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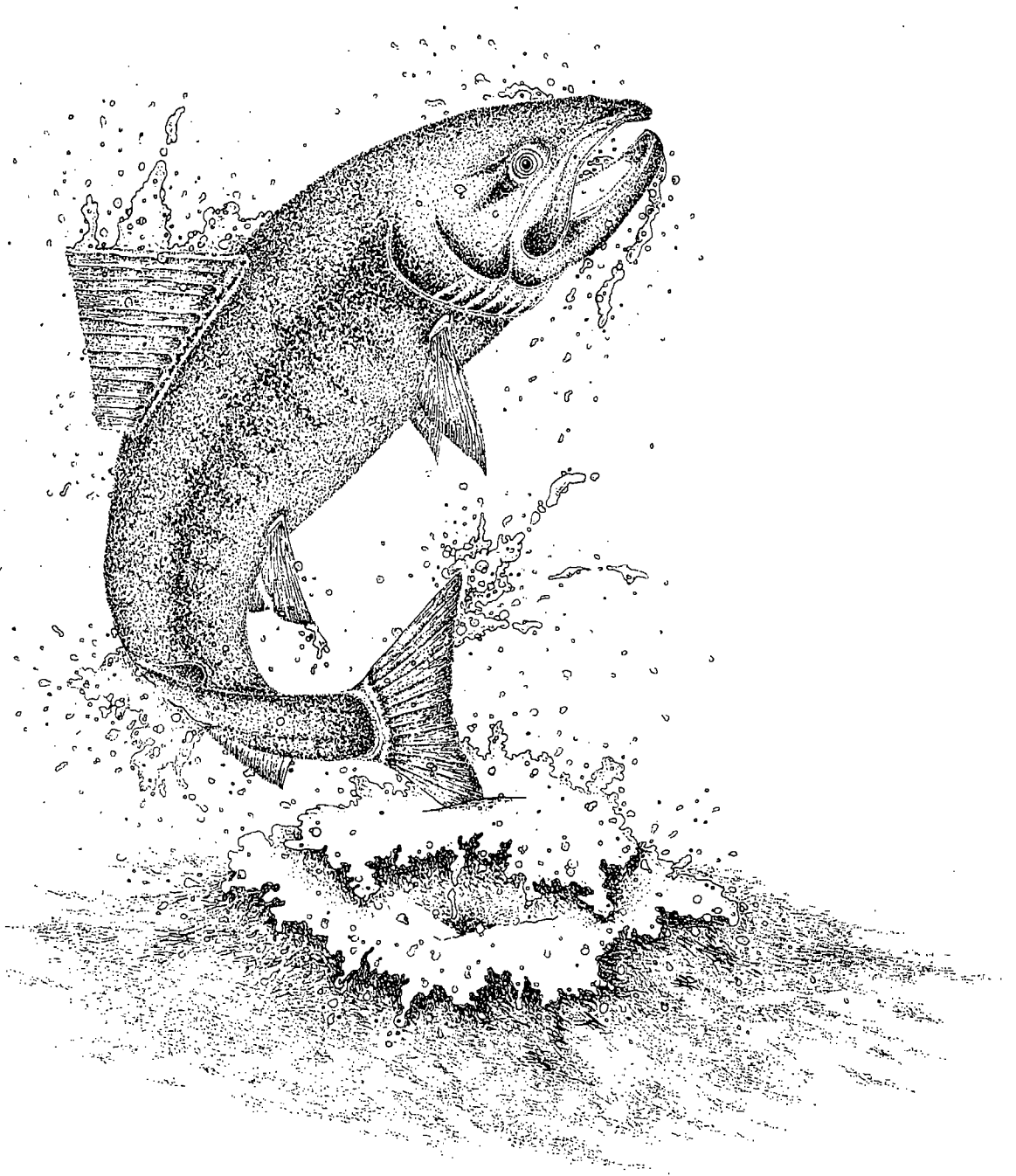
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Oregon's Wild Salmon and Steelhead Trout:

A Review of the Impact of Management and Environmental Factors



THE WHITE HOUSE
WASHINGTON

OFFICE ON ENVIRONMENTAL POLICY

KATIE McGINTY,

DIRECTOR AND DEPUTY ASSISTANT TO THE PRESIDENT

TO:

Pete Myers

FROM:

Katie McGinty

NUMBER OF PAGES:

DATE:

MESSAGE:

We certainly missed you at Tom's on Saturday. Thanks for the note and article from the Oregonian. We are looking into it. Thanks again.

Katie

PHONE - (202) 456-6225 FAX - (202) 456-6231
ROOM 286 OLD EXECUTIVE OFFICE BUILDING
WASHINGTON, DC 20501

W. ALTON JONES FOUNDATION, INC.

DC ✓

22 March 1993

MEMORANDUM

TO: KATIE MCGINTY
FROM: Pete Myers *Pete Myers*
RE: Attached newspaper article

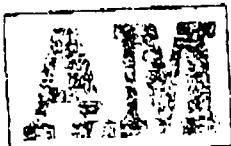
I was very sorry not to be able to join you at Lovejoy's last Saturday night. It sounds as if you had a great evening. Meg is a wonderful dinner guest.

I just came across a classic article in the Oregonian—Portland's leading newspaper and until recently a captive of the timber industry— from 1990 that has an especially telling passage about the genesis of the current "lumber shortage."

In it, the chief economist of the Forest Service predicts (in 1990) that by 1992 there will be a 1.5 billion board foot shortage of timber that will cost 15,000 jobs, all because of mismanagement by the private companies of their lands 5 decades ago. In essence, because they weren't replanting then, there is no new harvest now.

The whole piece is worth reading, but knowing how precious time is these days I've highlighted (2nd page) the most pertinent section.





SUNRISE EDITION

The Oregonian



Clear-cuts in Montana's Swan Valley, the work of Plum Creek Timber Co., sit beneath the Bob Marshall Wilderness in the Northern Rocky Mountains.

Private forests face critical log shortages

□ Timberland owners must now face a crisis caused by decades of clear-cutting, with no relief in sight for years

By PAUL KOBERSTEIN
of The Oregonian staff

PISTOL RIVER — Dorothy Tharing, a nurse at a local birthing center, makes her home near the Pistol River eight miles up a narrow, dirt road from the southern Oregon coast. From her kitchen she can hear log trucks roar by every half-hour in front of her yellow, one-story house.

"Last winter was when the log trucks started coming down really heavy," she

said. "It started after they had the land
size up there."

She noticed a brownish tint to the murky green river, one of a half dozen small streams in Curry County that runs down the western edge of the Siskiyou Mountains, under U.S. 101 and into the Pacific Ocean.

Tharling suspected the silt and the log trucks came from the same source: a 1,200-acre grove of old Douglas fir being clear-cut for Pointe West Timber Co., a West Coast-based log exporter.

In June, Tharsing, a slender, 43-year-old mother of two, discovered another change about the Pistol River.

After a miserably wet spring, her kids tried to dive into their favorite swimming hole.

The hole used to be so deep kids could
dive in from rocks on the shore. Water
that had covered the head of her 11-year-

"I've heard that logging can wreck a stream, but I'd never seen it until now," she said.

Around the time Tharsing was born, problems like these were the norm. Back then, during the industry's heyday, loggers cut right down to the stream and often shoved logs and machinery through the water.

Very little virgin timber remains in Oregon's private forests. But even today, abuses associated with another era abound on private timberland throughout the Northwest.



The year is 1952. England crowns Queen Elizabeth. America likes the one the Yankees win the World Series.

Oregon's timber industry enjoys its best year ever. These are the baby boom years, days of prosperity, and everybody wants — and most can afford — a house.

In 12 months loggers strip enough lumber from private Oregon tree plantations to house the state's entire 2 million population plus San Francisco's 700,000 residents. No one worries about the loss of forest: the countryside is crocheted in Douglas fir.

No one worries, either, when millions of trees are toppled the next year, or the next and the next. And no one worries future generations will have no wood to

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PRIVATE, Page A10

THE OREGONIAN, MONDAY, SEPTEMBER 17, 1993

A10

NORTHWEST FORESTS: DAY OF RECKONING

Private: Shortages could last 50 to 100 years

Continued from Page One
build their houses.

Until now.
From Southern Oregon to the Canadian border, from the Pacific Ocean to Montana, the Douglas fir is severely in short supply. Granted, federal regulations to protect the northern spotted owl squeeze that supply.

But years of overcutting by private timber owners has left a legacy of log shortages, mill closures and surging saw log prices. The industry's strategy for boosting future production — liquidating old forests to make way for young, fast-growing stands — has apparently backfired.

Private companies have harvested at a much faster clip than the Forest Service and Bureau of Land Management combined. The federal agencies own 40 percent of the region's commercial timberland, compared to 25 percent owned by private companies. The rest are owned by states and individuals.

But over the last 10 years, private companies have cut 52 percent of the timber, compared with 37 percent cut from federal forests.

In Oregon, the surge on private timberland began right after World War II. It hit its peak in 1982, leveled off in the 1980s and slowed down in the '70s and '80s. Between 1982 and 1992, the private harvest dropped by half. Dozens of mills closed.

But industry still overcuts its lands. That means it cuts trees faster than they can grow back. At some point, mills must close and remain closed until the next harvest is ready. It takes an average of 55 years for Douglas fir trees to grow to a marketable size, depending on soil and rainfall.

Many areas of Western Oregon face shortages over the next 50 to 100 years as a result.

Economists say the rate of cutting must slow down by 25 percent in the 1990s and continue to ebb until 2006, when the harvest will begin to creep up again.

This is a story that has nothing to do with the northern spotted owl.

The simple fact is that private industry is running out of trees that are available for harvest, said Richard Haynes, chief economist for the U.S. Forest Service.

"We are living with the consequences of what happened five decades ago," Haynes said.

Back then, industry cut trees at a frantic pace. But it was slow to plant new ones until the 1960s.

The inevitable is just two years off. By 1992, Haynes said, the cut on private lands will decline by 1.5 billion board feet. That's enough to keep 50 mills going and 18,000 workers busy for a year, he said.

What will happen then?
"You'll probably see all of the big companies leave the region," Haynes said.



Left: Plum Creek logger Steve Church prepares timber to be hauled away from site near Camas, Wash. Above: Zax Tharsing, 11, stands in a Pistol River swim ming hole that a few months ago was over his head. His mother, Dorothy, believes sediment from a logging operation upstream filled the hole.

Private industry created a supply problem. It's a shortage, Haynes says, our grandchildren will inherit.

However, the timber companies — such as Weyerhaeuser Co. and International Paper Co., to name two — say they will remain in the region for the long run.

Tom Ambrose, a Weyerhaeuser spokesman, said his company planted enough trees 40 and 50 years ago to keep an even flow of logs coming to its mills during the 1990s.

He said Weyerhaeuser accelerated its harvest of old trees in the late 1960s and early 1970s. International Paper also accelerated its harvest in the 1980s, according to the investment firm Goldman Sachs.

The shortage exists not just in Oregon and Washington. In Oregon, enough trees feed mills in Idaho and Montana, where industry has been slashed and burned forests across the Northern Rockies at a steady rate.

Between 1978 and 1998, Champion International completed the liquidation of 900,000 acres in Montana. Plum Creek Timber Co. is close to completing the liquidation of 1.1 million acres of virgin forests in Washington, Idaho and Montana.

Tharsing's neighbors share her feelings about the degradation of the Pistol River, but not her bravado for speaking out. They fear reprisals.

They fear bucking the prevailing public opinion in the area, which is

positively pro-timber.

One woman said she would like to spend "all my waking days trying to stop what is going on up on the Pistol River."

She paused.
"With my husband working for South Coast Lumber," a Brookings lumber company not involved in the Pistol River operation, "he could lose his job if I spoke out," the woman said.
"And if he lost his job, he would leave me."

Dale Sheridan, a state forester who inspected the logging site for compliance with the Oregon Forest Practices Act, said he found no violations of the law.

"It's not pretty," Sheridan said. "But clear-cutting isn't pretty."

John Sermenus, a co-partner in Points West, denies doing any harm to the Pistol.

"We're very environmentally sensitive," Sermenus says.
That claim, however, is in dispute.

A chainsaw grows into the side of a Douglas fir. The echo reverberates across the Pistol River valley. The fir stands in one of the state's last large groves of privately owned old-growth.

Before 1970, the old trees from private stands such as this went to local sawmills. After 1970, the timber companies sold increasing numbers of their logs to Asian buyers, who

were willing to pay rapidly increasing prices for the finest old, clear-grained Douglas fir logs.

John Sermenus is in business to make money. Last summer, his partnership, Points West, paid \$21 million for 3,000 acres of this prime Curry County timberland, located near the Pistol's headwaters 15 miles from the Pacific Ocean. The company pledged all its assets to liquidate the loan and made plans to liquidate the stand within two years, he said.

And like many other timberland owners before him, Points West sells the logs for export.

Points West bought the land from a corporation that had harvested the trees at a slow, but even pace. The land had provided Gold Beach Plywood — and its 315 employees — with a continuous flow of trees.

But last June, Gold Beach Plywood closed. Company officials said the mill wasn't profitable any longer because they couldn't buy logs at a reasonable price. The price of Douglas fir has doubled since 1987 and tripled since 1984. Today, a second-growth Douglas fir saw log brings between \$475 and \$550 to the seller, depending on the quality. Prices are higher close to the coast, where for eign bidders tend to push prices up.

Company owners blamed the shortage of affordable logs on environmentalists, who blocked several timber sales in their attempts to protect the spotted owl.

The shortage's roots, however, are in the overcutting of private tim-

berlands in the 1950s and 1960s. During those years, timber companies in Curry County chopped down almost 400 million board feet of logs per year.

There was no way they could sustain that rate. If timber companies had spread the harvest evenly year by year, the shortage would be less severe, Haynes said.

This year, instead of producing 400 million board feet, Curry County's private lands will produce only 15 million.

Fishermen began to notice the plunder of the Pistol River in the 1970s. The number of fall chinook landed by sportmen in the river crashed from 300 in 1972 to just 20 in 1973 and has been depressed ever since. Overharvesting cut into the population, but excessive fishing cannot account for the destruction of spawning grounds, said Dan Carleson, habitat coordinator for the Oregon Department of Fish and Wildlife.

In the 1930s, loggers moved further inland. In 1947, the Forest Service took a close look at water quality in the river. It planned to sell timber on its own land high in the headwaters.

Federal law required the agency to examine the cumulative impact of logging on Forest Service and private lands. If the Forest Service found the impacts were great, it was to withhold timber sales.

The Forest Service found seven

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THE OREGONIAN, MON SEPTEMBER 17, 1990

NORTHWEST FORESTS: DAY OF RECKONING

Private: Mills shut down as private logs went overseas

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problems:

- High amounts of mud and fine sediment below clear-cuts.

- High stream temperatures caused by clear-cutting and removal of streambank vegetation.

- Massive landslides during storms.

In 1988, the Forest Service told the Oregon Department of Environmental Quality about pollution caused by logging on private lands in the Pistol basin.

Mike Frazier, the Siskiyou National Forest district ranger in Brookings, says the clear-cutting on Points West property only makes problems worse for fish in the Pistol.

"They are violating all kinds of people's sense of good land stewardship," he said.

"When you see the stuff that's going on up there," he added, "you have to be concerned."

DEQ Director Fred Hansen said his agency doesn't have the money to monitor pollution caused by logging operations. That job belongs to the Department of Forestry, whose monitoring program is in its infancy.

Hansen, however, said the DEQ is starting to look over Forestry's shoulder. The DEQ has begun a long-delayed review of Forestry's logging regulations.

"We've obviously got a lot of areas which are not violating water quality standards, and a lot of areas that do violate standards," he said. "But in most cases, we just don't have enough data."

Frazier said the Forest Service is so concerned about the damage to the river basin that it is delaying timber sales in that area for 20 years. He said further logging would worsen the river's serious problems.

"It could take this basin two decades to recover," he said.

That means Curry County mills in Brookings will have to wait two decades for that timber.

Frazier said the Pistol canyon's slopes are steep and the soil is prone to slide. And yet, in some places, the loggers saw right down to the river. And the clear-cut, growing every day, covers the entire drainage from ridge to ridge.

"They are changing the habitat for a large area, and it's going to hurt wildlife," Frazier said.

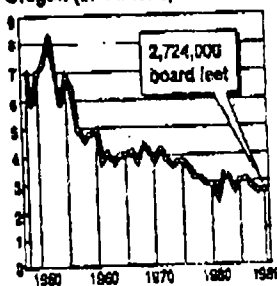
Only rarely has the Forest Service delayed timber sales because of environmental damage to adjacent private lands. It has happened twice — both times in Montana.

Two years ago, Champion International completed the liquidation of its tree farm in Montana. The logging devastated some watersheds in the Bitterroot Divide, forcing the Lolo National Forest to withhold several federal timber sales until the

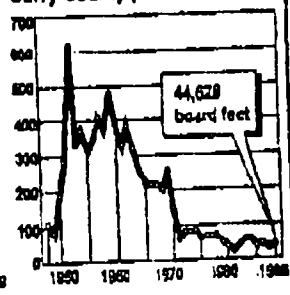
CUTTING PRIVATE TIMBER

The timber harvest on private industry land in Oregon and Curry County, hit all time peaks in 1952 and has declined ever since.

Oregon (in millions)



Curry County (in thousands)



land can restore itself. That could take decades.

Now, the Flathead National Forest is withholding timber sales around Plum Creek land in Montana's Swan Valley.

"Plum Creek's been in here, in a big way," said Bill Pedersen, the Swan Valley district ranger. "From grizzly bear in watershed standpoints, the impacts have not been acceptable."

Points West isn't the first company to cut down and export trees from a private forest that previously sustained an Oregon mill.

Because it has good soils and lots of rain, Northwest Oregon is among the best tree-growing regions of the state.

But it has just one tiny mill in Warrenton.

Most logs are being exported by Cavenham Forest Products Inc., which manages the lands for owner Sir James Goldsmith, the British financier.

From 1980 to 1989, Weyerhaeuser Co. cut 230,000 acres of old-growth from another tree farm near Coos Bay. In recent years, the logs were exported. As the last raft of logs floated down the Nullicum river in the spring of 1989, Weyerhaeuser announced the closing of a sawmill in North Bend.

From 1866 through 1960, Georgia-Pacific Corp. scraped more than 2 billion board feet from a tree farm near Coos Bay. When the trees were gone, G-P closed or sold four mills and fired company loggers.

In 1989, G-P closed a plywood

plant in Springfield, citing a log shortage. It fired 250 workers.

Meanwhile, the company continued to export second-growth timber from 125,000 acres in Lincoln County. Logs from the company's timberlands are stockpiled at the Port of Newport.

In the last decade, the Coos Bay local of the International Woodworkers of America labor union saw its membership dwindle from 2,600 to 500. In March 1989, for the first time in 120 years not a single sawmill operated on Coos Bay.

"Tree growing companies have degenerated into export log brokerages — shamelessly closing their domestic mills, while selling logs to foreign buyers," says Roy Kenna, a Cottage Grove forest industry consultant.

In Northern California, thousands of redwood trees are being felled along the coast. Houston financier Charles E. Hurwitz bought Pacific Lumber Co. in Scotia in 1985 and immediately doubled the rate of tree-cutting in the nation's largest privately owned virgin redwood forests. Hurwitz said the production increase was necessary to repay \$798 million that his company, the Macmillan Group, borrowed to buy Pacific Lumber.

In Washington, Idaho and Montana, the situation is similar. In those states, the Plum Creek Timber Co., the Northwest's second largest timberland owner, cuts trees at a blistering pace.

The majority of the Washington trees are exported; Montana trees

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NORTHWEST FORESTS: DAY OF RECKONING

Private: Douglas fir cut before prime

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are milled locally.

That's good for Plum Creek employees, but bad for other mill workers.

Plum Creek almost always outbids other mills for timber in Montana, Northern Idaho and Eastern Washington — a monopoly it maintains because few others can afford the higher prices. Plum Creek coffers are flush with log-export profits.

But other companies are not so fortunate. Five competing mills in Western Montana closed in recent months and a sixth laid off the night shift.

"Plum Creek's position in the market is so big they can determine who gets logs and who doesn't," says Ben Cohen, a state representative from Whitefish, Mont.

Many other timberland owners, large and small, rush to take advantage of the high prices. The few remaining tracts of private old-growth are being liquidated.

Second-growth tree farms are being cut before they are ready to produce maximum crops.

A Douglas fir puts on most of its girth between ages 35 and 55. But many second-growth firs are being cut as young as 25 years. Log-starved mills snap them up as quickly as they're cut.

Experts believe the rush will make the timber supply crunch much worse.

"We're seeing like farmers eating their seed corn," says Gary Letman, a timber economist with the Oregon

Department of Forestry.

Plum Creek admits its own huge clear cuts hurt wildlife. But President David Leland said the company is changing its ways. From now on, Plum Creek will leave trees on the ground for wildlife to use. Instead of leveling whole countryside, Plum Creek will clear only 30-acre lots.

"By looking at the forest in a holistic way," Leland said recently in Yakima, "we can better manage our resources and respond to public concerns."

Many of his colleagues complain that rules to protect fish and wildlife only hurt the industry. And it's true that any effort to protect the spotted owl — rare on public lands and even rarer on private lands — is bound to cost jobs. But the owl is not alone among species that have been hurt by industry's practice of clear-cutting entire river basins.

"More than 60 different critters are displaced by these massive clear-cuts," said Loren Hicks, Plum Creek's staff biologist.

Huge clear-cuts devastate rivers, too, obliterating salmon and trout populations at the same time.

State logging laws in Oregon and Washington don't limit the size of a clear-cut. Clearings range up to four square miles along the Coast Range.

The state of Washington wants to slow the damage. A task force of government, industry and environmental leaders is preparing legisla-

tion that would compel Washington far ahead of Oregon in protecting the forests.

But in Oregon, the law allows private timberland owners to focus on cutting wood. Having cut their own lands, they turn to the Forest Service and Bureau of Land Management for trees.

State Highway 40 in Washington leads west from Hoquiam to oceanfront resorts along the coast. Clear-cuts line the road for miles. Some of them belong to ITT Rayonier. "Clear-cutting and intensive management produce a crop of trees every 50 years," an ITT sign proclaims in way of explanation for the leveled forest behind it.

