

NATIONAL FIRE PLAN

HEARING
BEFORE THE
SUBCOMMITTEE ON
PUBLIC LANDS AND FORESTS
OF THE
COMMITTEE ON
ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE
ONE HUNDRED SEVENTH CONGRESS
FIRST SESSION

TO RECEIVE TESTIMONY ON THE EFFECTIVENESS OF THE NATIONAL
FIRE PLAN IN THE 2001 FIRE SEASON, INCLUDING FUEL REDUCTION
INITIATIVES, AND TO EXAMINE THE 10-YEAR COMPREHENSIVE
STRATEGY FOR REDUCING WILDLAND FIRE RISKS TO COMMUNITIES
AND THE ENVIRONMENT THAT WAS RECENTLY AGREED TO BY THE
WESTERN GOVERNORS' ASSOCIATION, SECRETARY OF THE INTERIOR
GALE NORTON AND SECRETARY OF AGRICULTURE ANN VENEMAN

SEPTEMBER 25, 2001

PART 2



Printed for the use of the
Committee on Energy and Natural Resources

U.S. GOVERNMENT PRINTING OFFICE

77-952 PDF

WASHINGTON : 2002

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512-1800; DC area (202) 512-1800
Fax: (202) 512-2250 Mail: Stop SSOP, Washington, DC 20402-0001

COMMITTEE ON ENERGY AND NATURAL RESOURCES

JEFF BINGAMAN, New Mexico, *Chairman*

DANIEL K. AKAKA, Hawaii	FRANK H. MURKOWSKI, Alaska
BYRON L. DORGAN, North Dakota	PETE V. DOMENICI, New Mexico
BOB GRAHAM, Florida	DON NICKLES, Oklahoma
RON WYDEN, Oregon	LARRY E. CRAIG, Idaho
TIM JOHNSON, South Dakota	BEN NIGHTHORSE CAMPBELL, Colorado
MARY L. LANDRIEU, Louisiana	CRAIG THOMAS, Wyoming
EVAN BAYH, Indiana	RICHARD C. SHELBY, Alabama
DIANNE FEINSTEIN, California	CONRAD BURNS, Montana
CHARLES E. SCHUMER, New York	JON KYL, Arizona
MARIA CANTWELL, Washington	CHUCK HAGEL, Nebraska
THOMAS R. CARPER, Delaware	GORDON SMITH, Oregon

ROBERT M. SIMON, *Staff Director*

SAM E. FOWLER, *Chief Counsel*

BRIAN P. MALNAK, *Republican Staff Director*

JAMES P. BEIRNE, *Republican Chief Counsel*

SUBCOMMITTEE ON PUBLIC LANDS AND FORESTS

RON WYDEN, Oregon, *Chairman*

DANIEL K. AKAKA, Hawaii	LARRY E. CRAIG, Idaho
BYRON L. DORGAN, North Dakota	CONRAD BURNS, Montana
TIM JOHNSON, South Dakota	PETE V. DOMENICI, New Mexico
MARY L. LANDRIEU, Louisiana	DON NICKLES, Oklahoma
EVAN BAYH, Indiana	GORDON SMITH, Oregon
DIANNE FEINSTEIN, California	CRAIG THOMAS, Wyoming
CHARLES E. SCHUMER, New York	JON KYL, Arizona
MARIA CANTWELL, Washington	RICHARD C. SHELBY, Alabama

JEFF BINGAMAN and FRANK H. MURKOWSKI are Ex Officio Members of the Subcommittee

KIRA FINKLER, *Counsel*

FRANK GLADICS, *Professional Staff Member*

CONTENTS

STATEMENTS

	Page
Bingaman, Hon. Jeff, U.S. Senator from New Mexico	14
Cantwell, Hon. Maria, U.S. Senator from Washington	24
Craig, Hon. Larry E., U.S. Senator from Idaho	5
DeIaco, Rick, Urban Forester, Ruidoso, NM	51
Domenici, Hon. Pete V., U.S. Senator from New Mexico	2
Hartzell, Tim, Director, Office of Wildland Fire Coordination, Department of the Interior	15
Hubbard, James E., State Forester of Colorado, on Behalf of the Western Governors' Association	39
Johnson, Hon. Tim, U.S. Senator from South Dakota	3
Laverty, Lyle, Associate Deputy Chief and National Fire Plan Coordinator, Forest Service, Department of Agriculture	6
Lawrence, Nathaniel, Senior Attorney, Natural Resources Defense Council, Olympia, WA	43
Murkowski, Hon. Frank H., U.S. Senator from Alaska	4
Nelson, Tom, Director of Forest Policy, Sierra Pacific Industries, Redding, CA	56
Smith, Hon. Gordon, U.S. Senator from Oregon	34
Woods, Trent, Save Elk City, Elk City, ID	65
Wyden, Hon. Ron, U.S. Senator from Oregon	1

APPENDIX

Responses to additional questions	77
---	----

NATIONAL FIRE PLAN

TUESDAY, SEPTEMBER 25, 2001

U.S. SENATE,
SUBCOMMITTEE ON PUBLIC LANDS AND FORESTS,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:30 p.m. in room SD-366, Dirksen Senate Office Building, Hon. Ron Wyden presiding.

OPENING STATEMENT OF HON. RON WYDEN, U.S. SENATOR FROM OREGON

Senator WYDEN. The subcommittee will come to order, and let me apologize to our witnesses. Obviously, these extraordinary times make it difficult to schedule these hearings, but we very much appreciate your patience, and let me begin by making clear that my friend and colleague of 20 years in the U.S. Congress, both in the House and the Senate, is both a personal friend and professional colleague, and we have worked very, very closely together on many issues.

Senator CRAIG. And our public should not hold that against us, right?

Senator WYDEN. I want my colleague to know that, as I begin my chairmanship, nothing is going to change in my effort to continue to reach out to work with you on all these issues, the fire issue, virtually all of the Western timber debates have long been obscured by the smoke of partisanship and acrimony, and we have lost too much land already. We are not going to walk away from this debate, passing up an opportunity to make a real difference both from the standpoint of the environmental and economic wellbeing of our communities.

I am going to make a couple of comments, then turn to Senator Craig.

It seems to me that anybody watching the thousands of brave firefighters fight the fires that raged over hundreds of thousands of acres this summer has to recognize that business as usual fire control is no longer good enough. What we are going to have to do is find a way to make sure that the warring camps in the natural resources debate come together, and that is what we did in the county payments bill, and that is what I think our challenge here is with respect to fire.

We are going to actively pursue opportunities to unify communities, the timber industry, and environmental leaders to develop creative strategies for reducing fire materials in the forest, employ-

ing materials in our rural communities with family wage jobs, and maintaining the environmental integrity for ourselves and future generations.

Suffice it to say in the past the environmental community in a number of instances fought forest management practices that would have lessened the severity of fires for fear the timber companies would settle in and harvest the big trees. Some in the timber industry were willing to prepare the forests for fires, but wanted the big trees in exchange. Debates smoldered and slowed progress, and the West continued to burn, and the heart of the problem is, while this contentious discussion went forward, our ecosystems got sicker, not healthier, and that is what we are going to try and change

The national fire plan, of course, provides an opportunity for us to pursue that agenda. It focuses on better science, and was used for most of the 20th century. It has five components: fire-fighting, rehabilitation and restoration, hazardous fuel reduction, community assistance, and accountability, so we are going to look to make sure that the national fire plan is our vehicle on a bipartisan basis so that when it is fully implemented we can ensure that the money goes to protect the resource for the long term and reduce the fire danger on our national wildlands.

As the new chairman of this subcommittee, it is my responsibility to keep Congress and the administration focused on what will be a difficult multi-year program. Last year, the Clinton administration proposed, and Congress concurred, on a bipartisan basis that the fire plan should be fully implemented with an appropriation of \$1.3 billion. A portion of that money was directed specifically at the urban-wildland interface to protect lives and private property. The work began with that appropriation and will be our work for sometime. The Forest Service tells me that they will need the same level of funding for the next 15 years in order to address the full extent of the fire danger on our national wildlands. In our view, it is our collective responsibility to make sure that these resources are used in a way that benefits the environment and the local economies, and with that I would like to recognize my colleague and friend, Senator Craig.

[The prepared statements of Senators Domenici, Johnson, and Murkowski follow:]

PREPARED STATEMENT OF HON. PETE V. DOMENICI, U.S. SENATOR
FROM NEW MEXICO

Good afternoon. I would like to take this opportunity to thank Mr. Rick DeIaco from Ruidoso, New Mexico, who I understand is the recently hired urban forester for the village of Ruidoso, for appearing before the subcommittee today.

So far this year in Washington, D.C., we have held several hearings about how the Fire Plan is coming together. I also held an informal hearing in Ruidoso, New Mexico on July 2, 2001. Mr. Laverty was there and was very helpful. We learned some things, and have tried to address some of the concerns in the FY02 Interior Appropriations bill. Additionally, Mr. DeIaco was kind enough to give my staff some additional thoughts and I would like to enter his letter in the record.

I hope that today we can really look at the implementation of the National Fire Plan and glean information that will help determine what, if any, additional funding and improvements are needed to make sure that we secure effective and rapid implementation of the National Fire Plan.

As you all know the implementation of the National Fire Plan is extremely important—both in New Mexico, and elsewhere in the West. Following last year's fire sea-

son—the worst fire season in the last fifty years—we know first hand the challenges we face. During that season, over 70,000 fires burned more than 7.5 million acres.

It was during this awful fire season we learned that federal firefighting agency budget requests were reduced before they were sent to Congress. Consequently, firefighting preparedness was not at maximum capacity, and firefighting efforts were extremely impaired. This, in turn, left us with an even larger fire recovery need.

With the cooperation of many of my colleagues in the Senate, including Senator Bingaman, Senator Diane Feinstein from California, Senator Ron Wyden from Oregon, and Senator Larry Craig from Idaho, we were able to act in the Fall of 2000 to provide considerable authority, support, and funding for the National Fire Plan. I am proud that the Congress saw fit to include my \$240.3 million dollars for hazardous fuels reduction work in the National Fire Plan. In addition to providing increased funding for fire preparedness, we directed and funded the federal agencies to: (1) identify communities at risk from wildfires; (2) enhance cooperative firefighting efforts; (3) initiate hazardous fuels treatments and forest health projects; and (4) accelerate rehabilitation and restoration work.

I have to say that I was extremely pleased with the award of approximately \$4.7 million last week to New Mexico communities, in addition to \$3.5 million awarded to Region 3 in June, for National Fire Plan grants by the Forest Service. These grants are the first step in showing the Congress' and the Forest Service's commitment to provide: (1) technical assistance and support to local communities and organizations for fire protection projects and assessments; as well as (2) economic action and pilot programs that address the use of small diameter trees. These grants are necessities in our effort to address fire risk in our forests and around our communities.

In closing, I would like to emphasize that we have a lot of work ahead of us in addressing this problem. Our forests did not get into this predicament overnight. Likewise, we cannot rectify the situation overnight. We have begun marching down a path and we need to know some very specific things about the future that path will take: Specifically, what are people on the ground presently doing, what more needs to be done, and what can me and my colleagues here in Congress do to help? Thank you.

PREPARED STATEMENT OF HON. TIM JOHNSON, U.S. SENATOR FROM SOUTH DAKOTA

Mr. Chairman: I would like to thank you for holding this hearing on an issue that has deeply affected the Black Hills Forest in South Dakota and the forests of much of the nation. Preserving the environment, aesthetic and industrial integrity of our nation's forests has been one of my top priorities during my tenure in Congress. I am a strong advocate for a multiple use approach in dealing with public land management. Balancing the needs of the environment with responsible use of forest resources are a must for sound forest management.

Over the past two years, the Black Hills in western South Dakota have been ravaged by fires. Last summer, the largest fire in my state's history was recorded. The Jasper Fire started on August 24, 2000 and burned as fast as 100 acres per second, covering a total of 83,000 acres. It took over two weeks to control the blaze. The fire threatened private homes in the communities of Deerfield, Custer and Hill City, the Jewel Cave National Monument and the Mount Rushmore National Memorial. It also forced the evacuation of many residents in northwestern Custer County and southwestern Pennington County. The Jasper Fire would have been much worse if it were not for the herculean efforts of over 1,000 men and women, which included over 90 different South Dakota communities.

This year, another large fire went through the Black Hills. The Elk Mountain Complex fires took nine days to control and destroyed roughly 29,000 acres. Thankfully this fire was not as large as the Jasper Fire, but still very significant.

Although I understand that fire is a healthy part of a forest's life, there is certainly a difference between a prescribed, controlled burn and one that threatens private property and local communities. Many of these fires are started by circumstances we cannot control. The Western United States have been ravaged by drought-like conditions the past few years and make preventing a fire almost impossible. However, some steps can be taken so that when a fire does start, the local communities will be in a better position to fight it. I would like to see more funding directed towards training local community fire departments in fighting forest fires. Also, I believe it is important that the United States Forest Service (USFS) and the Department of Interior (DOI) fully utilize the authority Congress gave both agencies by offering training and job opportunities for the restoration of national forests and public lands. This will be a boon to local economies and offer high skill/wage jobs

for its residents. The Forest Service should continue to coordinate with state foresters and local governments and take the necessary steps to ensure that these plans are implemented efficiently.

Mr. Chairman, I look forward to the testimony and to working with my Senate colleagues and the agencies on implementation of the Fire Plan.

PREPARED STATEMENT OF HON. FRANK H. MURKOWSKI, U.S. SENATOR FROM ALASKA

The condition of our federally-owned forest lands and recent fires make it evident that a comprehensive and effective plan for addressing fire risk is needed. I commend the Forest Service and BLM for addressing this issue by developing the National Fire Plan. The Western Governors Conference has also acted to develop a 10 year strategy for addressing the fire problem. This hearing will discuss the effectiveness of the National Fire Plan.

The fire problem is especially acute on the 39 million acres of Forest Service land and the 57 million acres of Department of Interior land that have been identified as being at high risk of fire because of abnormal fuel loading and other factors.

We are not exempt from this problem in my home state of Alaska. South central Alaska is currently suffering from the most devastating softwood insect pandemic in the recorded history of North America. The white spruce resources in the boreal forests of that region have been decimated by the spruce bark beetle, with many stands suffering more than 80 percent mortality and some areas showing 100 percent mortality.

The problem extends from the Copper River area in the northeast to the tip of the Kenai Peninsula south of Anchorage. It crosses ownership boundaries, including lands managed by the Forest Service, the Park Service, BLM and the Fish & Wildlife Service, as well as lands under state and private ownership. Current active infestation on federal ownership is about 35,000 acres. The total cumulative acreage damaged by the infestation over the past 10 years is 2.9 million acres. 1.4 million acres of that is on the Kenai Peninsula. Another 85,000 acres have accumulated within the Municipality of Anchorage.

While state and private forest landowners in the region have made substantial efforts to remove dead and dying trees and replant the affected lands, the federal agencies have taken virtually no action, except to participate in discussions and spend many thousands of taxpayer's dollars producing reports. They have also provided some funds to assist municipalities in the region, but these focus mainly on fire fighting rather than prevention.

This lack of proactive effort is unacceptable and must not be allowed to continue. Unfortunately, much of the beetle-killed white spruce timber in south central Alaska has now been dead so long it retains little commercial value. An opportunity has been lost to recover the costs of removal and reforestation, an opportunity that was, to a significant degree, captured by the state and private landowners in the area.

That does not mean it is too late to address the wildfire risk in Alaska. It just means that the agencies are now going to have to address the fuel loading problem without much of a revenue stream to offset the costs. I hope that the Administration has effective plans to address the multi-agency Alaska issue as part of the National Fire Plan recommendations.

I will not accept that we are going to address the problem with prescribed burns. We saw evidence of where that leads last Spring. A prescribed burn, started by the Forest Service, raged out of control near Kenai Lake, destroying habitat and threatening homes and lives. We were very fortunate when favorable winds and heroic efforts by firefighters prevented significant private property losses. We can't rely on luck or Providence to protect us from our own foolishness in the future.

Finally, I have three specific concerns that I hope will be addressed today:

1. I am concerned about what appears to be an historic pattern of measuring success by accounting for the number of acres "treated," without a clear indication of prioritizing either the economic and ecological value of those acres or the relative value of the "treatments" applied. In implementing the National Fire Plan the agencies must do a better job of balancing its efforts through such prioritization.

2. While the wildlands/urban interface is important in terms of human life and private property values, it cannot be the sole focus of our efforts. I believe we must look to the future and give much more weight to protecting areas of high economic and ecological importance in the more remote areas of our federal lands than the current Fire Plan appears to do. Certainly, we should prioritize public safety. However, if we take an unbalanced approach and focus most of our effort on short term protections around communities, we will have only addressed today's problems and will have compounded the problems of tomorrow.

3. The problem of fire risk to our federal forests calls for large and multi-faceted action. We simply must not ignore nor minimize the effectiveness of mechanical intervention, including timber harvests, to maintain the health of our forest ecosystems. The protection of watersheds and habitat and the maintenance of the economic values of our forests can and should be accomplished in large measure through active forest management across a broad spectrum of public lands, especially in those areas such as national forests and BLM managed forest lands which are designated by law for multiple use management.

**STATEMENT OF HON. LARRY E. CRAIG, U.S. SENATOR
FROM IDAHO**

Senator CRAIG. Well, Mr. Chairman, thank you, and thank you for your kind and generous remarks. That friendship is mutual. I have enjoyed it and appreciated it over the years, and this relationship. It will clearly continue.

I want to thank the chairman for recognizing that it was time to look at the national fire plan, not only to look back into this summer, but to look forward into next year, and we have witnesses with us today that I think can do that.

Interestingly enough, Mr. Chairman, this past week I was at ground zero at the World Trade Center, and while we are all living now, and this Congress is working in the shadow of that incident, I was extremely happy to learn that the National Interagency Fire Center had three class 1 incident command teams working in New York and at the Pentagon, while at the same time it was manning at least 15 large project fires in the West with both class 1 and class 2 teams.

In all sincerity, I believe that the National Interagency Fire Center, the Departments of Agriculture and Interior abilities to fight fire and render assistance, is a testimony to all involved, and I think both of us honor them for that. In other words, the investment we made last year to fight fires on the public lands of America was playing itself out in the smoke and the rubble of New York City.

As many predicted, this fire season is the second year in a row of extraordinary fires that have consumed some 3 million acres and some 50 homes and structures. As usual, our firefighters continue to struggle against long odds, and you have mentioned, and have performed admirably under what at best was difficult situations. Last fall, the chairman and I joined with Congress and appropriated the single largest budget increase in the history of the U.S. Forest Service aimed at dealing with deteriorating forest health and the extraordinary fire risk that we faced on our public lands and that we continue to face.

Today, I am interested in learning from the administration how the implementation of the national fire management plan is proceeding, and from our panelists about what is and what is not working. I would also like to know of the other opportunities that the agencies might see that we are missing in directing them toward.

I would like to welcome Trent Woods from Save Elk City to the hearing today. Trent, in all fairness, I appreciate you traveling from Elk City Idaho. The Friday before last, I tried to make it to Seattle and back, a normal 12-hour turn-around. I recorded over 36 hours on airplanes and in airports, so I know that your task was

a bit arduous getting out here from Elk City. It is just arduous getting, Mr. Chairman, from Elk City to Grangeville.

[Laughter.]

Senator CRAIG. Let alone traveling across the county. He was well-conditioned by the time he got to the airport in Lewiston, I suspect.

My point is that it is important we understand the challenges faced by hundreds of small communities such as many that we have in our States. Much of the Forest Service and the Department of the Interior's efforts of this first year have been focused on fire suppression and planning. Considerably less attention has been directed toward the reduction of hazardous fuels, work that we all know must be completed.

I am concerned that too much of the funding for the national fire plan is being spent to hire new agency employees, rather than private contractors, which does not fully meet the original intent of the initiative, so I hope Mr. Laverty and Mr. Hartzell can help us understand this and other shortfalls, and what steps their agencies are taking to ensure that we will meet the fiscal year 2002 targets, as well as correct the fiscal year 2001 shortfalls.

Finally, I am increasingly troubled by the missed opportunities to manage our overstocked forest in a way that provide the much-needed small spin materials to help fuel new and existing cogeneration facilities. It is interesting that only those of us who look at the statistics are talking about the energy crisis of today, when this committee that the chairman and I sit on were absolutely embroiled last winter in California's blackouts and our wakeup call that all of us are still wanting to heed.

The opportunity to develop additional environmentally friendly cogeneration plants powered by renewable wood products is an opportunity this country can ill afford to miss. I want the Federal Land Management Agencies to take advantage of the resource, but more importantly the time, the place, and the health environment in which our public lands exist. I expect we will hear more about this from several of our witnesses today.

And let me close with this observation, Mr. Chairman. The American taxpayer and this Congress have invested a significant amount of money to begin taking care of forest health problems of our Nation. Given the events of last week and the economic impacts we are experiencing, I hope the U.S. Forest Service and the Department of the Interior understand the need to begin showing progress.

In addition, it is important to ensure that programs funded through this initiative spread economic benefit beyond the agencies and to the people and the communities involved.

Thank you for the hearing. Let us proceed.

Senator WYDEN. I thank my colleague. Let us do just that.

Mr. Laverty, we will start with you, and then Mr. Hartzell.

**STATEMENT OF LYLE LAVERTY, ASSOCIATE DEPUTY CHIEF
AND NATIONAL FIRE PLAN COORDINATOR, FOREST SERVICE,
DEPARTMENT OF AGRICULTURE**

Mr. LAVERTY. Well, Mr. Chairman and Mr. Craig, it really is a rich opportunity for Tim and I to be here this afternoon to share

with you some of the really significant accomplishments that have, in fact, taken place as a result of the implementation of the national fire plan.

As a result of perhaps years of aggressive suppression we have seen some very significant changes take place in the landscape, and in many cases those unintended consequences of accumulations of fuels have led us to the circumstance that we have found that came to highlight last year and again this year. Last year we burned well over 7 million acres. This year we have burned in excess of 3 million acres already to date, and we still experience extreme conditions in many parts of the interior West, Oregon, Idaho, Colorado, California, Arizona, Utah. We are still in major fire season and it is not over yet.

Yet we have had extreme success across the country as a result of the investments that the Congress and the American taxpayers have been willing to make to reduce these kinds of consequences. What I would like to do is share in a few minutes with you some of the things that we have been able to accomplish and that we are currently working on as it relates to successful implementation of the fire plan.

Tim and I are passionate about accountability. We are passionate about accomplishments, and I can tell you we can assure you that these investments are, in fact, bringing the results that I believe we are collectively working towards.

Before I start, let me just share with you a little bit about the current situation. I mentioned and Senator Craig mentioned that we have burned a little over in excess of 300 million acres already this year—3 million acres, I am sorry, 3 million acres, with a cost of approximately \$600 million. That is a substantial investment.

Many of these fires that we have encountered this summer have been in the urban interface with high expense, fires such as the Green Knoll in Jackson Hole, Wyoming, where we have been in fact protecting communities with substantial investments. In California, we have had fires where it is costing us up to \$1,200 and acre or \$1,500 an acre, just because of the importance of protecting life and property. These fires I think are indicative of the nature of the incredible growth that has taken place in the interior West and really across the country.

We had folks last week up in Martha's Vineyard talking about the national fire plan and even in that community folks are concerned about urban interface between the threat of vegetation.

Since Tim and I were with you last year, or this past spring, we have been working aggressively to implement the national fire plan through a seamless interagency approach, and before I share with you some of the significant accomplishments and some of the key point areas, I'd like to share with you some of the things we've done as a result of the interagency coordination.

Tim and I have recently completed a charter for the Interagency Leadership Forum, which is a forum designed to bring the Secretaries, the Under Secretaries, and Assistant Secretaries together to provide active, engaged leadership structured to ensure that we have got clear interagency coordination on a policy, that we have got clear interagency accountability, and that we have got effective

implementation not only not only of the national fire plan, but of the national wildland fire policy.

We have recently completed with the leadership of the Western Governors and State foresters, tribal interests, and conservation and commodity groups and a variety of community based restoration organizations the 10-year comprehensive strategy, which was a collaborative approach for reducing wildfire risks to communities and the environment. The two Secretaries and the Governors transmitted the copy of that report to each of you in mid-August, and I think it is an indication of the strategy that reflects how we are working together with the States and other organizations in the long term collaborative approach on dealing with these kinds of issues that need to be solved at the local level.

We have been aggressively coordinating our research efforts. The joint fire sciences program is but one example. Our research agenda is now being developed by interagency resource specialists, as well as folks from the academic community and interest groups.

We are currently working on developing a set of interagency performance measures for all Federal land agencies. These measures are going to cut across the organizations that will reflect the GPRA efforts so that in our annual performance plans we can, in fact, have a consist outcome-measured set of performance measures for line officers, and I think this is a huge breakthrough in terms of the kinds of coordinations taking place.

Finally, I would share with you that we are conducting a series of interagency strategic overviews across the country, in every region of the country. These reviews are designed to look at how can we improve our effectiveness in the delivery of the national fire plan as we move into the next program year. We are going to complete these by the end of this next month, and as soon as we complete our analysis and summary of these findings, we would be glad to come up and share with you what we have done.

Let me just talk for a second about some of the program accomplishments. Fire-fighting readiness. As a result of the investment, we have been able to make significant investments in new fire-fighters. We have hired over 3,300 additional fire-fighters just on the forest side this year, and as a result of that we are hearing testimony after testimony after testimony across the country on how we have been able to successfully attack these fires and hold them in the initial attack phase. The result is that we are able to reduce the effects of wildfire on many communities, and the result is that we have saved a lot of structures. Even though we have lost structures, we have saved a lot of structures.

We have been able to make some significant investments, I think, in terms of hazardous fuels, and I would just like to talk about this for a minute. We really have been able to reduce fuels. As of yesterday we have treated well in excess of 1.2 million acres just on national forestlands across the country. That is a significant investment in terms of reducing hazardous fuels, and we expect to be successful as we move into the future.

If I could just may be capture a couple of points, and I will pass it to Tim. In addition to the fire-fighting readiness that we have with the fire plan, we have been able to make significant investments in human lives, and we have been able to make some big

changes in the lives of our communities because we have been able to put at-risk young people to work.

I was down in Ohigh, California about 3 weeks ago, and heard testimony from a counselor in the high school that talked about the changed lives that are taking place as a result of hiring some of these kids to put them to work this summer.

We also, in addition to the incident command teams that are at the ground zero, we also have two of the new hot-shot crews that we were able to fund as a result of the fire plan that are effectively working in the recovery efforts in New York, the Medellin crew from Illinois, and the Augusta crew from Virginia, so there are a lot of positive results from the investment.

Just in closing, Tim and I are very conscious about accountability, and as we look at the future in terms of how we can in fact be accountable so that we can with all transparency share with you that we have good accountability for the projects, that we are making good efforts in terms of accomplishing the objectives, I am convinced that we are there, and we are delighted to have a chance to share with you today what is going on with the fire plan, and we would be happy to answer any questions.

[The prepared statement of Mr. Laverty follows:]

PREPARED STATEMENT OF LYLE LAVERTY, ASSOCIATE DEPUTY CHIEF, AND NATIONAL FIRE PLAN COORDINATOR, FOREST SERVICE, DEPARTMENT OF AGRICULTURE

Mr. Chairman and members of the subcommittee, thank you for the opportunity to appear before you today to talk about the effectiveness of the National Fire Plan and the recently released 10-Year Comprehensive Strategy. I am Lyle Laverty, Associate Deputy Chief, State and Private Forestry and National Fire Plan Coordinator of the Forest Service. I am here today to bring you up to date on what has been accomplished thus far and what we plan to do next in implementing the National Fire Plan.

The severe fire season of 2000 captured the attention of the American people and highlighted the need to find ways to protect life and property and minimize losses of natural resources. On September 8, 2000, the Secretary of Agriculture and the Secretary of the Interior issued a report entitled "Managing the Impact of Wildfires on Communities and the Environment." The report, referred to as the National Fire Plan, contains recommendations to reduce the impacts of wildland fires on rural communities, reduce the long-term threat from catastrophic fires, and ensure sufficient firefighting resources in the future.

For the past century we have been very successful at preventing and suppressing unwanted fire. This work was accomplished with the best intentions to protect our growing communities and valuable forest and rangeland resources. In some locations an unintended consequence of this success, however, was the buildup of unprecedented amounts of dense vegetation that now, in times of drought and wind, fuels devastating wildfires. These uncharacteristically intense fires threaten homes, communities, watersheds, wildlife habitat, and the lives of firefighters and the public. Each year, more vegetation grows and the problem becomes incrementally worse. There is no short-term solution to this problem. Now, more than ever, we must continue to prevent and suppress unwanted fires and reduce these unnatural fuel conditions. They have the potential to be more destructive to communities and the environment than ever before.

While we continue with our best efforts to protect communities and forestlands from the effects of unwanted fire, we must focus our attention to treating the hazardous buildup of vegetation that fuels these fires. An aggressive fuel treatment program and adjusting land and fire management priorities are the long-term solutions to reduce the effects of unwanted wildland fire, restore our forests to ecologically healthy conditions, and protect our communities on a longer-term basis. As we continue to find common ground and work in partnership with other federal agencies; states, tribes, local communities, and Congress, we leverage our resources and skills, increasing our ability to solve this national problem. We are at a turning point. The National Fire Plan is the beginning of the solution.

Mr. Chairman, less than eleven months have passed since the Forest Service, Department of the Interior, and our State partners undertook the giant task of implementing the National Fire Plan. It is a monumental task. In that brief time, we've learned many lessons, and we realize we have many areas in which we can improve. We are dedicated to expediting collaboration, providing common performance measures and budget planning models, and analyzing and managing interagency landscape scale projects.

