## Review



# YALE FOREST FORUM



## Northwest Forest Plan Revisited

A summary of a forum exploring the science, policy, and politics of sustainable forestry in the Pacific Northwest, USA

A Yale Forest Forum Event

October 23, 2001

Global Institute of Sustainable Forestry

New Haven, Connecticut

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## YFReview

## Northwest Forest Plan Revisited

A summary of a forum exploring the science, policy, and politics of sustainable forestry in the Pacific Northwest, USA

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#### **Executive Summary**

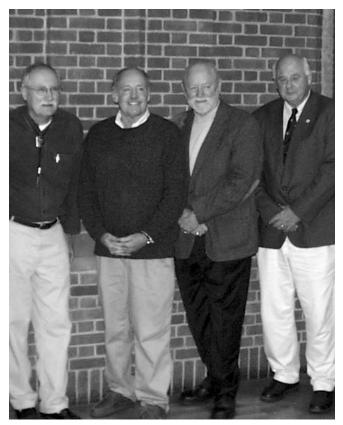
Perhaps no late 20th century environmental issue sticks in Americans' minds as well as the northern spotted owl and timber industry controversies that exploded from the Pacific Northwest into the national political agenda in the late 1980s and early 1990s. While the debates encompassed economic, social, and political issues, at the heart of the matter was a scientific question: How can the forests of the Pacific Northwest be harvested in a way that protects spotted owls and other critical species, vet still maintains the economic vitality of the lumber companies and rural, timber dependent communities?

In the late 1980s, Congress asked a panel of four scientists to answer this question and develop alternatives for a management plan for the Pacific Northwest federal forests. The four—Dr. John Gordon, former dean of the Yale School of Forestry and Environmental Studies; Dr. Jerry Franklin, Professor of Ecosystem Analysis at the University of Washington; Dr. Norm Johnson, Professor of Forest Policy at the University of Oregon; and Dr. Jack Ward Thomas, former USDA Forest Service Chief, currently Professor of Forestry at the University of Montana—laid the groundwork for the Clinton Administration's Northwest Forest Plan

The plan was the landmark compromise between environmentalists and the timber industry and covered a region stretching east from the Pacific Ocean past the crest of the Cascades and south from the Canadian border to the California redwoods.

On October 23, 2001 the Yale Forest Forum and the student-led Western Resources Interest Group hosted a forum entitled, "The Gang of Four Revisited: Science, Policy, and Politics of Sustainable Forestry" at the Yale School of Forestry and Environmental Studies in New Haven, Connecticut, USA. Once again, Dr. Gordon, Dr. Franklin, Dr. Johnson, and Dr. Thomas were brought to the same table, after a lapse of over ten years, to discuss their work in protecting the old-growth forests of the Pacific Northwest, the development of ecosystem management

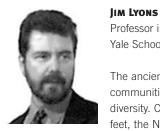
concepts and regional ecosystem protection strategies, and the evolution of natural resource science and policy resulting from their work. Jim Lyons, who, as staff to the U.S. House of Representatives Agriculture Committee, originally convened the team of scientists, and is now Professor in the Practice of Natural Resource Management at the Yale School of Forestry and Environmental Studies, served as moderator.



The Gang of Four together once again. From left to right, Jerry Franklin, Norm Johnson, Jack Ward Thomas, and John Gordon.

### YEReview

#### Issue Introduction



"The efforts of these individuals resulted in significant changes in national forest policy."

Jim Lyons

Professor in the Practice of Natural Resource Management, Yale School of Forestry and Environmental Studies

The ancient forests of the Pacific Northwest sustain rich biological communities that are critical and irreplaceable reservoirs of biological diversity. Containing 500 year old evergreens towering more than 300 feet, the Northwest's old-growth forests are the habitat of the rare northern spotted owl, which became both the symbol of the forest's ecological values and a lighting rod for controversy.

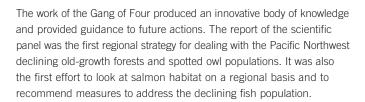
During the late 1970s and early 1980s the issue of spotted owls and old-growth forests started to come into focus in the Pacific Northwest. The Forest Service and the Bureau of Land Management had maintained substantial timber programs on their respective public lands in the region. Federal timber sales in Oregon, Washington and northern California were around six to seven billion board feet annually, approximately two to three times the federal national timber sales today.

Concern arose among biologists and others that the population of northern spotted owls, a species already listed under the Endangered Species Act, could not be sustained if this level of old-growth harvest continued. Furthermore, maintaining viable populations was a legal requirement under the National Forest Management Act. The biologists thus put pressure on the Forest Service to explain the relationship between forest management and spotted owl populations and to develop a strategy that would ensure that the agency could maintain viable populations of the owl.

In the early 1980s, the Seattle Audubon Society brought a legal case against the Forest Service. At question was the Forest Service's ability to meet its obligations to maintain the viability of the spotted owl while at the same time aggressively cutting old-growth timber. In 1989, Judge Dwyer of the 9th Circuit Court issued an injunction against the 139

timber sales planned by the Forest Service, and two years later made the injunction permanent.