Further south, on U.S. 101, a Weyerhaeuser sign designates a site as "America's first tree farm." Near the Columbia River, the formerly forested landscape is almost completely nude.

Log trucks stream past these clear-cuts — 10, 12, 14 an hour. They cross the Columbia into Oregon and head for the Port of Astoria's docks.

Trucks from the hills around Astoria also dump their loads there. If there's a timber shortage, it's not visible here.

Northwest Oregon is the only region in the state that will produce more lumber during the 1990s than during the 1980s, according to a recent Oregon State University study.

The reason: The forests have been

growing faster than they've been cut down. And soon, the Tillamook State Forest, badly burned in the 1940s, will be ready for its first harvest since then.

Over the next decade, state and private lands in Northwest Oregon will increase production by more than 50 percent.

But elsewhere in Oregon, the study said, the 1990s look bleak:

• In Clackamas, Marion and Linn counties, the harvest will decline by about a quarter. Production from national forest and private lands will skid severely and, like most other areas of Western Oregon, won't recover to 1980s levels for more than 100 years.

• In Lane County, the harvest will drop 13 percent, again because of log shortages.

• In Douglas County, the private harvest will drop by almost 40 percent. Harvests on federal lands will decline 10 percent.

• In the Medford area, private harvests will decline by 27 percent, national forest by 15 percent.

• And on the South Coast, private harvests will decline by 11 percent, national forest by 5 percent.

Measures to protect the spotted owl will shrink both public and private harvests even more.

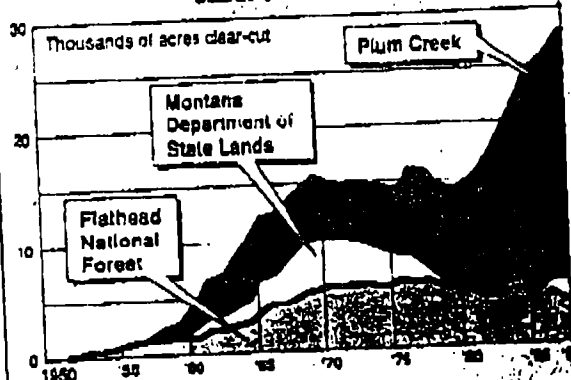
Sooner or later, logging communities and mills will dwindle. Tourists driving through a bruised timberland, may look for greener forests elsewhere.

It will be a lifetime before the Northwest's forests grow back.

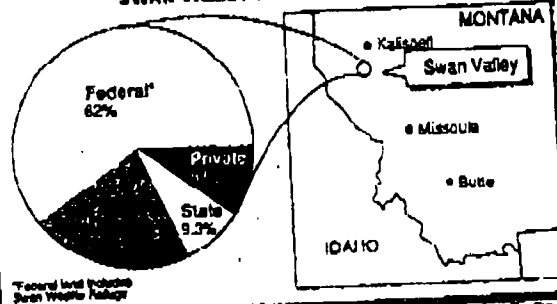
PLUM CREEK CORPORATE PROFILE

Plum Creek is clearing land at a much faster rate in Montana's Swan Valley than either the Forest Service or state of Montana. But the Forest Service owns three times the amount of land.

CLEAR-CUT ACREAGE



SWAN VALLEY LAND OWNERSHIP





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

February 22, 1993

Ms. Katie McGinty
 Director
 Office of Environmental Policy
 White House
 Washington, D.C. 20020

**PHOTOCOPY
 PRESERVATION**

Dear Katie,

I enjoyed our initial discussion about forest summitry on Tuesday, and I look forward to helping on this issue. In doing so, I hope and trust we can preserve many forests and communities along the way.

In anticipation of Tom Collier's exercise and next Thursday meeting, as well as to follow up on our discussion following the group meeting on Tuesday, I want to pass on a few perspectives as to how we might proceed.

I have wrestled with this critter for nearly three years now and I have a visceral need to advance some viewpoints. These are general in nature but could bear critically on how we approach the beast.

1. Treat the issue and the occasion as a blessing, not as a yoke;

The opportunity to bring a modicum of resolution to the Pacific Northwest (PNW) forest conflict ought to be cherished. It is ripe for progress having been on the vine for many years. All interests are anxious for, and in several cases desperately in need of, resolution of the issue. Further, it is a clear opportunity to bring political, institutional and economic memory. To pounce where others have scattered will serve the Clinton Administration well if the issue is approached properly. In addition, this leadership can be brought to bear with managed entrepreneurship not just exhortation and threat. The federal government owns over 58 percent of the commercial timber base in the region. As distinct from nearly all other regions of the nation, we can produce environmental and economic benefits by virtue of our own actions; not just by influencing others. Hence, the foundations of entrepreneurial government are in place in this instance.

PHOTOCOPY PRESERVATION

-2-

The PNW is an excellent locus for applying the approach I referred to in the "Reinventing Federal Environmental Management" piece (I've enclosed a revised and slightly expanded version). In contrast to the years of inter agency squabbling, this Administration can assemble the players (BLM, FS, FWS, NPS etc), embrace a set of first principles, specify objectives and link resources and policies to efficiently reach those objectives.

2. The key is leadership

A concrete demonstration of Administrative leadership would be a PNW franchise version of the Environmental Policy Council I discussed in the paper. This could be termed the PNW Federal Resource Policy Council (FRC) or some such. It would devise a short, mid and long range integrated planning and management system for all federal resources in the region. The FRC would be geared to specific ecological and economic targets which would be amenable to continuous monitoring. The council would be encouraged and empowered to work collaboratively with local, state and private interests to achieve the objectives in the lowest cost, least distorting manner, bringing to bear the full measure of its policy and resource base. The Council would be held accountable by the President for continuous, demonstrable progress toward these objectives. Failure would trigger a predetermined policy (timber sale levels, surface water flows, sale buybacks, etc.) which would assure progress along the desired path.

3. Rigorously adhere to science based policy

It is critical that the Administration bound its policies with explicit science based criteria and counsel. We must enlist the best scientists (with and without baggage) to help bound the decision space and defend the policies which reflect that bounding. These must include biologists, wildlife specialists, ecologists, forest resource specialists and economists. We must be very careful not to assume that because this issue has been around so long, that all the technical and scientific issues have been properly posed, and that the facts are known. The unfortunate fact is that we know a fair amount about a few issues, but that much is unknown or highly uncertain. This must be expressly acknowledged lest we delude ourselves into concluding that managing for single criteria (owls, or even select salmon species) based on limited data, is sufficient.

4. Present intelligent environmental management as a long term economic engine and stabilizer.

The commercial fishing, ecotourism, recreation and high quality resource dependent industries e.g. photo processing, are key factors in the region's long term economic condition. In lieu of mere compatibility of environmental and economic

PHOTOCOPY PRESERVATION

-3-

objectives, powerful evidence suggests that, in this region in particular, conservation based environmental and resource management is the engine, if not the central precondition for long run economic health. It is critical to understand that policy approaches to facilitate the transition from an intensive timber harvest forest management to one more deeply rooted in conservation biology is actually very human capital (read jobs) intensive and very cost effective in terms of environmental management. Riparian corridor restoration, timber stand improvement, stock thinning, resource quality monitoring and species management are all high quality, efficient and effective jobs programs. Further, these activities, as well as riparian set asides, and other targeted set-aside policies are very cost effective vis a vis standard environmental control policies.

5. Provide some immediate volume for the timber supply pipeline.

Pipeline or reserve stock volumes, are at an all time low. This is reflected in the recent run up in timber futures prices (although it doesn't explain a large fraction of the price rise and I'm looking into that now). The price run up is a real political problem which could drive us off course. We need to understand it better but we also need to free up some volume to let some pressure off. This could come from currently enjoined, although noncritical habitat timber sale volumes, or some east side insect damage related volume (or possibly interim log export restriction. Either way, we'll have to, and be seen to be, responsive to this situation. Unattended, this problem could set us back years and there is not enough old growth left to endure such a miscue.

6. We need supportive, technical agency staff to work with us from the start.

There are many highly competent and supportive staff who can make our job far easier and more broadly credible. We need to immediately identify them, enlist them and link them as a functional team. Otherwise our group could spend vast amounts of time recreating the capabilities and products of others. I have in mind a group of six to eight people from FS, FWS, BLM, NOAA and EPA.

I look forward to seeing you at 11:00 today, where I hope to shed a bit more light on these thoughts, as well as share some ideas on how elements of my earlier EPC concept can be advance through your office.

Best regards,

Robert M. Wolcott.

**Endangered Species Committee/Northern Spotted Owl
Briefing for the Administrator of EPA**

May 1, 1992

Robert M. Wolcott

**Endangered Species Committee Representative
to the Administrator of EPA**

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Information Base

1. Administrative Hearing Record of January 8-22, 1992 in Portland, Oregon.
2. Public Hearing record of February 12-13, 1992 in Portland, Oregon.
3. "Such other information as the Committee may receive" according to the ESA; additional relevant materials from the public record.

Northwest Forest Ecosystem: Status of the Forest Ecosystem

- Old growth forests are generally defined as a forest stand usually at least 180-220 years old with moderate to high canopy closure.
- Northwest Oregon and Western Washington house the some of the world's classic coniferous forests. These forests are outstanding due to the size and longevity of the dominant species.
- No other forests in the world rival these species in lifespan. Every single coniferous genus represented here finds its largest specimen in these forests. Dominant tree species typically reach heights of 50-75 meters and often live well beyond 500 years.
- Old growth forests are now restricted mostly to Federal lands in the Pacific Northwest, managed by the FS, BLM, and the NPS. Their wood is highly prized by the timber industry because it makes high quality and high priced lumber and plywood.
- Most scientists agree that ancient forest in the PNW has at least the following three features:
 - 1) multi-layered canopy of trees;

Northwest Forest Ecosystem: Status of the Forest Ecosystem

- 2) large diameter live trees, some with broken tops; and
 - 3) dead, decaying trees, both standing and fallen
- About 5-10% of all old growth found ⁱⁿ the Northwest 200 years ago remain.
 - Old-growth forests are unique in the unsurpassed volume of organic matter stored in both the live trees and dead snags and down logs. This factor leads to a major distinction between old growth forest and young growth. Specifically, old-growth forest carbon and nutrient cycling is a closed cycle, detrital-based system. Nutrients are conserved, resulting in water flowing from within the watersheds that is very clean and potable.

Northwest Forest Ecosystem: Status of the Northern Spotted Owl/Interagency Scientific Committee Report

The Interagency Scientific Committee (ISC) Report

- The Interagency Scientific Committee (ISC) Report is the foundation for the present FWS and FS conservation and recovery efforts for the owl.
- The ISC strategy is thought to be the most thorough, scientifically credible application of science theory and methodology to the management of a species and associated habitat ever produced.
- The ISC was chartered in 1988 to address management of the owl. Four federal agencies supported the effort: BLM, FWS, FS, and NPS.
- The ISC was charged with developing a least-cost strategy for protecting the owl.
- The Committee consisted of 17 members, all highly qualified experts, chaired by Dr. Jack Ward Thomas, senior scientist for the FS. The report was formally peer-reviewed by experts from five scientific societies, including:

Northwest Forest Ecosystem: Status of the Northern Spotted Owl/Interagency Scientific Committee Report

- The Ecological Society of America
 - The American Ornithologists Union
 - The Wildlife Society
 - The Society of Conservation Biologists
 - The Society of American Foresters
- In addition to those peer reviews, the report has withstood scrutiny from management interests including:
- Congress
 - The "President's Task Force," appointed by the Secretaries of Interior and Agriculture
 - The FWS owl recovery team
- The President's Task Force concluded that the FS should operate "...in a manner not inconsistent with the ISC strategy."
- The FWS owl recovery team has produced a strategy based on the ISC strategy, including all key principles.
- The ISC strategy is based on five underlying scientific principles:

Northwest Forest Ecosystem: Status of the Northern Spotted Owl/Interagency Scientific Committee Report

- 1) species that are well distributed across their range are less prone to extinction;
- 2) large blocks of habitat with multiple pairs are superior to small blocks with only 1 or 2 pairs; Habitat Conservation Areas, or HCA's averaging 50,000 acres with 20 pairs were prescribed;
- 3) blocks of habitat close together are better than blocks far apart;
- 4) habitat that is less fragmented is better than habitat more fragmented;
- 5) dispersal habitat with a similar forest structure to nesting habitats will provide better assurance of movement between populations than habitat less suitable for owls; they prescribed the so-called "50-11-40" condition as essential to adequate dispersal habitat, translated to mean 50 percent of the area must have trees of 11 inch diameter and 40 percent canopy closure.

No · hwest Fo · es Ecosystem: Status of the Northern Spotted Owl/Interagency Scientific Committee Report

- The ISC strategy considered and attempted to minimize social and economic effects resulting from prescribed timber management adjustments. It sought the highest timber yield consistent with the preservation of the species.
- The strategy is unprecedented in that it prescribes timber harvest on 50 percent of presently suitable owl habitat on federal lands. It therefore allows for loss of a significant percentage of the owl population prior to recovery to a level of long-term stability.
- The ISC acknowledged in their report that the best strategy for the owl would have been to halt all logging activities on all remaining owl habitat.
- Continued review of new data indicate that the ISC recommendations may not have been conservative enough to assure long-term (100 year) viability of all owl populations, particularly those in the Coastal Range of Oregon.
- The ISC strategy explicitly states that it will only work if all federal agencies participate. The present failure of

Northwest Forest Ecosystem: Status of the Northern Spotted Owl/Interagency Scientific Committee Report

BLM to adopt the ISC report recommendations into their timber management planning will likely result in:

- 1) higher risks to extinction for the owl and almost certain extinction of the Coastal Range populations;
- 2) re-evaluation of Forest Service timber sales which received "no jeopardy" opinions predicated on federal adoption of the ISC;
- 3) undermining present efforts to manage the Region's economy in an ecologically sustainable manner as suggested by "Oregon Shines" and other economic strategies.

- Adoption of the ISC strategy by the FS has allowed them to continue sales, and to our knowledge, has resulted in no "jeopardy" opinions issued by the FWS for any sales proposed after ISC adoption.

Northwest Forest Ecosystem: Status of the Northern Spotted Owl/Interagency Scientific Committee Report

Life History of the Northern Spotted Owl

- The northern spotted owl is a territorial habitat specialist which depends upon forests with an old growth structure including multi-layered canopy of branches, large dead snags and logs and associated prey species such as ground squirrels and wood rats.
- The Northern Spotted Owl's range is from Southern British Columbia, Canada, south through western Washington, Oregon, and northwest California. Home ranges average 4800 acres per monogamous pair.
- Once established in a territory, adult owls are relatively long lived but have a very low fecundity rate. In the fall of their first year, juvenile owls disperse to find suitable territories; only 20 percent survive this dispersal due to predation, starvation or other causes.
- It is well-accepted that habitat specialists such as the owl can go extinct long before all of their habitat is lost

Northwest Forest Ecosystem: Status of the Northern Spotted Owl/Interagency Scientific Committee Report

Status

- It is currently thought that there are 6,000 owls in existence, based on samples of 2,000 -3,000 known individuals.
- The owl is largely extirpated in areas of Southwest Washington and portions of Oregon and California as a result of diminished old growth ~~and nature forest~~ habitat.
- Over the period of 1985-91, there have been significant declines in the size of spotted owl populations in western Oregon (6-16%/year) corresponding with very steep declining trends in mid to late successional forests.
- Only 36 percent of the landscape within HCA's (nesting and breeding sites) on BLM lands is currently suitable for owls, much less than the ISC had envisioned in its strategy.
- Testimony by Dr. Thomas, chair of the ISC, captures the incremental, cumulative impact exacted on the species:

Northwest Forest Ecosystem: Status of the Northern Spotted Owl/Interagency Scientific Committee Report

"It should be kept in mind, however, that the process that led to the "threatened" status of the northern spotted owl was and is insidious in nature. These changes in owl habitat have occurred one timber sale at a time, one fire at a time, one agricultural clearing at a time, one city at a time, over a prolonged period...these timber sales may be considered a further incremental adverse impact on the welfare of the northern spotted owl if they deplete options that presently exist to provide dispersal habitat or a coordinated overall conservation strategy for the owl."

- The owl is a FS Pacific Northwest Region "management indicator species" and is generally accepted as an indicator of the status of old growth ecosystems. Density of owls in the Coast range appears to be roughly correlated with the coverage of older forest habitat.
- As stated in the report of the Scientific Panel on Late-successional Forest Ecosystems, current forest plans do not provide a high level of assurance for maintaining habitat for old-growth dependent species.

Northwest Forest Ecosystem: Multispecies Status and Concerns

- At least 200 vertebrate species utilize old growth and late successional habitat including the owl, marbled murrelet, bald eagle and northern goshawk, all rare and potentially threatened species.
- Some 21 stocks of genetically distinct salmonids that face moderate to high extinction inhabit watersheds within old growth systems in the region.
- In the Pacific Northwest, 101 of 214 salmon stocks face a medium to high risk of extinction. In the Coastal Range of Oregon, 58 stocks of salmon face a moderate to high risk of extinction.
- The newly discovered cancer-treatment chemical, taxol, is derived from the Pacific Yew. Pacific Yew is found primarily in old-growth forests of the Pacific Northwest. Specialty old-growth forest products are an important part of the economy of the northwest region.
- Old growth forest tree canopies are habitat to a rich variety of epiphytes and other lichens. In addition to the owl, the red tree vole, northern flying squirrel and others are closely associated with old-growth forests.

Endangered Species Committee History

- The current exemption process for BLM timber sales/northern spotted owl is the first exemption decision to be based on a formal hearing conducted by an administrative law judge. The hearing record is the sole basis for the ESC decision.
- Prior to the 1978 amendments to the ESA, a less formal process for laying out the pros and cons of an exemption was used.
- Only two other times (Grayrocks and Tellico) since the enactment of the ESA in 1973 have exemptions under the Act been considered. Three other attempts have been made, but did not make it to the ESC stage.
- This low number of exemption applications results to a large extent from the successful consultation process where conflicts are resolved, and from the stringent criteria for considering exemption. Brief summaries of the other two actions are presented:

Endangered Species Committee History

Grayrocks Reservoir

- In 1976, several law suits were filed concerning violations of the ESA (failure to consult) and NEPA regarding the construction of Grayrocks Dam and reservoir in Wyoming and its effects on the Platte River in Nebraska, habitat of the endangered Whooping crane.
- In 1978 FWS designates parts of the Platte River as critical habitat under ESA and requires consultation with the Corps of Engineers.
- In 1978, the Senate passes ESA reauthorization containing the exemption process. A staff report to the ESC forms the basis for their decision to exempt Grayrocks with specified mitigation to include: 1) establishment of the Platte River Trust, 2) a fund of 7.5 million for maintenance and enhancement of critical whooping crane habitat (a foundation of the decision was that funding for the Trust be concurrent with funding the rest of the project)

Endangered Species Committee History

Tellico Dam

- In 1976, FWS issues a biological opinion that the Tellico Dam on the Little Tennessee River would jeopardize the continued existence of the snail darter; at this point, the Dam was 90 percent complete.
- Congressional hearings were held in Washington and Knoxville, TN, after which the ESC denied the exemption.
- However, a Tenn. representative in congress amends an appropriations bill to exempt Tellico and the House accepts the language on voice vote.
- President Carter signs the bill regretfully and gates close on the dam in November of 1979.
- In 1984, FWS discovers additional populations of the snail darter and downgrades its status from endangered to threatened, and rescinds the Tellico Dam area as critical habitat (species no longer exists there).

Proposed Action and Purpose

- On September 11, 1991 the Bureau of Land Management (BLM) requested exemptions for 44 FY '91 timber sales from the Endangered Species Act (ESA). These sales were found during consultation with the FWS to jeopardize the survival of the Northern Spotted Owl. They are located in portions of 6 counties in Western Oregon.
- The proposed timber sales are intended by BLM to provide short-term economic relief to timber dependent communities in Western Oregon.
- The O&C Act of 1937 requires that the BLM lands be managed for: "permanent forest production, and the timber thereon shall be sold, cut, and removed in conformity with the principle of sustained yield for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing to the economic stability of local communities and industries, and providing recreational facilities."

"Timber cut from a forest unit shall be limited to the productive capacity of such unit and the Secretary is authorized, in his discretion, to reject any bids which may interfere with the sustained management plan of any unit."

Threshold Criteria

- Approval of an exemption application results in convening the Endangered Species Committee (ESC) to approve or deny the exemption request. Three threshold criteria must be met for consideration by the ESC. These include determination that the applicant:
 - 1) carried out the consultation in “good faith” and “made a reasonable and responsible effort to develop and fairly consider modifications or reasonable and prudent alternatives to the proposed agency action”
 - 2) “conducted any biological assessments as required”
 - 3) “to the extent determinable ... refrained from making any irreversible or irretrievable commitment of resources”
- The Secretary of Interior found that BLM had met these criteria approved the application on October 1, 1991.

Threshold Criteria

Consultation

- BLM requested a final record of decision within 24 hours of FWS issuance of draft jeopardy opinions. This shortened the consultation process and reduced the number of documented examples of reasonable and prudent alternatives that could be identified through the consultation process.
- On March 4, 1992 the Ninth Circuit Court of Appeals found that neither the underlying Timber Management Plans (TMP's) or BLM's Jamison "interim management strategy" has ever been submitted to FWS for consultation. BLM is prohibited from going forward with any timber sales, including the 44, until this is done.

Irreversible and Irretrievable commitment of resources

- BLM may have made irreversible and irretrievable commitments of resources by making inflexible commitments to existing TMP's and sale quotas.

Other Legal Requirements: EIS

EIS requirement

- An exemption decision by the ESC under ESA §7(k) shall not be a major Federal action for purposes of NEPA ...
Provided , That an EIS which discusses the impacts upon endangered species or threatened species or their critical habitats shall have been previously prepared with respect to any agency action exempted by such order.
- EPA filed a motion to intervene in the administrative hearing to ensure that information regarding EIS adequacy (and other subjects) would be discussed fully in the record. Motion was granted.
- EPA rescinded its motion to intervene when it became persuaded that mechanisms other than formal intervention were adequate to ensure that information pertinent to EIS adequacy would be placed on the record.