The rehabilitation and restoration efforts in Montana's Bitterroot Valley are a testament to community and agency partnerships. The Forest Service is working with the State to mitigate the extent and impact of invasive plants on National Forest System lands and private lands that may grow in after an area has been burned. Funding for this treatment is coming from the National Fire Plan and State and Private Forestry. Research and feasibility studies in bio-energy and biomass production are underway in Colorado, California, and the Pacific Northwest, as we look for alternative ways to improve utilization and reduce hazardous fuels. Contracting Officers are working on a national contract to provide engines and crews from the private sector to assist us with wildland fire suppression and fuel treatment projects. Today, there are unprecedented examples of interagency and governmental cooperation occurring to meet these goals. The accomplishments so far are from a program only eleven months old. The list of accomplishments is long, and I am proud of the progress we have made in such a short time.

10-YEAR COMPREHENSIVE STRATEGY

Before I focus on implementation of the National Fire Plan, I would like to briefly discuss the 10-Year Comprehensive Strategy—A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment. Congress directed the Secretaries of Agriculture and the Interior to work with the Governors to develop this strategy in the FY 2001 Interior and Related Agencies Appropriations Act. The direction requires "close collaboration among citizens and governments at all levels." In developing this strategy, we worked with a geographically diverse group of people, representing all levels of government, tribal interests, conservation and commodity groups, and community-based restoration groups. The multi-faceted nature of the issues and jurisdictions addressed by this strategy necessitates broad communication and collaboration. While the line officers of the land management agencies are the principal decisionmakers concerning public lands, the collaborative framework, with clear roles and responsibilities, will assist in the implementation of this strategy across all ownerships and jurisdictions.

The comprehensive strategy was completed and released to the public on August 13, 2001. The Western Governors' Association, the National Association of Counties and the National Association of State Foresters endorse the Strategy. The key points are:

- The Comprehensive Strategy emphasizes measures to reduce the risk to communities and the environment from wildland fires for the long-term.
- The Comprehensive Strategy emphasizes a collaborative, community-based approach to address wildland fire issues and the importance of making key decisions at the local level.
- The primary goals of the Comprehensive Strategy, which are consistent with those contained in the National Fire Plan, are: to improve prevention and suppression, reduce hazardous fuels, restore fire-adapted ecosystems, and promote community assistance.
- A set of core principles, including collaboration, priority setting, and accountability will help guide the major themes of the comprehensive strategy.

Successful implementation of the National Fire Plan and the 10-Year Comprehensive Strategy requires a commitment among the federal and state partners to integrate their programs, to the maximum extent practicable, to ensure that implementation proceeds in a standard, consistent, and cost-effective manner across agencies. By May 1, 2002 a detailed implementation plan will be developed in collaboration with the Governors to establish detailed and consistent operational ways of doing business between Federal and State agencies and tribal entities to ensure the Core Principles and Goals are met; financial and other resources are available and utilized in an integrated, targeted, and cost effective manner; legal and technical requirements are met; and a system is established to identify and promptly address implementation issues.

We are working with the Department of the Interior to integrate priorities, develop accomplishment timeframes, identify performance measures, and report on procedures that outline efforts to work with states and communities to reduce the threat and risk in areas that need fuels treatment. Although we have made progress

in some of these areas, Secretary Veneman and Secretary Norton have discussed the need for much more thorough integration of program activities between the two Departments.

Because the five land management agencies listed in the National Fire Plan have different missions and authorities, planning requirements vary. All National Forests in the Forest Service have action plans that guide fire suppression actions on initial attack fires and larger fires that escape initial attack, and prescribed fires. National forests that don't have fire management plans have adequate direction for tactical fire suppression initial attack and fuel treatment and are in the process of updating their plans. By December 2003, we expect that each national forest will have a fire management plan that meets guidelines established in the 1995 Federal Wildland Fire Management Policy.

THE NATIONAL FIRE PLAN

I would like to focus on 5 key points dealing with the National Fire Plan:

- Firefighting
- Rehabilitation and Restoration
- Hazardous Fuel Reduction
- Community Assistance
- Accountability

Firefighting

The National Fire Plan made funds available to increase initial attack capability, increase extended attack support, and provide more resources during large fire episodes. These additional firefighting resources have facilitated control of more fires during initial attack, thereby reducing wildland fire threats to communities at risk. Through workforce hiring and employee development efforts, the Forest Service has hired approximately 3,300 new firefighters for the 2001 fire season. In bringing on these new people to fill vital firefighter positions, the Forest Service has provided training to every individual involved in the fire programs.

Additional equipment purchased under the National Fire Plan has enhanced the organizational capacity of the fire management organization. For example, in Oregon and Washington, Forest Service units have added 58 fire engines, 4 bulldozers, and 10 water/foam tenders. In the state of California, units have added 251 new pieces of equipment, including 216 vehicles.

The cornerstone of the Forest Service wildland fire program is safety and adhering to fire qualification standards for all wildland firefighters. This fire training is reinforced with daily, weekly and monthly safety meetings and annual fire safety refresher training. In addition, safety briefings are given at the beginning of each shift on an incident.

To enhance our readiness and attack capabilities, our scientists are conducting research to improve monitoring of fuel conditions, enhance fire risk assessments, improve fire weather and behavior predictions, and increase the accuracy of long term prediction of fire severity, fire weather, and climatic conditions. Twenty-two research and development projects related to these improvements have been funded using the Joint Fire Sciences and National Fire Plan programs. Managers will use the information collected from these research projects to implement fire plans.

While these efforts will help reduce threats to communities at risk, large wildland fires will not be eliminated. Long term and comprehensive programs in fire prevention, fire suppression, and fuel treatment, involving the States, tribes, communities, and other federal agencies, will be necessary before the current fire environment is changed to one that is less destructive and costly. To this end, we are currently working on improvements to wildland fire planning systems, focusing fuel treatment in areas where communities are at risk, working with other State and federal agencies to plan interagency landscape level fuel treatment programs, and expanding fire prevention programs like FIREWISE.

Mr. Chairman, enhanced readiness and attack capabilities have other important advantages beyond wildland firefighting. For example, two of the Forest Service hotshot crews established under the aegis of the National Fire Plan are now assisting with the World Trade Center and Pentagon emergencies. The Augusta Hotshots from Virginia and the Midewin Hotshots from Illinois are working with Incident Management Teams assigned by the Federal Emergency Management Agency to support Mobilization Center operations.

Rehabilitation and Restoration

Rehabilitation and restoration efforts are focused on lands that are unlikely to recover naturally from wildland fire damage. These efforts are in addition to the emergency stabilization efforts that have already taken place, and are funded with

Burned Area Emergency Rehabilitation (BAER) funds. For FY 2001, 437 rehabilitation and restoration projects are underway. This includes watershed restoration on 840,000 acres; more than 3,000 miles of road and trail restoration; fish and wildlife habitat restoration on 500,000 acres; treatment of invasive plants, insects and diseases on 280,000 acres; and planting over 650,000 trees. Much of this project work is being contracted to utilize local businesses in the restoration work. Additionally, a large amount of planning has been accomplished to prepare for future projects. For example, an environmental impact statement (EIS) is being prepared on the Bitterroot National Forest to cover restoration and rehabilitation activities on over 300,000 acres of burned land.

In FY 2001, nine research projects and two new applications of technology were funded through the fire plan in support of rehabilitation. The agency is working with State and local agencies to set priorities for lands scorched in last year's fires and to reduce hazardous fuels.

In New Mexico, restoration efforts are ongoing on the Cerro Grande Fire that occurred in May 2000. The Forest Service worked with the Department of Energy, the Santa Clara and San Ildefonso Pueblos, the National Park Service, and private citizens to stabilize high risk sloped areas after the fire was contained. These treatments were successful in protecting the watersheds and reducing post fire damage from flooding and hazardous pollution. Implementation of treatments began in early June after the fire and was completed prior to the mid-July storm season. Some additional emergency treatments were identified and accomplished in 2001 along with long-term restoration measures using funds from the National Fire Plan.

In addition to National Fire Plan rehabilitation work, emergency stabilization teams have surveyed 27 large fires on 209,000 acres of National Forest System land; 60,000 acres of which are classified as severely burned. So far this year, the Forest Service has allocated \$6 million for emergency stabilization on these burns. Treatments include grass seeding on 20,000 acres.

The Forest Service recently signed a five-year agreement with American Forests, a national nonprofit conservation organization, entitled "Add a Dollar to Plant a Tree for Wildfire Relief." This cooperative effort and expenditure of approximately \$4 million dollars will expand our tree planting activities all over the country on private and National Forest lands, and will help to provide important information to the American people about wildfire restoration.

Hazardous Fuel Reduction

We are investing to reduce fire risk in communities, municipal watersheds, and other areas where conditions favor uncharacteristically intense fires. As of September 15th, treatment projects have been completed on more than 1,000,000 acres. About 80% of these acres were treated with prescribed fire. The remaining 20% were treated either mechanically or by hand labor. Estimates of accomplishments projected through the end of the year continue to vary due to unseasonably dry conditions in many regions. In Florida, the state with the largest program, a third year of drought cancelled most planned prescribed burning activities. A lower than normal snow pack in the interior West also left much of that part of the country at high fire danger earlier in the season than normal. Currently, national program managers anticipate that actual hazardous fuels accomplishment will be less than the 1.8 million acres target.

The most important aspect of hazardous fuels reduction is reducing the threat to local communities. When it comes to reducing threat, we need to protect communities and help the communities to help themselves through changing the landscape from high risk to low risk. We will accomplish that by working closely with communities concentrating on major projects that reduce risk.

On the Sandia Ranger District of the Cibola National Forest in New Mexico, 2½ miles of wildland-urban interface boundary with subdivisions were treated for fuels reduction and the construction of a fuelbreak. This fuels reduction project in the Cienega Canyon and Armijo Canyon were treated by prescribed fire, and are adjacent to the Sandia Park subdivision and Ponderosa Pine Estates. The burning will help decrease the accumulation of vegetation to minimize the risk of a catastrophic wildfire in the neighboring communities. Other benefits to this project include improved forest health and wildlife habitat.

In certain areas, the Forest Service has used the "Wyden Amendment" (Watershed Restoration and Enhancement Agreements authorized in section 323 of P.L. 105-277) to enter into cooperative agreements to use Federal funds on non-Federal land when a project benefits the greater watershed. Under this authority, the Agency is allowed to protect watersheds that consist of lands under multiple ownership, including lands in the wildland-urban interface. In addition to the value of work

performed, significantly enhanced relationships have occurred through these partnerships.

Our work on the ground this year is based on planning done in previous years when there was less emphasis on mechanical treatment and increased hand treatment in the wildland-urban interface. Planning underway this year and in the future reflects our emphasis on the interface and ecosystem restoration. There will be increased costs for treatment in the wildland-urban interface.

The Forest Service, U.S. Fish and Wildlife Service and National Marine Fisheries Service are working together at national, regional and local levels to accomplish consultation under the Endangered Species Act of 1973, thanks to swift Congressional action to clarify the Department of Agriculture's authorities.

Our scientists are conducting research in ranking areas for fuel reduction efforts, determining impacts of these treatments on wildlife, fish and riparian areas, and developing new uses and systems for harvesting forest undergrowth and small diameter trees. Through the National Fire Plan, 24 research projects in support of hazardous fuels reduction are funded in 2001.

Community Assistance

We are just completing a successful interagency effort with the States and tribes to better define the communities in the wildland urban interface across the United States. Using State Fire Assistance funds, we have helped states increase firefighting capability, and establish a significant new hazard mitigation program. Over 290 mitigation projects have received grants in 2001, and over 128,000 homeowners in the Western U.S. will receive benefits from treatments. The Cooperative Fire Program has also funded 10 national FIREWISE workshops; educating 870 community leaders from 450 communities in 41 states about methods to increase protection for their communities. In New Mexico, every community that requested funding to complete a fire protection plan received funding from the Community Assistance Grants Program under the National Fire Plan.

To date, Volunteer Fire Assistance funds in the amount of \$13.2 million dollars are being delivered through grants to rural Volunteer Fire Departments providing training and equipment for small fire departments that are often the first line of defense in the interface. The Economic Action Programs are in the final stages of awarding grants for biomass energy systems, small diameter market development, and community economic development and fire planning.

Other examples of Community Assistance funding include:

1. The Oregon Department of Forestry is using State Fire Assistance grant funds to provide rebates to landowners who implement FIREWISE concepts on their property and to their homes.

2. The Idaho Department of Lands (IDL) is working on seven hazardous fuel reduction projects across the State with grant funds received through the National Fire Plan. To date, IDL has awarded over \$180,000 in cost-share grants to rural fire departments in Idaho to help them acquire equipment and training.

3. Many Southern states have joined together to use National Fire Plan grant dollars to fund an extensive assessment to evaluate the areas of the states that have the highest wildfire risk combined with the value of homes and improved property. The project will fund GIS mapping to display the most at-risk communities. The assessment will serve as a tool for growth planning, the determination of fire resource allocations, and as an important source of information for community leaders and the public.

4. The Concerned Resource Environmental Workers (C.R.E.W.) received a \$161,000 National Fire plan grant to construct approximately 25 miles of fire breaks throughout the foothills of Ojai, CA, over eighteen months. C.R.E.W. will contribute \$49,000 to the project as part of the grant cost-sharing agreements with the Forest Service. At-risk youth and other kids will be the workers on the project to protect the community. As many as 45 youths are planned to be employed through this project.

Accountability

Oversight, coordination, program development and monitoring for performance are critical for the National Fire Plan. We are conducting a series of regional reviews to assess progress. We are committed to demonstrating sound accountability for the funds provided by Congress in support of the National Fire Plan. We have implemented a new financial management system that better tracks federal funding and expenditures. We are currently developing new budget planning models and performance standards with the Department of the Interior. We continue to use existing and new information systems to track program performance and by December 31, 2001, we will have an Annual Status Report on our accomplishments, as man-

dated by Congress. The agency is using a new system to pilot an automated accomplishment reporting system for fuels, rehabilitation and restoration, and community assistance functions. Reporting under this system is enabling prompt assessment of output accomplishments. If deemed successful, this reporting system will be expanded for agency-wide use as early as fiscal year 2003. The output measures reported under the National Fire Plan are a key aspect of the broader agency performance measure accomplishment now being incorporated in the Annual Performance Planning process.

The Forest Service, Department of the Interior, and the National Association of State Foresters have jointly established an interagency website for the National Fire Plan where people can find out more about National Fire Plan Implementation and ways they can participate in making their homes safer from wildfire. Additionally the Forest Service and the Department of the Interior have cooperated in development of the Action and Financial Plans required by Congress. We will continue such cooperative efforts in preparation of the fiscal year 2003 program that will improve the consistency of information.

SUMMARY

Mr. Chairman, we have accomplished a lot in a short time. While we continue with our best efforts to protect communities and forestlands from the effects of unwanted fire, we will focus our attention on treating the hazardous buildup of vegetation that fuels these fires. The National Fire Plan is the beginning of the solution. We are hiring and training personnel to improve future fire management capabilities. We are stabilizing and rehabilitating many of the sites damaged during the fires in 2000, and looking at the work to be done in response to the 2001 fire season. The reduction of hazardous fuels reflects an expanded scale of action and extensive planning is underway for 2002 and 2003. We have come a long way and we recognize there are many areas in which we can improve. In cooperation with the States, the list of communities at risk has been revised, and will be an important tool to plan future projects. My staff and I will continue to work closely with the Department of the Interior team, State Foresters, communities, and the Congress to restore and maintain healthy ecosystems and to minimize the losses from future wildfires.

This concludes my statement; I would be happy to answer any questions you or Members of the Subcommittee might have.

Senator WYDEN. Good. Thank you very much.

Mr. Hartzell, if you have some comments we will welcome them, but the chairman of the full committee is here, Senator Bingaman, and I want to recognize him if he would like to make any statement.

STATEMENT OF HON. JEFF BINGAMAN, U.S. SENATOR FROM NEW MEXICO

The CHAIRMAN. Well, thank you very much. Congratulations on having this hearing. I think this is a very important issue. I know it is in my State, and you and Senator Craig have worked hard and long on this set of issues, and I am glad to hear of some of the successes.

I do have a concern in my State that we still hear some complaints that not a large enough proportion is going to this fire threat that communities face, and that is something that I hope we can examine. Also, I am concerned about the funding level, quite frankly. For example, rehabilitation and restoration of land that has been burned, my understanding is that the funding levels in the appropriations bills and funding levels that were requested by the administration are substantially below what they were last year. That concerns me.

I appreciate these witnesses. I know we also have Mr. DeIaco from New Mexico, from Ruidoso. He is the forester from the Village

of Ruidoso, and I am very pleased that he is here with us today. Thank you.

Senator WYDEN. Thank you, Mr. Chairman.

Mr. Hartzell, would you like to speak at this point.

STATEMENT OF TIM HARTZELL, DIRECTOR, OFFICE OF WILDLAND FIRE COORDINATION, DEPARTMENT OF THE INTERIOR

Mr. HARTZELL. Thank you, Mr. Chairman, members of the subcommittee. I will keep my remarks brief. You have got my written testimony and Lyle has adequately set the stage about how we have been working together.

I will make some comments about the five areas of the national fire plan. First, I want to talk about fire-fighting readiness and the additional capability that Congress provided us. With that money, we have hired an additional 1,900 fire-fighters in the Department of the Interior. Fully 1,500 of those fire-fighters are frontline fire-fighters, and that has made a difference this year. You know, we cannot take credit for all of our success this year. We were fortunate in having the cooperation of the weather, but nevertheless, those firefighters made a difference. They fought hard, they fought persistently, and we clearly made a difference this year out on the ground.

Also, I wanted to let the subcommittee know that we have, in fact, placed orders for all of the 110 pieces of new equipment, and we did, in fact, contract for all of the additional aircraft to help us fight fires this summer.

Quickly returning to rehabilitation and restoration, we had a commitment to provide emergency stabilization or restoration on 1.4 million acres of Department of the Interior lands that were severely damaged by wildland fires in fiscal year 2000. We have accomplished 1.2 million acres of that. The remainder of the projects are multiyear projects. They will carry over into next year, and they will be completed.

Before I leave rehab, I would like the subcommittee to know that we have a Forest Service-Department of the Interior team that has put together a strategy or a plan as to how to meet the need to provide additional native plant materials for restoration and stabilization activities. We expect that report to be delivered to the Congress by the end of December of this year.

Turning quickly to hazard fuels reduction, we had a commitment to treat 1.35 million acres of hazard fuels this year. We have currently completed 619,000 acres. We expect to have 700,000 acres completed at the end of this fiscal year, or the end of this month. That is fully 200,000 more acres than we treated last year. I would just like to address the shortfall. First, we will complete those remaining acres next year, but I think it is important for the subcommittee to know that our fuels treatment program was heavily dependent on prescribed fire, and 600,000 of those 700,000 acres that we could not get to fell in areas of severe drought, and we simply could not, in a safe manner, execute those plans.

I also want you to be aware of how proud we are of our work with the wild and urban interface collaborative working groups. These are groups at the State and local level that we have worked

with to develop fuels treatment projects in the vicinity of communities for next fiscal year, and for fiscal year 2003. This has made our fuels treatment program much, much stronger than it has been in the past.

This fiscal year we have roughly 230 fuels treatment projects in the wildland-urban interface. As a result of our work with these collaborative stakeholder groups, in fiscal year 2002 we have identified 545 on-the-ground treatment projects, and in addition we have identified nearly 300 projects that will be in the planning stage this year so that we get ahead of the power curve for treatment in 2003. We have a much stronger fuels treatment program now around at risk communities.

The national fire plan called attention to providing additional support to communities to develop their capacities to do fuel treatment, to educate their citizens about fire-proofing their homes and providing additional opportunities for small business. We received \$10 million, as you know, in new appropriation for rural fire assistance to provide sorely needed training and equipment to small, rural fire departments throughout the country. We made a pledge that we could probably reach out and provide moneys to 850 of these rural fire departments. I am pleased to report to the subcommittee that as of the end of August we had provided agreements to over 1,400 rural fire departments, and we are very proud of this.

In addition, we have increased our level of contracting. We have issued 375 contracts for fuels treatment and rehabilitation work, totalling more than \$18 million. In addition, we have provided over 100,638 grants to tribes for \$13 million worth of fuels and restoration work.

And finally, we have provided over \$17 million in community assistance grants to communities and counties to support a variety of locally led fuels treatment and fuels education programs.

Lastly, Lyle talked about accountability. We are truly passionate about this issue, and I would like to share a few things with you. Lyle mentioned the wildland fire leadership charter. I am not going to dwell on that, but I want to talk about a couple of other things that are going to help assure we use this money wisely.

No. 1, the Department of the Interior is implementing an automated national fire plan tracking data base. We are using the same software and data structure that the Forest Service has utilized, and by the end of the year we hope to have an operational system that is compatible with the Forest Service.

We have also chartered an interdisciplinary group that is going to review the various models and assumptions that we currently use to calculate normal year readiness resources such as personnel and equipment. We are initiating a study to determine if our controls are sufficient for costs that are incurred in fighting large wildfires, and we have also chartered an Interior-Forest Service team to develop consistent format, process, and standards for developing fire management plans.

Let me just close by quickly saying that the national fire plan is, indeed, a big effort. We are trying to fix a problem that has probably been 100 years in the making. There is no quick fix. Long-term commitment is going to be required. Collaboration and

leveraging of funds is absolutely essential for our success, and the national fire plan frankly requires that we approach business in a different manner. It requires much closer cooperation with our tribal, State, and other Federal partners, and it places a great deal of emphasis on local insight and local solutions to local problems within a broader national framework.

I hope you agree that we have demonstrated our commitment to these concepts and to the accomplishments that we promised in the national fire plan. We are clearly on the road to success. We appreciate your support to date. We look forward to your continued partnership.

[The prepared statement of Mr. Hartzell follows:]

PREPARED STATEMENT OF TIM HARTZELL, DIRECTOR, OFFICE OF WILDLAND FIRE COORDINATION, DEPARTMENT OF THE INTERIOR

Good afternoon, Mr. Chairman and members of the Committee.

INTRODUCTION

I appreciate the opportunity to address this committee concerning the effectiveness of the National Fire Plan in the 2001 fire season. My name is Tim Hartzell and I oversee the Office of Wildland Fire Coordination for the Department of the Interior. I am pleased to report that the Department of the Interior firefighting agencies have made significant progress in implementing the National Fire Plan, and that has made a noticeable difference in our ability to fight fires this season. We are proud of our accomplishments, but we recognize that we have more work to do to lessen the dangers to communities at risk, restore ecosystems and the natural role of fire, protect our critical natural resources, and most importantly, keep our firefighters and the public safe.

I would like to begin by saying that for our firefighters and the public affected by wildland fire, safety always comes first. Firefighting is an inherently dangerous occupation, and we cannot mitigate every hazard. What we can do is recognize risk, manage it, and minimize it, whenever possible. When we fight fires in an area affected by endangered species, we are guided by policy that was clarified in 1995 by the Fish and Wildlife Service—"firefighter safety comes first on every fire, every time." Secretary Norton fully supports this policy. In July, she stated, "No timber, no structure, no piece of equipment is worth taking an unnecessary risk and jeopardizing safety. Eventually, they can all be replaced—human lives cannot," and in August she said, "no emergency response is to be delayed or obstructed because of Endangered Species Act considerations."

ACCOMPLISHMENTS UNDER THE NATIONAL FIRE PLAN

The National Fire Plan directs the Departments of Agriculture and the Interior to carry out the following activities:

- Continue to make all necessary firefighting resources available
- Restore landscapes and rebuild communities
- Invest in projects to reduce fire risk
- Work directly with communities
- Be accountable

It is premature to give you final statistics on the fire season at this time, but we do have accomplishments to date on many key points of the National Fire Plan. As outlined by the following summary of accomplishments, we have made significant progress on all fronts.

CONTINUE TO MAKE ALL NECESSARY FIREFIGHTING RESOURCES AVAILABLE

Preparedness. Due to the additional resources provided by Congress in FY 2001, we are better prepared to fight fires this year than ever before. This funding increased our ability to hire additional firefighters and purchase necessary equipment. As a result, we are better able to respond to initial attack incidents efficiently, effectively and safely. Because of the time lag between ordering and delivery of much of the specialized firefighting equipment, it will take up to one year to realize the full potential from this funding increase.

Hiring. The Department has made hiring a top priority. In April 2001, Secretary Norton recorded firefighter recruitment public service announcements (PSAs), which were distributed to 5,000 radio stations nationwide. This markedly increased interest in our firefighter program. As of September 17, 2001, the Department has hired approximately 85 percent of a total of 8,103 fire personnel (6,865, with additional efforts ongoing). This number is approximately 1,900 more than last year. Of this increase, approximately 1,400 are frontline firefighters.

One important component of hiring was the conversion of a large number of positions from temporary to career status. This provides the Department with additional supervisory capabilities on large fires. The effort continues to be a work-in-progress and will not be completed until next year. When finished, it will significantly increase large fire suppression capabilities, and further improve our initial attack capabilities.

National Fire Plan Human Resources Advisory Group. The Department has chartered a Resources Advisory Group of senior human resources and fire management professionals from each of the four management bureaus. The Forest Service has assigned representatives and will be coordinating activities with the Department. The Group is tasked with promoting collaborative recruitment and retention initiatives to assure success in meeting the goals of the National Fire Plan, including development of a detailed staffing plan for the 2002 fire season and a cohesive strategy for the long-term recruitment, development and retention of fire management and restoration personnel.

Purchase of additional fire equipment and contracting for additional aircraft. Virtually all of an additional 110 pieces of equipment have either been purchased or ordered. All or most of the contracts for an additional 24 aircraft, including helicopters, single and multi-engine airtankers, large air transport, air attack and smokejumper (jumpships) aircraft have been processed.

Re-evaluating normal year readiness. The Department and the Forest Service are reviewing the budget planning models used to calculate the level of normal year readiness resources, such as equipment and personnel, to conduct fire management operations. This review is being led by the Colorado State Forester, assisted by a team of Federal and State fire and resource management specialists and university scientists. This team will recommend the steps necessary to develop a single Federal fire budget model, the adjustments necessary to meet 2001 Wildland Fire Policy and National Fire Plan direction, and the best mechanisms to implement the proposed changes.

Agreements with Australia and New Zealand for firefighting support. The Departments of Agriculture and the Interior have signed agreements with three Australian states and with New Zealand to formalize the exchange of fire suppression assistance. Both Australia and New Zealand assisted the Departments last year during one of the worst fire seasons in 50 years. This could provide up to 200 additional supervisory firefighters as the fire season warrants.

Some examples of successes:

Interagency training and experience proves invaluable on Green Knoll Fire

Interagency training and experience, and additional resources provided by the National Fire Plan proved invaluable to fighting the Green Knoll Fire on the Bridger-Teton National Forest in late July, 2001. With isolated homes and subdivisions threatened, Federal and county firefighters organized structural protection in a coordinated manner. Previously established agreements between Grand Teton National Park and the Bridger-Teton National Forest provided for critical public communication, which included community-based meetings, proactive media outreach, the Interagency Fire Information Center located in Jackson, and what came to be a nationally acclaimed website, www.tetonfires.com.

The 4,470-acre Green Knoll Fire profoundly demonstrated the need for expanding partnerships among agencies charged with wildland fire management. As an integral part of the National Fire Plan, these partnerships often expand beyond the scope of basic emergency response. Although the recent financial boost from the National Fire Plan assisted fire personnel by providing necessary funds to meet the challenge of a drought-driven fire season, the success story associated with this high-profile fire stems from more than just additional funds. What worked was teamwork at all levels and clarity of roles and responsibilities. Professionalism, preparedness and leadership played a key role.

Prior to the fire season, the Teton partnership provided for a three-day training session called "All Fire Days" that involved Grand Teton National Park, the Bridger-Teton National Forest, the National Elk Refuge, and the Jackson/Teton and Lincoln County Fire Departments. Firefighters drilled for three consecutive days, switching roles, cross-training with each other's equipment, learning new skills and

getting to know each other. All agencies formed a working relationship with the State of Wyoming to complete fuels reduction projects for at-risk forested communities. Park and forest programs fund a fuels management crew that mechanically reduces vegetation near developed areas. Additionally, both Federal agencies partner with the Wyoming Game and Fish Department and non-profit agencies to plan, fund and implement prescribed burns that benefit wildlife habitat and provide defensible space in wildland-urban interface communities.

RESTORE DAMAGED LANDSCAPES AND REBUILD COMMUNITIES

Burned Area Rehabilitation. The Department of the Interior targeted approximately 1.4 million acres that were severely damaged from last year's fires. We have completed in excess of 1.1 million acres of this rehabilitation work, and additional work is continuing. Much of this work involved multi-year projects, with immediate site stabilization followed by restoration of native vegetation. Successful restoration, especially on public rangelands devastated by the annual weeds and wildland-fire cycle, is critical to the long-term health of these ecosystems and an eventual return to a more natural fire regime and reduction of catastrophic blazes. The Department recently revised its Manual on Burned Area Emergency Stabilization and Rehabilitation. To implement the manual, a draft handbook was distributed for use during the 2001 fire season. After this fire season, it will be revised in light of what worked and what did not.

Native Plant Materials Development Program. To protect areas severely damaged by wildfire and unlikely to recover naturally, an interagency team of employees from Departments of the Interior and Agriculture has been formed to develop a long-term strategy to supply native plant materials to meet this need. This team is developing a strategy to increase the supply of native seed, with the help of our non-Federal partners.

Some examples of successes:

Emergency Fire Rehabilitation, Mesa Verde National Park

The Bircher Fire burned 22,409 acres of public land in the fire season of 2000, including acres administered by National Park Service, Bureau of Land Management, and Ute Mountain Ute Reservation. The Pony Fire burned an additional 5300 acres on lands administered by the Ute Mountain Ute Reservation and National Park Service. An interagency burned area rehabilitation team prepared a rehabilitation plan to mitigate impacts on lands managed by all three entities. The plan recommended mitigation for endangered species habitat, repair of fence lines, repair of water filtration systems, replacement of burned structures, and an evaluation of fire damage and watershed threats to known cultural resources which date to as early as 500 AD and number well over 1500 sites.