Because the injunction virtually halted timber sales in the region, in 1989 the Congressional Committees on Agriculture and Merchant Marine and Fisheries agreed to convene a scientific panel to develop recommendations regarding old-growth, owls and sustainable timber supplies. Dr. Jack Ward Thomas. Dr. Jerry Franklin. Dr. Norm Johnson and Dr. John Gordon were asked to conduct the study. Critics of this scientific panel named the group the "Gang of Four," reflecting their dislike for Congressional efforts to seek scientific guidance on an issue that had eluded a political solution. The team requested that Dr. Jim Sedell and Dr. Gordon Reeves, whose insight into the forest watersheds and native fish became vital in the study effort, join them.



But the significance of the Gang of Four's report went beyond providing the first comprehensive look at old-growth forests in the Pacific Northwest. The efforts of these individuals resulted in significant changes in national forest policy, in defining the role of science and scientists in the policy making process, in helping to translate the theory of ecosystem management into practice, and in reforming the management of old-growth forests in the Pacific Northwest.

Despite these efforts, Congress was unable to reach agreement on an approach to the crisis. The gridlock became a focal point of the presidential election in 1992. As a result of a campaign commitment, President Clinton convened a forest conference in 1993 in Portland.



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Oregon. The day-long conference involved the President, the Vice President and a number of members of the cabinet. Local officials. industry executives, environmental leaders and scientific experts testified. Among the forest conference participants who addressed the President were Dr. Jack Thomas, Dr. Jerry Franklin, Dr. John Gordon, and Dr. Jim Sedell. At the end of the conference, the President announced that within 60 days, he would have a solution to the crisis.

Several suggestions arose from the conference. One recommendation was that a scientific panel, which had the knowledge and experience needed to produce a scientifically sound, legally defensible set of options for the President's consideration, be convened. That team became known as FEMAT—the Forest Ecosystem Management Assessment Team. It was chaired by Dr. Jack Ward Thomas and included leading scientists included lead scientist Dr. Jerry Franklin, Dr. Norm Johnson and Dr. Jim Sedell. FEMAT produced a range of options for the President's consideration. The President eventually chose what was known as option nine, which became the basis for the Northwest Forest Plan.

In December, 1994, Judge Dwyer ruled this plan was legally sufficient to lift the injunctions affecting the region and to turn back management of the Northwest forests to the Forest Service and the Bureau of Land Management. In his ruling, Judge Dwyer expressly endorsed the use of an ecosystem approach to management of old-growth forest habitat, observing "given the current condition of the forests, there is no way the [federal] agencies could comply with the environmental laws without planning on an ecosystem basis." Bruce Babbitt, Secretary of the Interior during the Northwest Forest Planning process, later hailed "the use of science – interdisciplinary science – as the primary basis for land management decisions" as the most significant policy departure of his tenure in office. He called the Gang of Four's work "the beginning of a new applied science of landscape conservation, using the tools of many sciences to find an acceptable balance between human communities and nature "

#### Presenter Summaries

#### NORM JOHNSON

Professor, Oregon State University

Today it is difficult to realize that only a decade ago, the fight over old-growth dominated discussion at every possible meeting you could imagine in Oregon and Washington, whether it was a casual conversation in a bar, a report on television, or an article in the newspaper.

Concerns were raised and the public took notice. The timber industry also took notice. The old-growth timber industry employed tens of thousands of people, thus there was a delegation committed to maintaining the harvest. Almost overnight, it seemed as if a way of life was threatened by a critter that few knew about and even fewer had seen. A series of lawsuits were brought and forest plans, more than a decade in the making, were held to be inadequate.

The Forest Service eventually decided that forest planning was not going to solve the issues it was facing. They brought in Jack Ward Thomas to lead an effort to develop a scientifically credible strategy for conservation of the northern spotted owl. That was a fundamentally different way of looking at the problem. In six months, Jack and his colleagues developed the first regional conservation plan for the owl and set the framework and the approach that was expanded upon by the Gang of Four and others. When the group finished their report on the northern spotted owl, they realized that effective forest management is actually a system in-between setting up reserves and management that would maintain owl populations.

While the northern spotted owl populations received a lot of attention in the popular press, the real story was old-growth and the balance with the species associated with it. Old-growth was the start of the Gang of Four for it is this story that led Jim Lyons and others to ask Jerry Franklin, Jack Ward Thomas, John Gordon and myself to a hearing in Washington, DC. This group had never been together before. At the hearing, Congress asked what was known about old-growth. The answer



"Almost overnight it seemed as if a way of life was threatened by a critter that few knew about and even fewer had ever seen."

- Norm Johnson

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Pacific Northwest forest understory

was, "not much," but, always the optimist, Jerry Franklin said, "well, no problem, we can map all the ecologically significant old-growth in two weeks." That is how the family [Gang of Four] began.

The "family's" foundation was clarified in a letter of instruction that came from the Agricultural Committee. The Committee requested that the group assist in the identification of old-growth forest in the region. Specifically, the Committee asked the members to "evaluate different approaches for protecting ecologically significant old-growth and late-successional species and processes including, but not confined to, spotted owls."