EIS Adequacy

- Testimony by EPA and FWS suggests that BLM's underlying EIS for the 44 sales is inadequate because it does not include significant new information developed as a result of the listing of the owl as threatened and the release of the ISC Report.
- Three factors prompted EPA to request review of all relevant NEPA documents regarding BLM timber sales in Oregon:
 1. the determination by the FWS that 44 timber sales proposed would likely jeopardize the continued existence of the owl
 2. the application by BLM to exempt the sales from §7, ESA
 3. the decision by BLM not to prepare a supplemental EIS for the proposed sales
- The documents concerning the sales included:
 - EIS's and Records of Decision for BLM Timber Management Plans for the Eugene, Westside Salem,

EIS Adequacy

Roseburg, and Coos Bay BLM Distracts prepared between 1981 and 1983

- 10 EA's and the associated decision documents prepared for the proposed sales
- several amendments to those EA's
- BLM's 1987 Northern Spotted Owl EA

- All of these documents are included in EPA exhibit A of the hearing record.
- BLM argues that: 1) the listing of the owl as threatened is merely a legal process and does not in and of itself constitute new information, and 2) that the ISC Report is only one of a continuing stream of scientific findings and is no more significant than others, 3) BLM simply cannot revise its EIS's every time new scientific study is released.
- On February 6, 1992 the U.S. District Court of Oregon found the EIS for BLM's TMP's to be legally inadequate. The principal reason was failure to incorporate significant new information with a supplemental EIS.

EIS Adequacy

- BLM's original EIS's were developed in 1982 and 1983, prior to the listing of the owl as threatened or the release of the ISC report. BLM has been temporarily enjoined from offering, awarding or allowing any logging operation of timber in suitable owl habitat after December 31, 1991 until an adequate EIS is prepared. The 44 sales are in this group.

Testimony on EIS adequacy:

- The 44 timber sales would further reduce the amount of dispersal habitat in 62 of the quarter-townships designated "of special concern" by the ISC (i.e. especially vulnerable due to low numbers of owls) and 14 will drop below 50 percent of 11-40 forest.
- Direct take of 11 percent of the Coastal range owl population is possible.
- Exempting the 44 sales would likely result in isolation of the Coastal populations of the owl and high risk of extinction of these populations. Given that the owl is an indicator for old growth conditions, it is probable that other species which cannot migrate or disperse

EIS Adequacy

successfully to the northern forests will also face similar population and genetic isolation.

- Some of the 44 sales are located on steep slopes near streams; soil erosion would be expected to be 2-3 fold over the naturally occurring rates in these cases.
- 21 stocks of genetically distinct salmonids that could be affected currently face a moderate to high risk of extinction. "The majority of the BLM EA's [Environmental Assessments] do not provide information concerning potentially affected fish resources, and the discussion of fish resources in the remaining EA's is brief and inadequate." (A. Miller, at 10) 21
- "The NEPA documents for the proposed sales also do not adequately consider new information regarding potential water quality impacts of the sales ... do not adequately discuss existing water quality conditions, analyzed potential timber harvest impacts (both direct and cumulative) on water quality, or describe mitigation and monitoring." (A. Miller, at 10-11)
- Clean Water Act 305(b) reports for 1990 were significant new information not used in the analysis.

Exemption Vote

- “The ESC shall grant an exemption ... by a vote of not less than five voting in person ... if it determines on the record, based on the report of the Secretary, the record of the hearing ... and such other testimony or evidence as it may receive that” the exemption decision criteria of the ESA have been met.

- Members of the ESC:

- | | | |
|----|--|--------------------|
| 1. | The Secretary of Interior: | Manuel Lujan |
| 2. | The Secretary of Agriculture: | Edward Madigan |
| 3. | The Secretary of Army: | Michael Stone |
| 4. | The Chairman of the Council of Economic Advisors (CEA): | Dr. Michael Boskin |
| 5. | The Administrator of NOAA: | Dr. John Knauss |
| 6. | The Administrator of EPA: | William K. Reilly |
| 7. | A citizen from the affected state (Oregon) appointed by the President: | Thomas Walsh |

Decision Criteria

1. There are no reasonable and prudent alternatives to the action.
 2. The benefits of such action clearly outweigh the benefits of alternative courses of action consistent with conserving the species or its critical habitat, and such action is in the public interest.
 3. The action is of regional or national significance.
 4. Neither the Federal agency concerned nor the exemption applicant made any irreversible or irretrievable commitment of resources.
 5. It establishes such reasonable mitigation and enhancement measures ... as are appropriate and necessary to minimize the adverse effects of the agency action upon the ... threatened species, or critical habitat concerned.
- All of these criteria must be met in order to grant a full or partial exemption; if even one criteria is not met, the exemption cannot legally be granted.

Reasonable and Prudent Alternatives

1. There are no reasonable and prudent alternatives to the action.

- After jeopardy opinions were issued by FWS on the 44 sales, BLM engaged in no further consultation and no further documentation of examples of reasonable and prudent alternatives was made. This is highly abnormal for the consultation process. Normally, an interactive process between the two parties of identifying reasonable and prudent alternatives begins at this stage.
- As a result of the truncated consultation, the hearing record for the ESC is very limited regarding reasonable and prudent alternatives and mitigation and their analysis is problematic.
- Five reasonable and prudent alternatives were proposed in the hearing record. They include:
 1. Delay the sales (FWS)
 2. None exist (BLM)
 3. Substitute some of FY '92 sales
 4. Use harvest techniques other than clearcutting

Reasonable and Prudent Alternatives

5. Make the allowable sale quantity (ASQ) consistent with the ISC strategy
-
- Other reasonable and prudent alternatives may exist, or could be developed through further consultative efforts.

FWS's Reasonable and Prudent Alternative

- The FWS alternative: Locate timber sales in compliance with the ISC strategy for an interim period until adoption of the 1993 Resource Management Plans (RMP's). This would entail:
 - lowering the allowable sale quantity (ASQ) for FY '91 and FY '92
 - deferring or cancelling sales in habitat conservation areas (HCA's) or that would violate the 50-11-40 rule for dispersal habitat
 - as necessary, substituting sales prepared in compliance with the ISC strategy

Positive arguments for the FWS alternative:

- This alternative is not a permanent denial of the proposed sales. Instead, it preserves the option that all, or some of, the 44 sales might be cleared through a full consultation. Success rates on consultations are greater than 99 percent (nonrecord).
- The cost of this delay is probably negligible:

FWS's Reasonab e and Prudent Alternative

- 15-24 months backlog of timber inventory exists in the region.
 - Another large inventory will be added when Judge Dwyer's injunction on 1.2 billion board feet of FS timber is lifted.
 - FY '92 BLM sales can be substituted to cover far more than the 219 million board feet included in the proposed 44 sales.
 - Other supply alternatives exist in the form of private lands response, and diversion of export logs.
- The FWS alternative could result in a more rapid near term harvest of timber and a greater economic relief to those in hardship in the timber industry.

BLM's response:

- BLM arguments against FWS reasonable and prudent alternative to delay sales:

FWS's Reasonable and Prudent Alternative

- it would delay sales intended to provide timber supply in FY 1991 and thus prevent the BLM from carrying out its legislative mandate to contribute to community stability
- there would be no guarantee that a "no jeopardy" opinion would be given by the FWS even after the BLM had implemented a long-term strategy for the owl

Benefits, Alternative Courses of Action, Public Interest

- 2. The benefits of such action clearly outweigh the benefits of alternative courses of action consistent with conserving the species or its critical habitat, and such action is in the public interest.**
-

1. Alternative courses of action exist in the form of:

- substitutions of other BLM sales (such as FY '92 sales)**
- extensions of the Congressional "Safety Net"**
- further restrictions and/or enforcement of log exports**
- expanded worker assistance programs**
- adjustment of the allowable sales quantity (ASQ)**
- others may exist**

Benefits, Alternative Courses of Action, Public Interest

- The net benefits of these actions appear to dramatically outweigh the benefits of the proposed sales.

2. Public interest:

- Public interest is accepted in economic theory to be a measure of net societal benefits (NSB).
- Timber on the 44 tracts has an estimated gross harvest value of about \$63 million according to DOI analysis.
- Net value of timber from the 44 sales is a fraction of this gross value.
- Existence, option, recreation and commercial values of the preserved forest in the 44 sale areas outweigh net commercial timber value.
- For example, one study (by Hagen, Vincent and Welle) indicates that existence values for preserved owl habitat range from 5 to 14 times as large as gross harvest values.
- The proposed harvest does not provide a higher level of NSB than delay or cancellation of the sales.

Regional or National Significance

3. The action is of regional or national significance.

- “Regional and national significance” are typically measured in units of:
 - net employment income (income effects)
 - net person years of employment (employment effects)
-

Timber supply:

- The 44 sales total 4570 acres, or roughly 100 acres per sale. They are scattered over 6 counties in western Oregon. They represent:
 - About 30 percent of BLM's FY '91 harvest in Oregon
 - 2 percent of the annual harvest on the Westside of the Cascades (the Douglas fir region)
 - 0.6 percent of the national harvest of softwood
 - 0.13 percent of the timber harvest worldwide

Regional or National Significance

In all likelihood these do not translate into significant price effects on consumers.

- Timber from the 44 sales is equal to a small fraction of the annual regional shipments of old-growth logs to Asia.
- Current backlog of sold but uncut federal timber in the Pacific Northwest: 8.2 billion board feet, or an estimated 15-24 months of supply.
- Current backlog of sold but uncut federal timber in Oregon: 4.2 billion board feet
- New inventory available when Dwyer injunction is lifted: 1.2 billion board feet.
- 300 million board feet of timber were exported from Southwestern Oregon in 1990, substantially more than the 219 million board feet proposed for exemption.
- 700 million board feet of timber were exported from Oregon in 1990.
- 3 billion board feet of timber were exported from Oregon and Washington in 1990.

Regional or National Significance

- Each of these export supplies represent a timber supply that could possibly be diverted for domestic processing.
- Diversion of exports could be accomplished through higher bid prices by mills that need inventory, or by greater restrictions on export of public logs.
- Decreases of public harvest from the 44 sales can probably be compensated for by increased private harvests. Increased private timber demand will result in economic gains that more than offset the loss of the 44 sales.

Employment:

- The 44 sales are small and scattered over Western Oregon. The effect on permanent “jobs” is likely to be negligible.
- Any harvest dependent employment will be delayed significantly due to legal, administrative and market related delays. Major transitions in the work force will probably already have taken place.
- Reemployment prospects in the region are estimated at 92 percent by DOI. Businesses will probably adjust to a small supply shortage by obtaining alternative supply

Regional or National Significance

sources, thus reducing layoffs associated with nonharvest of the 44 sales.

- Timber related employment involves only 4.5 percent of the workforce in Oregon at present. The 44 sales represent a very small component of this segment at best.
- Employment impacts from restrictions on these sales are estimated by DOI from a low bound of 0 to a high bound of 2383 person years of employment. The 2383 figure is worst-case scenario that assumes all workers involved in harvest and processing come from the ranks of unemployed, and all timber is harvested in one year.
- Regional employment income effects of harvesting the 44 sales are estimated by DOI at \$11.9 to \$18.8 million under a worst-case scenario. Effects are unmeasurable under other conditions.
- Marginal and/or local lumber mills may not be the beneficiaries of timber sold at auction because logs are sold to the highest bidder without preference to need.
- Employment impacts would be greatest in marginally competitive business operations.

Regional or National Significance

- Total employment in Oregon's lumber-and-wood products industry declined by 17 percent between 1979 (the year preceding the recession of the early 1980's) and 1989 (the year preceding the current recession). Much of this was attributable to technological changes (such as automation in the mills) and improvements in labor productivity.
- Real average payroll per worker declined by 17.2 percent. By contrast, total employment in Oregon increased by 23 percent during this period.
- The loss of real wages simultaneous with gains in productivity is an unusual and unhealthy sign for an industry. It is symptomatic in this case of the declining role of the timber industry in regional economics and industry.
- Timber dependent communities have tended to have chronically high unemployment in the Pacific Northwest in the past decade, even in boom years.
- High unemployment is significantly correlated with timber manufacturing in the West. Low unemployment is significantly correlated with all other manufacturing in the West.

Regional or National Significance

- The Oregon and Pacific Northwest economies are diversifying away from and not toward timber production.
- Jobs created in the nontimber manufacturing sector were created at 10 times the rate of timber related jobs in the past decade.
- The Oregon and Pacific Northwest economies are experiencing higher than average growth and immigration than the rest of the U.S..
- High environmental amenities and strong trends toward modernization of the economy to long run sustainability are major forces behind this trend.

rreversible or rretrievable Commitments of Resources

- 4. Neither the Federal agency concerned nor the exemption applicant made any irreversible or irretrievable commitment of resources.**
-

- BLM may have made irreversible and irretrievable commitments of resources by failing to demonstrate flexibility to changes in existing TMP's and sale quotas. BLM refused to consider substituting future year's sales, although substitutions have been made for other reasons in the past.

Mitigation and Enhancement

5. Mitigation and Enhancement.

- If the ESC grants an exemption to BLM for the 44 timber sales, it is required by law to establish reasonable mitigation and enhancement measures that are necessary and appropriate to minimize the adverse effects of the sales on the owl.
- BLM lands are the only public lands that provide a connection between the seriously declining populations of the Coastal Range where the sales are located, and the more stable populations of the Klamath and Cascade Range populations.
- Although several owl nesting areas would be directly affected by the 44 sales, by far the most important impacts would be from destruction of dispersal habitat. The jeopardy opinions of the FWS reflect this concern.
- The most serious impacts to the owl, and the ones which must be mitigated for, would be the destruction of vital dispersal 50-11-40 habitat on BLM sales tracts.

Mitigation and Enhancement

- Failure to provide for dispersal habitat will most likely result in the listing of the Coastal owl population as endangered.
- If sales are exempted, minimum mitigation must include review of the Coastal population status for possible listing as endangered.
- Mitigation for any exempted sales must be conducted on an on-site basis for each tract, or at a minimum within the same quarter-township.
- The location and placement of the 44 sales in the Pacific Northwest landscape, coupled with the "checkerboard" ownership pattern in western Oregon limit the options for mitigation.
- Potential options presented in the record include:
 - selective harvest at each site to maintain old growth 50-11-40 characteristics
 - acquisition of comparable private land within the same quarter-township at a 1:1 ratio

Mitigation and Enhancement

- Unacceptable mitigation proposals include captive breeding and/or physical transport of owls between the Coastal ranges and the northern ranges in lieu of natural dispersal.
- Additional mitigation options [not in the record] for consideration include:
 - Short-term: Because of vulnerability of the Coastal range populations, require a 2:1 ratio acres acquired:acres cut in and around HCA's;
 - Long-term: based on the newly released Recovery Plan, provide for management of old growth ecosystem by (a) consolidating checkerboard ownership to allow better management and (b) combine FS and BLM ownership with management under FS.

Legal Analysis

- **Can the ESC reexamine the threshold determinations of the Secretary of Interior?**
- Counsel to the ESC and Solicitor of the Department of Interior, Thomas L. Sansonetti, has issued an opinion addressing the issue.
 - The Solicitor's opinion is that the ESA does not provide for ESC reconsideration of the Secretary's threshold determinations.
 - The ESC may use information regarding the threshold determinations (including the evidence presented through the consultation with FWS) in ESC's deliberations on the four decisional criteria and in establishing mitigation and enhancement measures.
 - The Solicitor's opinion is one but not the only reasonable and legally defensible interpretation of the ESA and regulations.
- **Whether the ESC is legally compelled to determine whether BLM's Environmental Impact Statement (EIS) adequately addresses the impacts of its proposed action on the spotted owl.**

The Solicitor's opinion states:

- That the ESC may but is not required to assess the legal adequacy of BLM's NEPA documentation.

Legal Analysis

- That the ESC may use information regarding BLM's EIS in ESC's deliberations on the four decisional criteria and in establishing mitigation and enhancement measures.
- The Solicitor's opinion is one but not the only reasonable and legally defensible interpretation of the ESA and regulations.

Relevant Cases

■ **Lane County Audubon Society v. Jamison**

- Ninth Circuit decision March, 1992
- BLM's timber management plan for timber sales held to be a distinct action from specific timber sales emanating from the plan. The Court further held that BLM is required to consult with FWS on both the individual sales and the plan.
- The Court enjoined future sales until BLM consults with FWS on any timber management plan.

■ **Portland Audubon Society v. Lujan**

- District Court, Oregon, February, 1992

Legal Analysis

- BLM did not consider significant new information concerning owl survival prospects in its 1982 Environmental Impact Statement or subsequent Environmental Assessments.
- The Court issued a preliminary injunction suspending timber sales in spotted owl habitat.

Options

1. Deny exemptions on all 44 proposed sales
2. Delay decisions on exemptions for any of the 44 proposed sales pending:
 - 1.) Full consultation with FWS
 - 2.) Completion of an adequate supplemental EIS
 - 3.) Development of a credible long-term strategy to preserve the Northern Spotted Owl
3. Approve some or all 44 exemptions with linkage to:
 - a.) BLM adoption of the Recovery Plan for the Northern Spotted Owl
 - b.) BLM adoption of the Preservation Plan for the Northern Spotted Owl
 - c.) BLM commitment to permanently preserve 770,000 acres of remaining old growth forest on BLM lands (option 12C from the "Gang of Four" Study)
4. Approve a subset of the 44 based upon screening of sales with respect to each decision criteria (DOI option)
5. Approve exemptions for all 44 proposed sales

March 8, 1993

TO: KATIE MCGINTY
DAVID COTTINGHAM

FR: MARLA ROMASH

RE: FOREST SUMMIT PAPER

Here's a proposed timetable for development of materials related to the Forest Summit. We'll need to talk about who drafts what, but final editing and review should be done here, through the Office on Environmental Policy and OVP. This does not include materials that will be needed for briefings prior to the summit - we need to talk more about that, but my sense is that much of the material being prepared for the summit could be used for any briefings we'll schedule.

NOTE: I'LL DRAFT PRESS RELEASE ANNOUNCING SUMMIT AND WILL HAVE THAT BY CLOSE OF BUSINESS TODAY.

1. WEEK OF MARCH 8

To coincide with announcement, we should plan some outreach (letter? information package?) to editorial writers and key reporters in the region. Also need to talk about QUICKLY soliciting op-edits from relevant players -- in and outside Administration -with positive spin, and arranging interviews for key players. I'm not sure it makes sense to do a full-scale briefing at this point, but we should talk about it.

ANNOUNCEMENT WEDNESDAY MARCH 11:

o **PRESS RELEASE FROM WHITE HOUSE:** President announces with press statement. (Romash drafts)

Circulated to WH press corps, to regional press in D.C., to regional press in WA, OR, CA.

o **BACKGROUNDER TO EDITORIAL WRITERS IN OR, CA, WA:** Letter with background material from TBD outlining summit rationale and plans.

o **SATELLITES & RADIO FEEDS:** Babbitt, Espy, McGinty

FIRST DRAFT DOCUMENTS PREPARED/DUE BY FRIDAY MARCH 12

(Need to identify who writes first drafts)

o **AGENDA FOR SUMMIT**

o **ISSUES SUMMARIES THAT WILL BE NEEDED**

We will need, as part of the materials we provide for summit participants, short summaries discussing key issues. (These issues summaries should track the agenda, that is, outline key issues around which the summit itself will be focused)

o **TIME LINE**

It would be helpful, particularly for the media, to have some kind of time-based outline, reviewing the debate here.

o **SPEAKERS BIOS**

We will need short bios of key speakers. List of speakers should be developed with an eye toward getting this information as soon as possible.

o **GENERAL BACKGROUNDER**

We will need a general, brief (no more than 2-3 pages) backgrounder, laying out key goals and issues for the summit. This would lead off the package of materials we will provide participants and the media.

2. WEEK OF MARCH 15

o **MEDIA ACTIVITIES:**

- Briefing for regional media in D.C.
- SITE VISITS BY SECRETARIES
- Continue to place op-edits
- Radio conference calls with local radio stations (for Secretaries, Gore (?)).

FIRST DRAFT DOCUMENTS DUE BY FRIDAY MARCH 19

- o CLINTON OPENING STATEMENT, CLINTON CLOSING STATEMENT
- o AGJ OPENING STATEMENT, AGJ CLOSING STATEMENT
- o BRIEFING MATERIALS, Q'S FOR SUMMIT (ARRANGED BY TO TRACK AGENDA)

SECOND DRAFT (FINAL?) DOCUMENTS BY FRIDAY MARCH 19

- o ISSUES BRIEFS COMPLETED, BACKGROUNDER COMPLETED, TIME LINE COMPLETED, AGENDA COMPLETED
- o DRAFT OF CLOSING PRESS RELEASE, WITH ACTION PLAN

3. WEEK OF MARCH 23

o **MEDIA ACTIVITIES**

- Op-edits, radio conference calls, satellites
continue
- Edit board meetings?

DOCUMENTS COMPLETED BY FRIDAY MARCH 26

o FINAL APPROVAL ON CLINTON OPENING, CLOSING; GORE OPENING CLOSING

o COLLATE INFORMATION PACKAGES (RING BINDERS?) FOR PARTICIPANTS AND FOR MEDIA.

4. WEEK OF MARCH 29

o MEDIA ACTIVITIES

-- Briefing for national media -- especially wires and networks

-- satellites, radio conference calls continue

-- Editorial boards?

-- Clinton or Gore op edit in regional papers?

o FINAL MEDIA RELEASES

-- Circulated at summit

-- Follow up to edit writers and columnists

-- Follow to national media

-- Satellite plan? (From summit site out)

-- Radio conference calls

-- NEED TO PLAN FOR CREATING DOCUMENT FROM PROCEEDINGS AND CIRCULATING

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United States Department of the Interior

OFFICE OF THE SECRETARY

Washington, D.C. 20240



Pacific Northwest Forest Conference

March 15, 1993

TO: Katie McGinty
Tom Collier
Tom Tuchmann
Chris Dorval
Dan Sakura
Carol Florman

FROM: Stephanie Solien

SUBJECT: Pre-Conference Site Visits

Following extensive outreach to the Congressional delegations of Washington, Oregon and Northern California and to the governors of the three states, we have already received a wealth of input on potential sites for visits by Cabinet Secretaries in the region affected by the timber crisis. I am attaching copies of the materials we received. (There may be some adjustments later, based on additional recommendations we are still expecting.)