The National Park Service's Burned Area Rehabilitation Implementation Team is directing work for the Federal agencies and the Tribe. The team is working to document fire damage to cultural sites across agency boundaries, as well as providing emergency treatments to sites that have imminent damage from exposure or erosion. All of the stabilization and rehabilitation work has been contracted out to a Native American business which employs Native American field crews. Coordination and implementation of burned area rehabilitation (BAR) actions such as this across all boundaries is much easier and more efficient because all five bureaus (USDA FS, BLM, NPS, FWS, BIA) have agreed to common BAR policies and implementation procedures under the National Fire Plan.

BLM Emergency Fire Rehabilitation of the Jackson Fire in Oregon

The Jackson fire of July 2000, burned a total of 79,875 acres, including 49,516 acres of public lands between Vale, Ontario and Farewell Bend, Oregon in the Malheur Resource Area of the Vale District of BLM. BLM seeded approximately 22,000 acres in the burn area, approximately 12,000 acres with a native seed mix. Included within this total area was 300 acres of unfenced private land, a potential-seed source of invasive annual and weed species for adjacent public lands. This private acreage was seeded to prevent the spread of invasive species and weeds on adjacent public lands. Cooperative agreements were used to seed these private lands in order to protect public land resource values in accordance with the Wyden Amendment of the FY 1999 Department of Interior and Related Agencies Appropriations Bill, (Public Law 105-277).

INVEST IN PROJECTS TO REDUCE FIRE RISK

Hazardous fuels treatments. For Fiscal Year 2001, the Department planned to treat hazardous fuels on an estimated 1.4 million acres. Much of this was to be ac-

complished through the use of prescribed fire. The Department will not achieve this acreage due to drought conditions in the Southeast, Pacific Northwest, Northern Great Basin, and Northern Rockies. As of September 17, 2001, we have treated 618,428 acres. Secretary Norton issued a memorandum to bureau directors in May, 2001 to ensure that coordinated, efficient and effective fuels treatment occurs on all Interior lands. This memo established a fuels management team to provide guidance for fuels treatment project selection and to coordinate with the Forest Service and State agencies.

Transfer of funds for environmental consultations. In addition to the allocation of project funds to appropriate field units, funds were transferred to the U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) to hire personnel to facilitate threatened and endangered species consultations. The FWS and NMFS have added staff to accommodate the increased workload, and are working cooperatively with the land management bureaus to plan projects for FY02 and beyond. This will expedite FY 2002 and 2003 clearances for fuels treatment projects designed to reduce risks to communities and priority watersheds.

- Wildland Urban Interface (WUI) interagency collaborative working groups. The Department has worked with the Forest Service, Tribes, the National Association of State Foresters, the Western Governors' Association, and other State organizations to establish locally led interagency teams that will prioritize hazardous fuels treatment projects in the wildland urban interface. Instructional memoranda have been provided to these groups to help them select projects for treatment. This process will guide implementation of the national fuels reduction program in the WUI for FY 2002 and provide a preliminary project list for FY 2003. As a result of this collaborative stakeholders effort, the Department has proposed approximately 700 on-the-ground WUI projects for FY 2002 and is beginning to move towards implementing them. A majority of the proposed projects are located in the west, in States such as Oregon, California, Idaho, Colorado, Washington, Utah, Nevada, New Mexico, Montana, and Wyoming. However, projects will be performed in other States with significant hazardous fuels problems, such as Florida, Georgia, Mississippi, and Tennessee. In addition to on-the-ground projects, we will fund approximately 300 risk assessments and subsequent project plans to enable communities to develop on-the-ground WUI projects for FY 2003 and FY 2004.

Some examples of successes:

BIA fuels reduction project prevents fire from spreading

The Round Valley Indian Tribe's fuels treatment project near Riverside, California, proved to be instrumental in stopping the recent Medicine Fire. The fire spread rapidly uphill consuming approximately 70 acres until State and local firefighters stopped the blaze on the Perry Ridge Fuelbreak, recently constructed with funds provided by the National Fire Plan. Without the fuelbreak, the fire could have spread to over a thousand acres, consuming valuable timber and watershed resources, and threatening the Tribe's reservation and other nearby communities.

BLM prescribed fire in Arizona restores watershed health

In late June 2001, the BLM Phoenix Field Office improved watershed health by completing a 6,000 acre prescribed fire on the Agua Fria National Monument. The prescribed burn reduced fuels buildup, improved the quality of grasses for wildlife, and reduced the number of non-native plant species. The Phoenix Field Office worked with the Tonto and Prescott National Forests, the Arizona State Land Department, Black Canyon City Fire Department, and the Arizona Department of Transportation to make this prescribed fire a success. During the prescribed fire, resource specialists and fire managers had the opportunity to interact with the public, explain the purpose of the prescribed burn, and provide daily updates. They discussed strategy, safety concerns, progress and potential benefits. Long-term monitoring of the area will provide resource specialists and fire managers with information to help with future prescribed burn planning.

WUI fuels reduction program in Stehekin, Washington

The National Park Service conducted a hazardous fuels reduction project around the community of Stehekin, Washington, located within the North Cascades National Park. Two fires, the Rex Creek Fire Complex (43,000 acres) and the Glory Mountain Fire (948 acres) burned this year within a few miles from Stehekin. The hazardous fuels reduction work made it easier to protect the community and focus personnel and equipment on stopping the wildfires. In one day alone, the Rex Creek Fire advanced nearly 9 miles. This extreme fire behavior captured the attention of community members, and strengthened their resolve to help the National Park

Service move forward with its continued defensible space and forest fuel reduction programs.

Spruce thinning project to protect Tanacross, Alaska from wildfire

Thinning of spruce stands to reduce the threat from wildfire has begun around the village of Tanacross, 190 miles southeast of Fairbanks. The project is a cooperative effort by BLM, the Village of Tanacross, the Tanana Chiefs Conference, Alaska Division of Forestry, and U.S. Fish and Wildlife Service. The idea for the hazardous fuels project came from the village, which contacted the Tanana Chiefs Conference (TCC), and TCC arranged for the project with BLM. The project will leave a defensible space for fire suppression forces to protect the village if a wildfire occurs.

WUI Projects Funded in Marin County, California

Approximately \$350,000 in Federal funds has been allocated for fourteen fire prevention and hazardous fuels reduction projects being performed this year in communities surrounding Point Reyes National Seashore and Golden Gate National Recreation Area in Marin County, California. Local fire agency project managers, working through Fire Safe Marin, a non-profit organization, and the National Park Service, are completing the hazardous fuels reduction projects and are hiring local contractors and youth conservation crews. Examples of projects are the City of Sausalito-Shaded Fuel Break, a seven mile interface between the City of Sausalito and Golden Gate NRA; the reduction of hazardous fuels between Inverness and Point Reyes National Seashore; and the hazardous fuel reduction project in Homestead Valley near Golden Gate NRA. The long-term goal of the community partnership is to develop a systematic and strategic approach to fuels reduction and fire prevention that is supported broadly by the public.

WORK DIRECTLY WITH LOCAL COMMUNITIES

Contracting with local businesses and organizations. In January 2001, the Department of the Interior and the Forest Service developed policy guidance to implement a streamlined approach to awarding contracts to local businesses and organizations for hazardous fuels treatment projects and landscape restoration. This policy is being implemented on an interagency basis in each of the 11 Geographic Areas currently used for firefighting coordination across the country. In each Geographic Area, one of the Federal agencies has taken the lead for contracting. In some cases, the geographic area has been subdivided and agency leadership designated to facilitate work. The policy requires an organized approach for community outreach and coordination to locate and develop firms with which we can contract and assist communities developing local fuels reduction and restoration capability. As of September 2001, the Department has awarded 358 contracts worth \$18.6 million for National Fire Plan activities, including hazardous fuels treatments and rehabilitation and restoration work.

Improving local fire protection capabilities through financial and technical assistance to State local, and volunteer firefighting efforts.

Rural Fire Assistance. In 2001, Congress established a new \$10 million Rural Fire Assistance program. The Department developed policy to guide implementation of this pilot program. The program is providing rural fire departments with needed assistance in training, equipment purchase, and prevention activities to increase firefighter safety, enhance fire protection capabilities, enhance protection in the wildland urban interface, and increase the coordination among local, State, Tribal, and Federal firefighting resources. The Department estimated that approximately 820 of the 3,223 rural/volunteer fire departments adjacent to Interior lands and within the wildland urban interface would receive funds and benefit from the pilot program this fiscal year. As of August 30, 2001, 1,386 awards have been given to rural and volunteer fire departments, totaling approximately \$7.5 million. We expect to finish obligating all funds by the end of the fiscal year.

Expanding outreach and education to homeowners and communities about fire prevention through use of programs such as FIREWISE.

The FIREWISE program, developed by the National Wildfire Coordination Group in 1986, provides information to homeowners, county officials, building contractors, firefighters and others about practices that can lessen the risk of wildfires to communities. Through the National Fire Plan, \$5,000,000 is targeted in FY 2001-03 for development and delivery of a series of national FIREWISE workshops. Participants at the State-level workshops might include representatives from the construction industry, homeowners associations, insurance industries, local governments, and rural fire departments. The workshops are presented as a "Training-of-Trainers" experience, with the expectation that participants will return to their host organizations or communities and, in turn, conduct similar workshops at the local level. The Sec-

retaries of Agriculture and the Interior will soon record interagency public service announcements to increase awareness of the FIREWISE program.

Some examples of successes

Hagerman Fire Department helps protect Fish and Wildlife Hatchery

On September 7, 2001, a wildland fire burned around the Hagerman National Fish Hatchery, near Twin Falls, Idaho. Four houses were directly threatened by the rapidly spreading, wind-driven fire. Fire engines from the Hagerman, Bliss, Bulh, and Wendell Rural Fire Departments (RFD) assisted with fire suppression efforts. The Hagerman and Bliss RFDs provided structure protection for the hatchery residences. This response was enhanced by equipment purchased this year as a result of a Rural Fire Assistance award given to the Hagerman RFD by the Fish and Wildlife Service.

Interagency distribution of Rural Fire Assistance and Volunteer Fire Assistance funds

The Oregon/Washington BLM Branch of Fire and Aviation Management, and the Forest Service Pacific Northwest Region, Directorate of Fire and Aviation Management, have been officially integrated at the State Office and Regional Office level since 1995. The National Fire Plan is implemented seamlessly between the two agencies. The interagency office works with all of its State, local and Federal partners in all aspects of fire management. BLM and the Forest Service were able to use this close working relationship to combine Rural Fire Assistance awards, and awards from the Forest Service's Volunteer Fire Assistance program. This provided RFDs with a "one-stop shopping" experience and allowed all involved agencies to conserve resources in reaching out to the RFDs. In some cases, a very modest award made all the difference to a struggling RFD. One small RFD had two old wildland fire engines with tires so worn, they were not sure they could safely make it to a fire. They asked simply for enough money for 10 new tires. Another small RFD needed a new tank for its wildland fire engine—their existing tank was so rusted it could no longer hold a weld, and could not be repaired. The agencies' grant money allowed the RFD to install a new tank on their old truck.

The Hulls Gulch Environmental Education/Wildland-Urban Interface Project, Boise, Idaho

After the severe fire season of 2000, the McCord site, a 20-acre property acquired by the City of Boise, was used to develop a public model home that emphasized wildland fuels management, fire ecology, and firesafe building and property protection in a wildland fire environment. BLM's Idaho State Office, the City of Boise, Ada County, Ridge to Rivers Council, Boise Parks and Recreation and the Treasure Valley Fire Prevention Co-op are working together on this project to provide funds, expertise, and labor. When completed, the facility will provide indoor and outdoor classroom and meeting space to educate audiences ranging from school children to neighborhood associations and other community groups. The project provides an excellent chance to create interagency, community, and business partnerships. The location of this project is important—in August 1996, more than 15,000 acres across the Boise Front burned. Hundreds of homes in the wildland-urban interface were threatened including an inholding surrounded by Boise City's Hulls Gulch Preserve. The project is expected to be completed sometime in 2003.

Increasing employment and contracting opportunities in Idaho

The Department, the Forest Service, and the State of Idaho are working together to increase opportunities for local contracting and recruiting in support of the National Fire Plan, particularly for unemployed natural resource workers, including ranchers, farmers, loggers, and forest product workers. A joint memorandum has been signed among all parties to formalize this arrangement.

Increasing employment and contracting opportunities in Oregon

The BLM Klamath Falls Office, OR, has started a 3,000 acre wildland urban interface fuels reduction project that includes tree thinning, brush removal, and slash piling in and around Bly Mountain. The project is providing temporary jobs for up to 80 displaced farm workers in the drought-devastated Klamath Basin. The BLM has hired four contractors who have begun recruiting workers in the local area. The Oregon Department of Forestry and local elected officials are assisting the BLM in planning, support, and community relations.

BE ACCOUNTABLE

Interagency coordination. The Departments of Agriculture and the Interior are in the process of formalizing a charter to establish an Interagency Wildland Fire Leadership Forum, which will provide executive oversight and ensure policy coordination, accountability, and effective implementation of the National Wildland Fire Policy, the National Fire Plan, and the 10-Year Comprehensive Strategy. These efforts will be accomplished through developing common interagency performance measures, common data elements and common reporting systems. The Forum will ensure coordinated and consistent direction, oversight and monitoring of performance.

Monitoring of implementation. The Department is monitoring fire, management programs. The pilot Rural Fire Assistance program will be evaluated at the end of this fiscal year to determine operational issues, administration and consistent collaboration with stakeholders. Both the Forest Service and the Department will assess the extent to which wildland fire agencies have collaborated to implement the contracting and agreement authorities in Title IV of the FY 2001 Department of the Interior and Related Agencies Appropriations Act in a seamless fashion. The Council on Environmental Quality has made several site visits to determine how the environmental review process occurs (NEPA/ESA consultation) on hazardous fuels treatment projects. The lessons learned from all of these evaluations will be widely shared within the agencies. In addition, we have taken other steps to be more accountable:

Some examples successes:

10-Year Comprehensive Strategy

Developed by the Department and the Forest Service in partnership with the Western Governors' Association (WGA), this strategy is a template for how the Departments of Agriculture and the Interior will collaborate at the National, State, and local level to implement the National Fire Plan. The Secretaries of Agriculture and the Interior formalized the 10-Year Comprehensive Strategy on August 13, 2001 at the WGA annual meeting in Coeur d'Alene, Idaho. There are four goals of the 10-Year Strategy: to improve prevention and suppression; reduce hazardous fuels; restore fire adapted ecosystems; and promote community assistance. Each of the goals include a set of guiding principles for successful implementation and a set of action items. The Strategy recognizes that key decisions in developing fuels management and ecosystem restoration projects should be made at the local level. The Strategy identifies a set of core principles that provide common direction for meeting the goals of the Strategy. These core principles are collaboration at all levels, immediate protection of communities and high priority watersheds with long term emphasis on maintaining and restoring ecosystems on a landscape scale, and establishing uniform measures, standards, and reporting processes.

An implementation plan will be developed by May, 2002 to provide consistent and standard direction to implement the common purposes articulated in the Strategy and the National Fire Plan. The implementation plan will include consistent national performance goals and measures, priorities, tracking and reporting processes and operational ways of doing business.

Development of a National Fire Plan Data Reporting System. A contract was awarded for development of an automated database to collect data in order to track progress in meeting the goals set out in the National Fire Plan, related documents, and associated performance measures. The target is to have a pilot system operational and capable of reporting by the end of this calendar year. We have coordinated this effort with the Forest Service, and are using the same software and data structure that the Forest Service uses in their data reporting system. The two systems will be compatible, and the intent is that we will be able to produce joint reports on National Fire Plan accomplishments.

National Academy of Public Administration (NAPA) Report

The Department has commissioned a report by NAPA, which will concentrate on six areas from the 2001 Review and Update of the 1995 Federal Wildland Fire Management Policy:

- Management accountability
- Interagency coordination
- Intergovernmental coordination
- Improving risk management
- Workforce management
- Institutionalizing lessons learned

NAPA expects to complete the report by mid-December, 2001. Results of this study, along with internal reviews, will be used to review oversight and coordination mechanisms of the National Fire Plan and to assure that an effective strategy is in place to institutionalize the 2001 Federal Wildland Fire Policy.

Joint Department and Forest Service Cohesive Strategy

The Department is working with the Forest Service to develop one cohesive strategy to provide both agencies with a framework for reducing the risk and consequences of unwanted wildland fire by protecting, maintaining, and restoring land health and desired fire cycles.

Interagency National Fire Plan website. The Department the Forest Service, with feedback from the National Association of State Foresters, developed a joint National Fire Plan interagency website (www.fireplan.gov). The goals for the website are to:

- Provide an interagency information clearing house
- Provide one place for the public to get information on a variety of topics
- Provide mechanisms for public involvement in implementing the National Fire Plan
- Demonstrate that Federal and State wildland fire agencies are taking a cohesive and carefully planned approach to implementing the 2001 appropriation

CONCLUSION

I appreciate the opportunity to testify at this hearing. We believe that we have made good progress in reversing the trend of deteriorating health for our forest and rangeland ecosystems. We view the National Fire Plan as an investment that will help protect communities and natural resources, and most importantly, the lives of firefighters and the public.

The Department has made real gains in working with all of its partners to implement the National Fire Plan, but it has required a shift in the way we have traditionally conducted business, and a shift in the way we implement nearly every fire management program. Just as we need time to acquire all the new, specialized fire equipment, we will need time to continue to make fire management seamless across the Federal, Tribal, State and local agencies, so that we may better protect lives and resources, and restore ecosystems to a functioning condition. We are encouraged by the signs that the National Fire Plan has made a tangible improvement in the fire management program this year, and look forward to your continued support as we continue to implement the National Fire Plan.

Thank you, again. I will be happy to answer any questions from the committee.

Senator WYDEN. Gentlemen, thank you, and Senator Cantwell has joined us. She has been out on the ground in rural Washington listening to folks, and we are very pleased that she is with us, and Senator, if you would like to make any opening comments before we go to questions, you are certainly welcome.

**STATEMENT OF HON. MARIA CANTWELL, U.S. SENATOR
FROM WASHINGTON**

Senator CANTWELL. Well, thank you, Mr. Chairman. I think I will submit a longer statement for the record, but thank you for giving me this opportunity. I obviously have read quickly some of the testimony that has been made thus far, both as it relates to interagency training and experiences that were done at the Green Knoll fire, and, obviously, the fuels reduction program in Stahican, Washington, so thank you for including that in the information.

Obviously, I was very pleased to see the efforts this summer come together on the focus of the national fire plan and how we need to give more attention to it. Obviously, we have been devastated in Central Washington with the deaths of several young firefighters, and we are awaiting tomorrow the actual results of what has been an internal report on the 30-mile fire, so I am hoping that with the results of that investigation in hand we can come

back and address the specifics of what improvements need to be made in the system.

I am assuming that information is not being released today, and is not something that is available to us, but, nonetheless, we need to address this issue in the context of the national fire plan, and I appreciate the opportunity to ask questions as we get back to that process, Mr. Chairman.

[The prepared statement of Senator Cantwell follows:]

PREPARED STATEMENT OF HON. MARIA CANTWELL, U.S. SENATOR FROM WASHINGTON

Thank you, Chairman Wyden, for holding this oversight hearing on the National Fire Plan. The issue of how to ensure that our firefighters have sufficient resources to fight catastrophic wildfires, as well as efforts to reduce the risk and rehabilitate areas damaged by these fires are of particular importance to those of us from the West, where we have seen tremendous devastation over the past two summers.

The National Fire Plan was cobbled together in response to the prevalent wildfires of 2000, when almost 7 million acres of Western lands went up in flames. Despite severe drought conditions throughout the West this summer, fewer acres—about 3 million—have burned. For those of us from Washington state, however, the toll has—in human terms—been far more devastating. Four young Central Washington firefighters lost their lives July 10, fighting a blaze in the Wenatchee National Forest. I would again like to extend my deepest sympathies to the families of those four brave young men and women, who gave their lives to protect their neighbors in the Thirty Mile Fire.

It is thus with heavy hearts that we from Washington await the Forest Service's release tomorrow of the results of its Thirty Mile Fire investigation, as well as another report on the incident from the Occupational Safety and Health Administration (OSHA), due later this fall. I believe the lessons that can be learned from this tragedy deserve the Subcommittee's attention, and I look forward to working with you, Chairman Wyden, on a separate hearing on the Thirty Mile Fire, the Forest Service's report and recommendations.

Without the results of this investigation in hand, we cannot today address the specific circumstances that led those four young men and women to lose their lives in Okanogan County, Washington. However, I am committed to working with the Forest Service, Department of Interior and this Committee to ensure that when we send our young firefighters into harm's way, they are equipped with all of the resources and training necessary to make their jobs as safe as possible. It is unfortunate indeed that the Thirty Mile Fire is not the only incident of its kind to have occurred in the last decade. I understand that certain similarities may exist between this tragedy, and the Storm King Fire that took the lives of 14 in Colorado in 1994. I believe it is the job of this Committee to assess how the federal agencies' practices have changed in response to that fire, how policy changes designed to protect firefighters and communities are being implemented under the National Fire Plan, and what further safeguards or resources may be needed.

In addition to making certain our firefighters are well equipped in the face of raging wildfires, how the Forest Service implements its policies for the reduction of hazardous fuels in high-risk, fire prone areas is another topic of paramount importance for this Subcommittee. I look forward to learning precisely how the Forest Service prioritizes areas it will address in implementing its hazardous fuel reduction strategy—whether through predictive modeling techniques or otherwise—and how the agency is complying with Congressional direction that it target Wildlife/Urban Interface Zones for treatment. This is particularly true given that Washington state had, as of August 8, more than 185 at risk communities—including towns as diverse as Olympia, Pasco, Port Angeles, and Walla Walla. I am curious as to what kind of progress Interior and the Forest Service have made on their respective goals of treating 300,000 and 500,000 acres of land within these zones nation-wide during 2001.

As for how to go about this hazardous fuel reduction, I believe that the techniques the Forest Service employs in choosing which treatment methods it will use to prevent fires—whether prescribed burning, thinning, or a combination of both—is crucial in determining the effort's success. One of the most important factors in determining these measures' effectiveness appears to be the type of forest under treatment. What works for the West's dry, Ponderosa Pines, which occur at low elevations, may in fact be either ineffective or harmful for our wetter forests that exist at higher elevations. I am convinced that it is through a combination of treatment

methods—tailored to specific forest types—that we are likely to be most successful at preventing catastrophic wildfires. I thus believe it's critical that federal agencies have at their disposal diagnostic tools to classify these land types, sound policies for selecting treatment methods and techniques for assessing these measures' effectiveness.

Again, thank you Chairman Wyden for holding this hearing on a topic of such critical importance to Washington state communities, some of which have sustained tremendous losses—in both financial and human terms—from the wildfires that have swept my state for the past two summers. I look forward to working with you and other members of this Committee on crafting fire policies that will protect our citizens, communities, firefighters and public lands, and I look forward to the testimony of our witnesses here today.

Senator WYDEN. We will work very closely with you, Senator Cantwell, and especially as we get that report. Given that tragedy, it is especially important that we move quickly, and we will work with you to do it.

Gentlemen, let me begin by asking some questions about the budget. Both of your agencies have repeatedly stated that last year's funding levels for the national fire plan need to be sustained for at least 15 years. Nevertheless, the President's budget request significantly reduces funding for several components of the national fire plan.

For example, one area that has concerned me is the President's request would essentially eliminate rehabilitation and restoration funding for burned-over areas. It obviously takes years to replant and care for native vegetation following fires, and funding for immediate stabilization is needed following more recent fires. Isn't some money needed for rehabilitation and restoration funding?

Mr. Laverty.

Mr. LAVERTY. Mr. Chairman, the answer is certainly yes, and as the budget was put together I believe that part of the thought that went into that was that those funds that were available in 2001 were for the treatment of the 2000 burned acres, so there was probably some discussion or some thought process, I guess, if I could understand it, that felt that that had been taken care of and we were now moving into an area that we did not have any burned acres, so as we look at the work that still needs to be done, I think the House has recognized that there is some level of funding in that, the refunding and restoration that we do, in fact, need for 2002 to complete some of the burned area work for 2000.

Senator WYDEN. Last year, Congress appropriated \$34 million for the Forest Service community and private land fire assistance program. The President's budget request zeroed this out for next year. These funds, of course, are targeted to communities to help them rebuild from past fires and obviously to prevent new ones.

Last year, the communities were so interested in the program that they submitted requests for assistance that were wildly in excess of available funding. My question is, why would you all zero out a program of community assistance that is so very popular with folks on the ground at the local level?

Mr. LAVERTY. I believe the thought or the logic behind that was that \$34 million of those funds were to provide for the restoration of those severely burned areas of the communities that were impacted by the fires of 2000, and again, looking back, that those were for those acres and those impacts, so that is the only explanation I can provide for you.

Senator WYDEN. Well, listen, you all are getting your footing. I have spoken about it, Senator Bingaman has spoken about it. Suffice it to say, I have heard Senator Craig say things on these budget issues that reflect my concerns as well. We want to work with you on a bipartisan basis.

The Congress gets a request from the President of the United States, and we have got to follow it up, but we need you all to more vigorously make the case in order to get these funds. You have got three westerners here who have really watched the ravages this summer, and we need you all out there making the case, rather than looking at these budgets that are zeroing out or underfunding dramatically some of the most important programs for the West.

Tell me, if you would, how many jobs have been created in your judgment by the national fire plan thus far?

Mr. LAVERTY. Tim and I have mentioned that we have done some hiring and recruiting just on the agency side. We have close to 4,000 or 5,000 firefighters that we have picked up. At this point in time, we cannot tell you how many people we have actually employed as a result of some of the contracting.

Tim talked about some of the 300-plus contracts that Interior has let go. On the Forest Service side we have well over 500 contracts that result in about \$54 million of work that is going out there. Our contracting folks right now are working on the assessment of trying to determine so we can actually report to you how many people have been employed as a result of those contracts, and I think we are going to have that information probably within the next several weeks or so.

Senator WYDEN. Okay, if you could get that to the subcommittee that would be very important.

As part of that, we are particularly concerned about creating rural jobs. As you know, the Congress last year responded to the concerns that we are hearing all over the rural West, that you appropriate money, that funds go for these various programs, and somehow they do not get out there to local businesses, they do not relate to local employers and contracts.

How, thus far, have you been using that change in the law to create more economic opportunities for folks in the rural West?

Mr. LAVERTY. I think as we look at the list of contracts that we have awarded just on the Forest Service side, many of these contracts are awarded in these communities that would reflect that rural environment. I was just looking at Oregon and Washington, and every one of these are rural-based communities where these contracts have been awarded. Just in the Pacific Northwest, in those two States, there is well over \$7 million, almost \$7.5 million of contracting. It is Josephine County, Union County, well all of these basically rural counties where these funds have been actually targeted and awarded.

Senator WYDEN. Why don't you, in getting us the answer with respect to how many jobs have been created by the national fire plan, do a specific breakout for us with respect to how many jobs have been created in rural areas so that we can explain to our constituents—Senator Craig and Senator Cantwell—and when we fought for that local preference it really did translate to something that was important in rural counties.

I am going to ask you some more questions in a few minutes, but I want to recognize my colleagues, and let us begin with Senator Craig.

Senator CRAIG. Mr. Chairman, thank you. Tim, you talked about the number of acres you treated in BLM. You achieved a little more than 50 percent of your stated goal. You suggest that the inability to meet all of your goal was in part a weather-related drought situation. A couple of questions around the 700,000, or the 1.3 million acres of treatment, or proposed treatment. How many of these acres treated for fuel reduction were considered high risk forested lands?

Mr. HARTZELL. I do not have that answer for you, and I would have to get that.

Senator CRAIG. Okay. I wanted that in the context of, let us say, overgrown juniper, which may not be high risk, but from the standpoint of land management is one big weed in some instances.

Mr. HARTZELL. Senator, you raise an interesting question. That is a vegetative community in the West that we need to treat. It is a high fire risk, though, as you know.

Senator CRAIG. Oh, yes.

Mr. HARTZELL. Juniper used to formerly be clustered on the rocky ridges. It has moved down slope. It has taken over the productive range sites and removed forage for livestock. When you get a fire in these dense juniper stands it tends to be extremely severe, eliminates the sage brush, and we get a mono type of annual grass. So that is a very high risk area that we are concerned about targeting.

Senator CRAIG. Well, in the context of those acres, and if you look at them in relation to what were considered high risk, while again you suggested it was primarily an environmental situation from the standpoint of weather and drought conditions, I would also like to examine how many of the 1.3 might have been held up by regulation, by process, by appeal, by litigation. If we could examine the total of that, I think it would give us a better picture of understanding what you are able to do or may not be able to do based on those conditions.

Mr. HARTZELL. We have heard very little from our field offices in terms of the number of projects that have been held up by process. Undoubtedly, this is the case. It is always going to be the case in certain areas. It does not seem to be a limiting factor. I would say that the biggest challenge that we face is that three-fourths of our proposed treatments were or prescribed fire-only treatments. I think we understand the vagaries of weather and burning conditions and how that can influence your productivity.

We need to have a more balanced program. We need to have a program that relies on a variety of treatments, particularly in these areas that are fire-prone, and prone to catastrophic fire. We simply need to be able to get into the forest. We need to be able to thin the underbrush. We need to be thinning timber stands so that we can reintroduce fire, or when wildfire comes in we do not destroy these sites.

Senator WYDEN. Lyle, let me follow a similar line of questioning with you. In the last 2 years, approximately 10 million acres of land were lost to wildfire, billions of board feet of timber lost, and

I guess we recognize the phenomenal loss of the valuable public resource. How much of that was salvaged, or plans to be salvaged, meets that criteria?

Mr. LAVERTY. Senator, I do not have the numbers here. I can get it for you. We were talking about that just before we came up, trying to pull that information together. We did not have that here. We can get that for you.

I do know that there are attempts at a number of the areas around the country to salvage where it is appropriate, based on those bare plans, some volume. I know in the Bitterroot they are working hard to move volume out of there. John Twiss on the Black Hills is working hard to salvage some of that volume that was burned last year.

So across the country I know that we have efforts underway to capture where it is appropriate that kind of volume that can be salvaged. We will get you that specific information.