The letter noted that old-growth areas needed to be identified and mapped as a graded series within each affected forest from most important to least important. The letter also requested the development of recommended guidelines for managing unreserved lands. The project was made even more difficult because the Committee did not have any money for the project. We knew this was a near to impossible task. The Committee seemed to recognized the difficulty of the request and stated

in the letter, "We encourage you to solicit the assistance of others who would be helpful in this endeavor, including resource personnel from the Forest Service." The Committee asked for the task to be completed in three weeks.

Less than a week later, the members of the Gang of Four called for assistance. Beginning in a coliseum, and later moving into a Youth Center in Portland, the mapping of old-growth forests began. Hundreds of people arrived, including all of Jack Thomas' and Jerry Franklin's colleagues and many state and federal agency officials. The Committee had asked for alternatives so the Gang of Four created alternatives. These ranged from forest plans that took into account highly significant old-growth, buffers for fish, spotted owls and other endangered species. Then there was a risk assessment, which considered functional retention of old-growth for a century or longer, functional succession of old-growth, northern spotted owl populations, property with nesting habitat, populations of sustainable old-growth, species habitat, and sensitive fish habitat. The team completed the analysis, calculated the harvest numbers, and made a date with the Committee.

John Gordon, who had left the group temporarily, rejoined the team in DC the night before the date with the Committee. Because he had seen the report earlier, it was quite a shock when John got off the plane and said, "I won't sign this." Although he had no problem with the analysis itself, he did not like the flimsy language. He took the report and decided to write some conclusions. He wrote six of them that night. The rest of us thought that the conclusions were corny and contrived largely because they were so clear.

The next day during the presentation to the Congressional Committee, John stated, "There's no free lunch here. We developed 40 alternatives and can't find an alternative that gives high levels of species protection and gives high harvest levels. We scientists have done what we can. The process of democracy goes on from here." At least 40 members

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of Congress heard that. The team had never selected a preferred alternative—this decision was left to Congress.

As the team presented the findings, Congressman Peter DeFazio from southwest Oregon turned white as a sheet. He knew what it meant. He knew there was nowhere else to go. The Committee as a whole adjourned for the day to think about the report and vowed to come back the next morning to debate the alternatives.

The next morning, Sid Morrison, the informal leader of the Northwest congressional delegation, remarked "the sticker price here is high, but we think your analysis is okay." He told the Gang that Congress was not going to try to destroy the quality of the analysis. Then Bob Smith, a Congressman from eastern Oregon, known to be in favor of abundant timber harvests, said, "You could have saved some paper because there's no alternative worth presenting less than AA." AA was the first alternative that provided protection for everything. And with that he defined the threshold from a conventional standpoint. He defined, in some sense, what sustainability meant to him.



#### **IERRY FRANKLIN**

Professor of Ecosystem Analysis, University of Washington

From 1965 onward, scientific research was conducted that was relevant to forest management, timber management, and ecosystem management. Considerable research on old-growth ecosystems provided scientists with an understanding of their structure and functions, and how to define them. It was clear that these forests were different from other forests and that they had high value for ecological functions, which scientists were interested in, especially in terms of larger spatial scales. This research was not finding its way into the regular forest planning process. One theory as to why is that the science that was emerging threatened the various stakeholders and the values held by professional resource managers. Therefore, the knowledge was not making it into the planning process.

Dr. Jack Ward Thomas and other biologists in the Interagency Scientific Committee to Address the Conservation of the Northern Spotted Owl (ISC) were the first to put this research to work. The ISC took two immense steps that provided a foundation for the Gang of Four. The first one was to assert that. "We can't do this one stand at a time." If you're going to deal with old-growth organisms like owls, you're going to need large reserves or large contiguous blocks of habitat. We realized that larger habitat blocks which had been fragmented could potentially be put back together, both by natural process and by active management.

The ISC also recognized that the matrix, or unreserved part of the landscape, is important. If preserves are all you do without focusing on and worrying about what goes on in the matrix—in the area outside preserves the whole system can fail. Conditions in the matrix are as important as the preserves in a regional strategy for old-growth forests and related organisms. Throughout the process, the team also learned about disturbances. When Mt. St. Helen's erupted in 1980 it eliminated approximately 125,000 acres of National Forest in one fell swoop. Policy makers and scientists knew



"If you're going to deal with old-growth organisms like owls, you're going to have to have large reserves, large contiguous blocks of habitat"

— Jerry Franklin



that any old-growth management plans had to address the potential for large, unpredictable, catastrophic disturbances.

The Gang of Four was an opportunity to really integrate and focus this new information and science in the mapping and the grading of the old-growth forests. This opportunity arose because the Congressional establishment was threatening to do something about the spotted owl and timber conflict if we didn't. That was a no-go. So we had no choice—we were coerced into this process. There was now a large body of science available for use in developing and evaluating a very broad array of alternatives., bringing the best current science into the assessment and planning process. Prior to this process, this was not possible.