From that material, a number of travel recommendations can be made. These general and specific recommendations will serve the plan to utilize visits to educate on three "themes": the basic science and ecosystem issues, grass-roots community and human effects of the long-running standoff; the basics of science and ecosystem issues that apply; and the economic issues surrounding how the region's people can both continue to benefit from their traditional economic and cultural link with the forests and also prepare for the future.

1. Recommended Guidelines

- * Flyover of forestry lands for an aerial view of the impacts of old and new forest management practices and to see old growth stands and Riparian areas;
- * On ground visit to forest to see current state of the forests and watersheds, alternative management practices, "new forestry" and Riparian zones;
- * Visit timber-dependent community and meet with community leaders and people who have been affected by the timber economy downturn;
- * Meet with business and community people who are developing new innovative forest product business by

Salmon?

Forest Conference/2

stressing "value-added" production or diversifying rural/timber based economies by emphasizing infrastructure investment (port development) and new alternative businesses.

Other Suggestions:

* Community meetings--whether closed-door sessions or public "town meetings"--should be part of the mix. This also provides an opportunity for broader inclusion--people not chosen as Conference participants.

* On flyovers and ground forest tours, Secretaries should be accompanied by representatives of the Forest Service, Fish and Wildlife Service and the Bureau of Land Management, as well as interested members of Congress, local elected officials and the Governors if they wish to attend;

* There may be a need for a specialized meeting for Tribal leaders in the region.

2. General Site Selection Guidelines

This is a breakdown, by ranking of Congressional districts in each state, of where visits should be focused:

Washington:

1. Sixth District (Dicks, D)
2. Third District (Unsoeld, D)
3. Second District (Swift, D)

Oregon:

1. Fourth District (DeFazio, D)
2. Second District (Smith, R)
3. First District (Furse, D)

California:

1. First District (Hamburg, D)
2. Second District (Herger, R)
3. Sixth District (Woolsey, D)

(Note: District maps are attached.)

3. Specific Site Choices

Here are suggested itineraries that would work for discussion and scouting purposes:

Washington:

- * Secretary participates in a flyover of the Olympic

Forest Conference/3

Peninsula, does a ground tour of forest sites there, then travels to Grays Harbor (19.2 percent unemployment--lost its largest employer in November) where visits can be made to a number of sites: a food bank, the closed Dahlstrom Brothers Mill, the giant closed ITT pulp mill. To show the potential for change, a visit is made to the retooled Mayr Brothers mill and perhaps the Polish Hall headquarters of the Association of Western Pulp and Paper Workers, who are pro-training, pro-diversification. A town meeting with people familiar with the crisis' affect on the social fabric could draw guests from counties and towns to the North on the Peninsula. Another very attractive possibility is Fort Vancouver Plywood, a local coop working to produce plywood from waste paper. (See attached briefings from Rich Nafziger, former timber policy chief for Governor Booth Gardner; from Rep. Norm Dicks; Rep. Jolene Unsoeld; Senator Patty Murray.)

Oregon:

* Secretary begins with an air and ground tour of the forests. The Secretary then travels to Roseburg, Oregon, which Rep. DeFazio calls the most timber-dependent county in the region. A town meeting is held with social services officials, job training program managers, union officials. Another potential site in Northern Oregon is the Boise Cascade Sawmill in St. Helen, which also has a large port operation. We should also attempt to include the Applegate Project, a sustainable forest/timber planning effort in Rep. Bob Smith's district to the south. (See attached briefings from Rep. DeFazio; letter from Mike Draper; materials from Rep. Elizabeth Furse.)

export
issue

California:

* The Secretary flies over Humboldt County forest lands, where fragmentation, clear cutting, siltation of streams and rivers and new efforts at sustainable use can be observed. A ground tour can take in Pacific Southwest Forest and Range Experimental Station. In Eureka, the managers of the Schmidbauer Sawmill are using new techniques to cut waste; the family-owned Blue Ox Millworks has a sawmill and a custom wood products facility. There is also a new local recreational equipment manufacturer, Yakima Industries. At the harbor in Eureka, one pulp mill is closing and salmon trollers have been docked for the past two seasons. A town meeting can include

Forest Conference/4

managers of a significant job conversion service and the like. (See attached briefing from Rep. Dan Hamburg.)

4. Utilization of Administration Officials

As I understand the Clinton officials' schedules, Secretary Babbitt will have three available days for Pre-Conference activities; Secretary Espy and Administrator Browner one day each. With those individuals and time frames, the plan would be to assign each one of the three states as summarized below.

(It should be noted that it would be of great assistance in preparing for the Conference to have an additional Administration official representing economic matters: either Labor Secretary Reich or Council of Economic Advisors Chair Laura Tyson. Either could be paired with any of the three other Administration officials for key portions of their regional itineraries.)

Secretary Espy: One day, Washington

EPA Administrator Browner: One day, Northern California

Secretary Babbitt: One day Oregon, one day meetings with constituency groups, one day DOI business.

Note: If Clinton officials have additional time to spend in the region, we would make similar scheduling recommendations.

SUMMARY ANALYSIS FROM ANCIENT FOREST RESEARCH

The issue of old growth forests provides the coalition and the environmental movement with a powerful symbolic issue to win nationwide support and to positively influence a broader environmental debate.

Voters already worry about losing trees and forests to logging and development, and they believe that forests are a valuable part of our national heritage. The strongest and most intense argument for saving the old growth forests combines balance, our national heritage, and preserving the remaining small portion of our disappearing, unique old forests.

Despite their emotional attachment to the idea of old growth forests, voters can be swayed by the timber industry's argument for a balanced alternative to preservation. Voters resist a tradeoff between jobs and the environment and support a balanced position that provides a plan and "sets limits." In the end, the side that wins the balance argument wins the debate.

Mood of the Electorate

In this recession, voters are preoccupied with the worsening economy which might have softened voters' support for the environment; 62 percent cite an economic issue as their greatest concern, while only 5 percent say the environment worries them the most. Still a whopping 96% think the environment is important to them personally. Voters volunteer that the environment is critically intertwined with survival, the future, and the world they leave their children.

Although the forest issue lacks some of the urgency seen in other issues like clean water and toxic wastes, voters worry that trees are disappearing every day as wealthy developers buy off local government officials and over-develop their communities. Most of all voters, particularly women, worry about the future and are aware of their responsibility to protect the environment including these ancient forests for future generations.

Still, the coalition will have to struggle with making this issue seem real, immediate, urgent, and relevant to the voters -- most of whom still think that public lands are far-away national parks in the West. In the end, it may be easier to win voters to our side than to hold them with any intensity. The most difficult task may be getting this issue to compete with other more immediate economic and environmental concerns.

The Actors

Voters are willing to assume some of the blame for what has gone wrong; however, this does not lead them to excuse either corporations or the government for their failure to protect the environment. On a 10 point scale, voters rate large corporations' credibility on environmental issues at only 3.14 and timber companies do not fare much better with a 3.40 rating. Environmental groups, on the other hand, do twice as well with a rating of 6.80.

Even in impacted areas, voters give timber companies low rating of 4.58 compared with a 5.26 rating for environmental groups. Voters are convinced that timber companies exist only to make money. Exporting logs and jobs to Japan is a vivid example of this greed and is particularly effective with blue collar voters and traditional households. Clear cutting also reinforces voters' initial perceptions of the timber companies -- uncaring corporations that are driven by the bottom line. This overwhelming cynicism about timber companies colors voters' willingness to accept industry proposals, putting the opposition at a significant disadvantage when they argue that they represent true balance between the economy and the environment.

Government does not fare much better, for voters are convinced that government has failed in its obligation to protect the environment, representing the interests of the highest bidder rather than the public good. Voters initially believe the National Forest service protects the environment and rate them 6.8 on a 10 point scale for their credibility on environmental issues. However, they readily believe that the Forest Service, like every other branch of government, could become the captive of special interest politics -- of timber companies seeking the highest profits.

Voters have faith in the altruism of environmental activists; however, voters suspect some environmentalist positions are extreme and unrealistic. Images of snail darters and spotted owls are powerful symbols that damage environmentalists' overall credibility. Voters feel that they have to bring a sense of balance and perspective to the debate the environmental movement could easily lack.

Tradeoff Between Economy and Environment

Voters overall reject the suggestion of a choice between the economy and environment. While they realize jobs are important, they also understand that a healthy economy depends on a healthy environment. Voters are looking for a solution that protects the environment and jobs. They want planning and good long term management, which they believe will produce the most jobs in the long run and provide for all of our survival.

By a margin of 67 to 28 percent, voters oppose exempting corporations from some environmental regulations, even if the corporation increases the number of jobs in their area. By a margin of 54 to 25 percent, voters say when they hear about a local industry being hurt by laws protecting a bird, plant, or animal, they are usually more supportive of protecting wildlife than protecting businesses and jobs. Similarly, by a margin of 52 to 36 percent overall, voters favor protecting endangered species of wildlife even if it means losing jobs. (Note that in impacted areas, voters are more willing to split on their sympathies with 37 percent for wildlife over 33 percent for jobs, and lean toward opposing the endangered species act 42 to 48 percent.)

Voters clearly want moderation and a balanced approach which gives them both a strong economy and a strong environment. In the end the side that wins the balance argument will win this debate.

The Message

The strongest and most intense argument for saving the old growth forests combines balance, our national heritage, special trees, and for our childrens' sake. The coalition wants to save the old growth forests, America's "rainforests," and part of our national heritage. We are not talking about saving every tree in the forest but unique old trees that are part of our national heritage and fast disappearing. Ninety five percent of these trees are gone now, and we need to preserve the remaining for our children just as we have preserved the Grand Canyon and Yosemite Park. That statistic has enormous power and saliency in this debate.

To win, the coalition needs to emphasize that it is presenting voters with a modest, moderate plan that promises to preserve unique forests for future generations without destroying the economy. Several other messages

reinforce the coalition's position and help build majority support -- providing for future generations, responsibility to their children, and national heritage -- but they should remain secondary to establishing the overall message of moderation, which will ultimately win a contested debate.

The coalition must prevent the opposition from convincing voters it represents moderation. The timber industry's strongest message describes a balanced approach that sets aside land for wilderness but also fulfills the need for wood products. This argument provides the opposition with a 38 percent advantage and is particularly powerful among voters in the Pacific Northwest (53 percent advantage) and more traditional voters who are vulnerable to the loss of timber jobs: blue collar workers (48 percent advantage), women with less than a college education (47 percent), younger voters with less than a college education (50 percent) and homemakers (47 percent). This message also appeals to younger women, who give it a 49 percent advantage. This argument is particularly powerful -- 70 percent overall, 81 percent in impacted areas -- when it comes first in the debate. When the opposition shows a human face, they make a strong, emotional appeal to voters.

Seeking Balance

When voters are confronted with the simple choice between reducing the harvest of old growth forests or protecting jobs, they overwhelmingly support reducing the harvest (75 to 15 percent). But this advantage dissipates when voters are confronted with hard choices. They respond most strongly to the moderate argument that we do not need to protect every tree, but instead pursue a balanced approach that preserves forests for our children and jobs for families. This proposal addresses their three concerns: moderation, balance, and a plan. In fact, some of the strongest supporters of preservation shift to this balanced argument, including homemakers (53 percent support), college educated voters (51 percent), and voters under 30 (50 percent).

Voters like the idea of replanting trees, which seems to be a moderate solution to the choice between jobs and forests. Although they question the timber industry's motives, voters are looking for a solution that involves all parties in the debate. Given the choice of preserving publicly owned forests or cutting and replanting them, only 43 percent of voters chose preservation (39 percent chose replanting).

Core of Support

Voters most committed to preservation tend to be younger voters with more education and women. Women from a wide variety of demographic groups support preservation: 48 percent of homemakers, 46 percent of women under 50, 50 percent of college educated women, and 46 percent of Republican women. Younger and more upscale voters, groups who are traditionally more environmentally sensitive and less threatened by the economic fallout of environmental protection, also tend to support preservation of forests. They include voters under 30 (48 percent support), college educated voters (47 percent), professionals (49 percent), and suburban voters (46 percent).

Voters who have heard or read something about the forests are more likely than average to support preservation (46 percent, compared to 43 percent of voters overall). Voters who continue to support preservation over cutting and replanting, core supporters, include working women (52 percent), older women (52 percent), dual career households (53 percent), and voters in the South (58 percent).

Those voters who are often on the front lines of the environment versus jobs debate -- men, blue collar voters, seniors, and rural voters -- are most likely to support cutting and replanting and are the strongest opponents. Equally important, voters in the Northwest (Washington, Oregon and Northern California), the region most directly affected by this issue, are most likely to support cutting and replanting (50 percent).

Winning the Debate

The coalition needs to convince voters, increasingly concerned about their economic problems, of the immediacy and importance of preservation. The coalition must compete on the balance argument. We are not talking about every tree in the forest but about very unique trees, an irreplaceable part of America's national heritage.

The coalition must compete with the timber companies to win this debate, but it is in a strong position to do so and win. Even after hearing arguments from both sides, overall 88 percent of voters supported protecting the remaining old-growth forest with 50 percent strong supporters. It appears

that the voters became convinced that something important really was at stake when they heard the level of intense debate on both sides of the argument.

Methodology:

Preliminary results were a result of four focus groups conducted September 17 and 18, in Fayetteville, North Carolina, and St. Charles County, Missouri. The groups were conducted separating men and women and blue collar and white collar voters. The groups of ten people each, were likely general election swing voters, distributed across the spectrum of party identification but excluding strong Democrats and strong Republicans, age 30 to 55, and excluding anyone who had a family member in the media or in timber industry, in any environmental branch of government, or active in an environmental group.

The focus groups were followed by a survey which was conducted by phone using professional interviewers. The survey reached 873 adults, 18 years or older, who are registered to vote in the United States. There was an oversample of 73 voters in the states of Washington and Oregon and in the counties of Northern California. Interviewed respondents indicated they were registered to vote, would vote in the 1992 general election for president. The survey was conducted between November 20-24, 1991. Respondents were selected using a list of randomly generated phone numbers and stratified by state. Each state was represented in the sample in proportion to its contribution to the 1988 Presidential election. Quotas were drawn in the same proportion. Weights were applied to ensure an accurate distribution of age groups by party registration.

SAT TALKING POINTS

WHAT IS THE SAT?

The Scientific Analysis Team (SAT) was commissioned by the Chief of the Forest Service on July 30, 1992 to examine several issues related to Judge Dwyer's decision and the environmental impact statement (EIS) on management of the northern spotted owl. Information from this effort will be incorporated into the supplemental EIS that the Forest Service is preparing under court direction.

WHAT DID THE SAT ANALYZE?

1. Would decisions by the Endangered Species Committee to allow 13 Bureau of Land Management timber sales change owl viability ratings assigned to alternatives in the FIES?
2. Would new biological information change the owl's viability ratings in the FEIS?
3. Would implementation of the selected alternative affect the viability of other old-growth related species identified in the FEIS?

WHAT DOES THE SAT REPORT DO?

The report does not represent any official position of the Forest Service.

It is a biological analysis of old growth ecosystem components within the range of the Northern spotted owl.

The biological analyses of specific alternatives in the report represent the collective judgment of a panel of distinguished Forest Service biologists and scientists.

The report presents one set of management proposals, based upon various scientific, legal, political and administrative assumptions, that the scientific panel believes would raise the viability rating to 'high' for the northern spotted owl and all other native vertebrate species associated with late-successional (i.e. old growth) forests. Viability is defined in 36 CFR 219.19 as "a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area."

Forest conference participants need to be aware that other management proposals can be developed. However, if the option provides less protection to these old growth associated species it may lower viability ratings. There are certainly many options available to resolve the Northwest old growth issue, but options that provide for more timber harvest also increase the risk for associated species. Finding the right balance will be difficult.

The team report emphasizes the need for full interagency cooperation in a unified strategy for old growth associated species.

The Forest Service has not prepared any analysis of the impacts on timber harvest or jobs if the recommendations in the SAT report are implemented.

Although the report contains new scientific information on species not analyzed before, the findings are not much different than those presented by the Scientific Panel on Late Successional Forest Ecosystems (Gang of Four).

SUMMARY OF SCIENTIFIC ANALYSIS TEAM REPORT (SAT)

March 18, 1993

Background

On May 28, 1992, Judge Dwyer directed the Forest Service to address the following deficiencies he identified in the final spotted owl environmental impact statement (FEIS) and Record of Decision:

1. Discuss the effects of the exemption of 13 BLM timber sales from Section 7 of the Endangered Species Act;
2. Analyze and discuss the implications of new information and analyses of demographic trends of spotted owl viability ratings;
3. Evaluate whether implementation of any of the FEIS alternatives would cause the extirpation or extinction of other species associated with old growth.

The Chief of the Forest Service established a scientific team, directed by Jack Ward Thomas, to conduct a technical review of these issues.

Scientific Analysis Team (SAT) Report Highlights

A. BLM Habitat Management Issues

1. Exemption of 13 BLM Timber Sales

The SAT found that exemption of the 13 timber sales did not change the overall viability ratings for the northern spotted owl.

2. Preferred Alternatives in BLM Draft Resource Plans

The SAT analyzed BLM's draft resource plans to determine their effects on the viability of the northern spotted owl. The SAT found that these plans were not consistent with the Forest Service strategy, and would not provide a high viability rating for the northern spotted owl. While the team viewed these plans as an improvement over the existing BLM plans, they still do not provide adequate protection for the owl.

B. New Information on Northern Spotted Owl

The SAT conducted a comprehensive review of new information on the owl since 1991. They looked at information on owl populations, demographics, and dispersal of the northern spotted owl and hybridization with barred owls. The SAT concluded that the new owl information does not warrant more stringent owl protection measures other than those recommended to compensate for BLM spotted owl management.

C. Analysis of Other Species Associated with Old Growth Forests

The FEIS for the northern spotted owl identified 32 species of vertebrates that are associated with old growth forests. The SAT refined the basis for identifying these species and expanded the evaluation to include 667 species that are closely associated with old growth forests. These species included terrestrial vertebrates, fish stocks, invertebrates, vascular and non-vascular plants, and fungi. Of the 667 total species, 387 species were identified as needing additional mitigation measures. The SAT then developed a set of guidelines that, when implemented, would raise the viability ratings of all species to a high rating over a 50 year time period.

1. Mitigation for Watershed Protection Areas

The Watershed Protection Area (WPA), as defined by the SAT, contains riparian vegetation, floodplains, inner gorges, aquatic ecosystems, and associated high and extreme landslide hazard areas. Within the WPA, scheduled timber harvest is essentially prohibited unless a site specific analysis indicates such activity would help meet riparian management objectives. The SAT includes specific standards and guidelines for roads and facilities, grazing, recreation, minerals, fire/fuels, and lands and hydropower development. Implementation of these mitigation measures would protect the 112 fish stocks at risk and other riparian associated species.

2. Mitigation for Marbled Murrelets

The marbled murrelet has been listed as a threatened species under the Endangered Species Act. The SAT recommended interim measures for protecting the marbled murrelet while a management plan is being developed by the Fish and Wildlife Service and the FS.

3. Mitigation for Rare and Locally Endemic Species

The SAT found 16 species of nonvascular plants and 2 species of salamanders that are not protected under the preceding mitigation measures. They recommended additional measures for this group by species that generally depend on surveys for occurrence of the species and protection on a site-specific basis.

4. Effectiveness of Mitigation Measures

The SAT concludes that if the Forest Service adopts the entire mitigation package that there is "a high likelihood of continued existence of well distributed plant, fish, and wildlife populations associated with old growth forests."

D. Successful Implementation of Strategy

The SAT emphasizes that their strategy for protection of the owl and other old growth species can only work if the complete package of mitigation measures is adopted.

E. SAT Strategy Affects on Ongoing Activities

The SAT recognized that the Forest Service has many ongoing activities. The SAT recommends that activities that do not involve current contracts should be modified to be consistent with the SAT standards and guidelines. Ongoing activities that involve contractual or other binding agreements should be assessed to determine their compatibility with the SAT standards and guidelines. The SAT states "where they conflict, consideration should be given to cancellation". In other words, this could mean a cancellation of contract and the associated expenses to the federal government. With respect to ongoing timber sales, the SAT generally does not believe timber sales already under contract need to be cancelled unless they are likely to jeopardize a Federally listed species. Consultation between the Forest Service and Fish and Wildlife Service will provide a comprehensive evaluation of any ongoing timber sale activity. The SAT acknowledges that there is minimal timber sale activity in owl forests because of court injunctions.

F. Adaptive Management Process

The SAT recognizes that there is an ongoing need to incorporate new information on the owl and other old growth species into forest plans. If new information warrants, standards and guidelines will need to be changed. The SAT provides a 13 step process that can be used to incorporate new information. This is similar to the process the Fish and Wildlife Service uses in the northern spotted owl recovery plan.

G. Interagency Coordination

The SAT recommends that a unified and coordinated management strategy should be developed by state and federal agencies for old growth forests. The SAT recognizes that it is not just the owl that needs protection, but the entire old growth forest ecosystem.

\elevenpt(\sl The Scientific Analysis Team Report)

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CHAPTER 1

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Executive Summary

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THE SCIENTIFIC ANALYSIS TEAM

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The Scientific Analysis Team was formed by the Chief of the Forest Service to respond to U.S. District Court Judge William L. Dwyer's questions regarding the Forest Service's Final Environmental Impact Statement on Management for the Northern Spotted Owl in the National Forests (USDA 1992)(hereafter referred to as the Final Environmental Impact Statement). Jack Ward Thomas, team leader, was assisted by a core team of 9 scientists and 15 associate team members and technical support staff.

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Historical Perspective on the Issue of Management of Late-Successional Forests

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The chronology of events indicates increasing philosophical, scientific, legal, and societal concerns regarding conservation of the northern spotted owl (Strix occidentalis caurina). These events surround the larger issue of retaining biological diversity across the landscape. Federal courts compel that the Forest Service to comply with both the Endangered Species Act and the National Forest Management Act. A mixture of laws, regulations, case law, and pronouncements by politicians and agency leaders have produced a de facto policy for management of National Forests.

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Assumptions Made in the Forest Service's Final Environmental Impact Statement

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The Final Environmental Impact Statement contained assumptions regarding management of northern spotted owl habitat by the Bureau of Land Management. One assumption was that the Bureau of Land Management would adopt a forest management strategy for northern spotted owl habitat equal or superior to the Interagency Scientific Committee's Conservation Strategy. Another assumption was that formal consultation between the Bureau of Land Management and the Fish and Wildlife Service under Section 7 of the Endangered Species Act would result in a de facto management strategy at least equal to the Interagency Scientific Committee's Conservation Strategy.