Senator CRAIG. Because of the fuel loading that we know has gone on, and both the chairman and I have visited about that, this committee has looked at that as a relationship to forest health for a good number of years, many of these fires burn so intently that there is no opportunity for reburn, if you will, but in some instances there is, where there is not an effort to salvage and/or reshape that landscape in a way that brings back a more productive stand. Is there not a risk of reburning some of these areas?

Mr. LAVERTY. I believe in some cases there actually is a risk, and one of the things that we are actually doing with some of the funds from the fire plan this year is investing in some research that can help us answer some of these questions from a science basis on what is the effect of science versus not-salvage, of removing some of that volume. We have looked at many of the areas up on the Bitterroot. We know that if we do not take some of that volume out, that is going to end up on the ground, and the net time the fire comes through we are going to have an added fuel base.

We need to have good answers in terms of how science can help us do that, and we have got a good approach, I think, to help bring a good science base for those decisions.

Senator CRAIG. In examining those acreage as it relates to how we manage burned areas, are you factoring in also a reality of weeds? You and I and the Forest Service, BLM and others have been focusing in on that. We have a new legislation passed last year that moved through this committee. We have a new initiative out there now to put some dollars and cents to it so that you can all become partners with States and local weed districts in managing these lands. I mean, we really have in the West 10 million acres of potentially high risk weed patch if we do not manage it well. How does that fit into the context of this current analysis?

Mr. LAVERTY. The investment that the Congress has made in the national fire plan provided some incredible resource to deal with invasive procedures, I think almost \$12 million just on the forest Service side just to deal with that. Those funds are going very, very long distance in terms of working with States, counties, and weed boards on how we can, in fact, be aggressive in dealing with this war on weeds in the West, and I am convinced that with these kinds of investments, not just a 1-year, but working on long-term

monitoring and aggressive action, that we can, in fact, make a difference, and again I hear testimonies from people across the country on how these investments with counties, county commissioners are talking about how this has made a difference, so these investments are working well.

Mr. HARTZELL. Senator, if I could, just to follow up on that issue, I mentioned that we have 1.4 million acres of severely damaged lands that we plan to treat. We figure that we probably have a weed problem on at least 600,000 of that 1.4 million. What we are encouraged by is that the national fire plan increase for the rehab program for this year will enable us to pretreat those weeds, and then after we go in and try to restore native plants, follow up with a post weed treatment, so we are very encouraged.

Senator WYDEN. Gentlemen, let me ask you a question, and I appreciate my colleague letting me do it, because I think my colleague is asking about a point that needs to be clarified. This fighting the weeds is an extraordinarily important natural resources initiative in the West, and I want to make sure I understand it. Are you using fire plan money and county payment bill money?

As you know, we are very proud around here of the county payments bill. You all called it the most important Forest Service initiative for 30 years. We are plenty proud of it, but I want to make sure I understand where this money is coming from. Is this county payments money, or national fire plan money, or possibly after October 1 this year it is going to be both, but why don't you explain to us where this money is coming from.

Mr. LAVERTY. Mr. Chairman, the funds that I mentioned, the \$12 million, those were national fire plan fund moneys that were targeted for invasive species, so any additional fund that the counties would elect to put into that really is—

Senator WYDEN. But thus far this is just fire plan money?

Mr. LAVERTY. Fire plan funds, yes, sir.

Senator WYDEN. I thank my colleague.

Senator CRAIG. Good question. Thank you.

Lyle, you referred to cost per acre in fire suppression this year going as high as \$1,000, \$1,200 an acre on the average from 2000—well, on the average from 1993 through 2000. We looked at about \$101 to \$102 an acre, but the year 2000—let us see. Last year, I guess this year it has jumped to \$337 an acre in the past fiscal year. Given the fact that your agency has a \$200 million shortfall that will need to be covered for the fiscal 2001 fire season, can you tell us in part—you have talked about the urban interface and we have all recognized that, and the fire plan speaks to that.

Certainly, from 1993 to 2001 a phenomenal number of America's trophy homes have been built in that urban interface. Is that the dominant cause of that increase, on the average, or are there other factors involved?

Mr. LAVERTY. I believe there is a number of other factors.

Senator CRAIG. Because that is a tripling of cost on the whole.

Mr. LAVERTY. That is a tripling of cost, and part of—I have spent some time this morning trying to get a good answer for you in terms of what is going on. There are a number of factors. One of them is the fact that as we look at last year's cost, cost per acre, that was spread out over about 7, almost 8 million acres. This year,

the cost has spread over about 3 million acres. We have added some additional aircraft as a result of the investment in the fire plan this year which has really increased significantly the suppression cost.

Senator CRAIG. And they are expensed out in 1 year?

Mr. LAVERTY. Yes. These are actual operations, suppression of cost, yes. These are the suppression of costs, so those factors, and as we talked about increase fuel for these aircraft the folks are telling me that is another factor that is increasing these costs.

We are going to look hard—and I shared with Frank earlier that we are going to give you good analysis of that breakdown. It is a significant problem for us, because as you pointed out last year we had \$425 million that the Congress provided in 2001 for those contingency. \$275 million of that went to restore the cost suppression deficit from the 2000 fire season, so that is one of the factors that is leading us now to coming back again to looking at how do we offset that loss.

Senator CRAIG. One last question, Mr. Chairman, and prior to that question I will only make this passing comment. As these costs per acre go up to suppress fire it looks like forest health and fuel reduction and the opportunity to make some small amount of revenue off of that might be a rather more cost-effective way of approaching this, along with an environmentally positive approach, and out of it we might find some resource and some job base. I think we have to look at all of those.

Lyle, a question of you. Tim, a question of you. Would you tell us, the committee, what are the three things that impede you now, or your agency's ability to treat the number of acres that are at risk in catastrophic fire? If you had a magic wand today, and I would say in the context of good forest practices, and environmentally sound forest practices, what would that magic wand produce for you? What would be the three items that it would produce that would ease your ability to gain access to those endangered acres?

Mr. LAVERTY. Senator, I guess the first one, if I could be magic, I would create some additional resource specialists to get the projects planned. That is one of the ramp-ups that we are working on right now, is to get those people in place to do the planning so we can be effective in terms of bringing it on.

The other part of it is having to train skills to actually do the prescribed burning and the treatments from the ground. We are going for almost a doubling of the program, so we are on a very aggressive ramp-up to get people in place, and I think probably the other part is for us to continue to look at how can we refine some of our planning methods and methodologies. We need to be able to be more streamlined in terms of using information, and I think as we continue to bring those pieces together, I think you are going to see our effectiveness increase significantly as it relates to treating fuels.

Mr. HARTZELL. My number 1 would be increased contracting capacity, both internally and externally. Internally we are ramping up, we are hiring people, we are approaching contracting in a more efficient manner, we are sharing contracting skills, we are allowing

a bureau to take the leadership for contracting, and are giving the authority to order against that contract to other bureaus.

So that is one issue, but it is going to take a while to increase that capacity, but the flip side of that is, there does not appear to be the contracting capabilities in many small communities throughout the West in particular. If I could wave a wand, I would have small businesses all over the West come to us and say, we are capable of removing material. We are capable of helping you reduce the fuels hazard and make the forest healthier.

I think another barrier very clearly is the ability to use the biomass. We have got to figure out ways to connect forest health, the national fire plan, the national energy policy, in a way where we can in a rational manner use the material that we need to take off the hillside. We have simply got to figure out a way to do that.

And lastly, we are just committed to figuring out more and more ways to work together in a more seamless, efficient manner.

Senator CRAIG. Thank you. Thank you, Mr. Chairman.

Senator WYDEN. Before I recognize Senator Cantwell, I just want to tell you, Mr. Lavery, I think the answer you gave to Senator Craig's question when you could have had a wish list is very much along the lines of the philosophy that I think has got to be modern forestry in this century. That was not an answer that is going to divide people and polarize people. You basically said, look, I am going to need some resources in order to create healthy ecosystems. It is not a whole lot fancier than that, and we are going to have to work on the nuts and bolts to get it done, but if we can get those kinds of answers, you are going to give us a chance to change the debate about forestry for the long term, and that is very welcome.

I am also pleased that my friend and colleague, Senator Smith is here. With my colleague's indulgence, I am going to recognize Senator Cantwell now, because she has been waiting, and then we will have Senator Smith for any opening statement and any questions if you would like.

Senator CANTWELL. Thank you, Mr. Chairman, and again, thank you for conducting this hearing, and it is good to see so many of my colleagues from the Northwest. It makes me ponder whether we should bring up some Northwest legislation through the National Parks Subcommittee, maybe BPA borrowing authority.

Mr. Chairman, I would like if I could to ask Mr. Hartzell to dwell a little bit more on the hazardous fuels treatment section. In your testimony you talked about the 1.4 million acres and the fact that that was not achieved, and of concern to Washington State residents is this wildlife and urban interface zones, which cities like Pasco, Walla Walla, Port Angeles, even Olympia face the threats of those, so what have we learned about prioritizing the various methods for treating hazardous fuels.

Does this data base of acreage actually include prioritization based on various techniques, and do we have an estimate of how much of these acres that we have not been able to achieve are in these wildlife urban zone interfaces?

Mr. HARTZELL. I do not have the acreage with me. I know that we had roughly 300,000 acres of treatments proposed this fiscal year in the wildland urban interface, and we have treated roughly half of that, so we have met half of our commitment.

Senator CANTWELL. So you think 300,000 of the 1.4 you think?

Mr. HARTZELL. Of the 1.4, slightly in excess of 300,000 was within the wildland urban interface, that is correct, and we have treated roughly 150,000 of that 300,000, and what we are seeing as a result of our work with these collaborative local and State groups is a shift in emphasis of fuels treatment in the wildland urban interface to more of a mechanical treatment, either chain saws, or a combination of chain saws and mechanized equipment.

I think that reflects a couple of issues. It reflects a conservative and appropriate approach around communities where fuel hazards are great, where the forest is thick and there is the potential for severe fire, to use mechanical means to do the treatment. It is a less risky, safer approach around these communities, and I think you will see our approach to treating fuels around communities reflect a greater reliance on mechanical means starting next fiscal year and in the immediate outyears.

Senator CANTWELL. So you are saying the 150,000 acres already designated, you think they will be done by mechanical?

Mr. HARTZELL. I think they still probably reflect a fairly high reliance on prescribed fire, and a combination of mechanical means. I think it is important that the subcommittee understand the dilemma we faced this fiscal year. We got the big national fire plan funding increase, and on the Interior side we had very few projects ready to go. So essentially the projects this fiscal year that we are funding we took off the shelf. I think you will see a different mix of types of treatments next fiscal year as we have had time to think about the appropriate approach and plan the best fuels treatment strategy.

Senator CANTWELL. What does this acreage represent? I mean, you think this represents a complete inventory of the wildlife urban interface, that we have to go back, we think this will triple—what is your assessment?

Mr. HARTZELL. No. The acreage that we will be treating in fiscal year 2002 is going to be substantially larger than we treated this year, and what that reflects is the collective wisdom of the State and local groups to document and determine where they had the greatest priorities and the greatest problems within their States.

This year's program essentially reflects a fuels treatment scheme that, while it had some outside stakeholder input, by and large reflected the program that was designed by the Federal agencies. Starting next year you are going to see a program that was designed from the bottom up, local solutions, State solutions, States and locals identifying where the greatest threat is, where the greatest problem is to communities, in collaboration with us.

That is why I say, you are going to see a program that in my opinion is probably a truer reflection of where the problems are and where the emphasis should be, and reflects a more balanced approach to treatment, rather than just dependence on prescribed fire.

Senator CANTWELL. That is why I am bringing this up, because obviously I think it is great news the level of coordination and consensus-building that is happening from the bottom up. Having the people at the other end, where the request is for dollars, I am curious as to what you think that that means as far as potential

amount of acreage and what kind of dollar increase are we looking at, given the 2000 level?

Mr. HARTZELL. Well, we know a couple of things from our work with the States. Number 1, we asked the States to identify communities at risk. As a result of that effort, there were over 22,200 communities across this country that were identified by the States, at risk from some fuels or wildfire threat.

Over 9,000 of those communities were in the vicinity of Federal lands administered by Department of Interior agencies and the Forest Service, and we know that only about 20 percent of those 9,000 communities have as of yet received any kind of fuels treatment to reduce the hazard or are receiving fuels treatment. So we know from that inventory that the problem is much greater and the demand is much greater than we have been able to meet.

Senator CANTWELL. So no prediction on what that level of money would be? Putting this into context, I mean, we have these communities, and we have been impacted both the communities, their economies, and the tragic loss of life, and what we are trying to explain to our colleagues, the consensus-building that is happened here, and yet the fiscal side that will have to go hand-in-hand with this. Maybe my colleagues here do not need to hear that, or understand, although Senator Craig has articulated one concept to help finance an aspect of that, but I think not leaving the public with the assumption that there has been a lot of consensus-building, a lot of goals set, but here again the resources were not there and so these goals were not met. We want a fire plan that will actually mean something to the West.

Mr. HARTZELL. Two comments. One, we had far more projects than we had funding for. Our level of funding in the wildland urban interface in fiscal year 2002 was essentially level. But, we had more projects than we could treat, and because of this it is really important that we work in a collaborative fashion, because we have to prioritize. We have to simply pick and choose.

Senator CANTWELL. Thank you, and Mr. Chairman, I will look forward to working with you on that prioritization, and I will yield my time back.

Senator WYDEN. Those are good points. Senator Smith and I made these forestry initiatives a big part of our bipartisan agenda for Oregon, and we welcome you here today.

Senator SMITH. Thank you, Mr. Chairman. I would ask that my statement be included in the record.

Senator WYDEN. Without objection, so ordered.

[The prepared statement of Senator Smith follows:]

PREPARED STATEMENT OF HON. GORDON SMITH, U.S. SENATOR FROM OREGON

Thank you, Mr. Chairman, for holding today's hearing on the National Fire Plan. I am thankful that this Committee is continuing its vigilant oversight on the issues of wildfire control and forest health. I also want to thank all those who are here today to share their perspectives.

Controlling wildfires is based on widespread public values that resound in our laws. We protect our forests because we value recreation, wildlife habitat, water supplies, air quality, and the natural resources upon which our country depends. The Multiple Use and Sustained Yield Act, the National Forest Management Act, the Federal Land Policy and Management Act, the Endangered Species Act (ESA), the National Environmental Policy Act (NEPA) and the Clean Water Act all reflect

these values in one form or another. Unfortunately, nature's impulses do not always coincide with society's values.

In 2000, more acres burned in this country than in any year for over a century. The 2001 fire season has also seen the loss of ten lives, including three employees of an Oregon-based company. Likewise, more funding was used to combat wildfires last year than in 1999, 1998 and 1997 combined.

As part of providing this additional funding, Congress directed the Interior and Agriculture Departments, in cooperation with States and local communities, to develop a plan to reduce the threat of catastrophic wildfires, to improve our response to severe wildland fires, reduce their impacts on rural communities, and assure sufficient firefighting capacity in the future. I believe that Congress remains committed to our National Fire Plan, and to long-term restoration of our forests.

On a personal note, I want to commend the Administration for its responsiveness to our forests' needs and to concerns regarding the implementation of the National Fire Plan. Yesterday, I met with Chairman Connaughton regarding a request I made that the CEQ oversee the coordination of inter-departmental issues related to the Fire Plan, such as NEPA compliance and the potential for energy generation from forest biomass. Chairman Connaughton assured me that restoring forest health is a priority for the Bush Administration, and I look forward to seeing many of the bureaucratic barriers to implementation of the Fire Plan eliminated.

I also recognize that the Administration and Congress are not the only actors in achieving forest health goals. More than ever, the national forests need industry to achieve ecological goals. Likewise, economically distressed communities need a firm commitment from the federal government to the dual goals of rural and ecological sustainability. While the timber industry holds the technology and manpower to thin and treat our forests, the government holds the gate-keys.

Even with open gates, however, the cost of fuels treatment will require a new form of cooperation between the federal government, local communities, and the industry. County governments, under the county payments bill enacted last year, must use a portion of their funds for forest restoration projects.

In addition, many forest products companies have already retooled their mills to process smaller diameter logs, purchased specialized equipment to selectively harvest smaller trees—from the ground and air—and surveyed the prospects of constructing biomass and co-generation facilities. In a time when mills continue to close in my state, and timber offered on public lands is virtually non-existent, these actions have been taken in the hope that, at the very least, the government values living and sustainable forests and healthy riparian areas more than charred wood, burnt homes and scorched earth.

Again Mr. Chairman, I appreciate the opportunity to review these issues of importance to our state and to the nation. I hope today will advance and strengthen a federal forest policy that provides for both healthy forests and healthy rural communities.

Senator SMITH. I will not read it, so as to not break up the flow of this hearing, but I think this hearing is so important, not just to our public assets but also to our private assets as well that border one another, and I think it is important to recognize what a win-win situation exists to help economically distressed rural communities, as well as to improve the environment. I cannot think of any good that comes to riparian areas from public lands or private lands consumed by forest fire, and so this is where we ought to come together and find all kinds of solutions that help people, and our wildlife as well.

Mr. Chairman, I wonder if I could ask a couple of questions, one of which relates to the construction of biomass a cogeneration facilities that wish to use burned and salvaged materials. Have you had any meetings with the Bonneville Power Administration on such a thing?

Mr. LAVERTY. I am not aware nationally that we have met with Bonneville Power. We did meet just 2 weeks ago Monday with the folks from Oak Ridge, with the interests that have the responsibility on the Department of Energy side for the renewal resource, and we really have some opportunities right now to move ahead with

the elements in the philosophy of the national fire plan that capture some of this material.

We are just in the process right now of using our forest inventory analysis information to bring together a West-wide assessment, actually a Nation-wide assessment to help us define what is, in fact, the standing inventory, what does it look like, so we can relate to the biomass industry.

Here is the situation that exists on Federal lands as well as private lands, that this is the structure, this is the composition, and then begin to work, okay, what is then feasible to begin to move ahead.

As part of the funding of the national fire plan, we did fund a number of projects that were related to biomass, bioenergy pilots. We got one in California, we have got one, I think, down in Arizona, New Mexico, and then one in South Dakota, so there are a number of things that are underway, but the important part of it is to bring that information so that people can make good, reasoned decisions about what is available and what can we, over time, sustain as it relates to biomass, bioenergy, more importantly getting that material off the ground.

For us, all the Federal agencies, the State agencies as well, none of us want to see that material just burned up, so if we can put that into a positive energy stream, that is going to solve a lot of our problems for us, so this is a very rich opportunity.

Senator SMITH. Absolutely. Have you done any surveys of—I am thinking of the energy shortage we have had, and the concern of wildfire in relation to transmission lines. Are we okay there?

Mr. LAVERTY. Yes, we are. That is really one of the screens that come up very quickly for an incident command team, which is, what is the relation to that power grid. One of the costs—in fact, I saw a summary of one of the fires earlier this summer, is that there was a lot of investment dealing with power grid protection, so those are high on the screen.

Senator SMITH. I was in eastern Oregon about a month ago, when these fires were all raging, not necessarily in the forest but in grassland, and I was told that private vehicles were kept off out of fear for some endangered plants, but those plants were all consumed by fire because the private vehicles were not allowed to help to put it out, and I wonder who makes that decision. Is it different from place to place, State to State, and is that the right kind of reaction?

I mean, if you have got a private landowner bordering public lands that are on fire, should we say no to their help in the name of an endangered plant, and then watch that plant be consumed by fire?

Mr. LAVERTY. I would have to look into that situation, but it does not make any sense that we would not accept help.

Mr. HARTZELL. Yes, Senator, I have not heard anything from, say, the BLM offices in eastern Oregon about that situation. I will certainly look into it.

Senator SMITH. Okay. I would appreciate it. I was given chapter and verse just outside of Ontario, Oregon, between Ontario and Burns, where this apparently occurred in some number.

Thanks, Mr. Chairman.

Senator WYDEN. I thank my colleague. Good questions. Just a couple of others, Mr. Lavery, a couple of policy issues that I am interested in that our Governor, Governor Kitzhaber has some interests with respect to these demonstration projects that he wanted me to follow up with you on.

You mentioned that you were interested in streamlining some of the information processes, and that is obviously going to be important. Are there ways that you can use the Internet differently down the road as we look at forestry in this century that are going to help you streamline those processes?

Mr. LAVERTY. Mr. Chairman, I would say the answer is probably yes, because I think the Internet provides us opportunities to receive information from folks that can help us out. We are not the only purveyors of information as it relates to resources, and once we start that information flow I really believe that there are opportunities that we can acquire information in a much more timely fashion than we ever have before. The Internet becomes a vehicle to do that.

Senator WYDEN. All right. Let me give you a project, because my other hat here in the U.S. Senate is, I chair the Technology Subcommittee on the Commerce Committee, and why don't we start with respect to the fire area, with respect to the fire plan generally, but I would like to ask you to ask your people to look at how information technology, IT, the Internet can be used to better fight forest fires to squeeze more efficiency out of those dollars.

I noted when you answered earlier that you had an interest in streamlining the information processes and increasing information-sharing efficiency, I think was how you characterized it, and could you get back to me on how particularly you might use the Internet more creatively in terms of fighting fire and be put on notice that I may ask you the same questions as it relates to the Forest Service across the board, because I think there are some opportunities out there that we ought to mine.

Mr. LAVERTY. I would be delighted to do that. Mr. Chairman, we are conducting one of the overviews next week in the Pacific Northwest. One of the team members in that overview is the Forest Service liaison from IBM, and the whole purpose of having Bill on the team is to help us figure out how can we, with the systems that we have available to us, improve our efficiency in terms of information.

Bill was out on a fire up on the Colville earlier this summer, and was looking at it from a fire-fighting standpoint, how can technology be even more efficient in helping us deal with fighting fires, and Bill has got some great ideas about Palms or hand-held items in fire crews' hands so they can actually see real-time where is the most intense part of the fire perimeter, so there are a lot of things going on. I would be delighted to share that with you, and we will have a chance to test that out.

Senator WYDEN. How long do you think it would take to get me a report done on particularly new technologies, and how they are used in terms of fighting fires?

Mr. LAVERTY. If you give me 2 weeks I will have you a first draft from our review in Oregon.

Senator WYDEN. That would be good. I was very excited when I had my tour. Like Senator Smith, we were all out and about this summer, and particularly looking at what happened in the 9 a.m. updates on fires that were online, and the fire center web page gave out a lot of valuable information, but I think we can do a lot more, and whether it is Palm Pilots or wireless devices, this is an area I am very interested in.

Senator Smith, by the way, is on the Commerce Committee, too, so we would have a chance to help you both here and on the commerce committee as well.

Let me ask you a question about the Blue Mountain demonstration project, which as you know has been important to Governor Kitzhaber and folks on the east side and in Oregon.

During the last meeting, the advisory panel established benchmarks and defined levels of success for the Blue Mountain demonstration project, and this was in preparation for the final report, and the most striking feature remains the inability, again, to do some of the forest health treatments, including commercial thinning, and reduction of hazardous fuels that are important, and this project just has not done it for the local sawmills and the long term interests of the community.

We are still losing family wage jobs, and I think what people want to know with respect to that project is, how do we get beyond the meetings and the committees and the additional planning, and the planning for more planning, and notices to send out notices, and really get into what has been an awful lot of gridlock in these Blue Mountains in the northeast part of the State just have these dense stands of dead-standing trees and insect infestation, and what is it going to take to get this done, and to get a long-term agreement, and to work with the Governor and the environmental folks and industry and communities to make this happen?

Mr. LAVERTY. One of the places we are going to visit next week is Baker City, and the intent is to talk about the Blue Mountain project and what is going on, and what do we need to do corporately to bring results on the ground. I will get back to you after that review, and we will give you a report on what we believe we can do on our side to make that come about.

Senator WYDEN. I would like that, because I can tell you the whole Oregon congressional delegation wants to get this one out of the pipes. It just seems like this has been a planner's full employment program. It just kind of goes on and on and on, and I do not see—Senator Smith touched on it. I do not see how it makes any sense from an environmental standpoint, and how it makes any sense from an economic standpoint.

Let me ask you about one other project, and I think this will be another area I would like you to get back to me on. The Warner Creek fire was a terrible event in our part of the world, and the area just sits there essentially unlogged, unrestored, I gather even unstudied, and with the money going for the national fire plan's preparedness and the like, we have been trying to get the Forest Service support so that we can begin to get this data to put in place a plan for the area.

The folks on the ground would, again, like to use this as a local model of collaboration. These are the people who are putting to-

gether the exciting proposals for the county payment money and the like, but they have just said point blank the Forest Service pre-year watch has not been interested in being collaborative, and I would like to know what you know about this and how we can turn this one around, too.

Mr. LAVERTY. I know just enough to be dangerous, so I will follow up and I will get back to you on that.

Senator WYDEN. Warner Creek and Blue Mountain are important projects for our part of the world, and they really to me illustrate the lengths to which people are interested in going in order to be collaborative. These are not people who are talking about salvage riders and all kinds of other no-cut options and the like.

These are people who are committed to coming up with policies that will give us sustainable forestry and healthy ecosystems, and I really want to see those two get off the ground, and I think you do not know me all that well, but you do not want to have me asking you about those projects again and again—

Mr. LAVERTY. You will not have to do that.

Senator WYDEN [continuing]. When you come up here to the U.S. Senate, and I want to get them done.

Senator Smith, do you have any other questions? All right. Gentlemen, we will excuse you. Thank you, and very helpful testimony. We look forward to working closely with you.

Our next panel, Jim Hubbard, State Forester of Colorado, speaking for the Western Governors Association, Nathaniel Lawrence of the Natural Resources Defense Council, Rick Delaco from Ruidoso, New Mexico, Tom Nelson, with Sierra Pacific Industries in Redding, California, and Trent Woods from Elk City, Idaho.

Gentlemen, we will make your prepared remarks a part of the hearing record. I know that there is almost a biological compulsion to read what is in front of you, and I would just ask in the interest of time, we will make your complete statement a part of the hearing record in its entirety, and if you could take the time, since we have got five of you, to just capsule the key kinds of points, and I promise that your prepared remarks will be there for posterity, and for all time in the hearing record.

Mr. Hubbard.

STATEMENT OF JAMES E. HUBBARD, STATE FORESTER OF COLORADO, ON BEHALF OF THE WESTERN GOVERNORS' ASSOCIATION

Mr. HUBBARD. Thank you, Mr. Chairman, Senator Smith. I am Jim Hubbard. I am the State Forester of Colorado, representing the Western Governors' Association today. I have been working closely with the Western Governors on this issue since the inception of the national fire plan.

The Governors consider this one of their top priorities, and have kept it as such for sometime now, even prior to the national fire plan. Some of their commitments, whether they are talking about wildland fire in terms of community protection or in terms of ecosystem restoration, are to be involved with the formulation of the national fire plan to make sure it is a collaborative approach. Then they moved on to make sure it had a long-term strategy to guide it, and they are continuing to implement, to produce an implemen-

tation plan that will establish the accountability and commit financial resources and support the commitment that Congress has made.

To that end, they sent a letter to the appropriator, to Senator Byrd, with all 18 Governors signing on. That is not something they normally do. They are serious about continuing long-term on the ground work on this issue.

Our problem has not gone away. In the year 2000 we burned over 8 million acres, and we are continuing above the 10-year average. We do not anticipate in the West that this will change until the natural system changes, and the implementation of the national fire plan as a collaborative effort could be that change agent.

Last month, the Governors signed with the Secretaries of Interior and Agriculture a 10-year comprehensive strategy to reduce wildfire risk and restore ecosystems. This was developed by a broad range of stakeholders, environmental interests, industry interests, tribal, local, State, Federal Government. The strategy establishes four goals. You have a copy of the entire document, but the goals are to improve prevention and suppression, to reduce hazardous fuels, to restore fire-adaptive ecosystems, and promote community assistance. The key is collaboration. The Governors agreed with the Secretaries that they wanted full State involvement, that this has to be all lands and it has to be for a long time.

Now we are talking about how we reduce risk and restore systems together. That is something new to us, and we want to do it, and we do not believe it will succeed without community involvement.

We are setting priorities together, and we beg your indulgence. In 2001 we used what was already cleared through the environmental process, NEPA, ready, off-the-shelf documents. That did not address the priorities that we were after, but that was ready to go, and we wanted to show some progress.

In 2002, we will do better, but in 2003 is when you will see the results of the collaborative process. It takes 18 to 24 months to get through the environmental clearance process, and that planning starts now, and that is proceeding together.

So a lot has happened in the first year. We have done a lot in coordinating preparedness, in implementing what is already available to us through the environmental clearance process, and we are collaborating a great deal on what is yet to come in fuels treatment particularly.

Along with the strategy, you do not see specific implementation actions. I will not go into the reasons for that, but the Western Governors committed with the Secretaries to produce that document, and implementation plan by May 1 of 2002. That will include performance measures. That will include a priority-setting process.

The Governors are committed to a full partnership, and working towards that, and believe that the stage is set for long-term solutions. We will reduce risk, and we will put systems back in balance. The agencies are committed to this, whether that be Federal land management agencies, or State agencies. The Governors are certainly committed to this, the administration is, and Congress has provided support. We believe we are on the path to success.

[The prepared statement of Mr. Hubbard follows:]

PREPARED STATEMENT OF JAMES E. HUBBARD, STATE FORESTER OF COLORADO, ON
BEHALF OF THE WESTERN GOVERNORS' ASSOCIATION

Mr. Chairman and Members of the Subcommittee, my name is Jim Hubbard, and I am the State Forester of Colorado. I am here today on behalf of the Western Governors' Association (WGA), which is an independent, non-partisan organization of Governors from 18 Western states and three U.S.-Flag Islands in the Pacific. Let me begin by stating that wildland fire and ecosystem restoration issues are of extreme importance to the Western Governors. Were it not for the short notice available to WGA regarding this hearing, a Western Governor would be before you today. It was my pleasure, however, to accept the invitation from WGA to appear on the Governors' behalf, especially since I have been actively advising them on wildland fire issues since last summer.