When the team agreed to map and grade the old-growth forest, no one was sure exactly how that could be done. Success depended on the biologists, silviculturists, hydrologists and other experts in the field—government employees and researchers that knew the land—exchanging information with each other. These professionals came together in a common place, brought their materials, and took two weeks to map, grade, and evaluate alternatives for the old-growth forests. Approximately 125 to 150 people came together to work on this issue. People were arranged according to geography—the table at one end of the room was the Mt. Baker National Forest staff and the next one was the Gifford Pinchot staff and the next one was the Mt. Hood staff, and so forth. Each working table was geographically arranged in relation to its neighbors so participants could look at what was going on at the other table and see how well their work fit together.

Only professional staff experts, not supervisors or managers, were allowed to participate. We wanted as neutral an environment as possible for the participants, where they could feel safe, where they could be asked to provide their best information. They were beautiful. They were professional. They were great people. The agency professionals were empowered to do their job. They did it and they did it beautifully. They were the magic ingredient in the Gang of Four process.

#### **IACK WARD THOMAS**

Professor of Wildlife Conservation, University of Montana Former Chief, US Forest Service

What the Gang of Four did was the basis of what is now called science-based management. The science up to that point was the science of how to produce timber. It was fairly obvious by the 1980s that there was movement toward the listing of some species in the Northwest as threatened. If a law is passed, it takes a while for that law to come into action, so the scientists were obviously on a collision course, but they had come out with an initial set of forest plans. Those forest plans had been produced under extreme duress, headed by a fellow named John Crowell, who was the Undersecretary and Chief Council for Louisiana Pacific. Crowell indicated that he wanted 25 billion board feet cut per year. In actuality, they only got to 13.5 billion board feet.

But even instituting that, while it might have been practical in the sense of just producing timber, was certainly out of touch with the American people in terms of what they were willing to accept ecologically. One did not have to be a scientist to know that a confrontation was coming. Every time I flew into Portland and looked out the window. I would see the progression of the clear cuts and I would listen to people on the airplane. It was fairly clear that that level of cutting was not going to be tolerable in the longer term.

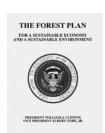
Science had not been able to cope with the question due to management override based on the political unacceptability of reduced timber harvest in the Pacific Northwest. The first and last try that the US Forest Service made internally was a reduction in timber harvest of three to four percent, which was proclaimed by Senator Hatfield and others from the Northwest as completely unacceptable given the consequences of the situation.

The Interagency Scientific Committee (ISC) was then established, and worked behind closed doors. Our first presentation was to the combined



"What the Gang of Four did was the basis of what is now called science-based management"

— Jack Ward Thomas



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Cover of President Clinton's Forest Plan, July 1, 1993

agency heads, with demonstrators outside. John Turner, who was the head of the Fish and Wildlife Service and a biologist by training, commented that it was a remarkable piece of work. One member of the Forest Service looked like he had been kicked in the stomach, but even he said, "My God, this is what we asked for." Then the head of the BLM said, "This is going to destroy my political career." I was never so taken aback in my life, but it was a guick connection with reality. The agency heads took the report and tried to tear it apart, making it clear that the members of the ISC were not the nicest folks on the list of people in Washington about that time. But the fact was that they could not shake the analysis.

Soon after, Bill Clinton was elected President and promised that the administration was going to obey the law and do what it could within its legal jurisdiction. He created the Forest Ecosystem Management Assessment Team (FEMAT), which was to develop a set of options with a broad array of people working on the task. Six hundred people were pulled together and had 60 days to do the job. Of course, it was supposed to be science in action. It wasn't science but rather analysis and planning done by scientists. There is a difference. If science is observed—the production of new information in a peer-reviewed fashion using the scientific process—then each one of those papers or reports or whatever is done can be considered a brick, a brick of knowledge. That brick is thrown in the pile. FEMAT was getting a very large pile of bricks, which was problematic. Some were ecological bricks, others were soil, or forestry, or wildlife.

Someone had to pick the right bricks out of the pile and create a platform for management, and it was decided that those choosing the right bricks should be scientists. So the scientists went to work and produced an array of alternative actions from which the President then chose a solution. Three lessons were learned from FEMAT: the process was completed too guickly: a fully open process is needed; and managers must also participate. One of the most important concluding questions to ask is: How much

of this is science and how much is politics? I would not want to turn the world over to science—scientists cannot say what is and is not acceptable risk level. Who are we, as scientists, to say what is right and what is wrong? We can say, however, "here are the consequences, clear and distinct and here are the decisions with which you are faced," and can do their best to assure the decision makers have that information at their disposal. This is the evolution of science more recently applied to management.

The President wanted to extend this approach of science contributing to the development of policy. He accepted FEMAT's recommendation for the Columbia Basin, which was going to be largely a fish issue. The Columbia Basin Project was started in 1993—it has been eight years and it still is not finished. If no one can come to grips with the consequences of the information and face up to it, the process is declared flawed or inadequate and the team is sent back to get more information, going full circle. These scientific teams brought science into the issues and provided some real breakthroughs in the process. Then they looped back to try to deal with the political consequences of the situation and became stuck.