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Questions to Be Answered by the Scientific Analysis Team

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The Scientific Analysis Team evaluated data and information necessary to answer the following questions.

1. Does exemption of 13 Bureau of Land Management timber sales from "jeopardy" opinions necessitate changes in viability assessments in the Forest Service's Final Environmental Impact Statement?

a. Exemption of 13 Timber Sales Viewed as a One-Time Action

This action would cause a slightly increased risk to spotted owl viability across its range. However, no change to the "high" viability assessment presented in the Final Environmental Impact Statement was warranted. Therefore, mitigation measures for the Final Environmental Impact Statement's preferred alternative were not required.

b. Exemption of 13 Timber Sales With Compliance Thereafter With Current Approved Resource Management Plans

This strategy would change the overall viability rating for the preferred alternative of the Final Environmental Impact Statement from "high" to "low". An addition of 1,134,000 acres to Habitat Conservation Areas on National Forests in Oregon was required to attain an overall "high" viability rating for the preferred alternative. Implementation of such a strategy is unlikely.

c. Adoption of the Bureau of Land Management's Preferred Alternative in the Draft Resource Management Plans

Adoption of the Bureau of Land Management's preferred alternatives is the likely future management strategy for the Bureau of Land Management in Oregon. Adoption of the preferred alternatives in these plans would change the overall viability rating for the preferred alternative under the Forest Service's Final Environmental Impact Statement from "high" to "medium". An addition of about 418,000 acres to Habitat Conservation Areas on National Forests in Oregon was required to attain an overall "high" viability rating for the preferred alternative of the Final Environmental Impact Statement.

2. Does new information necessitate changes in management proposed in the Forest Service's Final Environmental Impact Statement?

A review of new information on the biology of the northern spotted owl, including information on the demographics of the owl, dispersal, hybridization with the barred owl, population density, and correlations between population and habitat trends, suggests no change in the overall "high" viability rating for the Final Environmental Impact Statement preferred alternative if the Forest Service implements the Interagency Scientific Committee's Conservation Strategy (or additional mitigation measures to compensate for management by the Bureau of Land Management, if required).

3. What are the risks to other species associated with late-successional forests? What are appropriate mitigation measures?

The Forest Service's Final Environmental Impact Statement identified 32 species of vertebrates as being closely associated with late-successional old-growth forests. The Scientific Analysis Team refined the basis for identifying these species and expanded the evaluation to include 667 species that are closely associated with old-growth forests. These species included terrestrial vertebrates, fish stocks, invertebrates, vascular and nonvascular plants, and fungi. Of the 667 total species, 387 species were identified as likely being at risk and needing mitigation measures following implementation of the Forest Service's preferred alternative.

The Scientific Analysis Team developed a six-part mitigation strategy to provide habitat conditions that would contribute to long-term viability of species closely associated with old-growth forests within the range of the northern spotted owl. The team stressed a note of caution because analysis for many species was qualitative (i.e., professional judgement based upon evaluation of scientific data). The mitigation steps include:

Application of standards and guidelines from existing Land and Resource Management Plans and Final Environmental Impact Statement Alternative B (or recommended additions to Habitat Conservation Areas on National Forests to compensate for management by the Bureau of Land Management, if appropriate); habitat management for at-risk fish species and stocks; conservation of nesting habitat for the marbled murrelet; protection of habitat for rare and locally endemic species; and special guidelines to protect habitat of other species in the upland forest matrix. A total of 185 species were identified (including 149 species of invertebrates) for which so little is known that assessment of risk to these species was not possible.

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Requirements for Implementation of Mitigation Measures for Species Associated With Old-Growth Forests

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The six mitigation steps are additive; each step assumes that mitigation activities apply for all species in the previous step. Many additional recommendations are presented that address implementation of the team's standards and guidelines, as well as those of the Interagency Scientific Committee's Conservation Strategy or the Recovery Plan for the Northern Spotted Owl; ongoing or planned activities; development of policy, and oversight and adaptive management processes; strengthening of interagency cooperation; monitoring; and research.

\twelvept

Management Options Other Than Those Suggested by the Scientific Analysis Team

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The Scientific Analysis Team's effort most closely resembles Alternative 10, Option A, of the Scientific Panel on Late-Successional Forest Ecosystem's report Alternatives for Management of Late-Successional Forests of the Pacific Northwest, excluding the Oregon Coast Range. Alternative 14, Option A, is similar to the cumulative situation described by the Scientific Analysis Team

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for Federal lands in the Oregon Coast Range. Although the Scientific Panel's report provides many options for management of late-successional old-growth forests, only a limited subset (4 of 14) of alternatives in the report provides a "high" probability of success for several factors of concern. The factors included a functional network of late-successional old-growth forests, viable spotted owl populations, nesting habitat for marbled murrelet, habitat of other species associated with late-successional old-growth forests, and habitat for sensitive fish species or stocks.

Because the Scientific Panel's report was prepared without detailed information on species associated with late-successional old-growth forests, the Scientific Analysis Team recommended that the mitigation measures for endemic, localized, or very specialized species developed by the Scientific Analysis Team be incorporated into options from the Scientific Panel's report. The Scientific Analysis Team recommends using the Scientific Panel's report when options are desired to exceed mitigation measures developed by the Scientific Analysis Team.

\twelvept

Alternatives for Management of Habitat for At-Risk Fish Species and Stocks.

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If land managers seek options for habitat management for at-risk fish species and stocks other than those described by the Scientific Analysis Team, the team suggests careful consideration of all assessments and management alternatives that provide a "high" level of probability of success in protecting spawning and rearing habitat.

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Potential Restrictions on Manager's Decision Space.

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Managers must view the Scientific Analysis Team's recommendations as an opportunity to achieve a resource objective rather than as a constraint. The objective includes protection of threatened or endangered species and biodiversity through "ecosystem management."

MEMORANDUM

TO: Ricki Seidman
Rahm Emanuel
Regina Montoya
Marla Romash

FROM: Katie McGinty

SUBJECT: REVIEW OF THE SCIENTIFIC ANALYSIS TEAM (SAT) REPORT

DATE: 3/19/93 11:30 A.M.

This is the second and final draft of a review of the Scientific Analysis Team Report. Please call 456-6224 if you have any questions.

REVIEW OF THE SCIENTIFIC ANALYSIS TEAM (SAT) REPORT

In 1987 a lawsuit was brought against the Bush Administration's Department of Interior for failing to heed the advice of their scientists who recommended that the old-growth dependent Northern Spotted Owl be listed as a threatened species under the Endangered Species Act. This law suit started a long chain of legal, congressional and administrative actions which have led to the formation of the Scientific Assessment Team (SAT). The SAT is a team of 24 scientists formed in July, 1992 by the Chief of the Forest Service to respond to questions U.S. District Judge William Dwyer raised regarding the Forest Service's Final Environmental Impact Statement on Management for the Northern Spotted Owl in the National Forests.

There are two outstanding lawsuits that have bearing on policy in these areas:

(1) In 1991 Judge Dwyer placed an injunction on the sale of any national forest timber within spotted owl and associated old growth related species habitat until the Forest Service developed a plan that would protect such species.

(2) In 1992 Judge Frye placed an injunction on 13 timber sales that the Bush Administration "exempted" from the Endangered Species Act. In other words, the Bush Administration's action to "exempt" these sales meant that this timber could be cut even though it was in Spotted Owl habitat.

When the Forest Service responded in 1992 with an owl protection plan, Judge Dwyer found it to be insufficient and asked the Forest Service to answer three questions and present a revised plan by August 19, 1993. To answer these questions, the Forest Service asked Dr. Jack Ward Thomas to chair Scientific Assessment Team (SAT). Dr. Thomas is a well known Forest Service scientist who has completed a number of highly acclaimed -- and controversial -- reports on spotted owl and old growth issues.

WHAT DID THE SAT ANALYZE?

Judge Dwyer asked the Forest Service to address the following three questions. Highly condensed responses follow.

1. Would decisions by the Endangered Species Committee to allow the 13 Bureau of Land Management timber sales change owl viability ratings assigned to alternatives in the Final Environmental Impact Statement (FEIS)? (In other words, would the Bush Administration's decision to "exempt" these 13 timber sales from the Endangered Species Act, and in so doing, allowing the sales to proceed, have an impact on the viability of the Spotted Owl.)

Response: A one time exemption of the 13 sales would have minimal impact on spotted owls or the proposed Forest Service final plan.

2. Would new biological information change the owl's viability ratings in the FEIS?

Response: New information since the release of the final plan does not necessitate a change in the plan regarding protection of the northern spotted owl.

3. Would implementation of the selected alternative affect the viability of other old-growth related species identified in the FEIS?

Response: In addition to the owl, 482 old-growth forest related species are at risk. Mitigation measures to protect them will be needed to assure long-term viability.

The scientists have concluded that if viable populations of the species are to be maintained, significant stands of old growth forests will have to be retained rather than harvested. This will require significantly reduced harvest levels on Federal lands. The report does not specify sustainable harvest levels nor total acreage of protected areas. Nevertheless, if the Administration decides to follow the best available science on conservation of biodiversity on Federal lands in the Pacific Northwest and Northern California, the Forest Service and Bureau of Land Management will be forced to reduce harvest levels on Federal lands by 75% to 85% from historic levels. (This represents a total regional reduction of 25% to 30% when state and private resources are accounted for.)

DISTINGUISHING THE SCIENCE FROM POLICY

It is critical to distinguish this report from policy. This is a scientific report, not a policy statement. The forest conference represents a step toward a comprehensive, long term and balance policy that recognizes the importance of the timber industry to the economy and jobs in the region as well as the importance of America's precious old growth forests that are part of our national heritage.

The report does not represent any official position of the Forest Service.

It is a biological analysis of old growth ecosystem components within the range of the northern spotted owl.

The report was required by the court in response to actions taken by the Bush Administration; it does not reflect policy determination of the Clinton Administration.

The report presents one set of management proposals, based upon various scientific, legal, political and administrative assumptions, that the scientific panel believes would raise the viability rating to "high" for the northern spotted owl and all other native vertebrate species associated with late-successional (i.e. old growth) forests.

There are certainly many other options available to resolve the Northwest old growth issue. No policy decisions have been made by the Clinton Administration.

The Forest Service has not prepared any analysis of the impacts on timber harvest or jobs if the recommendations in the SAT report are implemented.

CHAPTER 1

Introduction, Synthesis of the Scientific Analysis Team Report, and Observations

THE ASSIGNMENT

The Scientific Analysis Team - Personnel and Assignments

The Scientific Analysis Team was formed by the Chief of the Forest Service to respond to questions and concerns expressed by U.S. District Court Judge William L. Dwyer regarding the Forest Service's Final Environmental Impact Statement on Management for the Northern Spotted Owl in the National Forests (USDA 1992)(hereafter referred to as the Final Environmental Impact Statement). The following persons were assigned to the team.

<u>Name</u>	<u>Title</u>
Jack Ward Thomas, Ph.D	Team Leader and Chief Research Wildlife Biologist, Forest Service, Pacific Northwest Research Station, Forestry and Range Sciences Laboratory, La Grande, Oregon
Martin G. Raphael, Ph.D	Associate Team Leader, Principal Research Wildlife Biologist, Forest Service, Pacific Northwest Research Station, Forestry Sciences Laboratory, Olympia, Washington
Eric D. Forsman, Ph.D	Research Wildlife Biologist, Forest Service, Pacific Northwest Research Station, Forestry Sciences Laboratory, Corvallis, Oregon
A. Grant Gunderson	Threatened, Endangered, and Sensitive Species Program Manager, Forest Service, Pacific Northwest Region, Portland, Oregon
Richard S. Holthausen	National Wildlife Ecologist, Forest Service, Pacific Northwest Research Station, Forestry Sciences Laboratory, Corvallis, Oregon
Bruce G. Marcot, Ph.D	Wildlife Ecologist, Forest Service, Pacific Northwest Research Station, Spotted Owl Management, Research, Development and Application Program, Portland, Oregon

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Gordon H. Reeves, Ph.D	Research Fish Biologist, Forest Service, Pacific Northwest Research Station, Forestry Sciences Laboratory, Corvallis, Oregon
James R. Sedell, Ph.D	Principal Research Ecologist, Forest Service, Pacific Northwest Research Station, Forestry Sciences Laboratory, Corvallis, Oregon
David M. Solis	Spotted Owl Program Manager, Forest Service, Pacific Southwest Region, San Francisco, California

In addition, the team leaders recruited one additional team member who had done extensive work with the Northern Spotted Owl Recovery Team (USDI) on the subject of species of plants and animals that are likely associated with late-successional forests. This was invaluable experience and a proved to be great asset to the Scientific Analysis Team. He is:

Robert G. Anthony, Ph.D	Assistant Leader, Oregon Cooperative Wildlife Research Unit, Fish and Wildlife Service (USDI), Corvallis, Oregon
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In addition, the Scientific Analysis Team recruited 13 experts to assist in the completion of the work assigned. These persons contributed so significantly to the Scientific Analysis Team effort that we considered them as Associate Scientific Analysis Team Members. They are as follows:

Scientific Analysis Team: Associate Team Members

Bruce Bingham, Ph.D	Research Plant Ecologist, Forest Service, Pacific Southwest Forest and Range Experiment Station, Redwood Sciences Laboratory, Arcata, California
Amedee Brickey	District Wildlife Biologist, Forest Service, Sierra National Forest, Pine Ridge Ranger District, Shaver Lake, California
Gordon E. Grant, Ph.D	Research Hydrologist, Forest Service, Pacific Northwest Research Station, Forestry Sciences Laboratory, Corvallis, Oregon
Pat Greenlee	Threatened and Endangered Species Coordinator, Forest Service, Willamette National Forest, Eugene, Oregon
R. Dennis Harr, Ph.D	Principal Research Hydrologist, Forest Service, Pacific Northwest Research Station, Forestry Sciences Laboratory, Seattle, Washington
Mauragrace Healey	Writer/Editor, Forest Service, National Forest System, Northern Spotted Owl Environmental Impact Statement Team, Portland, Oregon
Barbara Hill	Zone Wildlife Biologist, Forest Service, Gifford Pinchot National Forest, Amboy, Washington

Introduction

Robin Leshner	Botanist, Forest Service, Mount Baker-Snoqualmie National Forest, Seattle, Washington
Kadonna Pennell	Administrative Officer, Forest Service, National Forest System, Northern Spotted Owl Environmental Impact Statement Team, Portland, Oregon
Francis Schmechel	Zone Wildlife Biologist, Forest Service, Gifford Pinchot National Forest, Vancouver, Washington
Marilyn Stoll	Wildlife Biologist, Forest Service, Olympic National Forest, Olympia, Washington
James Valenti	Computer Assistant, Forest Service, Olympic National Forest, Olympia, Washington
John A. Young	Geographer, Forest Service, Pacific Northwest Research Station, Forestry Sciences Laboratory, Olympia, Washington
Joan Ziegler	Forest Botanist, Forest Service, Olympic National Forest, Olympia, Washington
Robert R. Ziemer, Ph.D	Principal Research Hydrologist, Forest Service, Pacific Southwest Forest and Range Experiment Station, Redwood Sciences Laboratory, Arcata, California

While we consider this report a joint effort and collectively stand behind the entire report, the team members were given individual assignments and were primarily responsible for developing various sections of this report. These assignments were as follows:

<u>Section of the Report</u>	<u>Title</u>	<u>Team Member Assigned</u>
Chapter 1	Executive Summary	Solis
Chapter 2	Introduction, Synthesis of the Scientific Analysis Team Report, and Observations	Thomas
Chapter 3	New Information on the Northern Spotted Owl	Forsman and Marcot
Chapter 4	Risk Analysis of Species in Old-Growth Forests of the Pacific Northwest: Viability Assessment and Mitigation Measures in National Forests	Marcot, Raphael Anthony, and Holthausen

The Scientific Analysis Team Report

Appendix 4-K	Strategy for Management of At-Risk Fish Species and Stocks in National Forests Within the Range of the Northern Spotted Owl	Sedell and Reeves
Chapter 5	Requirements for Successful Implementation	Raphael and Gunderson

The Scientific Analysis Team was assigned three distinct and very different tasks to accomplish. Although these tasks are all related in the sense that all contribute to strengthening the information to be used in the Forest Service's Final Environmental Impact Statement, they do not produce an integrated whole. The approach taken by the Scientific Analysis Team was to develop chapters responsive to the particular assigned tasks. Each chapter, therefore, stands alone. There was, and could be, no "flow" between chapters.

The report covers complex natural resource issues, many of which have a unique "jargon". There are also many technical terms which are associated with the general subject area. We have attempted to avoid the jargon and limit our use of the technical terms. A glossary has been included to assist the reader. Common names of the species we address have been used in the text except where none were available. For a complete listing of the common and scientific names of the species see the List of Common and Scientific Names.

It must be noted that in fulfilling our tasks we have reached many conclusions. We have based these conclusions and recommendations on conversations with experts, extant literature, and professional judgement. All conclusions in this report are those of the Scientific Analysis Team alone, unless otherwise noted.

An Historical Perspective on the Issue of Management of Late-Successional Forests

To fully comprehend the situation that has led, seemingly inexorably, to the commissioning of the Scientific Analysis Team to address the specific questions described below, it may be important to examine the history of how land managers can deal with threatened or endangered species, the welfare of other terrestrial species associated with late-successional forests, and the maintenance of habitat for sensitive fish species or stocks or both. This historical perspective is presented in detail in Appendix 2-A.

This chronology of events can be logically interpreted as increasing philosophical, scientific, legal, legislative, and societal concern with retaining biodiversity through a process of managing land and resources. These concerns are related to retaining the processes and functions of ecosystems. If so, the overriding objective of land management (particularly that of the National Forests) can now be described as the preservation of biodiversity.

It is difficult not to accept this as the overriding objective if the regulations issued pursuant to National Forest Management Act of 1976 that calls for maintenance of viable populations of native and desired non-native vertebrates well distributed within the planning areas (interpreted by the Scientific Analysis Team as National Forests within the range of the northern spotted owl) are to be taken seriously. And the Federal courts have said that the Act is to be so considered.

The consequence of the Forest Service not meeting that objective is that not only will the agency be in violation of the National Forest Management Act, the species in question will likely be listed as “threatened” or “endangered” under the mandates of the Endangered Species Act of 1973 as amended. It may be increasingly significant to Forest Service managers that the Endangered Species Act declares its purpose to be the preservation of the ecosystems on which a threatened or endangered species depend.

ESA ↗

Eight revisions to the original 1973 Endangered Species Act have been enacted (two in 1976, 1977, 1978, 1979, 1982, 1984 and 1988). The most current (1988) version of that Act states, “The purpose of this Act is to provide a means whereby the ecosystem upon which endangered species and threatened species depend may be conserved...” This statement of purpose has been kept essentially intact through all seven revisions of the Act. This provision may become more significant to Federal land managers with increasing shifts toward “ecosystem management”. The Federal courts have not hesitated to force Federal agencies into compliance with those laws - even to the point of closing down commodity production from Federal lands, such as timber cutting in late-successional forests. Is it possible, then, that only after these objectives of providing for the viability of species, especially those considered threatened or endangered (which can be viewed in the context of “biodiversity” or “ecosystem management”), can the production of goods and services from these lands proceed.

This trend toward ecosystem management was seemingly further advanced by the recent declaration by Chief of the Forest Service, Dale Robertson, in late 1992. He stated that the Forest Service would, henceforth, practice “ecosystem management” on the National Forests.

These events seem, at least to us, to be evolving in the cauldron of a mixture of laws and regulations, case law, and pronouncements by political leaders and agency leaders into a *de facto* policy for management of National Forests. However, it is not for scientists to determine policy. The Scientific Analysis Team does feel that it is appropriate to point out what seems to be occurring, as this directly affects how scientists must interact with natural resource managers. Much of the increasing confusion and acrimony surrounding the management of National Forests could be reduced or resolved through a clear statement of policy - either through the process of law or by edict by persons in authority.

Consideration by the Scientific Analysis Team of other species that are likely associated with late-successional forests on National Forests within the range of the northern spotted owl demonstrates how complex ecosystem management can be. And, this is the consideration of but one stage of forest land development in but one part of the United States. In addition, such an assessment represents the first of many steps needed to facilitate a true understanding of ecosystem management by a land management agency.

This process may give scientists, land managers, the courts, and the public some appreciation for the complexity of “ecosystem management” whether undertaken one species at a time or as a whole. We applaud the concept of ecosystem management and recognize the boldness that is required to commit to such a dramatic change in the paradigm that presently guides natural resource management. It is likely that continued total reliance on a species-by-species approach to preserve biodiversity will fail because of inefficiency and economics, and the associated direct and opportunity costs (Thomas et al. 1990).

The Scientific Analysis Team Report

Questions to be Answered by the Scientific Analysis Team

The Scientific Analysis Team was formed by the Chief of the Forest Service to respond to concerns expressed by U.S. District Court Judge William L. Dwyer on July 30, 1992, regarding the Forest Service's 1992 Final Environmental Impact Statement on Management for the Northern Spotted Owl in the National Forests (USDA 1992). The questions addressed to the Forest Service by the judge that were assigned to the Scientific Analysis Team for response were:

1. Does the May 15, 1992, decision by the Endangered Species Committee to allow cutting of 13 timber sales prepared by the Bureau of Land Management and judged by the Fish and Wildlife Service to cause "jeopardy" for the northern spotted owl necessitate changes in spotted owl viability assessments of the alternatives in the Final Environmental Impact Statement? If there are changes in the viability assessments, what mitigation options are recommended?
2. Does any information that has become available since the publication of the Forest Service's Final Environmental Impact Statement necessitate revision of the standards and guidelines of the selected alternative in the Final Environmental Impact Statement or change the probabilities of maintaining viable populations of the northern spotted owl that were assigned to the alternatives in the Final Environmental Impact Statement? If a revision of the standards and guidelines of the selected alternative is warranted, what are the recommendations for mitigation measures? These questions are addressed in Chapter 3.
3. Would the Forest Service's implementation of the selected alternative in the Final Environmental Impact Statement (the Interagency Scientific Committee's Conservation Strategy) lead to the extirpation in Forest Service planning areas (National Forests) of any of the 32 species identified in the Final Environmental Impact Statement as being closely associated with late-successional and old-growth forests? In addition, the Chief of the Forest asked us that, if that is so, what mitigation options are recommended to assure that extirpation does not occur? These questions are addressed in Chapter 4.