Congressional deliberation on fiscal year 2002 appropriations regarding wildland fire and ecosystem restoration is of initial, critical urgency to Western Governors. I would like to submit, for the record, a recent letter from 18 Western Governors to Senate and House Interior Appropriations conferees. Western Governors are seeking continued substantial funding for wildland fire management issues, along the lines of that received in fiscal year 2001. The attachment to that letter specifically details, among other items, the Governors' views on funding for restoration and rehabilitation work, community and private land assistance, volunteer fire assistance and the treatment of emergency appropriations. Western Governors also believe that sufficient funding needs to be devoted to the regulatory agencies, such as the Fish and Wildlife Service and the National Marine Fisheries Service, so their environmental compliance work does not become a barrier to allowing on-the-ground fire and restoration projects to proceed.

Western Governors recognize that recent tragic events require an urgent shift in our national priorities, but they ask that we not lose sight of important domestic needs. Over time, with continued substantial up-front investment, we can significantly reduce the damage caused by wildfires, improve the health of our lands and protect lives and property. It has taken more than 100 years to reach the current situation of extreme fuel loads on our federal, tribal, state and private lands, and it will take a multi-year investment of time, money and on-the-ground work to address it. If we are to reduce the threat and consequences of wildland fire to communities and their resource base, we need to continue the effort launched last year.

Stewardship over and sustainability of natural resources and communities is a long-held goal of Western Governors. As the nation witnessed during the 2000 fire season, severe wildfire poses a significant threat to both of these priorities. More than eight million acres were lost. We are again seeing the impact of severe wildfires this season. At least three million acres have burned so far. Almost a year ago, at the Governors' request, among others, the Congress called on the Departments of Agriculture and Interior, in partnership with the Governors, to develop a long-term strategy to address the wildland fire threat and need for ecosystem restoration. As stated by-Congress in the FY 2001 Interior and Related Agencies Appropriations Act (P.L. 106-291), the Secretaries are to:

- work with the Governors on a long-term strategy to deal with the wildland fire and hazardous fuels situation, as well as the needs for habitat restoration and rehabilitation in the nation; and,
- engage Governors in a collaborative structure to cooperatively develop a coordinated, National ten-year comprehensive strategy with the States as full partners in the planning, decision-making, and implementation of the plan. Key decisions should be made at local levels.

Last month, Western Governors and the Secretaries of the Interior and Agriculture endorsed and transmitted to the Congress "A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Comprehensive Strategy." I would like to submit that document for the record along with a joint letter of endorsement from Western Governors and the Secretaries. Additional letters of endorsement are also included from The Intertribal Timber Council, the National Association of Counties and the National Association of State Foresters.

The Strategy was developed in a collaborative manner by those endorses, as well as a range of stakeholder representatives. These individuals represent the spectrum of natural resources policy interests from environmental groups to industry. Their contribution to and support for the Strategy speak volumes to its value and to the process by which it was developed. The Strategy was designed to accomplish four goals across federal and adjacent state, tribal and private lands:

1. Improve Prevention and Suppression;

2. Reduce Hazardous Fuels;
3. Restore Fire Adapted Ecosystems; and,
4. Promote Community Assistance.

The Strategy sets forth a number of guiding principles to achieve these goals including collaboration, priority setting and accountability. The Strategy also establishes a collaborative structure to accomplish these goals, with states and local governments as full partners in its implementation.

Western Governors are pleased with progress made to date and the level of collaboration among the states and the Department of the Interior and the Forest Service. However, we cannot hope to accomplish our ultimate goals unless Congress provides a substantial annual level of funding and the necessary direction that the Departments use that funding in full partnership with state and local governments. Only through a true partnership can we tackle this threat, which knows no boundaries and is beyond the capability and resources of any single level of government.

Let me take just a moment to describe how Congressional resources have been made available to date and how the Governors believe this needs to evolve to meet the envisioned outcomes of the Strategy. In fiscal year 2001, most of the funds were appropriated as an emergency supplemental appropriation. This meant that all the projects to undertake fuels reduction and restoration work already had to "be on the shelf." In other words, they had to have already gone through environmental compliance and National Environmental Policy Act (NEPA) processes. So when you examine what was done this year with those funds, it may not be the most strategic work possible to address our long-term fire hazard problems, nor will it reflect the gains that we expect will come from working with multiple partners on joint projects both in the wildland-urban interface and across the landscape.

What has become clear over recent years is that the federal land management agencies alone cannot do all that needs to be done. They need communities, states, tribes, and landowners to be working with them as they design projects to reduce the risk of wildfire to both communities as well as the ecosystem. If the funds are put into the budget, rather than releasing them only under the declaration of an emergency, the collaboration envisioned by Congress and the Governors can take place. And it will be meaningful, because it will actually be tied to the planning and implementation of projects in such a way that the environmental compliance and NEPA work can be done in a timely fashion. These processes may take one to two years, so we will need to make this investment from our budgets for a few years before we start seeing strategic, fire risk-reduction projects that are planned to maximize the effectiveness of all of our resources and funding sources.

You may note that specific implementation actions are not included in the Strategy. Although the states intended to address implementation, we were unable to do so because of the need to first integrate the wildfire management programs of the Department of the Interior and the Forest Service. That will require great effort. The Departments have pledged to work with the Western Governors on an implementation plan to complement the Strategy and to complete it by May 1, 2002. The plan will address the needed integration among the Departments, as well as those of state, tribal and local programs. Performance measures, consistent priorities and timeliness for accomplishing the goals of the Strategy will also be established in ways that meet all applicable legal requirements for federal and state actions.

Western Governors intend for the implementation plan to be collaborative, to set priorities, and to provide accountability to all participants, as well as the Congress. WGA believes that accomplishment tracking and reporting processes should incorporate common performance goals and measures in order for the agencies to improve the link from activities and budget to performance and results. In addition, if this effort is to be a true partnership, investment decisions made by the federal government must be done in collaboration with states, tribes and local governments. Finally, just as was done to develop the Strategy itself, Western Governors will employ a collaborative process among a range of stakeholder groups to seek their input and support for the implementation plan.

Western Governors urge you to support the Strategy and the forthcoming implementation plan. We also hope to work with the Administration on additional fire-related items. One is the development of procedures within existing laws to expedite compliance with the NEPA and interagency consultation required under Endangered Species Act. The other is the development of federal agency contracting procedures that will focus on restoration, forest health and rangeland activities recommended by local land managers.

Western Governors believe that a full partnership between the states and the federal government, and substantial on-budget funding to implement the Strategy recently agreed to, are necessary to successfully address the massive scope of the threat and consequences of severe wildfire to communities and ecosystems. We ap-

preciate the recognition by the Congress of the need for state leadership and for the resources you have provided so far to address this problem. We will need your continued support if our nation is to ensure the health of its ecosystems and the sustainability of its invaluable natural resources and the communities in their midst.

This concludes my testimony on behalf of the WGA. Thank you for your consideration. I would be happy to answer any questions that you may have.

Senator WYDEN. Thank you very much.

Mr. Lawrence, welcome.

**STATEMENT OF NATHANIEL LAWRENCE, SENIOR ATTORNEY,
NATURAL RESOURCES DEFENSE COUNCIL, OLYMPIA, WA**

Mr. LAWRENCE. Mr. Chairman, Mr. Smith, thank you for an invitation to appear today. Given the shortness of time, I am just going to focus my remarks on one aspect of the national forest plan, and that is the use of thinning in an effort to reduce fire risk.

To summarize, we know a lot less about effective fire risk reduction than is often thought. What we do not know about fire risk reduction and thinning suggests that the forest should be regarded as three distinct zones, one of them very close to homes and communities, which would be our top priority, is a place where we know aggressive thinning can do a lot to reduce the risk to structures.

The second, the general, heavily managed and altered forest, is a place to experiment with thinning and find out what we do not currently know, which is where and how we can use it in a way that will make things better in the forest, rather than worse, and the third is the back country, the relatively intact roadless areas, old growth and riparian zones which are relatively unaltered. They are therefore much less at risk, or heightened risk from fire, they are further away from communities, and they have much more to lose in terms of natural values if we go in and try experimental thinning and it goes wrong.

I said just a moment ago that thinning was experimental, and what I mean about this, if there is one point I leave you with today, I want it to be this. There is virtually no peer-reviewed, empirically based research that shows a reduction in fire intensity subsequent to thinning. There are lots of anecdotal cases where there have been forests thinned and fire came through, and it burned down lower, and there are lots of anecdotal cases the other way, where fire came through a thin forest and it blue up.

There is some research—it is certainly not definitive, but there is a body of research which suggests, which tracks the increase of fire intensity after thinning. Now, this does not mean that we should not be thinning to try to reduce fire risks. What it means is, we do not know how to do it in a way that lets people predict that it will be effective, that the money used will be effective, and that the results will get the results that we very much need.

It is an experiment. It is a complicated and dangerous experiment, one we need to undertake. We need to think about where we are undertaking it so we get the right results and we do not put resources at risk in doing that.

[The prepared statement of Mr. Lawrence follows:]

PREPARED STATEMENT OF NATHANIEL LAWRENCE, SENIOR ATTORNEY, NATURAL
RESOURCES DEFENSE COUNCIL, OLYMPIA, WA

Mr. Chairman and Members of the Subcommittee: Thank you for your invitation to appear today. The National Fire Plan and its constituent documents, the so-called Cohesive Strategy and 10-Year Comprehensive Strategy, have a vital set of tasks to accomplish. Done right, they would safeguard rural and urban-interface communities, and help return vigor and resilience to forest, rangeland, and aquatic ecosystems. Done wrong, they will at best perpetuate current threats to those communities and degradation of those ecosystems, wasting taxpayer dollars at a time we have none to spare and failing the American public. As it stands now, the National Fire Plan does not ensure that underlying problems will be effectively dealt with or that funding will be well used. Congress cannot afford to ignore these problems, but it should not allow implementation of the National Fire Plan until assured that the needed priorities and standards are in place and will be followed.

Of the issues raised by the National Fire Plan, I want to focus on the use of thinning to reduce future fire risks in and around federal forests. To summarize, we know far less about fire risk reduction than many believe. What we do know points to three distinct forest zones, each calling for a different treatment approach and priority. The first is the immediate vicinity of homes and communities, where damage from fire can be greatly reduced and where our top priorities lie. The second is the heavily managed and altered forest. This is a zone where it makes sense to experiment carefully with thinning, monitoring and evaluating its actual impact on fire intensity and increasing our investment only if and when we have learned the impact of what we are doing and only after dealing with the first priority, the community zone. The third is the less altered forest, largely unlogged, unroaded backcountry, along with old growth and intact riparian areas. These forests are much less in need of remediation, more prone to harm from active management, and more remote from communities. Thinning here, if it is ever done, should be rare, light, and years away.

Unfortunately, the National Fire Plan is not designed to assure that these zones are dealt with in order of priority. Instead, it is a virtual black box, devoid of meaningful standards, constraints, or commitments about the kind and location of fire risk reduction in which the implementing agencies will engage. This approach is in the same vein as other trends at the U.S. Forest Service, in particular, which are away from standards and accountability and towards increased discretion to do as the agency chooses, notwithstanding public opinion, scientific evidence, and congressional direction. The recently adopted 10-Year Comprehensive Strategy¹ is oriented toward a number of the needed priorities and standards, but does not supply them or assure they will be developed.

WHAT WE DO NOT KNOW: HOW TO ENSURE THINNING REDUCES FOREST FIRE INTENSITY

Above, I spoke of thinning to reduce fire risk as an “experiment.” This is an essential point. The National Fire Plan treats thinning as an established cure for intense fire, something so routine that no criteria or sidebars for its use are needed. In point of fact, however, virtually no peer-reviewed, empirical studies show that thinning actually leads to a systematic reduction of forest fire intensity.² The Cohesive Strategy acknowledges this, somewhat obliquely, when it notes that “[a]t landscape scales, the effectiveness of treatments in improving watershed conditions has not been well documented.”³

¹A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Comprehensive Strategy. August 2001. Publisher, place, and authorship unspecified.

²Models and assessments that predict what future fire intensity might be abound, but they do not report the actual, near or long-range results of thinning as conducted under real world conditions. Similarly common are studies that look at occurrence and acreage of fire without considering intensity. However, thinning does not aim to reduce burning overall, indeed lack of low-intensity burning is seen as part of the problem. Rather, the postulated function of thinning is to make fires less intense. Thus, studies that ignore intensity do not provide useful information about the effectiveness of thinning. One masters degree thesis appears to provide a lone exception to this dearth of relevant research. Pollet, J., and Omi, P.N. 1999. Effect of thinning and prescribed burning on wildfire severity in ponderosa pine forests. Paper presented at the JFSC Fire Conference, “Crossing the Millennium: Integrating Spatial Technologies and Ecological Principles for a New Age in Fire Management.” Boise, Idaho.

³U.S. Forest Service. 2000b. Protecting People and Sustaining Resources in Fire-Adapted Ecosystems: A Cohesive Strategy. Oct. 13, 2000.

Actually, a series of studies though not definitive shows post-thinning increases in fire intensity or spread.⁴ Anecdotal cases exist of both increased and decreased fire intensity after thinning. But in general we don't have the necessary scientific basis for predicting confidently that a given thinning project, as it ends up being implemented on the ground, will reduce fire intensity.

How can it be that thinning could increase fire risks? First, thinning lets in sunlight and wind, both of which dry out the forest interior and increase flammability. Second, the most flammable material brush, limbs, twigs, needles, and saplings is difficult to remove and often left behind. Third, opening up forests promotes brushy, flammable undergrowth. Fourth, logging equipment compacts soil so that water runs off instead of filtering in to keep soils moist and trees healthy. Fifth, thinning introduces diseases and pests, wounds the trees left behind, and generally disrupts natural processes, including some that regulate forest health, all the more so if new roads are used.⁵

This does not mean that thinning will never help reduce fire risks. Rather, it means that we don't know whether and under what conditions thinning will make things better, rather than worse. It is therefore only an experiment, a complicated, tricky, and dangerous experiment.

There is one kind of thinning we do know is productive. If drastic thinning is used within 150 feet of structures that have fire resistant roofs and siding, and saplings are kept cleared out, the buildings don't get hot enough in a fire to combust.⁶ When trees are very widely spaced, fires physically cannot jump from treetop to treetop,⁷ and they don't develop the heat to ignite properly constructed or retrofitted homes. It is important to note that you do not really have a forest left after this kind of thinning, but you do have safe communities.

⁴See, e.g. Fahnestock, G.R. 1968. Fire hazard from precommercial thinning of ponderosa pine. U.S. Forest Service Research Paper PNW-57. Portland, Oregon; Weatherspoon, C.P. and C.N. Skinner. 1995. An assessment of factors associated with damage to tree crowns from the 1987 wildfire in northern California. *Forest Science*. 41:430-451; Huff, M.H., R.D. Ottmar, E. Alvarado, R.E. Vihnanek, J.F. Lehmkuhl, P.F. Hessburg, and R.L. Everett. 1995. Historical and current landscapes in eastern Oregon and Washington. Part II: linking vegetation characteristics to potential fire behavior and related smoke production. U.S. Forest Service Pacific Northwest Forest and Range Experiment Station, GTR-355. Portland, Oregon; U.S. Forest Service. 1995. Initial review of silvicultural treatments and fire effects on Tye fire. Appendix A, Environmental Assessment for the Bear-Potato Analysis Area of the Tye Fire, Chelan and Entiat Ranger Districts, Wenatchee National Forest, Wenatchee, WA. 5 pages.

⁵Some of these phenomena are discussed in the fire effects section of the Final Environmental Impact Statement for the Roadless Areas Conservation Rule (FEIS). The Forest Service's fire specialist review of the scientific literature for the FEIS discusses a number of the underlying studies. See FEIS, Fuel Management and Fire Suppression Specialist's Report (available online at <http://www.roadless.fs.fed.us/documents/feis/specprep/xfire-spec-rpt.pdf>) at 22 ("The Congressional Research Service . . . noted: 'timber harvesting does remove fuel, but it is unclear whether this fuel removal is significant;'" "Covington (1996) . . . notes that, 'scientific data to support such management actions [either a hand's off approach or the use of timber harvesting] are inadequate'" (brackets in the source)); id. at 22-23 ("Kolb and others (1994) . . . conclude that . . . management activities to improve forest health [such as fuel management] are difficult to apply in the field" (brackets in the source)); id. at 21 ("Fahnestock's (1968) study of precommercial thinning found that timber stands thinned to a 12 feet by 12 feet spacing commonly produced fuels that 'rate high in rate of spread and resistance to control for at least 5 years after cutting, so that it would burn with relatively high intensity;'" "When precommercial thinning was used in lodgepole pine stands, Alexander and Yancik (1977) reported that a fire's rate of spread increased 3.5 times and that the fire's intensity increased 3 times"); id. at 23 ("Countryman (1955) found that 'opening up' a forest through logging changed the 'fire climate so that fires start more easily, spread faster, and burn hotter'"). Others are discussed, along with adverse impacts to wildlife, in two annotated bibliographies of scientific research available from the Natural Resources Defense Council. Ercelawn, A. 1999. *End of the Road—The Adverse Ecological Impacts of Roads and Logging: A Compilation of Independently Reviewed Research*. 130 pp. Natural Resources Defense Council. New York. Ercelawn, A. 2000. *Wildlife Species and Their Habitat: The Adverse Impacts of Logging—A Supplement to End of the Road*. 41 pp. Natural Resources Defense Council. New York.

⁶Cohen, Jack. 1999. Reducing the Wildland Fire Threat to Homes: Where and How Much? In proceedings of the Symposium on Fire Economics, Planning, and Policy: bottom lines; 1999 April 5-9. San Diego, CA; Gonzales-Caban, Armando; Omi, Philip N., technical coordinators. U.S. Forest Service Pacific Southwest Research Station Gen. Tech. Rep. PSW-GTR-173. Albany, CA.

⁷Agee, J.K. 1996. The influence of forest structure on fire behavior. Presented at the 17th Annual Forest Vegetation Management Conference, Redding CA, January 16-18, 1996.

WHAT WE DO KNOW: INCREASED FIRE RISK AFFECTS ONLY SOME FORESTS AND COMES FROM MANAGEMENT PRACTICES THAT CONTINUE TODAY

What else do we know about fire risk? We know that increased fire risk is traceable to human intervention. Where forests are abnormally dense and thus more flammable, several kinds of forest management share the blame. The usually mentioned culprit is fire suppression. But also implicated are logging (especially removal of medium to large, fire resistant trees) and grazing⁸ (because cows and sheep crop forest grasses that otherwise would shade out tree seedlings and carry low intensity, brush-clearing fires).⁹

We know that many forest types are not at greatly heightened risk, because in their natural, healthy state they burn only infrequently, so that intense fires are normal and unavoidable. We know that it is problematic to extrapolate just how dense or sparse forests actually were in pre-settlement times.¹⁰ Even the dry pine forests said to be at greatest risk were sometimes much denser before management than people tend to think. The Forest Service's long-time poster child for supposedly pre-management open stand conditions in the dry West is this 1909 photograph from the Bitterroot National Forest. See Illustration 1¹¹ (see also Attachment A¹¹ to this testimony, showing the photograph presented as an illustration of desirable, baseline conditions in a widely distributed 1998 Forest Service poster and in the first, i.e. May 31, 2000, edition of the agency's Coherent Strategy document).¹² The photo actually is of a just-logged stand.¹³ A pre-logging photo from the same area and year shows much closer spaced trees.¹⁴ See Illustration 2.

We know that where increased tree density does make forests abnormally flammable, it is small trees that are responsible. These are the trees that started growing after fire suppression caused a normal fire event not to occur, or overstory logging and/or grazing opened up the forest floor so seedlings flourished. Large and medium-sized trees typically pre-date these events, so removing them would not return the stand to more normal conditions.

We know that our forests are not currently burning as much as they once did. True enough, in recent years the acreage burned annually by wildfire in the West has trended upwards. However, it is on average still much lower than it was in pre-settlement times.¹⁵ Not widely publicized is the fact that much of the acreage reported as burning these days is not forest at all but rangeland and sagebrush, and that where forests do burn, they do so with variable intensities, as they did in the past. We do not really know much about how current wildfire intensity compares with the pre-settlement conditions that thinning is supposed to mimic, in part because current reporting emphasizes total acreage but does not systematically assess fire intensity.

And finally, we know that the management problems that caused small, flammable understories to develop where they did not earlier exist continue to this day,

⁸See The Comprehensive Strategy, supra note 3.

⁹Belsky, A.J. and D. Blumenthal. 1997. Effects of Livestock Grazing on stand Dynamics and Soils in Upland Forests of the Interior West. *Conservation Biology* 11:315-327.

¹⁰Stephenson, N.L. 1999. Reference conditions for Giant Sequoia forest restoration: structure, process, and precision. *Ecological Applications*. 9: 1253-1265; Landres, P.B., Morgan, P., and Swanson, F.J. 1999. Overview of the use of natural variability concepts in managing ecological systems. *Ecological Applications* 9: 1179-1188.

¹¹The illustration and attachments have been retained in subcommittee files.

¹²After the erroneous description of this photograph, with its (in retrospect) obvious slash piles among the thinned trees was pointed out to then-Chief Dombeck, along with an actual pre-logging photograph of much denser conditions (see Illustration 2), the picture and description were dropped from the final edition of the Cohesive Strategy, released on October 13, 2000. The erroneous use of the photograph supposedly to illustrate baseline conditions was perpetuated when the General Accounting Office included it in *Western National Forests: A Cohesive Strategy is Needed to Address Catastrophic Wildfire Threats*. U.S. GAO. 1999. Report no. GAO/RCED-99-65 (Attachment B to this testimony). The mischaracterization was detailed in *Ponderosa Poster Child: U.S. Forest Service Misrepresenting the Historic Condition of Western Forests and the Effects of Fire Suppression and Logging*, by Keith J. Hammer, a report commissioned by Friends of the Wild Swan and Swan View Coalition.

¹³Gruell, G.E. 1983. Fire and Vegetative Trends in the Northern Rockies: Interpretations from 1871-1982 Photographs. U.S. Forest Service, Intermountain Forest and Range Experiment Station GTR INT-158. Ogden, UT.

¹⁴Arno, S.F., J.H. Scott, and M.G. Hartwell. 1995. Age-class Structure of Old Growth Ponderosa Pine/Douglas-fir stand and its relationship to fire history. U.S. Forest Service, Intermountain Research Station GTR INT-RP-481. Ogden, UT.

¹⁵The Cohesive Strategy, supra note 2, notes that in "the upper Columbia River Basin alone—a small portion of the interior West—scientific assessments indicate that prior to European settlement, more than six million acres per year burned. Today, fewer than one-half million acres burn per year in this same area."

notwithstanding awareness of their adverse consequences. The Forest Service has known for more than seventy years that fire suppression caused subsequent fires to burn more and more intensely.¹⁶ Nonetheless, the National Fire Plan focuses just as uncritically as ever on massive, broadscale fire suppression, almost in the same breath with promising to address the ill effects of “decades of fire exclusion.”¹⁷ And much of the thinning done assertedly to reduce fire risk includes medium and large trees. Nothing in the National Fire Plan prevents this. The 10 Year Comprehensive Strategy evinces an understanding that small diameter timber is the necessary object of restorative thinning efforts. However, it is increasingly the trend at the Forest Service to try to blur the distinction between commercial logging, which is driven by economic considerations to include larger, more valuable trees, and so-called restoration thinning, where precisely the opposite is needed.¹⁸

WHAT OUR FIRE RISK REDUCTION PRIORITIES SHOULD BE, BASED ON WHAT WE DO AND DO NOT KNOW

When you reflect on what we do and do not know, the prudent approach to forest fire risk reduction stares you in the face. First, very close to buildings and communities, we have an urgent need and a clear course of action. Second, further away, in the previously managed, general forest, we have far less idea what to do, but ample room and time for experimentation because fire is still well below pre-settlement levels. Third and finally, in the unlogged, undeveloped backcountry, we have the least damaged conditions, the least urgency, the least idea what to do, and the most to lose from active management.

Zone one is overwhelmingly the top priority, the zone where we must focus attention, resources, and work. It is where people and homes are at risk. And it is where we know what will work. There we need highly aggressive thinning, combined with up-grading of exterior building materials and regular clearing of saplings. I want to stress that this kind of treatment does not leave much of a forest behind, just widely scattered trees at most. But this is a zone where consideration of human safety, for residents and firefighters alike, is paramount. And as noted above, research shows that it is very narrow, extending only about 150 feet from structures. Because of the widespread penetration of human communities into forested landscapes, this is still a lot of acreage that will take years to treat effectively, but it is not the general forest. By any defensible calculation, this is where the National Forest Plan should ensure the large majority of our near term resources are focused.

Our longer range priority has to be learning the conditions, if any, under which less drastic thinning—thinning that retains forest character—will reliably reduce subsequent fire intensity better than do other techniques. And the place for this is zone two, the already roaded and logged landscape. This is where management has had far and away the greatest impact, and the forest is most altered. Thus it is where some sort of remediation is likely needed and natural values are least jeopardized, because they are least present. And the way to do it, so we maximize the chances of learning without making things worse, is to take out only small trees, and only in those specific slopes and conditions where science indicates frequent fire used to predominate and now does not.¹⁹ The National Park Service is doing some of this already, undertaking small scale, targeted thinning of small trees and brush

¹⁶ Benedict, M.A. [Supervisor of the Sierra National Forest]. 1930. Twenty-one years of Fire Protection in the National Forests of California. *Journal of Forestry* 28: 707-710.

¹⁷ Compare <http://www.na.fs.fed.us/nfp/ff/ff—overview—text.htm> with <http://www.na.fs.fed.us/nfp/hazfuel/reports/brief—nfp—keypoint—hazfuel—032301.htm>. Some fire suppression is, of course, essential. Missing from the National Fire Plan, however, is any awareness that ultimately all forests in the lower 48 states burn and that for those that naturally burn frequently, putting out small fires aggressively, rather than allowing some burning, stores up bigger problems for later on. The 10-Year Comprehensive Strategy, supra note 1, does show some awareness that restoration of fire is an integral part of the challenge faced in our Nation's forests.

¹⁸ See, e.g. Testimony of Chief Bosworth, May 8, 2001, on the U.S. Forest Service FY 2002 Budget, before the Subcommittee on Forests and Public Land Management, pointing to “past inability of the Agency to view forest product production as an integral aspect of protecting and improving forest health,” and asserting that “timber harvesting can restore forest ecosystem health, reduce invasive species, and reduce the risks of catastrophic fires.”

¹⁹ Alarminglly, the 10-Year Comprehensive Strategy, supra note 1, does not distinguish between, on the one hand, forest locales and types that naturally had and could maintain low intensity burns and, on the other, forests that normally burn less frequently, where efforts to reduce fire intensity would disrupt and damage forest health. The Strategy's first listed action for hazardous fuel reduction, is simply “[r]educe the total number of acres at risk to severe wildland fire,” a goal that if implemented indiscriminately across forest types and locations would entail enormous waste and harm.

with strict size limits.²⁰ This was the original intent for the National Fire Plan.²¹ However, as noted above, the plan now contains no standards to ensure these objectives are met while simultaneously the Forest Service is moving back towards the use of commercial logging on a restoration rationale.

Finally, there is zone three, unroaded areas and intact old growth and riparian stands. Here we have the most to lose, ecologically, from experimental management, because these are the places with the most residual natural values. Because they are among the least altered segments of the landscape they are least in need of intervention. And because they are typically not adjacent to communities, they are not a priority from the standpoint of human safety. And the more sensitive these lands are, for example municipal watersheds and habitat for threatened and endangered species, the more important it is that we go slow and tread softly. If, because of truly exceptional circumstances, intervention is mandatory, we should look first to ending domestic grazing, removing very small woody material by hand, and reintroducing fire under controlled conditions. As far as the National Fire Plan currently stands, however, limited federal agency funds and authorities may focus on commercial logging of these areas ostensibly for restorative purposes.

CONCLUSION

Congress has provided billions of dollars in order to accomplish the goals of the National Fire Plan. This spending could result in great success—in ecological, economic, and human safety terms—or resounding failure and waste. In order to accomplish the Plan's goals, federal agencies must use federal dollars and authorizations where there is a solid understanding of the potential results and avoid activities that have uncertain outcomes. And federal agencies must be held accountable for following Congressional direction. Based on the research that is available, the needed course is simple—resources must be prioritized so that most dollars and efforts are focused on the urban-wildland interface, only some are focused on thinning small trees in the disrupted and managed forest, and, for now at least, virtually none in the backcountry. The National Fire Plan as it stands makes no effort to examine or establish these kinds of priorities, let alone ensure they will be accomplished. The 10-Year Comprehensive Strategy advances the dialogue about these issues in some measure, but does not include or adequately lay the groundwork for the needed standards, commitments, and accountability.

Thank you for the opportunity to testify today. I would be happy to answer any questions you might have.

Senator SMITH. Mr. Chairman, do you mind if I ask him a question on this? This is a very important point, Mr. Lawrence, and I wonder if the three categories of stands that you are talking about, for want of a better word—would you describe it as wild, roadless, never harvested? I do not know what percentage that is of the total, but I wonder if it is not fairly easy to see what are the conditions that has kept it safe, and if we might not try and replicate what we find, how nature has done it in these areas that have been grossly overplanted and are grossly overgrown, and is that not a reasonable way to get an answer fairly quickly so that it is not such a grand experiment?

Mr. LAWRENCE. It is reasonable and important to try thinning in places that we know have heightened fire risk because of dense understories, but we do not know how to do it in a way that will work, and there are several reasons for that. When you take out small trees, when you open up a forest understory, you let in sun-

²⁰ See, e.g., National Park Service. 2001. Environmental Assessment, Hazard Fuel Reduction and Site Restoration, Sequoia & Kings Canyon National Parks, East Fork Kaweah Developed Areas, Oriole Lake and Silver City. Environmental Compliance Document #2001-19. Three Rivers, CA. This project uses hard and fast criteria that preserve all trees over 40 feet high and all down logs over 8 inches in diameter.

²¹ Babbitt, B. and D. Glickman. 2000. A Report to the President in Response to the Wildfires of 2000 (speaking of "an aggressive program to thin forest stands to reduce small diameter trees, underbrush and accumulated fuels"). A Cohesive Strategy, *supra* note 2, page 17 (mechanical treatment will target "already roaded and managed portions of the landscape" where we "need to reduce the disproportionately large number of small, non-merchantable trees, brush, and shrubs that dominate short interval fire-adapted ecosystems").

light and wind which dry out the interior and make it more flammable.