Several last cautions are in order. First, there were not many people who could do science-based policy work. As a result, the vast majority of the people that were good were diverted into these efforts. They had not been sitting in their research units sipping tea and crumpets before these projects—they were busy doing their research. These projects diverted a large number of researchers from their work. The next stage is figuring out how to support management by providing the science and the people to do it in a more rational, quicker process.

Finally, it is critical to set firm deadlines. Take all of these scientists gathered together and say, "Welcome to the process guys. In 60 days we're going to give the President of the United States ten fully analyzed options for the decision of how to manage the timber of the forests of the Pacific Northwest." If you put them in a room and you guarantee them that they will not see their wives, husbands, or children until they





Norm Johnson, John Gordon, Jerry Franklin, Jack Ward Thomas and Jim Sedell enjoying a light moment during the forum.

get through with this, all of a sudden, they focus very intensely on the things that really matter and they let the little things go by the wayside. The Gang of Four all wished for another month, but it is not certain that we would have done much better. FEMAT always wished for another six months, but probably would not have done any better. And if the Columbia Basin project had been stopped six years ago, it would have been the same, as nothing better has been done since. It is still an on-going evolutionary process of how to bring science to bear.

#### Dr. John Gordon

Professor Emeritus and former Dean, Yale School of Forestry and Environmental Studies

Environmental problems take place in an atmosphere of contentiousness and controversy. Many lessons were learned from the pain and contention surrounding the process. The Northwest forest planning process served as an example of how to use science and scientists to answer real questions from outside science—questions regular people might ask. This is a very important role for science and something that has not been done very well in this country, except at times of extreme stress. Learning to do this in a routine way in the future is important.

It is also helpful to do things fast and within the budget. It is possible to have too much time and too much money to do something right. That goes against the standard grain. There is something about speed that adds to credibility. There's a saying that he who speaks true must have one foot in the stirrup.

Another necessity is a direct link to the decision maker and a commitment that the decision maker will do something as a result of what the scientists are doing. In the case of the Gang of Four, Congress said what they wanted to, and strongly implied that they would, do something. The fact that they didn't isn't all that instructive. Presenting options linked to consequences with stated risks is the best strategy. Coming up with single answers does not work. I have participated in enough single answer papers to state that unequivocally.

Finally, advocacy-oriented science is counterproductive, particularly done in the heat of assessment. Most decision-makers do not know how to distinguish science from non-science or scientists from non-scientists. It is essential to skip the advocacy science in the heat of assessment.



"We scientists have done what we can—the process of democracy goes on from here."

- John Gordon

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The Northwest forest planning process also provided lessons on implementation. This particular exercise was requested by Congressional Committees. It was actually implemented by the executive branch. The process entailed several branches of government working together. This cooperation was a good thing. It is something we can look to in future assessments.

One of the shortcomings of the process was that the designers lost control of the implementation. As Jerry Franklin said, "The three or four or five people that were most involved in the Gang of Four and survived FEMAT, had no involvement in the end game." And that's like paying a lot of money to an architect and then throwing out the plans to build this house from scratch. That didn't work out well here and I don't think it will work anywhere.

What actually happened as a result of this process? Most importantly, the law was obeyed. We learned a lot about the law in this process. The law is not what you think it ought to be. The law is not even what the legislator wrote. The law is what the court construes it to be until the court is reversed by another court. The law is what the courts say it is. You can't have the courts managing the forest, but they're where the buck stops.

One of the benefits of the work of the Gang of Four was that it cleared away the controversy about old-growth and biodiversity in the national forests so foresters and scientists could think about other issues with forests in this country. Nearly 70 percent of forests in this country are private. We ought to think about those instead of just arguing about the national forests of the West.

In the case of the Pacific Northwest forests, by the time scientific task forces were developed, flexibility was gone from the system with regard to win/win solutions that would make everybody happy. Starting assessment earlier would produce better consequences. The current way to manage a crisis is to lock up the barn door after the horse is already gone. So,

we need an early warning system, a mechanism to take these things on. John Bartholemew points out that it's easier to create the future than predict it. By developing an adequate set of mechanisms for doing assessments, particularly those that are not captive to any agency or interest group, we have a chance to create the future.

#### DR. IIM SEDELL **USDA** Forest Service

The best thing that happened in the Northwest forest planning process was trying to tie water and watersheds with what was essentially just a large tree and old-growth forest plan. The Northwest Forest Plan was the first landscape-scale Pacific salmon recovery framework. The plan was the only substantial conservation effort of all of the four factors affecting salmon. The plan institutionalized the importance of floodplains for salmon habitat. States, counties, and municipal governments are using this part of the plan to assist them in better floodplain management. This took conservation to a level beyond in terms of ecosystem management.

Without the Gang of Four this would never have happened. It is a daunting thought, to bring a large number of senior scientists with their own strengths, foci and ideas together. And the idea that these strong minds and wills and egos could actually sit together in a pressure cooker and come out with something is a real credit to not only their leadership, but the respect that they have for one another. It was not just happenstance. It was a really neat moment to get those kinds of people together to make this go. It does not happen everyday.