Expansion of the Number of Species Closely Associated with Old-Growth Forests to be Assessed

Upon careful review of this assignment, it became apparent to the Scientific Analysis Team that additional assessments were required to fully respond to the question concerning species closely associated with late-successional and old-growth forests.

Instructions from Judge Dwyer were to determine if the adoption of the Interagency Scientific Committee's Conservation Strategy by the Forest Service would cause extirpation, by planning area (which was interpreted by the Scientific Analysis Team as National Forests within the range of the northern spotted owl), of any of 32 species identified in the Final Environmental Impact Statement as closely associated with late-successional or old-growth forests. During early stages of our analysis it became obvious to us that there were numerous other are likely associated with such forests (USDI 1992). Accordingly, it seemed logical to address the concern for other species (vertebrates, invertebrates, vascular, and nonvascular). Therefore, an assessment of the status of a much broader array of species thought to

be associated with old-growth forests was conducted in concert with members of the Northern Spotted Owl Recovery Team.

Peer Review of the Scientific Analysis Team's Report

The Deputy Chief of the Forest Service's National Forest System (James Overbay, pers. comm.) directed that the Scientific Analysis Team's report be submitted for peer review. The Scientific Analysis Team welcomed that instruction. Further, the Scientific Analysis Team concluded that the peer reviewers should be selected by other fully qualified persons outside the Scientific Analysis Team. Therefore, six professional societies were contacted to provide names of qualified reviewers. These reviewers were contacted by the Scientific Analysis Team's Administrative Officer in the order that the names were listed until a reviewer was found that was available and willing to conduct the review under the prescribed time lines (response within three weeks). There was no contact between any member of the Scientific Analysis Team and the reviewers until after their reviews were submitted to the Scientific Analysis Team. The Scientific Analysis Team leader sent letters of instruction to the peer reviewers and did provide a missing appendix to the reviewers after the reviews were complete with the solicitation of additional comments, if such seemed appropriate. No additional comments were received.

The organizations that provided names of qualified peer reviewers were: (1) American Fishery Society, (2) The Wildlife Society, (3) Society of American Foresters, (4) Society for Conservation Biology, (5) Ecological Society of America, and (6) American Ornithologists' Union.

The Scientific Analysis Team collectively scrutinized each peer review in detail and revised the final report to satisfy peer review comments. Detailed notes were kept to document the team's reactions and responses to the peer reviews. These peer reviews and details of our response to peer review comments are on file at the Pacific Northwest Regional Office of the Forest Service, Portland, Oregon.

RESULTS

A brief synopsis of the answers to the three questions is presented in this chapter. There is a full discussion of the latter two questions in Chapters 3 and 4.

Question 1 - Does Exemption of 13 Bureau of Land Management Timber Sales From the Requirements of the Endangered Species Act Necessitate Changes in Viability Assessments in the Forest Service's Final Environmental Impact Statement?

The Scientific Analysis Team conducted an in-depth analysis of the effects of the exemption decision on the viability of the alternatives in the Final Environmental Impact Statement. Three management scenarios were examined: ① exemption of the 13 sales viewed as a one-time action, (2) exemption of the 13 sales with compliance thereafter with current approved management plans, and (3) adoption of the Bureau of Land Management's preferred alternative in the Draft Resource Management Plans. This analysis took place between September 1992 and February 1993.

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In March 1993, the Bureau of Land Management issued a letter stating that [they would not harvest any of the 13 exempted timber sales]. A copy of this letter is included here as Appendix 2-B. In light of this new information, the question regarding the exemption of the 13 sales is moot, and a complete discussion of the analysis process is not included here. A copy of the report documenting the 13 sales analysis process and the proposed mitigation measures to compensate for less than high viability ratings is on file with the Northern Spotted Owl Environmental Impact Statement Team.

to change

Question 2 – Does New Information Necessitate Changes in Management Proposed in the Forest Service’s Final Environmental Impact Statement?

See Chapter 3. Since January 1992, a variety of new information has been released relative to the biology of the northern spotted owl, including new information on the demographics and population density of the owl, dispersal, and hybridization with the barred owl. We present summaries of new information that has been released since January 1992, including updated information for four of the five study areas described by David Anderson and Kenneth Burnham of the Fish and Wildlife Service. Implications of the new information are discussed relative to the selected alternative in the Final Environmental Impact Statement.

Demographic Studies - See Chapter 4. Between 1985 and 1987, researchers initiated five long-term demographic studies of spotted owls in Washington, Oregon, and northwestern California. These studies were designed to investigate demographic rates of spotted owls, including age-specific birth and death rates and population trends. Data from these five studies were analyzed in a workshop at Fort Collins, Colorado, in September 1991.

The Fort Collins workshop produced an analysis of each of five individual study areas as well as a “meta-analysis” in which data from all areas were examined in combination to determine any overall trends. A synopsis of the Fort Collins workshop was written by Anderson and Burnham and provided to the Northern Spotted Owl Recovery Team in November 1991 for inclusion in its Recovery Plan for the Northern Spotted Owl (USDI 1992).

The analysis done at the Fort Collins workshop indicated that populations of territorial spotted owl females on all five study areas were declining. Estimated rates of decline on the individual study areas ranged from 6 to 16 percent per year, with an overall average of approximately 10 percent per year.

The demographic meta-analysis performed at the Fort Collins workshop indicated that not only were populations declining on the individual study areas, but female survival rates were declining over time at an increasing rate. This was probably the most troubling finding from the Fort Collins workshop because an accelerated decline in survival rates could be indicative of a population that has passed some sort of demographic threshold and is rapidly proceeding to extirpation or extinction.

Since the results of the Fort Collins workshop were released, there has been considerable discussion within the scientific community concerning possible biases in the demographic data on which the assessment relied. The primary concern was that emigration of juveniles and adults might cause survival rates to be underestimated. In the analysis technique used, undetected emigrants are considered to be dead when, in fact, some may still be alive. To the extent that birds emigrate, survive, and go undetected, the models used in the assessment overestimate

recapture rates and underestimate survival. It is known that undetected emigration of juveniles and adults does occur, based on results of radio-telemetry studies.

Studies using radio-marking techniques of juvenile spotted owls in 1991-1992 indicated that 22, 44, and 45 percent of juveniles from the three study areas survived the first year of life, left the demographic study areas, and would not have been detected by banding alone had they not been wearing radio transmitters.

Although it is probable that some of these emigrants will be detected by conventional calling and banding techniques as they move around and acquire territories in future years, the high rates of first-year emigration from the demographic study areas do suggest that undetected emigration is causing a negative bias in juvenile survival estimates derived from banding data. Survival estimates based on the radio-marked samples of juveniles in the 1991-92 study were considerably higher than the average values estimated from demographic studies. Comparatively high survival of the radio-marked birds may reflect the reduction of bias caused by emigration, but could also be the result of a particularly mild fall, winter, and spring in 1991-92. We believe it will take several more years of study before essentially unbiased estimates of survival rates of juvenile spotted owls are available for all demographic study areas.

Although there is less evidence to indicate significant emigration by adult owls, there is a concern that demographic analyses can be biased by such emigration because estimates of population growth rates are most sensitive to changes in adult survival rates. If anything, emigration of adult owls will lead to underestimates of adult survival rates and a corresponding underestimate of the rate of change of population growth rate.

The parameter used to estimate age-specific birth rates at the Fort Collins workshop was fecundity (defined as the number of female young produced per year per territorial female). Estimates of fecundity from the demographic studies are believed to be reasonably accurate, although several sources of counteracting bias are possible.

The Scientific Analysis Team contacted research biologists working on the five demographic study areas from which the data was acquired that was examined by Anderson and Burnham at the Fort Collins workshop to see if they could update their individual demographic estimates with 1992 data. Researchers working on four of the five study areas provided updated estimates of survival and fecundity. Adding one more year of data resulted in only minor changes in estimates of average survival rates and fecundity. New estimates of population growth rates will be calculated from the 1992 data during 1993. Because our update of demographic rates on four of the five individual study areas indicates little change in survival and fecundity rates from the original Anderson and Burnham analysis, we do not anticipate that the revised population change estimates will differ appreciably affect the original results reported by Anderson and Burnham (1992).

Population Density Studies - An alternative method of evaluating population trends is to examine actual changes in the number of territorial owls per unit area over time. The Scientific Analysis Team summarized density estimates for 12 density study areas. An analysis of these data indicated that of 10 areas with three or more years of data, only two areas near Medford, Oregon, appeared to be undergoing significant declines. Crude densities (number per total area considered) were essentially stable on seven areas, and increasing on one area. A meta-analysis of the combined data set indicated that the populations were declining at a rate of 3.2 percent per year. Although this analysis was based on relatively short time periods (2 to 8 years) of data

The Scientific Analysis Team Report

collection, we concluded that there was little evidence of significant changes in crude density on most of the study areas.

Declines in Owl Populations Related to Declines in Habitat - An analysis of timber-cutting records on the five study areas indicated that spotted owl habitat on Federally administered lands was declining at 0.9 to 1.5 percent per year on Forest Service study areas and 1.3 to 3.1 percent per year on Bureau of Land Management study areas. Timber cutting records were not available for non-Federal (state and private) lands. Analysis of rates of habitat loss using Landsat data that covered all land ownerships indicated rates of habitat loss between 1.1 percent and 5.4 percent per year. Rates of habitat loss were lower than estimated rates of population decline from demographic studies and greater than rates of population decline based on changes in owl numbers on density study areas. The one exception was the Medford area where relatively high rates of decline based on changes in owl numbers matched high rates of decline in habitat estimated from Landsat analyses.

It is apparent to the Scientific Analysis Team that results from demographic analyses of data on territorial females and changes in owl density of territorial pairs suggest quite different relationships between habitat loss and population response. One method (demographic studies) suggests that territorial populations of owls are declining substantially faster than the rate of habitat loss. The other method (population density studies) indicates that populations of territorial owls are either stable or declining at about the same rate as habitat loss. It is not apparent, however, how floaters (non-territorial, non-breeding adult owls) may fill vacancies in the territorial populations.

Thresholds in the Metapopulation of Owls - After the release of the Anderson and Burnham (1992) report, some experienced scientists suggested that the declining survival rates of female spotted owls were indicative of a population that had dropped below a demographic threshold and was declining precipitously toward extinction. The Scientific Analysis Team concluded from an examination of all available data that it is highly unlikely the overall spotted owl population has fallen below such a demographic threshold. In fact, given the size of the population, the extent of the presently occupied range, stable fecundity rates, and the amount of habitat that still exists, we consider it highly unlikely that any thresholds have been passed with the possible exception of some subpopulations in highly isolated and heavily cutover areas, such as southwestern Washington.

Viability Ratings and Spatially Explicit Models - Viability ratings for spotted owl populations under the five alternatives in the Final Environmental Impact Statement were ranked using the seven criteria presented earlier. Subsequently, the Forest Service was criticized for not using more quantitative, spatially explicit models to rank alternatives presented in the Final Environmental Impact Statement. Although the Scientific Analysis Team agrees that the use of quantitative, spatially explicit models to examine alternatives is a good idea, there are several reasons why the Forest Service has not done so. We consider those reasons as valid.

First, at the time the Final Environmental Impact Statement was released, the only spatially explicit owl/habitat model that we were aware of was still in the development stage and not fully tested. Second, and more importantly, the use of a spatially explicit model requires detailed, spatially explicit maps of present and anticipated future habitat and proposed logging areas (i.e., areas of habitat loss). Although digital maps of old-growth and mature forest have been produced, to some extent and to varying degrees of accuracy, by several agencies and private organizations, maps of most age classes younger than old growth are incomplete or lacking,

making it difficult to use spatially explicit models to evaluate current, and especially future distribution of habitat of various kinds used by owls for dispersal, foraging, and nesting. Thus, use of a spatially explicit model at this point would involve many assumptions about the amount and distribution of habitat and harvest areas that are unsubstantiated by currently available data.

There has been considerable refinement of spatially explicit models designed to examine relationships between spotted owl populations and changes in habitat. Given that such models are available, the Scientific Analysis Team suggests that the Forest Service continue to acquire adequate Geographic Information System technology and develop maps of habitat and harvest alternatives that can be used to assess alternatives for the spotted owl and other species associated with late-successional forests. Whereas maps of old growth have been developed by the Forest Service and several other parties, these maps are based on different characteristics and are not generally compatible.

Hybridization Between Barred and Spotted Owls - Since 1989, crosses (hybrids) between barred owls and spotted owls have been confirmed at four widely separated locations within the range of the northern spotted owl. Although records of hybridization between barred owls and spotted owls are an interesting biological phenomenon, biologists do not know what the ultimate outcome will be. Hybridization is common in nature, having been recorded in about 10 percent of the nonmarine bird species in North America. In most species where it occurs, hybridization is an uncommon event; and thus has little effect on the parental species, that is, they still continue as distinct species.

The Scientific Analysis Team believes that hybridization between spotted and barred owls is rare because so few hybrids have been detected during the last 15 years, despite the fact that hundreds of observers have been conducting surveys for spotted owls. Nevertheless, the barred owl is rapidly extending its range into the range of the spotted owl, and the incidence of hybridization could possibly increase as the numbers of barred owls increase. We simply do not know what the outcome will be. Even in the absence of interbreeding, the barred owl may represent a threat to the spotted owl from either competition or displacement.

We conclude there is little the Forest Service or other forest management agencies can or should do to influence the eventual outcome of the extension of the barred owl range. It is not at all clear that this range extension is the result of forest management practices. It is equally unclear whether a change in management practices (e.g., saving all the old-growth forests or stopping all timber cutting) will have any effect on the rate or extent of the extension of the barred owl range. In light of this uncertainty and the evidence that hybridization is uncommon, we believe the most reasonable course of action is to continue to manage habitat for large clusters of spotted owls dispersed across the historical range of the species.

Surveys for Spotted Owls - Since the release of the Final Environmental Impact Statement, additional surveys of spotted owls have been completed. These surveys indicate that the population of spotted owls in British Columbia is probably less than 100 pairs. We believe that protection of the Canadian population of spotted owls is important, particularly from the standpoint of maintenance of a widely distributed population.

Between 1987 and 1992, pairs of owls were detected at 3,591 sites in Washington, Oregon, and northwestern California. As each of these sites was not always verified by searches in subsequent years, the occupied sites in 1992 would likely be less than that number by some unknown

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amount. Because there are still areas that have not been searched for owls, it seems likely that the actual population is larger than the confirmed population. The increase in the number of confirmed owl pairs should not be interpreted as evidence of a population increase. Data from the density study areas and the demographic studies do not support such an interpretation.

The increase in the number of confirmed owl pairs results from greatly increased survey efforts have during the last 10 years, including, (1) a greatly expanded effort to inventory owls, (2) the initiation of numerous demographic studies across the range of the owl, and (3) increased surveys associated with timber sales in order to comply with Section 7 consultation requirements of the Endangered Species Act. Given the dramatic increase in survey effort since 1985, we are not surprised that significantly more owls have been located.

The total number of owls that exist under current conditions is not particularly relevant - what is much more important is the total number of owls projected to occur when a final management plan is fully implemented and habitat levels stabilize. The plan proposed by the Interagency Scientific Committee assumed that most pairs of owls outside Habitat Conservation Areas would eventually disappear as habitat was removed and simultaneously fragmented, eventually resulting in a population of about 2,200 pairs of owls within the network of Habitat Conservation Areas. This estimate is largely independent of the size of the current population. What does change as a result of the size of the current population of spotted owls is that we can be somewhat more confident that the population will survive through the short-term transition period while the plan is being implemented.

Review of Literature Available Since Publication of the Forest Service's Final Environmental Impact Statement - As part of our process, we reviewed all the available literature concerning northern spotted owls published since the preparation of the Final Environmental Impact Statement. In addition, we reviewed progress reports and other unpublished information and interviewed research scientists who were conducting ongoing research. A complete annotated bibliography of this information was prepared and appears as Appendix 3-B of this report. The Scientific Analysis Team evaluated this information and concluded that such information did not alter the underlying construct of the Interagency Scientific Committee's Conservation Strategy nor indicate any reason to alter the details of that strategy.

Evaluation of Whether New Information Warrants Changes in Proposed Management Schemes - The Scientific Analysis Team finds that the new information examined does not warrant proposing more restrictive measures for protecting northern spotted owl habitat. Assuming that the selected alternative in the Forest Service's Final Environmental Impact Statement is fully implemented, the Scientific Analysis Team concludes that the preferred alternative of the Final Environmental Impact Statement will provide a high likelihood of maintaining a viable, well distributed population of northern spotted owls.

Forest Service

Question 3 - What Are The Risks To Other Species Associated With Old-Growth Forests? What Are Appropriate Mitigation Measures?

See Chapter 4.

The Rationale for Expanding the Assessment Beyond 32 Species Identified in the Forest Service's Final Environmental Impact Statement - The Final Environmental Impact Statement identified 32 species of terrestrial vertebrates other than the northern spotted

owl as closely associated with old-growth forests. We refined the basis for identifying these species and expanded the evaluation beyond terrestrial vertebrates (amphibians, reptiles, birds, and mammals) to include plants, invertebrates, and fish species/stocks. This assessment was conducted because: (1) a full examination is in keeping with the mandates of the regulations issued pursuant to the National Forest Management Act to maintain viable populations of all native species well distributed within the planning area(s); (2) such an assessment avoids "piecemeal" consideration of evolving concerns with individual species with the inherent potential of infinite delays in plan approval; and (3) such an approach is in keeping with the Forest Service's recent commitment to "ecosystem management." We caution, however, that the effort reported in this publication is not a complete ecosystem assessment; it is a significant step.

Methods - The Scientific Analysis Team expanded the evaluation of the risk of extirpation under the adoption of the Forest Service's Final Environmental Impact Statement Alternative B (the Interagency Scientific Committee's Conservation Strategy) to assess *all* species that have been identified as being associated with old-growth forests. This evaluation took place in three phases:

1. Identification of species associated with old-growth forests.
2. Evaluation of the viability status of each such species under the five management alternatives described in the Final Environmental Impact Statement. This evaluation included an estimate of the likelihood of extirpation from planning areas (interpreted by the Scientific Analysis Team as National Forests within the range of the northern spotted owl).
3. Identification of potential mitigation measures to ensure high viability of all species identified as closely associated with old-growth forests that were determined to have a medium or high rate of extirpation under the Interagency Scientific Committee's Conservation Strategy.

We compiled what came to be called the "long list" of all species associated with old-growth forests. These lists emerged from a review of literature, unpublished studies and data bases, Forest Service ecology data bases, and professional knowledge. A set of criteria was developed to help judge the degrees of the association of the species with old-growth forest ecosystems. These criteria were used to reduce the "long list" to a "short list" of species that seemed likely to actually be associated with late-successional, old-growth forests. We then set up evaluation panels of seven to eight recognized experts in each of five specialty areas: (1) fungi, lichens, and nonvascular plants; (2) vascular plants; (3) amphibians and reptiles; (4) birds; and (5) mammals. The panels assessed risks to viability and probabilities of extirpation of individual species within those groups. In a separate process, we consulted with experts on fish habitat to develop lists and viability ratings of sensitive fish stocks. We consulted with invertebrate specialists for the same purposes. Panelists and consultants were provided summary data, distribution maps, and other information to aid in their deliberations.

To determine the likelihood of viability of each species under various planning alternatives described in the Final Environmental Impact Statement, each panel reviewed the available information for those species on the "short list" that were within their area of expertise, by planning area where appropriate. From this evaluation emerged a viability assessment for each species at three levels. Those rated by the panels as having a "high" or "medium high" likelihood of overall viability were considered as being at low risk of extinction or extirpation from one or more planning areas (i.e., National Forests). Those having a "medium" likelihood of overall viability were considered as having a "medium" risk of extirpation. Those species ranked

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as having a “medium low” or “low” likelihood of overall viability were considered as having high risk of extirpation. Each species was evaluated for each alternative in the Final Environmental Impact Statement. The period of evaluation was 50 years. The Scientific Analysis Team considered that these categories of risk correspond to the population viability language presented in the regulations (36 CFR 219.19) issued pursuant to the National Forest Management Act. **NFMA**

Results - Details concerning the species identified as closely associated with old-growth forests are found in Chapter 4.

Numbers of Species Associated With Late-Successional Forests - The Scientific Analysis Team identified 667 species that have a high likelihood of being associated with old-growth forests. This total was made up of 35 species of mammals, 38 birds, 21 reptiles and amphibians, 112 fish stocks, 149 invertebrates, 122 vascular plants, and 190 nonvascular plants and fungi.

Evaluation of the Provision of Habitat Needs of Species Associated With Late-Successional Forests by Increments of Protected Areas - Building on the Interagency Scientific Committee's Conservation Strategy to provide mitigation measures for viability of species associated with old-growth forests requires some approach of “tiering” from one set of mitigation measures to the next. It should be remembered that the Interagency Scientific Committee's Conservation Strategy tiered off designated land allocations such as National Parks and congressionally designated Wilderness in extant Federal land use plans. The combination of the Land and Resource Management Plans for the National Forests and the Interagency Scientific Committee's Conservation Strategy provide for high viability of 280 of the identified at-risk species. The Scientific Analysis Team continued that process by next considering the mitigation measures suggested to deal with the 112 fish stocks considered to be at risk. Mitigation measures for at-risk fish stocks were taken from the array of six management options for those at-risk fish stocks prepared by a panel of fish habitat and watershed experts for managing Pacific anadromous fish habitat on National Forests throughout the western states. This group is known as the Pacific Salmon Workgroup and Field Team (hereafter referred to as the Pacific Salmon Workgroup, also known as “PacFish”).

Each management option developed by the Pacific Salmon Workgroup has a different risk rating for the fish stocks in question. The option we recommend in this report was deemed by the scientists of the Pacific Salmon Workgroup and by the Scientific Analysis Team as having a “high” probability of providing for the viability of the fish stocks in question only insofar as spawning, rearing, and migration habitat on National Forests is concerned. Other factors influencing the viability of these fish runs (such as ocean fishing, irrigation drawdown, or runoff from agricultural lands) is beyond the capability of the Forest Service to address.