Most of the time when you thin you leave behind the small branches, the twigs, the brush and the needles, which are the most flammable part of the forest fuels complement, very difficult to take out, and you leave those behind, so you are leaving the most flammable stuff behind.

If you use heavy logging equipment, you can pack the soil, which means the water runs off instead of infiltrating, keeping conditions moist and helping to nourish trees. Also, the equipment nicks trees and brings in pests and diseases and so forth that affect overall forest health. There is a whole variety of things that cut the other way when you try to mimic natural distribution of trees with chain saws, and again, I am not saying that we should not do this. What I am saying is, this is a much more complicated thing than is generally imagined, and what we need to avoid, what the national fire plan needs to avoid is simply assuming that if you take out trees you will make things better, and that you can do that everywhere and you will not have to worry about fire at the same time that we are running around putting out all the little fires.

And again, the job in my mind, and I think that the facts speak to this pretty clearly, is to figure out where we are going to do that experimentation, and what kind of experimentation it is. What we do know about fire risk reduction and the changes in Western forests in particular, I think, points to the kind of zoning of the forest that I am talking about, the areas right around houses, the altered landscape that has been heavily managed, and the relatively unmanaged landscape.

We know, for example, that if you thin very, very intensively, so that you really do not have a functional forest left, right around the immediate vicinity of homes, and you get those homes fireproof roofs and fire-resistant siding, then they do not catch fire in a fire. The research is pretty clear on this. This is a very small zone around houses. It is 150 feet or so around houses. If that is where you do really intensive thinning, you really protect homes.

We also know that the problem in forests is from small trees. They are the trees that have come in after logging began, after fire suppression began, also grazing, which is implicated in increased fire risk, so we know if we are going to do this it is the small trees we need to focus on. We know the medium-size and big trees are fire-resistant, part of the natural ecosystem.

We know there are a lot of forests that were naturally dense, and that they will burn intensely regardless of what we do. It is important not to waste our resources trying to reduce fire intensity in a forest where that is just not going to work, except right around houses, of course, because if you own a house, you do not care whether that forest burns intensely and not naturally. You care about whether the house is left when a forest fire does come through, so that is where you thin intensively.

We also know that the management activities that cause problems with fire risk increases continue to this day. We know that we are still doing fire suppression as though it was not causing a problem. We have to do fire suppression, of course, but we need to

think about the way it is causing problems as well as solving problems.

We know that logging, taking out big trees, continues in places that are at risk from increased fire. The Forest Service increasingly in recent months has been trying to blur the distinction between restoration thinning and commercial logging, and that way leads to real problems because the incentives for commercial logging are the exact opposite for those of restoration thinning. One of them needs big trees to be profitable. The other needs to leave big trees and medium-sized trees in order to be effective, so we have gotten not to make the mistake of confusing those two.

We need to spend some money on thinning, because we cannot expect it to pay for itself, but given the billions we spend every year in fire and fire suppression, it is money well-spent.

My time is long since up.

Senator WYDEN. Just on this thinning issue, which as you know is not exactly noncontroversial in our part of the world, is there in your view, Mr. Lawrence, a place where the three types of forest exist side-by-side so that in effect there would be sort of a model forest where you could zero in on this analysis that you are calling for?

Mr. LAWRENCE. I think it depends a little bit on what you mean by side-by-side.

Senator WYDEN. In close proximity.

Mr. LAWRENCE. I have driven around a lot of the eastern part of your State of Oregon looking at national forestlands, and I can tell you there is no dearth of heavily altered forest that has been high-graded starting back in railroad logging days, and probably entered three times to have the big trees taken out, that is full of little, brushy, dog-hair thickets. You do not have to go far from communities to find those places because that is where the logging started, is close to communities. That is where the communities grew up, close to the logging.

It would not be hard to find a place that is relatively close to, let us say, a roadless area, or as large as they still are in eastern Oregon, which tends not to be too large, and put together a demonstration project looking at the three different areas and trying to treat them in three distinct ways, using thinning differently in the first two zones and not at all in the third, but looking to the third as a kind of a control.

Senator WYDEN. I will have some more questions for you in a minute, but suffice it to say, there are places in Oregon already that we think might serve as a model forest, not just as it relates to these three areas for consideration of thinning, but essentially areas where people are practicing multiple use in a way that is sensitive to all of the shared values that people have, and it is an area of interest of mine, and we will be talking to you.

Mr. LAWRENCE. Oregon has lots of opportunities for this. I just want to emphasize that as it is currently constituted, a national forest plan does not look to these kinds of priorities, and it does not contemplate the kinds of standards and criteria that create real accountability for treating those areas the way the science indicates they ought to be treated.

Senator SMITH. Mr. Chairman, pardon me. One more, Mr. Lawrence. I know in this back country zone, the wild area, I think in your testimony you advocate reintroducing fire to do some of that. Would that not be as experimental, as untested as just getting some of the timber out, maybe even a little that has commercial value?

Mr. LAWRENCE. The reason to look to fire is that it is going to come regardless, in the lower 48. This is not true, maybe, on the Tongass, but in the lower 48 we know one thing, sooner or later the forests will burn. We have known that for a long time, and the Forest Service has known for 70 years that fire suppression caused subsequent fires to be more intense, so it is going to come anyway, and it is a relatively low investment, low intrusive way of looking at restoring, but I think that this whole back country zone in general is a place that we need to wait until later to do any kind of significant, substantial restoration.

Senator WYDEN. Our next witness, Rick DeIaco, welcome. Please proceed.

**STATEMENT OF RICK DEIACO, URBAN FORESTER,
RUIDOSO, NM**

Mr. DEIACO. Thank you, Mr. Chairman. On behalf of the village of Ruidoso, and the collaborative working group, I am honored to be here. We appreciate this opportunity. I am going to give you kind of a local point of view. I represent a local community. I am a forester there, and I have got three points here.

We have had a really good, collaborative effort working with the State, with the forests, with State forestry, with the Forest Service. We have a group, and the impetus for all this came from the national forest fire plan to get things done, so what I want to offer today is a template, if you will, for communities to work through this process.

We have had a lot of testimony here as far as the big picture, what needs to be done on the public lands, et cetera. When you get next to what we would refer to as the interface, which we all know what the interface is, but I might add, different—you know, we think of the interface as where wildland fuels burn up against urban fuels. I mean, that is kind of a traditional definition. I might offer another one, just where public land comes together with private land. The reason is, is because that is the way the funding works.

Now, what we have done in southern New Mexico, around the Ruidoso area, we have kind of taken the geographic area, we have come up and put together basically five action plans. The first one is, make a geographic area, define that urban interface, so we drew a circle around a map and said, okay, these are the areas. Now let us look at all the land-holding agencies, which include the Forest Service, State, BLM, Mescalara tribe we have there, the Village of Ruidoso, some other municipalities that you have, and what is your piece of the puzzle, how do we get this thing done.

So after creating a geographic area, then we decided four other action items. How do we work together, because when you get the Forest Service and the State and the local people all together, sometimes we need to be able to communicate better, so we estab-

lished something—we use the unified command structure as far as trying to work together.

Then we looked at what projects we have on the shelf that are ready to go, they are either NEPA ready, or which projects do we have that we want to get funded, or are seeking funding for.

The third action item, or actually the fourth action item is, how do we speak to the public in one voice, so when Mrs. Jones goes over to the Forest Service and asks a question, or Mrs. Jones goes to the village of Ruidoso and asks a question, she gets kind of the same answer, so we formed a committee to do that.

The fifth thing was, how do we get our requirements, cutting requirements together so that we are consistent, and basically we broke that into either defensible or wildland, and wildland, depending on what your civil cultural treatment objectives are, basically you want to thin in the neighborhood of a 60 to 90 basal area, and around the defensible space around homes to go to about 40 basal area, which is much, much thinner.

That is the first point. The second point I would like to make here today is the need for the committee to look at different means of private funding. When we look at that urban interface, the way we look at it from our perspective is that—and there has been talk about what types of thinning, and I agree with my colleague as far as the zone, and the zone around the interface is most important. It is a perfect spot to try to do some experiments in there, because obviously when the fire comes across—and a good example was the Los Alamos fire last year in northern New Mexico, where the wild-fire swept across the wildland and after doing forensic studies on some of the fires, the burnt structures, it was shown that it was not necessarily the crown fire that burned all these fires, it was lack of defensible space and the spotting.

So what we are trying to suggest is that we create that zone where the public land side of the interface does the kind of thinning that they need to do, but it is incumbent upon the municipalities to somehow make it so that the general public has a way to go. In other words, has a method—people in New Mexico and probably throughout the West do not like to be told that there is all of a sudden going to be an ordinance that says you have to thin trees. They like to see it, and so the gist of this is that we have an opportunity here on the public side to show by example, and then we can go to Mrs. Jones and say, look, you need to do this in your backyard, because look what we have done out here.

So some of the demonstration projects, especially through, for instance, the collaborative forest restoration program, and some of the title IV money that we had to spend, utilized through the Wyden authority around Ruidoso, is being used as demonstration projects, so we make a big media blitz. We bring out the hot dogs and the popcorn and the media and say, hey, this is what you ought to do with your backyard, and it works. We have probably got 30 percent of the folks in our town that are voluntarily now cleaning up their area, cleaning up around their backyard.

Senator WYDEN. They are all eating hot dogs and saying, who is Ron Wyden?

[Laughter.]

Senator WYDEN. Go ahead. Excuse me. Go ahead. Please finish.

Mr. LAWRENCE. We gave them a hot dog and a pair of clippers. That is how it works.

So that is an important issue for us, and that is how we are trying to get our communities to work, because the whole idea in our mind, again from a local level, this national fire plan is about saving property and saving lives, and where do those lives and most of the property occur? It is on the inside of the interface.

So I appreciate this, and I will end it there.

[The prepared statement of Mr. DeIaco follows:]

PREPARED STATEMENT OF RICK DEIACO, URBAN FORESTER, RUIDOSO, NM

Mr. Chairman, on behalf of the Village of Ruidoso and the collaborative working group in the area, I am truly honored to be here. We appreciate the opportunity to address this committee and thank you for your leadership and assistance with regard to the National Fire Plan. If I may, I will talk about our working group and its collaborative accomplishments; describe some specific needs; and offer some planning input for the future.

Many people around the country and around the world think of New Mexico as a land of enchantment and a treasure chest of natural resources and cultural diversity. Ruidoso is a mountain community with 8,500 permanent residents located in south central New Mexico at 7,000 feet of elevation. From Memorial Day to Labor Day, the population swells to more than 25,000, staying in their second homes or local lodging. I am proud to live in a place where families come to relax and recreate and happily add to the economic development of our community. Recreation and tourism are economic staples in this and many of the mountain communities in New Mexico and throughout the West.

We are however, rapidly coming to grips with the challenges that threaten the forests of this grand treasure chest. With regard to the wildland urban interface, the problem is simple. There are too many trees and an increasing amount of people living in close proximity to those trees. Is this a problem for the forest? One might consider that Mother Nature is already correcting the problem and reducing the number of trees through increased incidents of insect infestations, pathogens like dwarf mistletoe, and wildfires burning hotter and covering more acres per event. Without human intervention and a century of time, natural succession will most likely have restored reasonable balance to our forests and watersheds. But at what cost?

The problem, from a community point of view, is for the increasing amount of people living in close proximity to those trees, the communities the people rely on, the economic security that sustains our lifestyles, for those who would provide necessary stewardship of our environment, and the elected officials providing leadership. We must continue to be smart stewards and forward looking legislators and realize it will take 10 to 20 years to restore our forests and get ahead of Mother Nature. There are three points I would like to share with this committee as we discuss the effectiveness of the National Fire Plan and its importance going forward:

1. The collaborative accomplishments of the Federal, State and Local land managers in the Ruidoso area

An element I am most proud of in terms of collaborative accomplishments is a measured increase in public awareness. It's relatively easy for land managers to agree on problem identification and necessary solutions. Convincing the general public these solutions are sound and an example of forest restoration takes solidarity of vision.

The Ruidoso Wildland Urban Interface Group (RWUIG) was created in November of 2000 at the request of the USDA Forest Service, Lincoln National Forest and the New Mexico Energy, Minerals and Natural Resources Department in response to the initiatives of the National Fire Plan. This working group meets every month and is hosted by the Village of Ruidoso at the Ruidoso Convention Center. The mission of the group is to enhance public safety and economic development of the community by addressing the challenges of urban interface wildfire hazards and general forest restoration.

This coalition of agencies and entities has established a geographical designation called the Ruidoso Wildland Urban Interface (see map).* Members include the Lincoln National Forest, New Mexico State Forestry, BLM, BIA, Mescalero Apache

*All attachments have been retained in subcommittee files.

Trite, Lincoln County, Village of Ruidoso, Village of Ruidoso Downs, State Land Office, South Central Mountain RC&D, River Association, and local contractors and companies (see membership). The group has established four action items:

a. Land holding agencies and entities interact and coordinate decision-making through the Unified Command Structure.

b. Priority projects have been identified and are either ongoing, approved and in line for implementation, or waiting for funding. The idea is that in 3-5 years, when all of these projects are completed, consistent and meaningful treatment will have been accomplished.

c. A common voice was established by the creation of a committee of individuals from the different agencies and entities that share new information and ideas and project public information with a common theme.

d. Treatment standards were reviewed and similar treatment prescriptions were agreed upon in general terms. Treatments were divided into "defensible needs" (densities around homes target 40 sq. ft. of Basal Area) and "wildland needs" (densities target 60-90 sq. ft. of Basal Area depending on vegetation type). The group discussed and agreed that the "defensible space" around a structure is best described in a publication by the National Arbor Day Foundation, Nebraska City, NE referred to as Tree City USA Bulletin #41 (see attached). The first zone, 30 feet minimum on flat ground, around a home doesn't need to be clear-cut and can include leisure and activity areas where density is greatly reduced and specie choice and landscape materials must be considered. The Village of Ruidoso offers a forest health, lot assessment service for its residents. The bulletin is a standard handout item at each lot visit. The idea is that the Village along with other agencies are consistent and are providing sound technical advice that reduces wildfire hazard, promotes forest health as well maintaining fun and leisure space.

This working group is the professional core for planning and administration; resource acquisition and grant writing; technical assistance; implementation; and public awareness for project proposals submitted to the National Fire Plan. Specific projects approved and in progress are included in the National Fire Plan Report (see report) prepared by the Lincoln National Forest, Southwest Region.

The key to the success of the RWUIG is the establishment of the action items and the commitment of the professionals involved to work together.

2. *The practical definition of the "wildland urban interface" and the importance of continued funding to assist private landowners.*

It is logical and appropriate to consider wildfire preparedness and workforce development as a priority given the immediate devastation wildfire can bring to a community. Prevention through public awareness and fuels reduction is a slower, longer term and equally important objective. Generally speaking, a wildland urban interface (WUI) is comprised of public land bordering on private land. Neither the trees nor the burning fire recognize legal boundaries. Therefore, creating a prevention plan for an entire WUI must recognize two scenarios: first, fire entering the community from the wildland (public lands) and second, fires originating inside the interface (private lands).

The Los Alamos fire event (Cerro Grande fire) taught us that much of the devastation to homes and property inside the interface could be contributed to lack of "defensible space" around homes. The crowning fire that swept across the wildland did considerable damage inside the WUI because it "spotted" into people's yards and onto their roofs. This is apparent when looking at destroyed neighborhoods with green trees around burnt homes. An effective prevention plan answers two questions:

1. How to maximize the distance between a "spotting" crown fire and structures within the interface.

2. How to minimize the effect of a "spot" fire produced by a crowning fire or a fire that originates within the interface.

The answer to the first question is to create a buffer of reduced tree density which will transform a "running crown fire" back to a "ground fire" where suppression efforts can be more effective. Ground fires do not "spot" like fires burning in the tree-tops. The answer to the second question is to encourage private property owners to create meaningful "defensible space". This requires education, technical support, and financial assistance. It is clear the cost of fuels reduction inside the interface is higher than similar treatment in the wildland. Removing trees in close proximity to houses, streets, power lines, etc. is more costly due to the fact the contractor has more liability and careful removal takes more time. A reasonable figure is \$1000/acre for treatment.

In FY 01 the Western Wildland Urban Interface Grant (WWUIG) program made available \$17 million for western states. New Mexico received \$1.7 million to be utilized for cost sharing, private land fuels reduction. The Capitan District of NM State Forestry has available \$600,000 for three communities: \$150,000 for Cloudcroft, \$150,000 for the Timberon/Mayhill area, and \$300,000 for Ruidoso and Lincoln County.

In Ruidoso the announcement of the program has produced requests for treatment on 3,617 acres. That translates into \$3,617,000 of request. Education through an aggressive public awareness campaign with regard to “defensible space” and recent fires has resulted in Ruidoso property owners thinning trees and raking pine needles. More than 30,000 cubic yards of forest debris have been cleared by property owners and removed by Ruidoso’s pick-up service this year. This debris (needle and branch material) is transported to a mulch and compost facility for utilization. Within the Ruidoso urban interface there is more than 10,000 acres of forested private land. Demand greatly exceeds the funding for this program. The WWUIG program is the best (possibly the only) conduit to get Federal assistance on the ground for private fuels reduction. It is my opinion that this program represents a key to saving lives and reducing property damage in any WUI fuels reduction program.

3. The relevance of proposed amendments to USDA Forest Service land management plans, with regard to the urban interface, in the Southwest Region

The USDA Forest Service, Southwest Region is proposing to amend land and resource management plans that could greatly increase the effect of treatment and accelerate the implementation of fuels reduction projects around a WUI. The amendment (see more at www.fs.fed.us/r3/wui/index.html) reflects a management emphasis in the WUI and modifies certain standards and guidelines to complement that management emphasis. In a nutshell, this amendment prioritizes resident populations at imminent risk to wildfire in a WUI above some existing restrictions imposed by Threatened and Endangered Species (T&ES) standards and guidelines. Here’s how this could work:

- An approximate ½ mile wide strip of Federal land around the WUI would be thinned to 40 to 60 sq.ft. of basal area (this replicates general conditions occurring approximately 200 years ago). If a running crown fire enters this reduced tree density zone, it would be transformed to a ground fire where resources could address it. This treatment will accomplish fire and public safety objectives and is the first step towards forest restoration.
- Treatment prescriptions in some areas would dictate removal of material greater than 9” (i.e. the use of the logging industry). Merchantable material removed will reduce industry’s reliance on Federal assistance and help to wean the local industry from Federal grant programs.
- The Lincoln National Forest is an excellent landscape for demonstration projects and could prove to be a template for successful management strategies. On the Lincoln NF there are numerous Mexican Spotted Owl (MSO) protected activity centers (PACs) and some would be affected. There is speculation that the effectiveness of some of the existing guidelines, in terms of what’s best for the MSO recovery, is in doubt. Consultations with US Fish and Wildlife indicate that by opening up the forest (proposed treatment within the owl’s foraging area), the populations of MSO prey (small mammals) could increase. This proposed treatment could have the effect of promoting MSO forage and thus increasing the owl population. As a supplement to this proposal, I would strongly recommend dollars be appropriated for extensive monitoring of the known PACs for a minimum of two years following treatment. This gives us the opportunity to gather some fresh data with regard to the effect of treatment.

This proposed amendment, along with the additional monitoring, represents a good opportunity for forest restoration. A best scenario indicates this type of treatment prescription could accomplish the objectives of increased public safety and recovery of the MSO. From a municipal point of view, this is a good example of “thinking out of the box”. The proposed amendment implies that the treatment be dictated by “the science” to achieve meaningful forest restoration. This proposal, if successfully monitored, represents a rare opportunity to begin to bridge the gap between the necessary treatment to achieve restoration and the legitimate concerns of the environmental community. Thank you.

Senator WYDEN. Excellent testimony. I thank you.
Mr. Nelson.

**STATEMENT OF TOM NELSON, DIRECTOR OF FOREST POLICY,
SIERRA PACIFIC INDUSTRIES, REDDING, CA**

Mr. NELSON. Good afternoon, Mr. Chairman. My name is Tom Nelson, and I am the director of forest policy for Sierra Pacific Industries in Redding, California. My testimony today also reflects the views of the American Forests and Paper Association, the American Forest Resource Council, the California Forestry Association, and the Intermountain Forest Association.

I have some photos that have been included in your packet, and there are some larger ones that we are going to set up here, with your permission.

A substantial portion of the national fire plan centers upon the effectiveness of fire suppression efforts. I will not address this issue, other than to state that fire suppression treats the symptoms and not the cause of catastrophic wildfires. Instead, my testimony focuses on four issues associated with the national fire plan and suggestions for addressing them. These issues are:

One, active forest management, including timber harvesting, must be an integral part of fuel reduction efforts.

Two, there are numerous risks to private forest landowners.

Three, there are hurdles that must be overcome to implement the national fire plan, and

Four, there is an opportunity to utilize fuels reduction material in the production of electrical energy.

My written testimony goes into much more detail on each of these issues than time allows for my presentation today, but I would like to emphasize several key points. First, we simply cannot continue on the path we have been taking. The disastrous effects of wildfires are mounting with each successive year. With just two-thirds of the 2001 fire season completed, there have been almost 62,000 fires burning over 3 million acres, destroying dozens of structures, seriously threatening the communities of Jackson, Wyoming, and Weaverville, California, and resulting in the deaths of 10 firefighters, costing the taxpayers nearly \$600 million. That was this year.

Last year, more than 7.4 million acres burned. This is equivalent to a 3-mile-wide swath from Washington, D.C. to Los Angeles and back, destroying 861 structures, killing eight firefighters, and costing the Federal Government \$1.3 billion in suppression costs.

Over the last decade, numerous reports have identified the problem we are discussing here today. There is no escape from the conclusion of all of these efforts. Our forests are in trouble. But most of the reports that indicate a need to change avoid entirely, or softly describe, the most important tool that can help reduce the threats to our forests—timber harvesting.

We are talking about common sense thinning to reduce the overly dense forest conditions that lead to catastrophic wildfires, and to show you an example of this, I brought a number of photographs taken this summer in the aftermath of one of these fires. This is from the stream fire in the Lasser National Forest in California. Those are the photos in your packet.

What I would like to point out here, there are two photos that show the interior of this fire, and there are no green trees there, and there were a number of features that were lost. First of all,

the aesthetic value was lost. This area is immediately adjacent to Antelope Lake, which is a very highly used recreational area near Susanville, California.

Secondly, there were four California spotted owl protected activity centers that were burned to a crisp inside here. In addition to that, there were two bald eagle areas that had active nest sites that were completely destroyed inside this fire.

The second photos I want to show you are on the perimeters of this fire. These are areas that were thinned, and the reason I am showing you this is that this thinned area was actually a commercial timber sale from the mid-nineties. The design of this sale was to reduce the fuel-loading and reduce the fire risk. That is the point at which they fought this fire and contained this fire.

The Forest Service folks that we talked to in the area said that had it not been for this area, it would have been a 35-to-40,000, maybe 50,000 acre fire that could have gone into the city of Janesville in California. Instead, this fire was 3,500 acres, so it may be anecdotal, but this stuff really works.

As previously mentioned, millions of acres of national forest are at risk for catastrophic fires. Many look just like the area around Antelope Lake prior to these photos. Failure to treat these unnatural fuel levels dooms forest ecosystems and watersheds to catastrophic wildfires that are so devastating it will take centuries for them to recover.

I would like to briefly mention the tremendous risk to private landowners that accompany this situation on our Federal lands. Sierra Pacific Industries owns and manages over 1.5 million of some of the most fire-prone forests in the United States. I have also attached in your packet a map showing ownership patterns in California, specifically the private lands owned by our company and the neighboring Federal lands.

You will note that these two ownerships are intermingled, which is very common throughout the Western United States. All of my company's management plans have one thing in common. How can we protect our forests from catastrophic wildfire? Our experiences and observations over the last 20-plus years have led to one inescapable conclusion, we must thin our forests to significantly reduce the fuel accumulations.

We recognize we cannot fire-proof our forests, but we can reduce the effects of wildfires by reducing the amount of fuel-loading within our forests, and we routinely do this in an economically efficient manner. The exact same conditions and response can, and should be implemented on the Federal lands that surround or border us.

There are a number of hurdles to overcome if we are to implement the national fire plan. Right now, the national fire plan's fuel reduction efforts are no different than other land management projects considered by the Forest Service and Department of the Interior. They must first go through a lengthy and cumbersome environmental analysis process as required by NEPA. Given the complexity of the ecosystems involved, there is no argument that a professional science-based analysis must take place to assure that the proposed fuels treatment project will meet the needed objectives and not adversely affect the environment.

What we have seen over the decades is that a NEPA process is driven more by bureaucracy than the ultimate objectives and decisions on the ground. There are other hurdles that I will not go into at this time.

When timber harvesting is used as a part of the solution, the opportunity to utilize this excess vegetation to manufacture wood and paper products, or even generate electricity, means that a portion, if not all of the public's cost can be captured. My company currently operates six biomass powerplants which produce about 100 megawatts of electricity per hour from wood waste, and I will go into that in more detail if you have questions about it.

Mr. Chairman, a very serious problem facing our Nation's forests has been identified and needs our immediate attention. It affects 72 million acres of Federal forest and places at risk millions of private acres and tens of thousands of rural communities. We do not need to authorize another study or pilot project. Our forests, wildlife, and communities cannot afford any more delay. We have the science, the professionally trained resource managers, and a workforce ready for the task. What we need is leadership to act. We hope that both the administration and Congress will provide that leadership in a bipartisan fashion.

Thank you.

[The prepared statement of Mr. Nelson follows:]

PREPARED STATEMENT OF TOM NELSON, DIRECTOR OF FOREST POLICY, SIERRA
PACIFIC INDUSTRIES, REDDING, CA

TESTIMONY

Good afternoon Mr. Chairman. My name is Tom Nelson and I am the Director of Forest Policy for Sierra Pacific Industries in Redding, California. My testimony today also reflects the views of the American Forest & Paper Association, American Forest Resource Council, California Forestry Association and Intermountain Forest Association. These organizations represent a vast majority of our country's forestland owners, wood product manufacturers, and pulp and paper products producers, who are committed to sustainable forestry for all forestlands, public and private. This is an industry that has sales of over \$195 billion annually and employs 1.6 million people, more than one percent of the U.S. workforce.

A substantial portion of the National Fire Plan centers upon the role, preparedness and effectiveness of federal fire suppression efforts including cooperation with state and local fire fighting entities. I will not address these issues other than to state that fire suppression treats the symptoms and not the cause of catastrophic wildfires. No matter how much effort is placed in fire suppression, you are only treating the symptoms of the problem, not its cause. Substantial efforts must be made to address the underlying cause of the problems facing our wildlands and the associated urban interface. My testimony focuses on four issues associated with the National Fire Plan and suggestions for addressing them. The issues are: active forest management, including timber harvesting, must be an integral part of fuel reduction efforts; there are enormous risks to private forest landowners; there are hurdles that must be overcome to implement the National Fire Plan; and there is an opportunity to utilize fuels reduction material in the production of electrical energy.

The focus of my testimony is on sound management practices that help promote the long-term sustainability of our nation's public and private forestlands. It is imperative that efforts focus on protecting forests, wildlife and communities. In order to accomplish these important objectives, timber harvesting must be tool available to, and used by, the Forest Service and Department of Interior.

Issue #1: Active Forest Management, Including Timber Harvesting, Must Be An Integral Part Of Fuel Reduction Efforts

Over the last decade, numerous efforts have identified the problem we are discussing here today. This committee has heard from witnesses today and at previous

hearings about the magnitude of this problem and what little has been actually accomplished to address it.

The disastrous effects of wildfires are mounting with each successive year. With just two-thirds of the 2001 fire season completed, there have been almost 62,000 fires, burning over 3 million acres, destroying dozens of structures, seriously threatening the communities of Jackson, Wyoming and Weaverville, California, resulting in the deaths of ten firefighters and costing the taxpayers nearly \$600 million. Last year, more than 7.4 million acres burned—equivalent to a three-mile-wide swath from Washington, D.C. to Los Angeles, California and back—destroying 861 structures, killing eight firefighters and costing the federal government \$1.3 billion in suppression costs. The situation has a long legacy of clear warnings and little action following the smoke of the last catastrophic wildfires as expressed in the following events:

- The National Fire Protection Association reported that wildland-urban interface catastrophic wildfires from 1985 to 1994 destroyed 9,925 homes.
- The National Research Council and the Federal Emergency Management Agency recognized catastrophic wildfires such as those in California in 1993 and in Florida in 1998 as among the defining natural disasters of the 1990s.
- The General Accounting Office (GAO) published a report in 1999, to the United States House of Representatives, entitled “Western Forests: A Cohesive Strategy is Needed to Address Catastrophic Wildfire Threats.” The GAO reported that “the most extensive and serious problem related to the health of national forests in the interior west is the over accumulation of vegetation, which has caused an increasing number of large, intense, uncontrollable and catastrophically destructive wildfires. According to the U.S. Forest Service, 39 million acres on national forests in the interior West are at high risk of catastrophic wildfire.”
- Escaped prescribed burning by the Bureau of Land Management created the Lowden Fire that destroyed 23 homes in Lewiston, California in 1999.
- The Forest Service report, entitled “Protecting People and Sustaining Resources in Fire-Adapted Ecosystems: A Cohesive Strategy,” was published in 2000. The Forest Service reported “the current condition of many of the western region’s forests renders them susceptible to insect attack, disease outbreak and severe wildfires. This situation is becoming more widely recognized as the most serious threat to these forests” long-term health, resilience and productivity.”
- Escaped prescribed burning by the Department of Interior created the Cerro Grande Fire that consumed 48,000 acres and destroyed 400 homes with losses exceeding \$1 billion in Los Alamos, New Mexico in 2000.
- The Congress appropriated an unprecedented \$2.9 billion in funding for the Departments of Agriculture and Interior’s land management agencies to prepare for firefighting efforts and take proactive steps to reduce fire risk on all federal lands in 2000.
- The GAO testimony entitled “The National Fire Plan: Federal Agencies Are Not Organized to Effectively and Efficiently Implement the Plan” was delivered to the House Resources’ Subcommittee on Forests and Forest Health in 2001. The GAO reported that “conditions on 211 million acres, or almost one-third of all federal lands, continue to deteriorate and that the list of at-risk communities ballooned to over 22,000.”
- The Western Governors Association (WGA) released its “Collaborative Ten-Year Strategy for Restoring Health to Fire-Adapted Ecosystems” in 2001. The plan would emphasize preventing catastrophic blazes instead of just fighting them.