"The Northwest **Forest Plan** was the first landscape-scale Pacific salmon recovery framework."

- Jim Sedell





#### **Discussion Summary**

Following is a brief summary of the panel's responses to questions raised by the audience.

#### Involvement of economists and social scientists

#### Jim Lyons

The creation of the Northwest Forest Plan actually had a number of elements. One certainly was the strategy and protection of old-growth and wildlife. Another element was an extensive assessment of community assistance and support through the economic transitions that occurred from the changes in policy that were brought about by the Northwest Forest Plan. FEMAT has economists and social scientists. Norm Johnson is an economist himself.

#### Norm Johnson

While social scientists and economists were involved in these efforts. they were driven by the preceding requirement to protect species on a large scale, so it was not the kind of cost/benefit analysis you might otherwise expect.

#### Involvement of "virtual locals" in decisions in the Pacific Northwest

#### John Gordon

Although local people have to be able to be involved in forest management, what's happened is that a lot of people who virtually live around forests do not live there geographically. The interesting thing is that there are a lot more virtual local people than there are geographically local people. In fact, they hold the balance. It is those people who will determine our fate. And they have become vocal. We have been ignoring the information revolution. The internet, television, travel, they are vocal and we're going to have to figure out how to swallow that.

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#### Jim Sedell

I agree, and any land manager has got that problem. Eighty-five percent of the population lives in the urban area. How do you make this eastside forest health problem relevant to someone in New Haven or Boston or Portland or Seattle? It is going to be a major chore to keep connected to the bulk of the population in this country.

#### Economic response to the Northwest Forest Plan

#### Norm Johnson

The Pacific Northwest has rebounded much better than many people thought. There has been an increase in the economic growth of the Northwest. The fact that many of the communities are located near I-5, the major interstate, helped so that the depression that many thought might happen did not. Although the restoration jobs did not substitute for the timber jobs, people moved on, the communities moved on, and the number of communities that are depressed now is very small. It was very surprising.

Industry has moved on, changing location, retooling and using the smaller type of wood. You do not see the depression in western Oregon and western Washington now, which were the major places where the old-growth mills had been. Far eastern Oregon and places like that, did not respond as well. They are isolated from a transportation standpoint and are far from major urban centers, so the economies there suffer. They were not directly part of the Northwest Forest Plan, but there are still real difficulties there.

#### John Gordon

The fact that federal policy could change the rural landscape, rural geography, is illustrated in much larger brush strokes in other places than the Northwest. In the agricultural Midwest an end result of federal policy and science was that rural populations were decreased. They

were literally decimated by a factor of 10. So the idea that federal policy can have the consequence of changing demography is valid. It will happen. It has happened.

#### Jack Thomas

The US population is growing at a certain rate. The western states that contain national forests are growing at twice that rate and counties that have a national forest are growing at twice that rate. People are flocking to those kinds of places to live; therefore we can expect a resurgence of the timber communities. On the eastside of Oregon, however, the questions of economic and social impact are very much scale related. In an isolated place the results have been somewhat devastating, but in general, at the state level and the regional level, there was not even a blip.

Decisions are made by the majority of a minority that cares about a particular issue. That is to say, decisions are made by the folks that show up. One would expect some of the people to show up more frequently than others. A larger percentage of them will most likely be part of that minority, the majority of the minority that cares. Even though you might say that a person in New Haven has as much of a piece of those national forests as somebody who lives there, the reality is not so. Local decisions ought to be made on local grounds.

#### Status of the Northern Spotted Owl

#### Jack Thomas

People get excited that they have models that indicate how populations are doing. There are some problems with the models, but they roughly indicate that populations continue to decline. That was exactly what was predicted. The populations were expected to decline for two decades before they stabilized, due largely to the rapid elimination of old-growth and the fact that the owls live for a long time, get displaced and do not have a good breeding habitat. So although the projections





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indicate a decline. I do not know what more one would do. We have taken the most productive timberland in North America—perhaps in government ownership to environmental protection of threatened species. It would be difficult to get any more protective.

The spotted owl is at the head of the list under the Endangered Species Act (ESA). The forest planning regulations that were in place at that time were far more severe than the Endangered Species Act (ESA), in that they involved viability of all vertebrate and invertebrates of native and non-native significance. That's far more constraining than the ESA. In fact, the initial core losses were related to the planning regulations and not to the ESA. Thus, the northern spotted owl is doing as well as it has been expected to do when the Northwest Forest Plan was implemented.

#### Salvage Rider: Keeping old-growth and relying on second growth areas to provide access to some timber areas

#### Jack Thomas

The overarching idea is that you cannot mess around with the basic strategy on which that plan is based. If you do, you will lose it. If you begin to say, we are going to manage some of these areas inside the reserves for timber production, you have just put both feet on a very slippery slope.