The Pacific Salmon Workgroup presented one other option that yields a “high” probability of success, but at a greater impact to commodity resources. Two other options are rated at “moderately high” (i.e., somewhat better than 50/50) probability of viability. In selecting such an option, one would have to consider if such a risk is acceptable to the management agencies and to the courts in dealing with a critical habitat component for fish stocks that are very likely to be listed as either “threatened” or “endangered” under the Endangered Species Act.

The Scientific Analysis Team's aquatic and riparian mitigation measures involve four components: (1) a network of key watersheds containing at-risk fish species and stocks, good quality habitat and/or high potential for restoration; (2) establishment of Riparian Habitat Conservation Areas with minimum interim buffer widths for different sized streams and a set

of standards and guidelines for operating within Riparian Habitat Conservation Areas; (3) conducting an intensive watershed analysis to establish final boundaries for Riparian Habitat Conservation Areas and watershed restoration priorities; (4) watershed restoration of degraded habitat for the long-term protection of aquatic and riparian habitats.

The minimum interim buffer widths for Riparian Habitat Conservation Areas consist of: 300 feet on each side of lakes and fish bearing streams; 150 feet on each side of permanent non-fish bearing streams; 150 feet of ponds and reservoirs and of wetlands larger than one acre; and 100 feet on each side of seasonal intermittent streams and wetlands less than one acre in size, as well as landslide and landslide-prone areas. Within these protection areas, timber management and other ground disturbing activities are prohibited unless a site-specific watershed analysis indicates such activities will accelerate meeting desired ecological conditions. Within key watersheds and inventoried roadless areas detailed watershed analysis must precede management activities.

The combination of reserves in National Parks and congressionally designated Wilderness, Land and Resource Management Plans, the Interagency Scientific Committee's Conservation Strategy, and Riparian Habitat Conservation Areas provide for protecting an additional 19 species at risk of high viability in addition to the 112 fish stocks the mitigation measures were designed to protect.

The next step in determining mitigation measures was the consideration of requirements for nesting habitat on lands managed by the Forest Service for the marbled murrelet. This species was listed as "threatened" under the authority of the Endangered Species Act on September 28, 1992. This listing ensures that a recovery plan for this species will be forthcoming eventually from the Fish and Wildlife Service. It is the Scientific Analysis Team's opinion that the prudent course of action is to reserve all marbled murrelet habitat on National Forests within 50 miles of marine habitats in Washington and most of Oregon, and within 35 miles in southern Oregon and California.

In addition, we recommend that habitat recruitment stands (i.e., stands that have capability to become marbled murrelet suitable nesting habitat) equal to 50 percent of the total extant suitable habitat also be selected and protected. The mitigation measures suggested are considered by the Scientific Analysis Team to be interim guides to preserve options until a recovery plan is prepared.

It seems likely that such a recovery plan for the marbled murrelet will build on the Recovery Plan for the Northern Spotted Owl (basically the Interagency Scientific Committee's Conservation Strategy) and some form of Riparian Habitat Conservation Areas will be designated to protect at-risk fish stocks. The Scientific Analysis Team estimates that 24 additional at-risk species can be assured viability by the combination of the above described actions. These actions will preserve a wide array of existing options for those preparing the recovery plan for the marbled murrelet. Further, it should be recognized that similar protection might well be imposed by the Fish and Wildlife Service even in a step-by-step series of Section 7 consultations, when any action is proposed that may disturb actual or potential nesting habitat. This proactive move is biologically appropriate and could save time and money over the long term.

There were another 17 at-risk species identified as rare or locally endemic. Mitigation measures vary for this group by species, but generally depend on surveys for occurrence of the

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species and protection on a site-specific basis. Another seven species that are more broadly distributed require some considerations in management of the forest matrix between protected late-successional old-growth forest areas. Such action includes leaving some large dead trees standing on site during silvicultural manipulations including logging, protection of talus areas, and buffering meadows and other natural openings, with areas of protected forests, use of prescribed fire, and minimizing the construction of roads.

For the remaining at-risk species, information was lacking to design specific mitigation options. Based on general life-history attributes of these species, we determined that habitat requirements of 23 species would likely be met by the combination of all the mitigation measures mentioned above. This left 149 species of invertebrates and 36 species of plants (9 nonvascular plants and fungi, 8 vascular plants) and vertebrates (9 mammals mostly species of bats) of which so little is known that we were unable to assess their viability or the prescription of mitigation measures. Inability to assess viability does not imply that species would be at risk nor does it imply the opposite. Intuitively, the reservations of late-successional, old-growth forests in National Parks and congressionally designated Wilderness, and specified in land use plans, the Interagency Scientific Committee's Conservation Strategy, Riparian Habitat Conservation Areas, and marbled murrelet habitat reserves should provide significant resources of old-growth forest habitat for insuring the viability of such species. The additional mitigation measures described for rare or locally endemic species above should further add to the probability of maintaining viable populations. Yet, the state of knowledge about these species is such that their viability cannot be assessed.

The Scientific Analysis Team suggests that information necessary to evaluate viability of these species be obtained and evaluated. It is logical to assume that such a process would reveal that some of these species have a low risk of extirpation or extinction. For those species that are determined to be at risk, it is likely that specific mitigation measures can be developed to ensure a low risk. However, this cannot be done without additional information. We believe that the assessment we have completed is the best we could do with extant empirical information, expert opinion, and common sense. As new information is generated we recommend that it be considered through the adaptive management process.

We conclude that, with the institution of the Interagency Scientific Committee's Conservation Strategy and the implementation of the mitigation measures described above, that 482 of the 518 (93 percent) plants and vertebrates closely associated with old-growth forests can be considered to have a low risk for extirpation or extinction. The remaining risk to the other species is impossible to assess.

Requirements for Successful Implementation of Mitigation Measures for Species Associated With Old-Growth Forests

See Chapter 5.

The Scientific Analysis Team developed a step-wise approach for providing protection of habitat for species closely associated with old-growth forests adequate to sustain viability (see Chapter 4). There were six distinct steps involved in this process. These steps, collectively, comprised the mitigation measures necessary to assure viability for the 482 plant and animal species determined to be associated with late-successional forests. There were 36 species about which so little is known that assessment of risk to these species was not possible. Full implementation of the suggested mitigation steps consists of the following:

1. Retention of all land allocations and standards and guidelines in Forest Service Land and Resource Management Plans that provide protection for species closely associated with late-successional forests or the fish species/stocks considered to be at risk.
2. Implementation of the Interagency Scientific Committee's Conservation Strategy or the Department of the Interior's Recovery Plan for the Northern Spotted Owl.
3. Immediate implementation, on an interim basis, of the Scientific Analysis Team's recommended standards and guidelines for species closely associated with old-growth forests or components of old-growth forests and the fish species and stocks considered to be at risk. The Scientific Analysis Team recognizes that meeting the requirements of the National Environmental Policy Act must precede permanent implementation.
4. Ongoing activities involving contractual obligations for the Forest Service should be reviewed on a case-by-case basis to determine compatibility with the standards and guidelines. We do not believe blanket cancellation of timber sales under contract is warranted; rather, each sale must be individually evaluated and considered for cancellation or modification. Where Federally-listed species that are clearly associated with old-growth forests, such as the marbled murrelet, are effected we recommend that the conservation recommendations (discretionary suggestions by the Fish and Wildlife Service) offered in Biological Opinions issued through Section 7 consultation be followed until the adoption of a recovery plan or conservation strategy for the species.
5. Proposed or planned activities, regardless of their point in the planning process, must be immediately modified to be consistent with the standards and guidelines.
6. The Scientific Analysis Team recommends that the Forest Service develop a policy to address appropriate habitat management response following wildfires, wind storms, insect-induced tree kills, or other significant mortality factors. This policy should build upon the standards and guidelines of the Interagency Scientific Committee's Conservation Strategy for salvage and fuels management inside Habitat Conservation Areas.
7. Establishment of a formally prescribed oversight process for consistent interpretation and application of the standards and guidelines suggested by the Scientific Analysis Team.
8. Development of an adaptive management process that will foster and guide development of new information, facilitate as well as the review and interpretation of that information as it becomes available. Research and monitoring are critical elements of adaptive management and as such must be given high priority. It is likely that data, generated by research and monitoring, will be the information used in the adaptive management process. The adaptive management process will indicate where and when modification of the standards and guidelines is warranted.
9. Finally, the Scientific Analysis Team emphasizes the need for full interagency cooperation that will result in unified strategies to provide for species closely associated with old growth and old-growth components. The Interagency Scientific Committee recognized the lack of interagency and intergovernmental cooperation as a potential major obstacle to efforts to produce an effective, cost efficient northern spotted owl habitat management plan. This obstacle continues to exist as the issue increases in complexity.

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Monitoring and Research

The Scientific Analysis Team identified monitoring and adaptive management as critical elements of their suggested management and mitigation measures. To be effective, such monitoring and adaptive management will require interagency cooperation, development of "trigger" points to signal needs for, or opportunities to, alter management direction, consistent execution and assessment of the results of monitoring, and the continuation of research efforts to fill critical gaps in knowledge.

Though such monitoring will be costly and time consuming, we consider it essential. The Scientific Analysis Team proposes an overall strategy of management and mitigation that, in the case of species of plants and animals associated with old-growth forests, is based to a large degree on expert opinion. The risk inherent in moving ahead in overall forest management with so little quantitative information for those plants and animals may be significant. We acknowledge that risk and consider it acceptable in the short term only if adequate research and monitoring are instituted and pursued vigorously in a coordinated, rigorous, and conscientious manner. We are cognizant that the monitoring plans in the Land and Resource Management Plans, which were designed to compensate partially for risk, have not, in general, been carried out in a manner consistent with this goal.

If the Scientific Analysis Team's recommendations for mitigation are accepted and instituted, monitoring and associated research will be essential to successful implementation. And, if, for whatever reason, no monitoring is instituted, the standards and guidelines we have suggested should be substantially enhanced to compensate for the risk of failure inherent in untested management strategies based to such a large extent on expert judgment.

The Effect of Suggested Standards and Guidelines of Altered Management by Other Land Holders

The attorneys for the Forest Service argued before Judge William Dwyer in the ongoing case of Seattle Audubon et al. vs. Moseley et al. that when a species is listed as "threatened", the requirements of the Endangered Species Act of 1973 supersede the necessity for the Forest Service to continue to be governed by the National Forest Management Act and the regulations promulgated pursuant to that Act (36 CFR 219; Planning Regulations for Implementing Section 6 of the National Forest Management Act) which deal with the management of habitat for that species. Of particular concern were the regulations requiring the Forest Service to maintain viable populations of vertebrates well distributed by planning area. The Court rejected that argument. We assumed in our assessments, therefore, that the requirements of both Acts must be simultaneously met.

The Scientific Analysis Team considered this ruling as particularly germane as we went about our assigned tasks. Because our task was to consider a series of questions dealing with the management of National Forests and development of management scenarios for consideration by decision makers, it was necessary to predicate our response on our interpretation of the requirements of the Endangered Species Act and the National Forest Management Act.

This process may be considered inappropriate to some, (i.e., those who believe that scientists should deal strictly with science and leave interpretation of the law and policy to others). However, it is obvious, at least to us, that one cannot deal with science as applied to

management without interpretation of the boundaries prescribed by law, regulations, policy, and science.

In the process of suggesting standards and guidelines to provide mitigation measures for risk to viability of species associated with old-growth forests (including the northern spotted owl, marbled murrelet, and sensitive fish species/stocks) the Scientific Analysis Team was faced with a number of situations in which only a portion of either the range or the overall habitat requirements, or both, of the individual species under consideration were met on lands managed by the Forest Service. An example of this situation is the case of stocks of anadromous fish whose best or only remaining spawning and rearing areas, or both, occur on National Forests. These fish stocks are subject to a myriad of debilitating factors that occur elsewhere, such as degraded riverine habitats between the spawning grounds and the ocean, the occurrence of catastrophic events, and the continued introduction of hatchery fish. Obviously, none of these debilitating influences on fish stocks of interest are within the control of the Forest Service.

It is, nonetheless, required that the Forest Service maintain that part of the habitat under its control in such a condition that any fish that do return to those spawning and rearing areas have a chance to reproduce and grow. This protection of the portion of the habitat under management by the Forest Service would be required regardless of management of other lands. In this case, if the spawning and rearing areas are lost, the fish stocks that are wholly or significantly dependent on those spawning and rearing areas are, likewise, lost.

When this concept is applied to all species dependent on late-successional forests, it begs a question. Do these standards and guidelines apply regardless of what other land managers, whose lands also harbor the species in question, do on their lands? Or, in other words, would added attention to the welfare of these species by other land managers reduce the stringency of the standards and guidelines set forth herein for those species? The answer is "no." To satisfy the requirements of the regulations issued pursuant to the National Forest Management Act, the Scientific Analysis Team felt that the standards and guidelines (or replacements that are equal or superior in effect) must stay in place, regardless of activities on lands managed by others.

MANAGEMENT OPTIONS OTHER THAN THE SCIENTIFIC ANALYSIS TEAM'S SUGGESTIONS

Alternatives From the Scientific Panel's Report

The Agriculture Committee and the Merchant Marine Committee of the U.S. House of Representatives (Johnson et al. 1991) established the Scientific Panel on Late-Successional Forest Ecosystems (hereafter referred to as the Scientific Panel, also known as "The Gang of Four") which presented an array of 14 alternatives for management of late-successional and old-growth forests and intervening lands on the Federally managed lands of the Pacific Northwest within the range of the northern spotted owl. These 14 alternatives ranged from an alternative that maintained historic timber harvest levels to one in which essentially all late-successional old-growth forests would be preserved. The latter included additions necessary to produce a high probability of viability of the northern spotted owl, and protection of habitat for at-risk fish stocks.

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A qualitative risk assessment was performed for each alternative that considered: (1) maintenance of a functional late-successional/old-growth forest network, (2) viable northern spotted owl populations, (3) habitat for nesting of marbled murrelets, (4) habitat for other late-successional old-growth forests associated species, and (5) spawning and rearing habitat for sensitive fish stocks.

The Scientific Analysis Team operated under instructions which evolved from the necessity to answer questions from the Federal Court on the Forest Service's Final Environmental Impact Statement and, therefore, approached the issue of protecting the late-successional forest ecosystem from a different angle than did the Scientific Panel.

The Scientific Analysis Team made the following assumptions: (1) the assessment was limited to Federal lands, specifically those managed by the Forest Service; (2) Land and Resource Management Plans for each National Forest within the range of the northern spotted owl were considered to be in place, except as modified by adoption of the Interagency Scientific Committee's Conservation Strategy; (3) the Interagency Scientific Committee's Conservation Strategy was assumed to be the management alternative for the northern spotted owl; (4) maintenance of habitat for the marbled murrelet (listed September 28, 1992 as a "threatened" species by the Fish and Wildlife Service) was mandated; and (5) species associated with old-growth forests were to be identified and mitigation measures presented for protection.

The Scientific Panel classified late-successional/old-growth forests as those that were "most ecologically significant (LS/OG1)", "ecologically significant (LS/OG2)", and the remainder of such forests "LS/OG3." The criteria used to make these classifications were habitat block size, fragmentation, location, stand attributes, stand age, productivity, elevation, and the occurrence of spotted owls, marbled murrelets, and other late-successional/old-growth associated species.

In terms of risk, the cumulative result of the Scientific Analysis Team's efforts most closely resembles Alternative 10, Option A, of the Scientific Panel's report for the range of the northern spotted owl excluding the Oregon Coast Range. Alternative 14, Option A, is similar to the cumulative situation described by the Scientific Analysis Team for Federal lands in the Coast Ranges.

In addition, the Scientific Panel's report presented three options for the management of the matrix (forested areas between reserved areas). Option A, mentioned above, implements the Land and Resource Management Plan standards and guidelines for each National Forest. It also imposes the 50-11-40 rule (Thomas et al. 1990) with the addendum for retention on cutover areas of six green trees/acre exceeding the average diameter of other trees in the stand before cutting, two large snags/acre, and two large down logs/acre (Johnson et al. 1991). The 50-11-40 rule calls for the Federal land within each quarter-township to have 50 percent or more of the forested acres in a state where stands average at least 11 inches or more in diameter at breast height with at least 40 percent or more canopy closure (Thomas et al. 1990).

The Scientific Panel did not have the detailed information on the species associated with late-successional forest conditions that was developed during the Scientific Analysis Team effort. Yet, the overall outcome in the risk ratings between the alternatives described are, at least superficially, similar. We strongly recommend, however, that if options from the Scientific Panel's report are considered for implementation, that the mitigation measures for identified endemic, localized, or very specialized species developed by the Scientific Analysis Team and described herein are incorporated with that option.

Only a limited subset (4 of 14) of the alternatives presented by the Scientific Panel, however, provided a “high” probability of success for all of the following factors of concern: a functional network of late-successional/old-growth forests, viable spotted owl populations, habitat for marbled murrelet nesting, habitat for other species associated with late-successional/old-growth forests, and habitat for sensitive fish species/stocks.

If additional options are desired for management beyond or in addition to those in this report, the Scientific Analysis Team suggests consideration of the options presented in the report of the Scientific Panel on Late-Successional Forest Ecosystems.

Alternatives for Management of Habitat for At-Risk Fish Species/Stocks

Likewise, if appropriate decision makers desire other options for management of the habitat of sensitive fish species/stocks other than those presented in this report, we suggest careful consideration of all of the assessments and management alternatives which provide a “high” level of probability as proposed by the Pacific Salmon Workgroup. This team of experts on fish habitat and watersheds presented eight alternatives for management of fish habitat on Federal lands.

The Scientific Analysis Team presents, herein, one of the two alternatives developed by the Pacific Salmon Workgroup that was rated as having a “high” probability of success in protecting spawning and rearing habitat. It seemed to us prudent, if not essential, that when dealing with the numerous sensitive fish stocks that have a significant potential to be listed as threatened or endangered under the requirements of the Endangered Species Act, that a management scheme have a high probability of protection of critical habitat for those stocks. We note that there is one other option put forward by the Pacific Salmon Workgroup that also has a high probability of success. We consider this other option as an appropriate replacement for the one detailed in this report.

If it seems appropriate to decision makers to assume the increased risk of failure to maintain habitat for sensitive fish species/stocks, management scenarios presented by the Pacific Salmon Workgroup with chances of success of “moderate” or even less might be considered for adoption. However, we strongly emphasize that if any aspect of the package we put forward is altered, the overall assessment of the cumulative effect in terms of maintaining viable populations of species closely associated with old-growth forests should be redone.

RESTRICTIONS ON MANAGERS’ DECISION SPACE

Restrictions Resulting From Compliance With the Endangered Species Act and “Viability Regulations” of the National Forest Management Act

Land managers are concerned with what some refer to as accumulating constraints on management prerogatives. These constraints are perceived as causing increasing loss of decision space (i.e., the feasibility of performing alternative courses of management action) with each additional objective for management that is considered. This is particularly true of meeting the requirements of the Endangered Species Act and the regulations issued pursuant to the National Forest Management Act to maintain viable populations of vertebrate species well distributed within the planning area (individual National Forests). The new policy of the Forest Service

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announced in late 1992 to enter into a new era of "ecosystem management" seems, to us, to be absolutely in keeping with meeting the underlying objectives of these Acts. It will, however, not be achieved without further tightening the decision space for achievement of other multiple-use management goals, such as timber harvest, grazing, and fish and wildlife species for consumptive use.

Examination of the history leading up to the listing as threatened or endangered of the northern spotted owl (Thomas et al. 1990, Thomas and Verner 1992, and Meslow and Bruce 1992), marbled murrelet, and several species of anadromous fish lead us to the conclusion that early warnings were inadequately addressed, probably due to associated political, economic, and social costs (Thomas and Verner 1992). With the advantage of hindsight, we see that this led, inevitably, to the listing of various species as threatened or endangered with more to come. At the point that species were officially listed, management prerogatives were severely limited due to the introduction of overriding new objectives to protect and recover listed species, and with the *de facto* sharing of authority for management decisions that bear on the welfare of listed species with the Fish and Wildlife Service or the National Marine Fisheries Service or both.

Potential Restrictions Resulting From Ecosystem Management

Moving to an ecosystem management approach seems most appropriate at this time (Thomas et al. 1990) because a species-by-species approach seems to be becoming increasingly burdensome (USDI 1992). However, the assessment made in this report of the status of species of plants and animals that are suspected of being associated with late-successional forests is just one part of the ecosystem management approach. It has produced a tiny preview of considerations that may be included in ecosystem management.

"Ecosystem management" is considered by some as a new buzz word to follow behind "new perspectives" and as merely fluff. We disagree. The concept is sound and the evolving scientific concept and knowledge make it possible to embark on this quantum shift in management paradigm.

Having committed to ecosystem management, it is essential to move forward quickly to develop the supporting conceptual framework for a truly new way of managing land. While, in our opinion, this framework simply does not exist, it is being formulated, developed and implemented in a piecemeal fashion by scientist/manager teams at a significant number of locations around the region. Further, it will take a concentrated effort by the scientific and land management communities to develop that framework. It will not be easy - but the Forest Service is now committed to "ecosystem management". This commitment must be quickly matched with action if credibility is to be maintained.

No Free Lunch

Although there are, in theory, many management options to address the cumulative problems being produced by the listing of the northern spotted owl, the marbled murrelet, and several species of anadromous fish species/stocks (with more species very likely to be listed), they do not address the need to consider ecosystem integrity in land management. All such options are concomitantly subject to scrutiny by the scientific community and the courts and will inevitably impinge on the decision space of land managers and impinge on the traditional production levels of commodities, such as timber harvest, grazing, and big game production, from the lands in

question. It is unrealistic to expect otherwise. We find, as other resource analysts before us, that there is simply “no free lunch” (Johnson et al. 1991).

It might be useful for managers to consider as objectives management activities to preserve threatened or endangered species and meet the implied biodiversity retention requirements in the concept of “ecosystem management”. When considered as constraints, these actions are automatically and inappropriately interpreted as reducing decision space (i.e., management prerogatives). When viewed as objectives, management of biodiversity through ecosystem management creates a very broad, challenging, uncharted decision space for managers.