There is no escape from the conclusion of all these efforts—our forests are in trouble. Most of the reports that indicate a need to change avoid entirely, or softly describe, the most important tool that can help reduce the threats to our forests—timber harvesting. We are talking about common sense thinning to reduce the overly dense forest conditions that lead to catastrophic wildfires and destroy important ecosystems.

The practice of thinning to reduce the potential for stand replacing crown fires works. Everyday, our foresters see more and more examples of the efficiency of thinning to effectively reduce the effects of catastrophic wildfires and substantially aid in the success of firefighting operations. In California near our land, the Goat Fire, Stream Fire, and many others are recent examples of the role thinning of forests plays in fire control successes. Harvesting of trees played a major role in containing and reducing the effects of each of these wildfires.

The condition of the forests determines the risk of catastrophic wildfire and ignoring overcrowded forests along with the large component of dead and dying trees is clearly a prescription for disaster. As described above, millions of acres of national

forests are at risk for catastrophic fires. As the GAO reports, “timber harvesting may make useful contributions to reducing accumulated fuels in many circumstances.”¹ Further, a Forest Service research report states, “well-thinned, relatively open areas scattered across the landscape, interspersed with denser, less intensively managed areas, would provide a wide array of wildlife habitat, and would be a forest less prone to large-scale catastrophic wildfire.”² In addition, as noted in the “Sierra Nevada Ecosystem Project Report,” “when slash is adequately treated and treatments are maintained, logging can serve as a tool to help reduce fire hazard.”³ Failure to treat these un-natural fuel levels dooms forest ecosystems and watersheds to catastrophic wildfires that are so devastating that it will take centuries for them to recover.

In some cases, depending on local conditions, hazardous fuel reduction through prescribed burning or other means may be more effective than timber harvesting. However, in most areas of the West, the most effective and cost-efficient method to reduce fuels includes timber harvesting, and this tool should remain available to the Forest Service and Department of the Interior for reducing hazardous fuels. Furthermore, when timber harvesting is used as part of the solution, the opportunity to utilize this excess vegetation to manufacture wood and paper products or even generate electricity means that a portion, if not all, of the public’s cost can be captured. This would allow for treating more acres within the budget limitations, providing economic opportunities for rural forest communities, while utilizing material that would otherwise simply go up in smoke. SPI and the associations supporting my testimony respectfully suggests that language should be included in the National Fire Plan and in relevant related documents specifically stating that timber harvesting is a tool available to the Forest Service and Department of the Interior to maintain and improve forest health.

Issue #2: There Are Enormous Risks To Private Forest Landowners

SPI manages over 1.5 million acres of some of the most fire prone forests in the United States. All of our management plans have one thing in common—how can we protect our forests from catastrophic wildfire losses. Our experiences and observations over the last 20 plus years have led to one inescapable conclusion—we must thin our forests to significantly reduce the fuel accumulations. We rely on existing authorities of the California Forest Practices Act, the underlying science of fire management, our experiences, and the professional judgment of our foresters when we develop site specific harvesting plans to protect our forests. We are confident that our efforts in thinning and fuel reductions are effective in reducing the threats and, most importantly, they are developed in an economically efficient manner.

We recognize that we cannot “fireproof” our forests. But we can reduce the effects of wildfires by reducing the amount of fuel loading within our forests. Our principles are simple—open the canopy of the forest by thinning and reduce the potential for the most devastating of fires, crown fires. On areas near roads and ridges where we logically fight fire, our fuel reduction efforts remove the largest amount of vegetation and trees. This allows fire fighting forces a chance to control the fire, improve the effectiveness of air attack and fire retardant applications and control “backfires” when they are necessary for wildfire control. As we move beyond these obvious defense zones, we thin our forests and leave more trees to achieve a balanced goal of reducing the potential for crown fires while maintaining adequate growth rates on our thinned stands.

We can only do so much on our own lands. The greatest threat comes from the fact that our ownership, like so many other private forest landowners, is interspersed with federal lands which are in need of fuels reduction. I have attached a map showing ownership patterns in California—specifically, the private lands owned by our company and the neighboring federal lands. You will note that these two ownerships, as is common throughout the Western United States, are intertwined and intermingled. Private forest products companies, like ours, as well as non-industrial forest landowners have aggressively tried to reduce the risks for catastrophic wildfires on their own holdings for many years, largely through the use of thinning. However, these efforts cannot be effective without the cooperation of our federal neighbors, since wildfires do not recognize property boundaries.

According to the Forest Service, most of the 72 million acres of National Forest System lands at risk of uncharacteristic wildfire are not in the wildland-urban inter-

¹ Ann Bartuska, Letter to John Talberth, November 6, 2000.

² Dahms and Geils, 1997.

³ Ann Bartuska, Letter to John Talberth, November 6, 2000.

face.⁴ However, because of limited resources, hazardous fuel reduction in many of these areas will be deferred for years. Accumulation of fine ground fuels and encroachment of shrubs and other vegetation beneath dominant canopies will continue. As a result, the likelihood of severe fire behavior in these areas will escalate. The forest industry is very worried about this situation, since these areas are precisely where our property is adjacent or intermingled.

The number of acres of public land that require hazardous fuel reductions far exceeds the number of acres treated by the federal land management agencies. The Forest Service's and Department of the Interior's hazardous fuel reduction efforts have not kept pace with the steady increase in over-accumulation of vegetation, outbreaks of insect infestations and disease, and accumulation of fine fuels even though these efforts have steadily increased over the past decade. The Forest Service estimates that 72 million acres of the land it manages is at risk of catastrophic wildfires and at the current pace of treatment, it will take more than 30 years to treat the existing areas.

About \$120 million of the Fiscal Year 2001 Interior Appropriations was directed to alleviate immediate threats to urban-wildland interface areas. To help stretch appropriations for hazardous fuel reduction work, efforts will be made to "match, where possible, joint projects with state cooperators."⁵ However, as one representative of the National Interagency Fire Center noted, community representatives are concerned there is no guarantee the federal government will continue to provide needed funding for their projects and, thus, communities worry they will be left to pay the entire cost of hazardous fuels reduction work.

Throughout the West, private landowners, state fire experts, and rural communities are poised and ready to implement management activities that will reduce the potential risks of devastating wildfires like we witnessed last summer in Montana and Idaho. A good example of this is the State of California's program to implement Fire Safe Councils in rural counties. The forest products industry strongly supports these efforts. To help achieve their goals, all of the major forest landowners in the Sierra Nevada region signed a memorandum of understanding to implement a series of interconnected defensible space to fight fires last year. We believe that this type of partnership between private forest landowners, the State, and local county officials is the most effective way to combat the inherent dangers to the 72 million acres now at risk within our National Forest System lands. But this cannot, and will not, occur without the key player at the table—the federal land managers.

Reversal of fuel conditions cannot occur overnight. Clearly, however, there is an urgent need to prevent fuel conditions from advancing at their current pace. It is not enough to provide funding for additional fire fighters and equipment. SPI and the associations would request increased appropriations in the next several fiscal years for hazardous fuel reduction efforts in areas at high risk of catastrophic wildfires. Additionally, we respectfully request that the appropriation language recognize and emphasize funding collaborative partnerships with owners of in-holdings, state foresters, and other entities who have established strong programs to reduce the threats of catastrophic wildfires and are pursuing long-term fuels treatment strategies.

Issue #3: Hurdles To The Implementation Of The National Fire Plan

The National Fire Plan's fuels reduction efforts are no different than other land management projects considered by the Forest Service and Department of Interior—they must first go through a lengthy and sometimes cumbersome environmental analysis process as required by the National Environmental Policy Act (NEPA). Given the complexity of the ecosystems involved, there is no argument that a professional, scientific-based analysis must take place to assure that the proposed fuels treatment project will meet the needed objectives and not adversely affect the environment.

But what we have seen over the decades is a NEPA process that is driven more by bureaucracy than the ultimate objectives and decisions on the ground. As a result, the project planning process takes years, tends to be very redundant, with little or no innovative thinking. The NEPA process has become an impediment to professionally planned and executed land management projects and the entire NEPA process, as well as individual agency regulations and policies, must be re-examined.

In today's reality, very few land management projects, especially if they involve the cutting of trees, are implemented without first going through an administrative

⁴Lyle Laverty, USDA Forest Service National Fire Plan Coordinator, Statement before the House Subcommittee on Forests and Forest Health, March 8, 2001.

⁵USDA Forest Service National Fire Plan: Action and Financial Plan—Title IV Funding, <http://www/na.fs.fed.us/nfp/pa/financial—plan/overview.htm>, Accessed 2/22/01.

appeals process or litigation. Appeals and lawsuits take an enormous amount of time and effort, and often delay the implementation of a project for years. In most cases, a successful challenge can be traced to simple procedural mistakes and not the merits of the final decision. Often agency managers report that the NEPA process discourages innovation and professional decision-making because it focuses on procedures and not the substance of decisions.

Given the critical forest health situation facing millions of acres of our western forests, special rules or exemptions must be authorized so that the land management agencies can quickly treat these overstocked and fire prone forests. The environmental consequences of not treating these areas in a timely fashion, resulting in the destruction of thousands of acres due to an uncontrolled wildfire, must be part of the environmental assessment and decision-making process.

The NEPA process is complicated by the jurisdiction of the President's Council on Environmental Quality (CEQ) over the underlying NEPA procedures of agencies. CEQ must examine its rules and the agencies must examine their procedures and policies to ensure they are part of the solution to the wildfire crisis, and do not remain a significant part of the problem. Regardless of whether the CEQ and the agencies revise the regulations or policies, there needs to be better utilization of categorical exclusions, emergency stay or appeal exemptions, and expedited procedures. There must be recognition of the fact that a "no action" alternative does indeed have serious and significant effects. Without these changes, more money will be spent in planning and assessing a project than will be realized by the land management activity on the ground.

In many areas in the west, due to the number of endangered species listings, Endangered Species Act (ESA) Section 7 consultation on land management projects, including fuels reduction activities, has become a real bottleneck. Since the existing Section 7 regulations were put in place in 1986, the National Marine Fisheries Service (NMFS) and U.S. Fish & Wildlife Service (FWS) have been asked to conduct nearly 300,000 consultations, with a dramatic increase in the numbers in the last several years. The first cause of this bottleneck has been a shortage of personnel to perform the consultations. A special appropriation this year to supplement the agencies' budgets for National Fire Plan support should help, but it is like buying more fire trucks, it treats the symptoms and not the cause.

One real fix is to address the Section 7 consultation problem, which is shifting more of the assessment responsibility to the land management agencies. A review of the Section 7 consultations finds that less than 1 percent resulted in a jeopardy opinion by either NMFS or FWS. Given this extremely low risk, changing the threshold at which the land management agencies are required to enter into formal consultation from a "may affect" to a "likely to affect" threshold would seem like a logical proposal. This would free up personnel in both the land management and regulatory agencies for review of activities with the much higher risks to listed species and would also allow them to get out of the office and focus on efforts to protect and enhance the species at risk.

Another fix could be to reorganize responsibilities for ESA between NMFS and FWS. Currently in the West, it is common for land management agencies to consult with both NMFS and FWS on the same project, involving the same stream segment, but involving different species—anadromous and resident fishes. One proposal is to have the responsibility for ESA compliance for anadromous fish shift from NMFS to FWS when they are present in fresh water. Admittedly, this is a complex proposal and would require legislation.

Existing regional land management plans and policies can also be impediments to the implementation of the National Fire Plan. Whether it is the Northwest Forest Plan affecting 24 million acres in Washington, Oregon and Northern California or the Sierra Framework Plan affecting the remaining national forests in California, regional land management plans lack flexibility for project planning to address actual on-the-ground circumstances. Allocating areas to "no treatment" with the objectives of providing habitat for listed species ignores the reality that the listed species are at great risk of losing critical habitat to a catastrophic wildfire. In fact, the Sierra Framework's selected alternative actually places more old growth forests at risk than other alternatives, which aggressively treat the dense, overstocked forests currently at risk.

The PACFISH, INFISH and Eastside Screen interim land management policies also directly affect the ability to the land management agencies to treat excessive fuel buildups and suppress wildfires. These interim policies limit the size, number and location of trees that can be cut without allowing site-specific professional determinations based on the specific ecosystem conditions. It also appears that guidelines of the PACFISH and INFISH management policies severely restrict firefighting personnel from dropping fire retardant within 300 feet of (and dipping water from)

streams that are inhabited by listed fish species. These short sighted guidelines have resulted in wildfires growing larger than necessary, and in some cases totally destroying the fish habitat they were intended to protect.

The ultimate solution to addressing the hurdles affecting the implementation of the National Fire Plan is for the Administration to designate a senior official to coordinate its implementation. We feel that CEQ is the best place for this leader to be located. As I have described, CEQ has the responsibility for overseeing NEPA and could be empowered to facilitate coordination between departments and agencies. Without this kind of leadership, agencies will continue to operate under their own visions and directives. Clearly CEQ could address the problems with NEPA and facilitate the use of categorical exclusions, emergency stay or appeal exemptions, and expedited procedures. The Council could also provide the leadership and coordination for dealing with challenges to fuels reduction projects. They could also facilitate a more workable Section 7 consultation process and coordinate consistent and timely products from NMFS and FWS. Finally, CEQ could coordinate changes to regional land management plans and policies that would result in professional, science-based decisions at the project level that address the conditions present on the ground. SPI and the associations believe that the failure to have this kind of leadership will result in more acres burned by catastrophic wildfires, destroying not only productive forests, but also wildlife and fisheries habitat, and rural communities.

Issue #4: Utilizing Fuels Reduction Material To Produce Electrical Energy

For years now, forest product manufacturers and others have been generating electricity from wood waste, or biomass. While the operations have been small, limited in their geographic distribution and most cases for internal use, the technology is clearly available and proven. Northern California has twenty (20) operating biomass-fueled electrical generation facilities with the ability to produce over 375 megawatts of power per hour for sale into the California electrical market, and several additional facilities currently shut down but capable of being re-started. SPI operates six (6) such facilities as part of our integrated operations with the ability to produce approximately fifty (50) megawatts of power per hour available for sale.

Given the fact that millions of acres are in dire need of treatment to reduce unnatural accumulations of small trees and that much of this is too small to be utilized in the manufacturing of lumber products, there is a perfect opportunity to utilize this material to generate electricity. Currently, over two-thirds of the biomass-fueled electric power is generated from forest-related activities, which includes: slash, brush & tops associated with timber harvesting activities; bark, chips and sawdust from forest products manufacturing processes; and small diameter material derived from thinning overly-dense forests identified as being at great risk to wildfire. Some have commented that there could be a biomass power plant associated with each ranger district on our western national forests.

Let's now focus our attention on the opportunity to meld our National Fire Plan with the National Energy Policy. Assume that just half of the 72 million acres of national forest lands at risk to catastrophic wildfires are available to be managed and that these acres have the potential of producing approximately 50 tons of biomass per acre. With some simple and conservative assumptions, this material could generate enough electricity to supply over 8,000,000 homes per year with power. This doesn't include other potential biomass fuel sources from private lands, state lands, tribal trust lands, lumber manufacturing residuals, and other sources still to be identified.

Promoting biomass electric power generation is not only fiscally sound, but also environmentally and socially beneficial. In 1999, the Department of Energy published an independent research report entitled "The Value of the Benefits of U.S. Biomass Power," which compared the impacts of biomass energy production with the most probable alternative fate of the residuals described above. The report also looked at the values of non-energy benefits resulting from biomass power production such as: air pollutants; greenhouse gas emissions; landfill use; forest and watershed improvement; rural employment and economic development; and energy diversification and security.

Some specific societal benefits from the utilization of biomass for power generation includes:

- **Alternative To Open Burning**—Without the biomass energy sector, large amounts of woody biomass were consumed by either wildfires, prescribed fires or field burning. While an alternative market exists for this material, millions of tons of this waste are consumed in power generation facilities equipped with sophisticated emissions control devices (rather than burned in the open with uncontrolled air emissions).

- **Greenhouse Gas Emissions**—Healthy forests have the ability to actively store a major greenhouse gas—carbon dioxide. The biomass retrieved from forest thinning operations not only improves forest health (and therefore carbon sequestration) but also represents a power generation alternative to the burning of fossil fuels for power. Furthermore, the alternative (open burning of this material described above) produces large amounts of CO₂ emissions.
- **Rural Jobs**—Employment associated with biomass energy plants is significant, especially in rural areas where these plants are typically sited. Activities such as harvesting, collecting, processing and transporting wood waste to the power plants requires skilled workers who earn relatively high wages. Highly skilled technicians are required to operate and maintain the power plants. The plants also contribute to the local economy through payment of property taxes.
- **Community Protection**—Communities located in forested regions, especially those adjacent to national forest system lands, are at significant risk due to the unnatural accumulation of forest fuels and for that reason the National Fire Plan's priority is to treat those areas first. When considering the work to be accomplished under the National Fire Plan, the ability to utilize biomass material could easily reduce the cost of the treatment, allowing for significant taxpayer savings.
- **Energy Diversification**—Biomass electricity production provides a renewable energy alternative to the use of non-renewable energy sources such as oil, gas and coal. Use of renewables represents an opportunity to diversify our energy portfolio.

In a market economy, one would assume that with the great potential and benefits described above, that there would be an abundance of biomass power facilities on line or under construction. Unfortunately, this is not the case. This is primarily due to the fact that benefits of biomass as a clean, renewable energy source are extremely hard (if not impossible) to quantify in market terms. It is very difficult to assign market values to forest fuel reduction when the benefits are clean air, watersheds, wildlife habitat and other environmental benefits. Finally, much of the potential fuel supply is located on lands that are under public ownership and therefore, tend to operate outside the marketplace. For these reasons, we believe an appropriate role for the federal government is to make commitments and support an opportunity with such great net public benefits.

Impediments—there are four categories of impediments to an expansion in biomass energy production that need to be addressed:

- **Fuel Supply**—there must be a commitment to a long-term supply of biomass (at least 10 years), through innovative government contracting and congressional appropriations, so that investments into facilities are worth the risk.
- **Regulatory Relief**—there needs to be some relief from the lengthy process of obtaining the required permits to construct and operate a facility, especially clean air permits. For SPI to construct additional biomass electricity power plants, we must work through a horrendous maze of federal, state and local regulatory processes that routinely takes several years.
- **Long Term Power Purchase Agreements**—there needs to be an opportunity to sell the power into local and regional transmission grids at rates that encourage investment of private capital in biomass energy facilities. There must also be some assurances that the energy producer is paid for what they produce and sell. For example, our company (SPI) was caught with a significant balance due from Pacific Gas & Electric last year when they filed for bankruptcy.
- **Tax Credits or Grants**—there needs to be some sort of upfront tax incentives or grants to construct and operate these facilities in locations close to the biomass supply and in rural communities lacking the needed infrastructure.

An opportunity to marry the National Energy Policy with the National Fire Plan is not only good energy, forestry and fiscal policy, but also good environmental policy. It will take at least a decade to get new fossil fuel, hydroelectric and nuclear energy on line, so we need a bridge to close that gap. If not, history has shown us that mother nature will consume these excess forest fuels, leaving in her wake destroyed homes, wildlife habitat and forest ecosystems that will require millions of dollars and decades to repair. SPI and the associations feel that the opportunity is clear—produce clean affordable and renewable electricity from the nation's forests, while supporting economic diversification of rural communities.

CONCLUSION

Mr. Chairman, a very serious problem facing our nation's forests has been identified and needs our immediate attention. It affects 72 million acres of our federal

forests and places at risk millions of private acres and tens of thousands of rural communities. We don't need to authorize another study or pilot project—our forests, wildlife and communities can't afford any more delay. We have the science, the professionally trained resource managers and a workforce ready for the task. What we need is leadership—leadership to act. Our expectation is that both the Administration and Congress will provide that leadership, in a bipartisan fashion, to address the hurdles, provide the funding and meet the challenges of improving forest health, enhancing wildlife habitat, protecting rural communities and utilizing this excess forest fuel to manufacture wood products, produce paper goods and generate electricity that are so important to our nation's economy.

This concludes my prepared remarks, I would be glad to answer any questions you or the subcommittee may have for me regarding this important issue.

Senator WYDEN. Thank you, Mr. Nelson.

Mr. Woods.

STATEMENT OF TRENT WOODS, SAVE ELK CITY, ELK CITY, ID

Mr. WOODS. Thank you, Mr. Chairman. My name is Trent Woods. My wife, Marilyn is with me, and I am going to ask her to put some slides up, or some pictures up for me. She did not count on doing that, so I am not sure this is going to work out very well.

In my written testimony, there are a number of pictures that I have used to illustrate some problems that we have in Elk City, and Elk City is a community that is located near the geographical center of the Nez Perce National Forest. It is a forest that completely surrounds us, and it is an integral part of our lives. We have grown up in it, we have used it, we have enjoyed its boundless beauty, its pristine waters, its wildlife habitat, and its renewable resource production. Because of these things, we also try to protect it.

In Elk City we have a nonprofit corporation called Framing Our Community that is a partner with the group that you probably are familiar with in Oregon called Sustainable Northwest. We share with them their motto, Healthy Forests, Healthy Communities, and this is our guiding light. We are therefore truly grateful for your genuine concern for long-term forest health and pledge our support to you for your endeavors wherever we can.

Before I get to the pictures, I might just mention that 22 years ago I and three others from Elk City sat in front of Congressman Cyberline's National Resources Committee, and this is where the Save Elk City button comes from, and we talked about a lot of these same issues, and the issues at that time revolved around the establishment of the Frank Church River of No Return Wilderness.

That issue specifically was establishing the boundaries of that wilderness, and the designated areas for multiple use. We naively thought we had resolved the majority of these issues in a peaceable manner, when approximately one-half of our forest was placed into wilderness and one-half was excluded for multiple use. Had the legislative intent attached to that legislation been followed and enforced, I doubt that we would be here today.

I want to talk about some rather local problems. You have heard about a lot of things in general about forests, and I have to be very local in my remarks, and it is a little bit different because our forest is predominantly lodgepole pine in this Elk City area and in the Red River ranger district. The lodgepole pine has a particular problem that is becoming predominant right now, and that is the moun-

tain pine beetle, which normally is a vital part of the lodgepole forest in that it attacks the weak trees, weeds out in a natural selection process.

It does this by entering into the bark of the tree, carrying a fungus into the sapwood called a blue fungus, which blocks food transport in the tree, and then feeding in the cambium of the tree and laying eggs, where the offspring then girdle the tree in the cambium layer and thus kill the tree.

Now, what happens is that the first year that the tree is attacked, it stays green. We have a picture—that will work. That will work. The one behind you is a better one, but that will work right there. Here you see a group of trees that are already brown that were attacked last summer. All of the trees around that, that are green, are already dead. Essentially, 100 percent of the trees in that area are dead trees. Now, next year they will all be brown.

Now, each one of those trees with all of the dead needles that are supported in the top of it are almost like dynamite. They will burn just unstoppable.

The question is, why are so many trees affected, and the answer is that since it attacks the weaker trees, it is pretty obvious that we have almost 100 percent weak trees here, and they are primarily weakened because the stands are too dense. We also have other things such as root rot and various other things that will affect this, but the density of the stands is the big culprit.

In 1982, the Forest Service recognized this problem, and there was a special appropriation made to hire additional foresters on the Red River District. They built additional housing, and then along came packfish. Right now, that district is shuttered and closed. Nothing is being done, and nothing has been done with the exception of one thinned area, which was done in 1985.

The reason to use this is to show you that in the area that was thinned there are no dead trees. Now, it may burn, as some have suggested, but it is going to be a lot later in life before that one burns.

Now, fortunately, we do have some rather inexpensive ways to at least alleviate this problem. We have many miles of roads that are already in the area. The easiest thing to do is to remove lodgepole pine that can be reached from existing roads. It means almost zero environmental impact. It would create numerous jobs in a county that has had double-digit unemployment for years and years. I think that if there ever was a win-win situation, it is right now.

Now, there are other issues that I have talked about in the presentation that you have, but the main thing that I would like to emphasize is that we have 150,000 acres of trees that next summer will be essentially dead standing timber, and it is amazing how much is going to be dead. You will not see a green tree out there, and something needs to be done right now.

My time is up, and I will stop at that point.

[The prepared statement of Mr. Woods follows:]

PREPARED STATEMENT OF TRENT WOODS, SAVE ELK CITY, ELK CITY, ID

Chairman Senator Wyden and committee members, my name is Trent Woods and this is my wife Marilyn. We bring you greetings from the great State of Idaho, and more particularly, from the remote mountain village of Elk City. We are a commu-

nity located near the geographical center of the Nez Perce National Forest. The forest completely surrounds us and is an integral part of our lives. We have grown up with it, we have used it, we have enjoyed it's boundless beauty, it's pristine waters, it's wildlife habitat, and it's renewable resource production. Because of these things we also try to protect it, which is why we are so happy to see some action in this body to become concerned with fires and forest health. We have been at a point where we thought that nobody else truly cared about whether our forest lived or died, and all the pristine waters along with it. The idea that we humans should evacuate to the urban areas and leave the forests unattended has been promoted in same venues. The philosophy of "LET IT DIE, LET IT BURN, IT IS GOD'S PLAN" is a terribly misguided philosophy with tragic consequences. We happen to think that we humans are also part of God's plan and that we were put here to use our brains and our brawn to become a useful part of the plan.

In Elk City we have a non-profit corporation called "FRAMING OUR COMMUNITY" that is a partner with the Oregon based group known as "SUSTAINABLE NORTHWEST" and share with them the motto "Healthy Forests, Healthy Communities". That is our guiding light and we are, therefore, truly grateful for your genuine concern for long term forest health and pledge our support for your endeavors wherever and whenever appropriate.

Realizing that your scope is national in nature and that you will be receiving input from many different areas, we don't know how we might fit into the completed puzzle but we do know that we are certainly a piece of the final picture. I don't know that our particular problems are common to all but I suspect that to be true. We don't have time to go into all of our concerns but I will try to show you some of the most pressing, most critical problems. Let me preface the following remarks by telling you that 22 years ago I, and three others from Elk City, sat in front of Congressman Seiberling's Natural Resources Committee discussing these same concerns in a different issue. That issue was the resolution of the boundaries of the Frank Church River of No Return Wilderness and the designated uses of the areas specifically excluded from the Wilderness. We naively thought we had resolved the majority of the issues in a peaceable manner when approximately 1/2 our forest was placed into the Wilderness and 1/2 was excluded for multiple use. Had the legislative intent attached to that legislation been followed and enforced we would not be here today.

I want to show you some pictures to illustrate very dramatically some of the problems that have resulted from the present day forest management practices. Practices that have come about from many outside influences.

The first picture is of a small insect known as the Mountain Pine Beetle. This insect is a natural component of the lodgepole pine timber that dominates a significant portion of our local area. Under normal conditions it serves a useful purpose in a natural selection process of ridding the forest of weak or undernourished lodgepole pine trees. It attacks the trees in early summer by boring into the cambium layer beneath the bark, infecting the vertical food paths of the sapwood with a blue fungus that blocks the food transport, then feeds vertically in the cambium, laying eggs along the way. Over the next few months, the offspring girdle the tree by feeding horizontally around the tree, destroying the cambium and killing the tree. This is a one year cycle so that a tree that has been "hit" this summer will still exhibit green foliage but, in fact, it is for all practical purposes already dead. The needles will not turn reddish brown until the following summer. The blaze area shows a beetle in the center and the white spots in the surrounding bark area are entry points for other beetles.

This next picture shows the effects of beetle infestation from one year ago, as evidenced by the red needles, and the trees infested this summer that are still green. Next summer every tree in this picture will be brown.

In both of the following pictures the mature trees are essentially 100% dead, although many are still green, but in the foreground you will note a vigorous young stand of lodgepole and ponderosa pine. These are the results of a previous "clearcut" that is ostracized by so many but still remains a viable option in certain limited circumstances.

The question arises "Why are so many trees affected if the beetle is a desired part of the natural selection process?" Since the beetle primarily attacks the weaker trees it becomes apparent that all of these trees have been weakened and the primary reason is that the stands are too dense. Not enough nutrients to support the wood mass that is present. Other conditions, such as over maturity, drought, or root rot, are contributing factors but stand density is the big culprit.

The NPF Red River Ranger District is predominantly lodgepole pine. The overstock situation was recognized many years ago and in the early 1980's a special appropriation was made to increase staffing and facilities to implement a major

thinning and harvesting program. The facilities were built and the process commenced. This picture is an example of what resulted from one of their 1985 thinnings. Please note that no dead trees are evident.

Unfortunately for our beautiful forest, along came PACFISH the ranger station that had been in existence since the early part of the century was closed, the program came to a halt, and the fuel load began to build for a potentially catastrophic fire. One that not only would destroy all the vegetation and wildlife habitat but would also destroy the clear flowing streams and the salmon and steelhead fisheries therein. The current productivity of the streams is illustrated here by a few of this year's salmon run that have spawned, completed their lifecycle, and are now feeding nutrients back to the stream where their life began.