#### Norm Johnson

It sounds good in theory until we try to find the stand to cut. We can always say, let's go out and find the areas you're talking about, but it turns out that rarely can we find one where everyone agrees. It is not like there is more timber over the hill anymore. We are never going to have a harvest level that is appropriate as projected from FEMAT or from the Northwest Forest Plan. That is not to say that there are not places in the other stands where in fact, from a scientific standpoint, it makes sense to go in and take action. While the land management agencies look at long-term risk, the regulatory agencies tend to look at very short-term risk. As a result an awful lot of efforts get sandbagged.

#### Jack Thomas

The plan was made looking at the long-term effects. Naturally, if you do not examine that information closely and you look at the big habitat reserve area on the map, you could make the assumption that Habitat Conservation Areas are all over the place. They were designed to contain 20 pair of owls, which the models indicated would persist for a very long time in isolation. Many of them do not have anywhere near that many at the moment. This is a hundred year plan and it is important that you stay with that. If you take short-term actions, the projections do not hold. The projections were made on the basis that those stands would be preserved and maintained such that they would support spotted owls and associated species over a long period of time.

#### Jim Sedell

This is particularly so for watersheds. The biggest, most dangerous disturbance in the last 10 years in the owl forest was from the '96 flood. That has created an opportunity to do some incredible watershed restoration efforts. In many ways, the tweaking of the Northwest Forest Plan, or any large regional plan, is going to allow you to take a leap forward instead of nibble away and get discouraged.

#### John Gordon

There may be some things to do on the social side. As Norm Johnson has indicated, sometimes there is a reason beyond a scientific reason why you cannot take action. Several things might have affected the way we are trying to go forward, such as the Warner Creek Salvage, but we were ordered to back off on them because of opposition that was feared might turn violent with ranger districts burned and logging equipment destroyed. If things are held captive to either civil disobedience or to terrorism at some level, no plan's any good.



#### Current forest management in the Pacific Northwest

#### Jack Thomas

The idea introduced by the scientists was one of ten. Option nine was selected and changed quite a bit before it was instituted. There was considerable additional environmental protection included in the plan. If you consider that from a projected 1.1 billion board feet 250 million were actually produced, current management is not tracking the plan. However, if you are of the environmental persuasion, it has been more protective than was anticipated. There has been an addition of some other things. There were 227 proposed species to survey and manage. You can go out and survey for these 227 different species, and if you find one I guess you're all set. You don't touch it. So the plan has been much more environmentally protective than was initially planned.

#### Reopening the plan

#### John Gordon

Congress should reopen the plan. The recommendation that came out of FEMAT was to institute adaptive management areas. These were going to be tried on a scale that meant something and see if they worked. It was a revolutionary principle. This was an interim idea to improve the situation until a better way of doing things better was determined—assuming we were going to learn how to do things better. To learn to do things better, you have to manipulate the landscape in some ways, and to my knowledge this is not being done on federal land. Thus, the plan should be reopened and evaluated.

#### Jack Thomas

I would like to see the plan followed. A precautionary principle was used for the fish issue because the group ran out of time and thought that the buffers along the streams should be one tree, a mature tree. That number was tripled as an interim number until a watershed assessment could be done from which an individual decision on the

landscape could be made. That's never been done. The plan has not been viewed as an interim measure with suggestions for improvements. The plan has never been adjusted and it needs to be.

#### Norm Johnson

I can't see the plan being reopened. The forests of the Pacific Northwest are a national treasure. While devising the plan, the group found that these forests, trees, streams, and critters are equally cared for by a vast number of people. Criticizing the plan is one thing but I'm concerned that opening it again means opening up all the issues again. It is not something to take lightly. Opening the plan would mean walking right into a storm and unless there is a national crisis, which is not present in the Northwest, I cannot imagine that it would be fully opened up.

#### The role of large-scale disturbances such as recent fires

#### Jack Thomas

The group had planned to have redundancy to account for landscape changing impacts. These areas were called Habitat Conservation Areas. Every one of them was in reach of two others, so there was redundancy going through the system which took the possibility of large ecosystem



A crown fire in mixed conifer forests of the eastside of the Cascades

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impacts into account. Luckily, the fires that have occurred in the past decade were not largely in the spotted owl areas. It is the eastside forests that have had spotted owl habitat destroyed, however, not many owls live there.

#### Jerry Franklin

This was one of the issues we had to deal with, and which we built into the plan, is the option for aggressive treatment of fires inside the Large Late Successional Reserves (LSRs). This is one of the places where we built in flexibility. Everybody buys adaptive management, but not when it comes to their resource. What happened is that the flexibility to treat the eastside forest simply has not been exercised. This is partly because the regulatory agencies are going to make conservative calls, based on existing habitat. One suggestion is a change in the plan to try to restore some of that potential for flexibility.

One specific change would be to focus on restoration activities in the fire landscapes of the eastside Cascades. Values will be lost if something is not done to reduce the potential for catastrophic fires. We have lost habitat to fire already. Part of the problem was the courts did not allow the managers to move ahead with treatment early enough.

The plan has been very successful in many regards, and whatever's done to modify the plan it must retain the credibility and the legality that it currently has. Because all of the habitat conservation plans for private and state lands are based on federal activities under the Northwest Forest Plan (NWFP), you cannot pull those props out from under these plans by changing the NWFP in a way that reduces its legality. At the same time, it is possible to refocus the activity in the very broadest sense on restoring habitat on the west side, restoring animal populations, and restoring fire in the eastside forests.