The Scientific Analysis Team Report

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DRAFT AS OF
March 11, 1993

FOREST CONFERENCE WORKING GROUPS:

o INTERAGENCY COORDINATION COMMITTEE

White House and Agencies

o WHITE HOUSE POLICY OVERVIEW COMMITTEE

McClarty/Gearan
Paster/Brophy
Hale
Herman
Emanuel
Stephanopolous
Montoya
Romash
McGinty
Gibbons
Rubin/Ross
Quinn
Varney
Rasco

o EXECUTIVE COMMITTEE

McGinty/Cottingham
Collier/Tuchmann, DOI
Lyons, USDA
Portman, LABOR
Fox, EPA

A. COMMUNICATIONS, ADVANCE, LOGISTICS

1. SCHEDULING, ADVANCE, LOGISTICS WORKING GROUP

Marcia Hale (WH)
Dave Van Note (Interior)
Denis Alpert (WH)
Isabel Tapia (WH)
Chris Dorval (Interior)
Carole Florman (Interior)
Dave Jacobs (Forest Service)

2. CONGRESS WORKING GROUP

Paster/Brophy (WH)
Rahm Emanuel (WH)
Stephanie Solein (Interior)
Jim Lyons (USDA)
Tom Tuchmann (Interior)

3. GOVERNORS, STATE, LOCAL WORKING GROUP

Regina Montoya (WH)
Rahm Emanuel (WH)
Stephanie Solein (Interior)
Chris Dorval (Interior)

4. INTEREST GROUPS WORKING GROUP

Alexis Herman (WH)
Chris Dorval (Interior)
Tom Tuchmann (Interior)
Jim Caplan (Forest Service)

5. PRESS WORKING GROUP

George Stephanopoulos (WH)
Marla Romash (WH)
Kevin Sweeney (Interior)
Chris Dorval (Interior)
Mr. Holmes (Forest Service)
Joel Berg (USDA)

6. SUBSTANTIVE PLANNING WORKING GROUP

McGinty/Cottingham (OEP)
Tuchmann (DOI)
Lyons (USDA)

B. LABOR/COMMUNITY DEVELOPMENT COMMITTEE

1. WORKER DISLOCATION WORKING GROUP

Rob Portman (Labor)
others (Commerce; Interior; Ag; Education)

2. ECONOMIC DIVERSIFICATION WORKING GROUP

(USDA); (Commerce)

3. INTERIM RELIEF WORKING GROUP

(USDA); (Interior)

DRAFT AS OF
March 11, 1993

C. FOREST MANAGEMENT COMMITTEE

Jim Lyons (USDA)

Jim Pipkin (Interior)

1. FOREST MANAGEMENT WORKING GROUP
2. FOREST SCIENCE WORKING GROUP
3. LEGAL QUESTIONS/LEGISLATIVE STRATEGY WORKING GROUP
John Leshy (Interior)
Mike Gipert (USDA)

MEMORANDUM FOR MARK GEARAN

FROM KATIE MCGINTY

SUBJECT: NEXT STEPS IN PLANNING FOR THE FOREST CONFERENCE

3-11-93

o BUDGET: I have met with Dave Van Note regarding this event. He is drafting a budget for the expenses he anticipates in renting conference space, hotel rooms, travel, etc. I expect his draft today. While Van Note's immediate expenses are being covered by Interior, he will soon need funds in order to hold conference space, etc. In addition, We need you to: 1) to direct David Watkins to prepare a budget to cover Conference expenses; and 2) work with the White House Counsel's office to address any potential legal questions concerning soliciting outside funding.

o LOCAL POLITICAL ADVISOR/OMBUDSMAN: Rahm Emanuel will make suggestions and prepare a memorandum of decision regarding the selection of a local political advisor/ombudsman. Emanuel will define the role this individual is to play and will clear his recommendations with me and with relevant Cabinet Secretaries, Northwest delegation members, State and local officials and other interest groups before forwarding a memorandum of decision to the President.

o CONFERENCE LOGISTICS: Dave Van Note is meeting with individuals who had been involved in setting up the Economic Conference for advice on planning and logistics.

o PAPER FLOW: We need White House assistance to ensure that paper is flowing to the appropriate players and coming back to us in a timely way. We are taking a first cut at a key players list that includes the White House, Congress, NGOs, Governors offices (in D.C. and in the states), industry groups and agency people (in D.C. and regions). It would be very helpful to us if you could: 1) designate someone to check out that list for us; 2) help determine who -- outside the White House -- should see what, when.

o BRIEFINGS FOR THE PRESIDENT AND VICE PRESIDENT: Marcia Hale needs to identify time in the President's schedule for several briefing sessions. I would recommend that three one-hour sessions be reserved. In addition, we need your assistance on a process to gain timely Presidential approval for key decisions -- particularly as they relate to the agenda, issues and participants.

o CABINET INVOLVEMENT: At a minimum, Secretaries of Agriculture, Interior, and Labor need to reserve time between now and April 2 to travel to the region for site visits. I would recommend that reservation be made at least for a two day visit so that we have the opportunity to have them visit all three states (Oregon, Washington, and California), and so that a program can be planned for them that will introduce them to the various facets of this issue. Secretary Babbitt has already cleared time on his calendar for this purpose Administrator Browner has also indicated her desire to visit the region. Secretaries of Agriculture, Interior and Labor also need to reserve April 2 and prepare to participate in the Conference, itself. The participation of Secretary Brown should also be strongly encouraged in light of his jurisdiction over community development programs (which will have to be marshalled as part of the economic assistance plan which will be part of the Administration's overall response to this situation) and over the National Marine Fisheries Service (the forest conference will also deal with issues relating to depletion of salmon stocks in the Pacific Northwest). Administrator Browner has indicated that she will participate on April 2. I have met with Christine Varney about this, and I believe that she raised it on her 3-10-93 morning Conference call with Chiefs of Staff.

o WHITE HOUSE STAFF INVOLVEMENT: I have established several working groups to orchestrate the Conference and to work on our substantive plan (see attached). For each working group, I have identified White House staff that I believe should be involved. To date, White House staff participation in meetings, etc. has been minimal or at a low level. Direction needs to be given to ensure engagement in this process at a high level among White House staff.

o DEPARTMENT OF LABOR: DOL has participated in meetings on this issue to date and understands that worker assistance programs need to be part of the Administration's plan. Because of Secretary Reich's desire to produce a comprehensive, broad-based worker assistance program, there is a reluctance on the part of DOL to " earmark " assistance dollars for the displaced timber workers. Direction is immediately needed in order to reconcile this conflict.

Other issues for your information:

- o By Friday, we will have a draft agenda for the conference -- outlining key issues that will be discussed in each segment. From there, we can begin to identify who should participate in each of these segments and what role the President, Vice President, and cabinet will take.

- o The Vice President has called the Governors of Washington, Oregon, and California from his plane. (Stephanie Solein is contacting Congressional and Governors' offices today to solicit suggestions. She will also provide us with a recommended list of "must do"/political priority site visits.

- o By Friday (3/12) we will have a list of suggested site visits for cabinet secretaries.

- o By Monday (3/15) we will have first drafts of materials that will comprise the 'briefing book' for participants and media. These are general background materials on key issues.

3/23/93-6:30

DRAFT AGENDA
Please do not Distribute

FOREST CONFERENCE
Portland, OR

April 2, 1993

10:30 **WELCOME:** Governor Roberts
OPENING STATEMENT: President Clinton

11:00 **BACKGROUND:**

A historian will put current forest management issues into perspective by summarizing the region's history. Such history will discuss the region's development, the region's economic diversification, and the role the federal government, forest products industry, and environmental community have played within the region.

11:15 **ROUNDTABLE 1:**

THE CURRENT SITUATION: WHO IS AFFECTED AND HOW

Twenty or so individuals representing those involved in the Pacific Northwest and northern California forestry debate will participate in this roundtable discussion.

This panel will allow people to speak out about how they are affected by the forestry issues in the region. This will allow all sides to provide a human touch to the region's forestry issues.

For example, loggers can talk about how their jobs may be threatened by harvest reductions, fishermen can talk about how their jobs have been threatened by overcutting, communities leaders can talk about how they are torn between their concerns for the forests and those whose livelihoods depend on the forests.

Six panelists will be asked to give 3 to 5 minute presentations. The President and Vice President will then ask follow up questions of the other panel participants.

Participants will include environmentalists, labor, timber and timber related industry, non-timber industries, community leaders, educators, native americans, forestry professionals and others.

12:45 p.m. **LUNCH**

1:15 ROUNDTABLE 2:

ECOLOGICAL, ECONOMIC, AND SOCIOLOGICAL ASSESSMENTS:

There will be much disagreement in the first panel about the "facts". Therefore, this panel of 15 or so experts from public, private, academic, and non-governmental organizations will discuss some of the technical issues surrounding the forestry and forestry related economics.

The participants will be broken down into two panels as follows:

Forest Ecology Issues - This panel will discuss forest science as it relates to the management of forests, fisheries, wildlife, and water quality. (participants include someone from the Forest Service, Fish and Wildlife Service, universities, industry, and environmental experts)

Economic Issues - This panel will discuss the macro-economic health of the region, the micro-economic health of forestry related communities, and the effects of timber issues on the people of the region. (participants include representatives from universities, state government, banking, industry and environmental groups)

Three experts per issue area will give five minute technical presentations on a topic. Two other scientists per panel will have an opportunity to respond to what they have heard or the President's and other's questions.

2:45 BREAK

3:00 ROUNDTABLE 3:

WHERE DO WE GO FROM HERE:

Twenty or so individuals will help the President, Vice President, and secretaries seek out new ways to resolve forestry issues in the region in this roundtable discussion.

The polarization gets the press, however, there are many reasonable people on all sides of the forestry debate that are working on new ways to protect both the forests and the jobs that depend on them. Without ignoring the very deep and very real divisions that exist between various interests, the following three questions will attempt to provide a forum for bringing people together -- instead of apart. These questions are:

(1) **How can we manage and protect our forests for today and for the future?** This discussion will allow people to talk about how new forestry practices can protect both ecosystems and jobs, and what our forests should look like for our children and grandchildren.

(2) How can these communities grow and adapt to today's changing economy? This discussion will provide an opportunity for people to discuss local, regional, and national opportunities for bolstering the region's rural economic health.

(3) If workers are impacted, how do you help those people who are affected? This discussion will allow people to show how to help woodworkers adapt to new forest related and other work opportunities.

Participants will include environmentalists, labor, timber and timber related industry, non-timber industries, community leaders, educators, native americans, forestry professionals and others.

4:30 CLOSING STATEMENT: The President will close the Forest Conference with personal comments and directives to his cabinet for what steps need to be taken to resolve the issue.

5:30 p.m. ADJOURN

March 23, 1993

MEMORANDUM

TO: Katie McGinty
FROM: Charlene Dougherty, Dick Meltzer
SUBJECT: Forest Issues

Attached is a very long "check-list" of issues, problems, and traps on the forest issues. We tried to list in an abbreviated way the major items that confronted us as we were moving and negotiating legislation last year.

This is not an official communication. It is, rather, the product of our informal brainstorming. Hope it doesn't deter you from continuing all of your good work.

We haven't shared it with anyone else in the Administration working on the forest conference. It is yours to share if you think it is helpful or appropriate, but please be discreet. It does say some unflattering things about the agencies and it does name some names (all of whom we want protected). Or, you may simply keep this list as your own personal nightmare.

Revised
Blaker
EPA

8 PAGES

CHECK LIST OF KEY FOREST ISSUES

Management:

Base on objective science where consequences of actions are known. Deviations from Gang of Four (e.g. logging in LSOGs, deleting LSOGs or key watersheds from protection) render the risk-analysis scale (pp 30 & 31 of Gang of Four Report) invalid.

Manage across the landscape, i.e. ecosystem approach, and for multiple species, including fish.

Manage with objective of ecosystem protection so that future crises are avoided, e.g. listing of additional species, loss of jobs related to a healthy (as opposed to exploited) environment (commercial and recreational fisheries, tourism industry, specialized forest products).

Interim versus long-term management. Gang of Four is a prescription for interim management. They say more science needs to be done to structure a permanent solution. House Ag and Interior bills provided for a two step process; both established a science committee to develop long-term plan; protection was provided for forest and species in interim.

Questions to resolve: Establish reserves or establish a management system or some combination of reserves and management prescriptions. Establishment of risk analysis (probability of success) as guiding principle of change of management. By statute or by regulations. Degree of Secretarial discretion. How to make management by FS, BLM, other agencies compatible and complementary.

LSOGs:

LSOGs contain both old-growth and second growth. The LSOG network was designed to establish a functional old-growth network, i.e. younger trees would be maturing into old-growth to replace old-growth as it dies off or is harmed by a natural event (fire, insects, etc). Not all old-growth is included in the LSOGs. The environmentalists have additional old-growth they want protected.

Logging in LSOGs: Gang of Four: manage LSOGs to maintain or enhance their ecological integrity; no commercial logging, including salvage. (pp 5&6).

Managed LSOG2s: Option 9 and 10 provides for managed LSOG2s: timber harvest is permitted under management option C (50-11-40, retention of green trees, snags, logs, 180 year rotations. (pp 6 & 18).

LSOG3s: How should these areas be managed?

Forests outside LSOGs:

Management of lands outside of the LSOG reserves is important to the key ecosystem protection issues of viability of the forests and associated species. The Gang of Four sets forth three management prescriptions: A, B, and C. See p.5. DLM cannot manage its land even at option A, because much land has been too heavily cut over to permit it to meet the 50-11-40 rule. Option C gives you a significantly higher probability of sustaining forests and associated species. Compare the risk rating for Option 8C and 10A, for example. The House Ag Committee reported an 8A bill. The risk for a functional forest network at 8A is "M" or a 50/50 chance. The risk at 8C is H (a high likelihood of success). (pp 30 -32)

Watersheds:

Protection of watersheds in the Gang of Four report is tied to "anchors" or preserves. Key watersheds are identified. Look at the maps with the watershed overlay to understand the scope.

Rivers and fish enviros believe that protection of these watersheds currently in good shape is the most important and most immediate need.

The Gang of Four prescriptions apply to federal lands. Some 85 fish stocks of special concern were not addressed in the watershed options because they were affected mainly by conditions outside of the federal lands. (p4 & 5).

Current Forest Service watershed, riparian, and fish protection is inadequate. After the Gang of Four report, they tried to suppress internal Forest Service reviews of the watershed options because those reviews agreed with the Gang of Four. Expect them to continue to gloss over the watershed problems. Go directly to Jim Sedell for information.

Management in watersheds: See Table 5 (p 26), Watershed/Fish Habitat Emphasis Option. Key: riparian management extends across all FS and BLM

lands, not just the lands within watersheds and LSOGs. Key watersheds are managed at Option C. Directions concerning road removal, cumulative effects, staying out of roadless areas, and others are set forth. (pp 26-27).

Key to watershed protection: anchor areas, management within the watersheds (not just riparian zones), apply across federal landscape, repair and restoration work.

Timber Cut:

Sales under contract: We understand there is 2 billion board feet under contract but not harvested (as of January 1). These sales are not under the injunction. Gang of Four notes that 44% of these sales are in LSOGs and owl additions. (p 10).

Pending Sales: You have our chart totalling the board feet in a number of forests which are being prepared for sale. Of the board feet not located in LSOG 1s and 2s, we assume some portion of that is within key watersheds or owl additions. We do not have this information. If you want the data given us by the FS, from which we compiled the chart, let us know.

Salvage: Consider developing environmentally sensitive guidelines for salvage. There are none to our knowledge. Restrictions on offering salvage sales were loosened last year. (The size of sales which could be offered without environmental documentation was expanded). The enviros are concerned about the effects of salvage sales on the forests and watersheds and will point to salvage sales which consisted largely of green trees, salvage sales which have caused environmental damage, fisheries losses, etc. One internal FS memo suggested that salvage could be used as the "cover" to quickly offer green sales. Mother Jones just ran an article on arson in the northern CA forests being used to get out salvage after the fire.

We intended to deal with salvage in our legislative proposals by setting statutory guidelines for salvage and permitting salvage only after approved by a scientific committee.

Log exports: One option for short term volume. Delegation has mixed views on exports. Opportunity to create jobs processing logs prior to export. Look at possible positive impacts by

restricting exports of unprocessed logs or by imposing tariffs.

Eastside:

Fish: Large number of sensitive fish stocks in the eastside. Look at watershed management prescriptions for federal lands on the eastside: Gang of Four, PACFISH report (done but not yet made available), SAT (contains information on eastside fish). Other: Gang of Four briefly discussed eastside forests. See p. 14. Consider doing a Gang of Four analysis of the eastside. Timber: Expect accelerated timber harvest on eastside forests as the westside remains shut down. If not carefully managed, expect successful lawsuits under NFMA, ESA, and likely injunctions. Jack Ward Thomas is the east side expert.

(Consider another forest-related exercise to follow the current one. This would deal with fundamental FS/BLM reforms to ensure that the problems plaguing the spotted owl forests are not exported wholesale to the eastside, to Idaho and Montana and elsewhere thereby triggering a new political dynamic. This might also help you address looming crises in the Mexican spotted owl forests).

Forest Health: Watch out for this. Has been used on the Hill as a "feel good" cover to justify salvage. Forest health bills introduced last session were really salvage bills. Go to Jack Ward Thomas on forest health.

Hot Spots:

Here is a checklist of other "sensitive" areas:

Certainty: Usually this means mandated cut levels. Congress has done this in the past, including the infamous 318 rider. Mandated cuts will get you in trouble with science, the Endangered Species Act, the enviros, etc.

Sufficiency: A favorite is "notwithstanding any other law". Another is selective exemptions from environmental laws. We discussed this in our meeting with you. If your concern is getting the program up and running quickly, there are ways to do this without violating the environmental laws or asking Congress to play God.

Both certainty and sufficiency will cause major problems on the Hill, not only with the

environmentalists, but with the "good government" folks -- Nader, Common Cause, etc. who will object to precluding or abbreviating judicial review.

Delisting: The Gang of Four did say that if the lands are managed correctly, the owl might recover and delisting might be possible. We considered a provision which would put a strong management program in place. When implemented, the program would have a high probability of owl recovery. It could then be considered the equivalent of a petition to the FWS to begin the normal delisting review. The final decision would be up to the FWS.

Experiments: Some in the northwest want to allow wide-ranging latitude to the FS to experiment in the LSOGs. Environmentalists have horror stories of experiments "gone bad" and they worry experiments will be a cover for timber harvests. Gang of Four stated that more research needed to be done.

Roadless Areas: These are very important to the environmentalists. Stay out of them. Permitting logging in roadless areas will invite strenuous opposition. (Note: roadless areas are generally roadless for good reason: hard to get to, steep slopes, need extensive road building, etc).

FORPLAN and suitable timber base: Norm Johnson will tell you there are problems with Forplan (he designed it). Be wary of the data it generates. Be very wary of FS information about how much timber is available for harvest on its lands. One of Forplan's most serious drawbacks is its failure to know where it requires cutting across landscapes, in roadless areas, and in ways that fragment the ecosystem more. This hurts the environment, but it also means the program fails to understand that some sales are more expansive than others because they require more road-building.

Reforestation: Be wary of FS information about its replanting efforts. We sent Stephanie a report one of our staff prepared on regeneration failures. Claims have been made in the past that areas have been reforested, when they haven't. Some of these "reforested areas" are added to the suitable timber base, when there aren't any suitable trees to cut. And, the agencies have permitted logging in areas where it is unlikely

that reforestation will ever succeed (high elevation, soil type, etc).

The Inspector General of the Interior Department reported that BLM has failed to perform a number of activities on its forests related to reforestation and to harvest trees on forests unrestricted by the owl. Congressman Wyden has been looking into this from the perspective that the fertilization and thinning programs, which are necessary to achieve the growth promised by the agencies, have been neglected. This reduces growth and reasonable projections of the cut, but also affects employment, where the agencies should be hiring more local folks to thin, fertilize, etc.

Thinning: There is a difference of opinion within the environmental community on thinning. The Gang of Four (p. 5) said that they did not think removing merchantable timber from the reserved LSOs should occur during the interim period. Some enviros think limited and careful thinning could happen and be helpful to the forest health. Others fear the agencies and industry will abuse any entre to the forests.

Viability Regulations/Endangered Species Act: There has been a raging battle about the viability regulations of the FS. Expect industry efforts to eliminate or gut these regulations. Resist. We understand that the FS has prepared, but hasn't approved, major changes to the viability regulations. Lyons would know all about this.

Indian Tribes: Don't forget them. They are concerned about the impacts of poor forestry practices on their lands and their fisheries. The Gang of Four group has been looking at these issues. We haven't seen their report. Talk to Norm Johnson.

O & C Lands: The community stability provision in the O & C Act poses long-term potential problems for comprehensive forest protection. To the extent that logging is limited on O & C lands, the Administration could be vulnerable to law suits forcing logging as a way of providing community stability.

Payments to Counties: A major political or budget problem. As you know, a sizable portion of some counties' revenues come from timber receipts.

This link needs to be changed and another source of revenue found for the counties.

Citizen suits/Administrative Appeals: In general, the enviros would like a citizen suit provision and they will oppose eliminating the appeals process. There has been active discussion of ways to shorten the appeals process without violating a citizen's ability to make an appeal. This is a tricky area. The FS and industry claim that many appeals are frivolous (and some are), but the appeals process has played a healthy role in making the agencies obey the law.

Whistleblowers: There have been strong and persistent stories about the FS muzzling employees and punishing whistleblowers and others who have tried to do an honest job. The Mumma resignation in FS Region 1 is a vivid example. AFSEE has examples. In addition, concerns have been raised that the "ologists" on the forest -- the biologists, ecologists, etc. -- are treated as second class citizens by the agencies. One allegation is that timber planners have gotten preferential treatment in the recent personnel cut-backs and in general bonuses and other work incentives. If the forests are to move more toward an ecosystem-based management approach, they need their scientists.

Reward for Timber Cutting: The environmentalists would like to see internal procedures within the FS changed so that promotions are not based on "getting the cut out". This works against biologists and others who are not timber managers. Similarly, funds available to individual forests to manage their lands (restoration, reforestation, and other work) should not be tied to timber harvests. Creates all of the wrong signals.

Secretarial Discretion: This is a big issue. There is such strong distrust of the agencies that few want to set up a program which vests much discretion in the Secretaries. Although that attitude has softened somewhat since November, many are concerned about what happens if the next Administration is not environmentally sensitive.