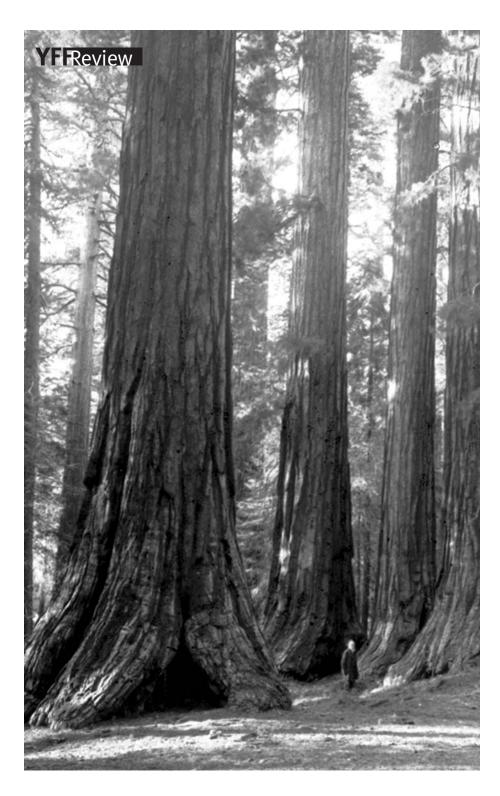
#### Concluding comments—a broader perspective

#### Jack Thomas

The larger question that we need to deal with is how do we manage forests in a sustainable fashion, with attention to not bursting other things. The drop in the cut in the Pacific Northwest was essentially replaced by imports from Canada, Scandinavia and Chile. Now we know that national forests are a national treasure, and we have protected them, but we have not reduced our per capita consumption of wood. We have only shifted the source.

As a consequence, the old-growth in the Northwest that is on private land has been cut—the total wood cut did not decline, it was replaced. Now we are looking at logging with the Canadians and we will still need to face the environmental consequences. Simultaneously we export money and jobs—economic opportunity—to balance the trade. There are ethical and moral questions that come in on top of this. The bottom line is that our timber consumption is not declining. In fact, it's increasing. We are simply getting it elsewhere. We need to think about the economic, ecological, and ethical consequences of that shift in supply and demand.





#### Resources for More Information

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#### Resources for More Information

Biodiversity Northwest http://www.pcbp.org/

Congressional Research Service Report http://www.cnie.org/nle/for-3.html

Northwest Forest Plan (USDA Forest Service) http://www.fs.fed.us/r6/nwfp.htm

President's Forest Plan (U.S. Environmental Protection Agency) http://cnie.org/NLE/CRSreports/Forests/for-3.cfm

Sierra Club, Pacific Northwest Ecoregions http://www.sierraclub.org/ecoregions/pacnw.asp

U.S. Department of Interior Bureau of Land Management, Oregon/Washington State Office, Northwest Forest Plan http://www.or.blm.gov/nwfp.htm

USDA Forest Service, Pacific Northwest Region http://www.fs.fed.us/r6/welcome.htm

Western Law Center http://www.westernlaw.org/forest/option9.htm

World Resources Institute, Old-Growth Forests in the United States Pacific

http://www.wri.org/biodiv/b011-btl.html

U.S. Fish and Wildlife Service. Pacific Region http://pacific.fws.gov/

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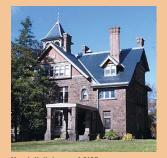
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The Yale Forest Forum (YFF) was established in 1994 by a diverse group of leaders in forestry to focus national attention on forest policy and management in the United States. The group convened the Seventh American Forest Congress (SAFC) to collaboratively develop and articulate a common vision of forest management to diverse stakeholders.

For over 100 years, the Yale School of Forestry and Environmental Studies (FES) has had a rich history in the pursuit of sustainable forestry. From the establishment of the School in 1901 Yale has played an integral role in the development of leaders who are prepared to confront the environmental challenges of the day.



Marsh Hall, home of GISF, on the Yale University campus

The School's Global Institute of Sustainable Forestry (GISF), housed in historic Marsh Hall, continues this rich tradition. Established by the Dean and a group of FES faculty members in 2000, GISF has launched new, innovative initiatives while coalescing and coordinating the many activities related to sustainable forest management at the School, including the School Forests and the Yale For-

est Forum. The Institute was created to address the management and conservation of both domestic and international forestlands in a holistic and comprehensive fashion. In pursuit of these ideals, GISF has developed several formal programs including the Program on Private Forests, the Program on Forest Certification, The Forests Dialogue, the Program on Forest Physiology and Biotechnology, the Program on Landscape Management, and the Program in Tropical Forestry.

The Yale Forest Forum is now the convening body of the Global Institute of Sustainable Forestry. Through YFF, GISF often holds multiple events each week at the Yale School of Forestry and Environmental Studies, and hosts workshops and seminars held outside the School, involving stakeholders from all sectors.

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