The problem of dying lodgepole is enormous, running well over 150,000 acres in the Elk City area alone. It surrounds our community and has the potential of destroying our homes, our businesses, and economically affecting the whole State. In addition, there exists a serious safety hazard from falling trees to anyone entering into the forest. A Forest Service consultant recently told me that before entering a stand for survey purposes, they first determine an exit path in case the wind increases while they are in the timber. A little wind and the trees fall like dominoes. **IT IS EXTREMELY CRITICAL THAT IMMEDIATE ACTION BE TAKEN TO ALLEVIATE THESE PROBLEMS.**

Fortunately, some actions could be initiated now with little effort. There are many miles of existing roads through and around the affected area. A large portion of these roads provide immediate access to thousands of acres of trees that beg to be removed. These are pictures alongside one such road. The removal of infected trees that are totally within reach of the roadway would have zero negative environmental impact and would be of huge benefit to the forest. These trees should be removed now to protect the still healthy undergrowth and while some commercial value still exists. Numerous jobs would be created in a county that has experienced multiple years of double digit unemployment. If ever a win/win situation occurred, it is here and now.

Due to time constraints, many issues have not been presented here. This is just the tip of the iceberg but I hope it is apparent from what I have presented that the forest problems in our area are now, they are critical, and to do nothing at this point, as has been the ongoing practice, would be devastating to our natural resources and to our nation. Among other things, we must:

1. Immediately remove fire and safety hazard timber
2. Restore foresters to our Forest Service
3. Restore morale in the Agency
4. Restore common sense to the decision making process
5. Eliminate endless appeals to every decision
6. Demand that forest health not be further imperiled by tire ESA.
7. **START NOW AND NOT TOMORROW**

I thank you for the opportunity to be here today and, for all my friends back home, I thank you for bringing the problems of our national treasures to the attention of all Americans.

GOD BLESS AMERICA.

Senator WYDEN. Mr. Woods, thank you.

This has been an excellent panel, and probably what you all have done is illustrate in a half-hour or so the primary challenge ahead of us, and what I really want to accomplish on my watch. I mean, this is my first hearing as chairman of this subcommittee. I have worked closely with Senator Craig for 20 years, and I think we showed with the county payments bill that you could find some ways to take people from very, very polarized positions and come up with practical solutions, and Mr. Woods mentions the win-win situation.

I am convinced, if we cannot on a bipartisan basis find some ways to bring this panel together, what we get is the lose-lose. You do not protect your treasures, nor are you sensitive to local economic needs, and that is just not what I think I got an election certificate for, and I come back to this summer.

I mean, anybody who was watching the thousands of firefighters fight these raging fires over hundreds of thousands of acres has to

recognize that business as usual, which is bad for the environment and bad for community economic needs, is not acceptable, and what I want to do is see if I can find some ways this afternoon to move you a little closer to some areas that we can pursue, both in the fire area and in terms of forestry generally, to come up with some solutions that will promote healthy ecosystems and forest health in particular.

Let me begin with you, Mr. Lawrence, if I might. You have heard Mr. Woods and Mr. Nelson and in particular folks in New Mexico as well talk about areas that have suffered severe insect infestations, and Elk City, which Mr. Woods has talked about, or severe fires, like I mentioned the Warner Creek area in Oregon. What is, in your view, the appropriate way to manage these areas so as to be sensitive to the economic needs of these communities?

Mr. LAWRENCE. Well, I think the starting point is to recognize that insect infestations present different challenges from the general enterprise of trying to do fire risk reduction in a more general forest. I think that most insect infestation areas have to be judged on their own merits. It is a difficult thing to generalize about.

There are places where insect infestations appear to be truly frightening, and then 2 or 3 years later turn out not to have had a particularly abnormal effect. There are other places where insects kill in particular areas almost completely, and what is left behind is a whole bunch of dead trees whose fate ultimately is going to be burn up, and to burn up relatively hot, and I think as between those two polar opposites, it is very difficult to speculate or to generalize about what the appropriate approach is.

Just a couple of general principles. You may or may not know that my organization is not a zero-cut organization. We do not oppose commercial logging on the national forests. We think the question is where it should be done and how, and I say that I think we cannot confuse restoration logging with commercial logging. That does not mean there should not be any commercial logging.

One place for commercial logging is places where there is a very high percentage of beetle kill, bug kill, or in some cases, rare cases, pathogen-killed trees, and it is an appropriate thing to look at, but it is very difficult to say sort of, you know, a priori, let us do it, or let us not do it.

I think another important thing to recognize is there is a big difference between going into an area before it burns, and going into an area after it burns. Areas that have burns in particular areas that have burned relatively hot and have suffered disturbance from management over the years tend to be very sensitive, and they have damage. What science we have about restoration efforts in those areas suggest logging those areas is very tricky, has lots of downsides.

There is less indication to show that there are big problems in the wake of logging trees that have been killed but not burnt, so there is some reason to think about getting in early and making a decision early about whether to log a stand or not. Waiting until it burns and then rushing in to do a so-called salvage logging operation often does not produce very much in the way of value for the timber companies and the communities, and it often produces lots of environmental harm.

Senator WYDEN. I would be very interested, and you could get us this for the record, to have you try to lay out in your view what are the appropriate management principles for those areas, because I think you are right, there is certainly, between the extremes, some differences, but could you get that for us, say in the next couple of weeks?

Mr. LAWRENCE. I will do what I can. I want to underscore—I am hedging here a little bit because the first thing I am going to do is go talk to scientists who know the most about this. This is not an area I prepared for today, and I know this much, that it has been a couple of years since I have talked to those guys, so I have got to track them down and hear what they have to say, read their research and think about it, and not to dodge you, but I think a couple of weeks is an ambitious timetable for that, given what is on our plate.

Senator WYDEN. This is going to be an ambitious subcommittee. [Laughter.]

Senator WYDEN. Because we have got a lot of work to do, and it may be of some solace to you, I am going to ask the flip side of the question now for Mr. Nelson and Mr. Woods, because Mr. Nelson and Mr. Woods are saying that they want to go on in there and deal with dead and dying material, and insect infestations, and I would be curious what environmental safeguards you think you two gentlemen believe ought to be applied to this kind of timber harvest.

Mr. NELSON. Should I go first?

Senator WYDEN. Either one.

Mr. NELSON. Well, first of all I think you need to talk about why you have these insect epidemics. There are insects in our forests all the time. They are natural populations out there. The reason you have the pictures that Mr. Woods brought here is because we have forest health conditions where we have trees under an immense amount of stress.

It is compounded by the fact that we have drought cycles, but in general, we have vastly overstocked conditions out there that puts the individual trees at stress, so that when these insects that are always out there get into conditions where you have vast acreage with trees that are growing much to close together, that are fighting for oxygen and nutrients, that is when you get insect epidemics, so I guess I would say that first of all an insect epidemic should be part of the fire plan, because it is the same cause. The overstocked, unhealthy forest conditions are going to produce both fires and insect epidemics.

The second point I think I would make is that this is truly a win-win situation, and what I heard you say, Senator, I agree with. In that vein, I do not see where we need to make a distinction between restoration and commercial logging. If we have a good, balanced program with commercial logging that takes out the fuel, we can generate electricity with it instead of making dirty, polluted air when the fires come in. We can also take out saw logs and make boards, and keep these rural communities in jobs. That is a win-win situation, so I do not quite understand the distinction between restoration and commercial logging.

Senator WYDEN. Mr. Woods.

Mr. WOODS. I agree with what he said, and the thing that I would like to talk a little bit about, you mentioned the environmental protections that we have, and number 1, in our area—and I will just talk about our area particularly—we have a rather healthy undergrowth of Ponderosa pine, of firs, and some other species in the lodgepole, which everybody recognizes needs to be protected. I doubt that anybody is more concerned with the environment than we are in Elk City on the long term.

What I talked about also was being able to establish at least some fire breaks to take out some of these things from existing roads, so we do not create any additional environmental damage. Our biggest problem, quite frankly, is in the Forest Service, and it is not that we do not have good people in the Forest Service, but their hands have been completely tied. There are mountains of paperwork that face them, and they sit in their offices with glazed eyes, quite frankly, and I think that is one of the reasons why the morale is so low. They have impossible jobs. They cannot get anything done. If they do anything, it is appealed. It is appealed and appealed and appealed, and I know that you gentlemen are more than familiar with that story.

But there is a way to immediately attack this problem in our area, and it does need to be done immediately, through a categorical exclusion, where these dead trees and dead pine trees that are within reach of the roads could be placed in a category that would not go through an appeals process and some removal could be established right now, and during this period of time, when you are getting part of this out, you can work on the rest of the problem.

Senator WYDEN. I am going to ask you two to do the same thing that I asked Mr. Lawrence to do. See if in the next couple of weeks you can get me a statement of how you would apply environmental safeguards to the harvest that you want to have, because I want to take those two statements, I want to take what Mr. Lawrence has said with respect to his concerns about how you deal with it from an environmental standpoint, and his desire to talk to scientists, which is plenty legitimate in my view, with what you are saying, because I have made it clear I want to get that dead and dying material off the forestland.

But I want this panel to understand, there is not going to be a salvage rider on my watch. We are not going to go back to those kinds of polarizing days that bring you a lose-lose situation. They are bad for the environment and bad for the economic needs of the community. We are not going back to that. We are going to stay at it until we find some ways to bring folks together, and you mentioned doing more of it at the local level. Senator Craig and I are very proud of that county payments bill, because it gets more of the decisionmaking out of Washington, D.C. It gets it out at the local level, and that is where the county projects portion was so important in terms of getting the legislation done.

So I asked the question in the way that I did for a reason, and that is that I am very hopeful that we are going to be able to figure out, like we did with the county payments legislation, a bipartisan coalition of sensible people from the scientific community and local communities around this country, and industry and environmental

leaders, and make some more progress here in an area that is absolutely key to reducing fire, which we are all interested in doing.

The last question would be for all the panelists. Maybe we can start right down the row with you, Mr. Hubbard. I actually will have a couple of other questions, but after this I want to recognize my colleague.

Mr. Hubbard and our other panelists, last year the Congress instructed the agencies to focus their efforts to reduce hazardous fuels in their communities that were at high risk from wildfire. Now, we have gotten reports that only a small portion of all the projects are being implemented in the wildland urban interface near communities. I would be curious whether that is your experience, and whether you think Federal agencies can be doing more to carry out what has been an important priority.

Mr. Hubbard.

Mr. HUBBARD. The States were asked to produce a list for the Federal Register of communities that were threatened by wildfire and forest condition. They produced 22,000 communities for that list. The process was that each State, through its own system, determined how to assess that risk, and provided that list of communities.

The Federal land management agencies were then asked to respond in field treatment projects that corresponded to protecting those communities that were at risk. In 2001, not much of that happened. We were dealing with projects that already had environmental clearance that had started through the process prior to that list being produced.

We accepted that. We coordinated with those agencies on how we could apply the resources spent on the private lands best with what was coming forward in the future on the Federal lands, but after the Federal agencies got finished with the preparedness implementation that achieved the most efficient level, they then turned their attention to fuel treatment projects and the joint planning of those projects, collaborative with the State and local communities. That is very much underway, and I think in 2003, when we get through the environmental clearance process, you will see good results.

Senator WYDEN. All right.

Mr. Lawrence.

Mr. LAWRENCE. Yes, the answer is they can do a lot more to identify priority communities and priority projects in community areas, and not only for the reasons that Mr. Hubbard points to, but also because the whole business of identifying where priority treatment priorities are going to lie is kind of a hot potato. It is not surprising that they have not made a great deal of progression it.

One critical element in doing that, I think, is going to be to work with community leaders to work on a program, and to integrate with a program of bringing fire resistant materials to the structures in question. As Mr. DeIaco said, in the Los Alamos fire the majority of the structures—this is not quite what you said. It is about what you said.

The majority of the structures that were lost were actually experienced a moderate to low intensity fire, and they either burned up because of that low to moderate intensity fire, or because of spot-

ting, firebrands that came from miles away. You can thin a very long way away from houses and still lose them and, heaven help us, every once in a while lose firefighters as well, if you do not make the houses more resistant to fire.

It does not do any good to define an urban wildland interface as miles away from communities, and then leave the houses exposed, so an integral part of this is working with community leaders, getting that work done to make sure that when you do thin around communities, you have got something there that can be defended.

Mr. DEIACO. Yes, I think the answer for the southern New Mexico area is a yes, too. The Forest Service there is a couple of years ahead, probably was ahead of the curve. They had stuff on the shelf, NEPA-ready. They have done more than 13 miles of the interface around the community. We pretty much have an intermixed community right where I come from. They have done a good job.

But again, it does not do a whole lot of good if you do not get on the other side of the interface and get the private folks in there doing their stuff, because that is where the damage is.

Thank you.

Senator WYDEN. And that is clearly where progress has been slow. All right.

Mr. Nelson.

Mr. NELSON. On the flip side of that, in California we have an infrastructure setup between the State of California Department of Forestry and the major private landowners as well as the Federal Government. It is called the Firesafe Councils. The one I am most familiar with is in the Quincy Library Group area, and in those places the private entities and the State have done an amazingly good job of getting fuel breaks—thinnings—around these communities.

The problem we have seen is that the Forest Service has not come to the table. It has not been their own fault in all cases, but they have been hampered by some of the hurdles I went into in my written presentation. In our case, in California specifically, the Sierra Nevada Framework EIS would not allow them to thin down anything below a 12-inch tree, for example. It is almost impossible to have a fuel break that is going to reduce the spread of fire with those kind of constraints on it. So in the case of the area that I am familiar with, the private entities and the State have done a very good job of trying to get at these communities, but the Feds have not.

The second point is, and it was previously mentioned, you cannot really stop a fire of the magnitude that we are seeing now with a shaded fuel break. All it really allows you is a safe place to get firefighters in, to get the fire down out of the tops of the trees so that you can get people and equipment on it and try to stop it, so the idea that you are going to thin, you can argue whether it is 50 feet or 5 miles around a community, that is not going to stop these raging fires we are seeing now, so we need to get out and make it beyond that. We need to reduce the stockings throughout the forest.

Senator WYDEN. Mr. Woods.

Mr. WOODS. I would just like to reiterate some of the things I have already said, and particularly in terms of the immediacy of

the problem. For us, we are looking at lodgepole pine that is mature pine, almost uniformly through the forest, and I said—it is a bad word to even bring up, but probably the best way to treat a lot of that is just absolute clear-cut. It is stuff that has got to come out of there. If it burns, it is going to be so intense that you are not going to be able to stop it.

And I was reminded a couple of years ago, I think Senator Craig was in the area south of the Salmon River with Secretary Babbitt and Governor Kempthorne, in a fire in this type of timber, when you cannot hardly go into it because the trees are falling so fast and the firefighters are at extreme risk. You are at extreme risk in this area right now if you just go out and survey a stand.

In fact, as I mentioned in my testimony, one of the consultants told me that they first of all, before they enter a stand, try to figure an escape route. If they get caught in that lodgepole timber when the wind comes up, there is no escape route, and I guess that my main thing is, now is imperative, and we do not have time to go through study after study.

Senator WYDEN. That is why I asked you both for your principles and how you would approach it in a couple of weeks.

Mr. WOODS. And we will have a plan to you in 2 weeks about environmental concerns.

Senator WYDEN. That is how we are going to have to do this, folks. If you all tell us how you are going to comply with the environment, Mr. Lawrence will tell us what he thinks the best science is that makes sense for handling these areas so as to promote sustainability, then we can do what people give us an election certificate for, and that is to come up with a way to make our forests healthier and deal with these issues.

So it has been an excellent panel, and we will go to Senator Craig.

Senator CRAIG. Mr. Chairman, thank you. I wanted to get back here to thank Trent for being here, and I see his wife in the audience. We have over the years worked together on a lot of issues. It is not unique that they wear a pin or a button that says, Save Elk City. For any of you who have not been there, it is this unique, private enclave, private property enclave in the middle of the Nez Perce Forest. It is a community whose relationship to the forest causes its existence, and I would like to think that the existence of the forest could be caused by the community itself.

To lose the kind of infrastructure, Mr. Chairman, we are in the process of losing in many of our small communities, mills, the very tool that the Forest Service now needs to make any value whatsoever of a forest practice toward improving the forest health is really at risk here at the moment, and I think it is something that all of us have to face and deal with.

I would have to take some issue with Mr. Lawrence, and the fact that he says there is no science that argues thinning. Well, we have not done enough thinning, although we have had a lot of pilot programs out there that would suggest that changing the character of the stands by removal, or replicating what Mother Nature would have done 100 years ago, does substantiate. I think what we are attempting to do here is to get back into our forests and try to rep-

licate what Mother Nature would have done here 100 years ago before we got at the business of putting out fire.

The introduction of fire into the circumstances of what we are talking about today is catastrophic, and we have had 2 full years demonstrating that now. Even in 1994 it was being demonstrated in a very real way, before we got into another wet cycle in the Great Basin regions of the West, and now we are back out of that and into the drought cycle.

We are back into ever increasingly hotter and totally stand-destructive kinds of fires of a nature that is well beyond, I think, what any of us had imagined, or even some of our friends on the other side who are advocates of no management whatsoever on our public lands are beginning to recognize is in itself an almost indefensible position.

Having said that, I would agree with you, there are not going to be any salvage riders, nor would there be any that I would support, but we are frustrated, tremendously frustrated when we suggest, or as some have suggested here that you do not thin in roadless areas. Then let me count the times the fire either started in the wilderness, roadless areas, and moved into the roaded areas, and then moved to the urban interface.

I am not sure on which end you start. If it is only the urban interface that we are allowed to enter, then that will not change—it will only save the trophy homes, and some of the suburban areas are the urban areas that have grown out of these communities that were once beside the forest that are now in the forest. It will not save the forest.

And clearly, public policy and this committee ought to be at the business of saving the forest, and changing the character of the stands so effectively outlined by the bug kill that is now so clearly evidenced in the Great Basin West, that is in part a combination of the uniqueness I think that Mr. Nelson outlined.

We had situations in the West this past 2 years in which standing trees had less moisture content than had they been dropped, sawed, and run through a dry kiln, and when that happens, and the pitch comes forward in its defense of itself for the purpose of saving the tree against the bugs, the tree inevitably dies, or it weakens itself to a point where only the strong survive, and that is one in every 50 or 60, and we set ourselves up for catastrophic events that will ultimately fall out.

I would hope that we have started down a road where we can gain public support and gain some of those who were once our critics, will work with us becoming cautious advocates of a way to save our forests to ensure their health and their watershed qualities and their wildlife habitat.

Mr. Chairman, you and I have worked closely on a lot of these issues. There are a good many questions I could ask, but the reality is that you do not just start at one end of a problem and suggest that you solve it by messing around down at one end of it. Many fires, and the fires that we saw over in the Quincy area, that took out phenomenal habitat, did not start in the areas that were once treated. It started in the areas that were not treated, and those were the unroaded areas, and in some instances the wilderness areas.

Now, we are not going to go into wilderness, and neither you nor I would support that, but to suggest that we do not even look at the unroaded areas, or that we are not allowed to develop a roadless policy, a new roadless policy that will allow us some flexibility there to regain forest health, Mr. Chairman, is in itself a half a solution at best, to a problem that will only increase as we cycle ourselves through these forests, and as we now bring ourselves to it.

I want to thank the folks for traveling from Idaho, but I want to thank all of you for being here. As the chairman and I and our colleagues in the Senate work with this new administration and the policies that are at hand, and hopefully the ability to adjust those policies a little bit, and to do so in the bright light of the public eye and the public attention—these are public lands and, frankly, I do not want to see Idaho burn. I do not want to see any other area burn, but we have literally millions of acres in my state today that are unroaded, that are ready to torch, and if we go through another year or two of the kind we have experienced in the last two, they may well go.

I would feel not only neglectful, but I would feel that I had acted in an irresponsible way, Mr. Chairman, if I had not tried to set in place policies that tried to save those forests in the name of the environment in which they now are.

Thank you. Thank all of you very much for being here. We appreciate your testimony and your involvement in these issues.

Senator WYDEN. I thank my colleague for a statement that, as has always been our tradition, indicates that you are willing to meet me more than halfway in terms of trying to work these issues out, and I say to the panel members, what we can do if the people from the industry give us the essence of how they would approach these issues from an environmental standpoint. If Mr. Lawrence and his associates in the environmental community talk to us about land management practices you all will follow, Senator Craig and I will perform as we did on the county payments bill. We will work with Chairman Bingaman and the Ranking Republican, Senator Murkowski from Alaska, and work with you on an ongoing basis to put in place a new approach that will keep forests in this country healthier. This will allow us to have more sustainable forestry, and will address both environmental and economic needs, so that is why we put you on that tight time frame.

It has been an excellent panel, and unless you all have anything you would like to add further, we will excuse you at this time. Does anybody have anything further they want to add?

The hearing is adjourned.

[Whereupon, at 5:45 p.m., the hearing was adjourned.]

APPENDIX

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

NATIONAL ASSOCIATION OF STATE FORESTERS,
Washington, DC, August 10, 2001.

Hon. ROBERT C. BYRD,
Chairman, Senate Interior Appropriations Subcommittee, U.S. Senate, Washington, DC.

DEAR SENATOR BYRD: The National Association of State Foresters (NASF) is pleased to support and recommend implementation of the document titled, "A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: A Ten-year Comprehensive Strategy."

The NASF is a non-profit organization that represents the Directors of State Forestry agencies in all fifty states, eight U.S. territories, and the District of Columbia. The need to improve public and firefighter safety, reduce hazardous fuels, and restore forest ecosystems is of nationwide concern and affects private as well as public lands. Our members are committed to working collaboratively; across jurisdictional boundaries, to promote the health and sustainability of our nation's forest resources.

The NASF appreciates the language from Congress in the FY 2001 Interior and Related Agencies Appropriations Act (P.L. 106-291) which directs the Secretaries of Interior and Agriculture to work in full partnership with state and local governments in responding to the current wildland fire and hazardous fuels situation.

We were also pleased to be included in the core group of stakeholders that drafted this strategy. We commend the entire drafting group for their dedication to the effort and for the commitment to partnership and collaboration reflected in the document.

As the strategy moves forward to implementation, the NASF encourages both Congress and the Secretaries to maintain the emphasis on full state-federal partnership, to focus on local involvement, prioritization and decision-making, and to encourage actions that transcend jurisdictional and/or ownership boundaries to address landscape level resource needs.

Thank you for your interest in and commitment to the sustainability of our nation's forests and communities. We look forward to working with you, as well as our federal and non-federal partners, to implement this strategy.

Sincerely yours,

CONRAD MOTYKA,
President.

August 13, 2001.

Hon. ROBERT C. BYRD,
Chairman, Subcommittee on Interior and Related Agencies, Committee on Appropriations, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: We endorse and commend to you the enclosed document, A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: A Ten-Year Comprehensive Strategy.

In October 2000, the Congress passed and the President signed the FY 2001 Interior and Related Agencies Appropriations Act (P.L. 106-291). The Conference Report accompanying P.L. 106-291 directed the Secretaries of the Interior and Agriculture to "work with the governors on a long-term strategy to deal with the wildland fire and hazardous fuels situation, as well as the needs for habitat restoration and rehabilitation in the nation." They are to "develop a coordinated National 10-Year Comprehensive Strategy with the states as full partners in the planning, decision making, and implementation of the plan." The Conference Report also stated that a collaborative structure with the states and local governments as full partners, will be

the most efficient and effective way of implementing a long-term program. We believe the Strategy meets these important objectives among others.

A number of stakeholders, many of whom are listed in Appendix II, assisted the Governors in the development of this strategy. We appreciate the work of these individuals and all others who contributed to this important effort.

Over the next nine months, we will prepare a detailed implementation plan for the Strategy that will seek to improve the integration of the wildfire management programs of the Departments of Agriculture and the Interior, establish consistent priorities and performance measures, provide timelines for accomplishments, meet applicable legal requirements for federal and state actions, and continue to build upon the collaborative approach undertaken thus far. We expect to complete the implementation plan by May 1, 2002.

ANN M. VENEMAN,
Secretary of Agriculture.
GALE A. NORTON,
Secretary of the Interior.
DIRK KEMPTHORNE,
Governor of Idaho,
Western Governors' Association
Chairman and Lead Governor.
JOHN A. KITZHABER, M.D.,
Governor of Oregon,
Western Governors' Association
Lead Governor.
JANE DEE HULL,
Governor of Arizona,
Western Governors Association
Vice Chair.

NATIONAL ASSOCIATION OF COUNTIES,
August 13, 2001, Washington, DC.

Hon. ROBERT BYRD,
Chairman, Interior Subcommittee, Senate Appropriations Committee, U.S. Senate,
Washington, DC

DEAR CHAIRMAN BYRD: The National Association of Counties (NACo) endorses "A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: A Ten-year Comprehensive Strategy."

Over the last decade, county officials have witnessed the ecological and economic devastation wrought by increasingly severe wildland fires across the country. As a direct result of this firsthand experience, we are convinced that the approach outlined in the Strategy is exactly what we should be doing to protect our communities and our natural resources.

NACo was heartened by the fact that Congress directed the Secretaries of the Interior and Agriculture to work with the states and local governments as "full partners" in developing the Strategy. We commend the Secretaries and Governors for the deference to local perspectives that permeates the Strategy, thus fulfilling both the spirit and the letter of the law.

Ultimately, however, our support for the Strategy is based not on the process by which it was developed, but on the promise it holds for achieving measurable outcomes on the ground. We believe that the Strategy lays out a roadmap for (1) improving wildland fire prevention and suppression; (2) reducing hazardous fuels; (3) restoring fire adapted ecosystems; and (4) promoting community assistance. America's counties are committed to meeting each of these important goals and look forward to working with the Secretaries and the Governors to implement the Strategy.

We thank you for your vision and look forward to working with you to achieve our common aims.

JAVIER GONZALES,
President, NACo,
Commissioner, Santa Fe County,
NM.
GEORGE ENNEKING,
President, NACo Western Interstate
Region,
Commissioner, Idaho County, ID.

INTERTRIBAL TIMBER COUNCIL,
Portland, OR, August 17, 2001.

Hon. ROBERT BYRD,
Chairman, Appropriations Subcommittee for the Interior and Related Agencies, U.S. Senate, Washington, DC.

Hon. CONRAD BURNS,
Ranking Member, Appropriations Subcommittee for the Interior and Related Agencies, U.S. Senate, Washington, DC.

Hon. JOE SKEEN,
Chairman, Appropriations Subcommittee for the Interior and Related Agencies, U.S. House of Representatives, Washington, DC.

Hon. NORM DICKS,
Ranking Member, Appropriations Subcommittee for the Interior and Related Agencies, U.S. House of Representatives, Washington, DC.

DEAR CHAIRMEN AND RANKING MEMBERS: On Monday, August 13, 2001, the Western Governors Association issued "A Collaborative Approach for Reducing Wildland Fire Risks to Communities and Environment," a "10-Year Comprehensive Strategy" developed by a stakeholder group led by the Western Governors Association (WGA) that hopes for the Strategy's adoption by the Congress and U.S. Departments of Agriculture and Interior.

The Intertribal Timber Council, an organization of seventy forest-resource owning Indian tribes and Alaska Native organizations, attended the development sessions of the stakeholder group, and we wish to take this opportunity to state the Intertribal Timber Council's (ITC) position on the Strategy. We must also note that this statement of position is that of the ITC alone and is not intended to represent the specific views of any individual tribe.

The Intertribal Timber Council is supportive of the Strategy, to the degree that tribal participation can be fulfilled within the well established and overarching policy of the government-to-government relationship directly between the United States and Indian tribes, and within the unique treaty and trust obligations of the United States to Indian tribes, our people, and our resources. With the Nation's forests—and their potential for wildland fire transcending ownership boundaries, the need for communication and collaboration among all involved parties is essential to comprehensively address wildland fire issues. We were pleased that our representative was able to take part in the WGA-led stakeholders group that developed the Strategy, and we hope we will continue to be involved in the development of the Strategy Implementation Plan.

There are, however, several issues within the Strategy that are of concern to us.

First, application of the Strategy's "priority setting" to Native American communities and resources must be clarified to fully recognize and adhere to federal trust and treaty responsibilities to tribes and their resources, and the tribal—federal government-to-government relationship.

Currently, the Strategy's Framework for Collaboration's description of Local Level activities includes tribes as participants in local stakeholder groups that are to help "establish priorities" for the application of wildland fire assistance, raising the question of whether tribal participation in local stakeholder groups is to subject tribal wildland fire funding to the collective priority determinations of the local stakeholder group. The Strategy's Summary discussion of the Framework for Collaboration underscores that question by noting the Framework is to apply "across all ownerships and jurisdictions." These raise the prospect that, within the Framework, parties other than the tribes and the United States could seek to become involved in determining the national level of funding for wildland fire activities on Indian trust lands, and in determining how that money is to be spent within Indian trust lands. That is not acceptable. Quite simply, no parties other than the U.S. and the tribes should have authority to determine how the U.S. fulfills those obligations. While tribes certainly are willing to work with all their neighbors in coordinating the most effective application of their respective funds and resources, it must be clear that the determinations for Indian Country remain solely in the hands of the U.S. and the tribes.

Second, we are concerned that, within the Strategy's Framework for Collaboration, tribal governments have been deleted from participating at the National Level, and that only the governors are to sit as "full partners" with the Secretaries of Agriculture and Interior. Earlier drafts of the Strategy included tribes and local governments in National Level participation, but the final version issued on August 13th unexpectedly deletes all but the governors from the National Level.

While we have been assured that the Strategy is to operate within all existing law and regulation, and that the Strategy says “line officers of the land management agencies are the principal decisionmakers concerning public lands” (note: Indian trust lands are not “public lands”), the Strategy also makes clear its intention that the governors, as “full partners”, have a substantive role in national budget and policy decisions regarding wildland fire. Such decisions could impinge upon the availability and application of wildland fire resources for federal trust obligations for Indian tribes and Indian resources.

Tribal governments are separate and distinct from state governments, and have a direct and unique relationship with the United States founded in treaties and fiduciary obligations. Given such interests, it is altogether appropriate that tribal governments also have a seat at the federal table. Tribes may be willing to participate in the coordinative efforts of the Framework for Collaboration, but in no way does that mean representation of tribal interests at the federal level on this issue is to depend upon agents of state government. Accordingly, the ITC asks that, in any Congressional or Executive adaptation of the Strategy, tribal governments be provided a tribal representative in National Level forums on wildland fire issues.

As mentioned before, the ITC is pleased to have taken part in developing a comprehensive collaborative and cooperative Strategy for all aspects of wildland fire and communities at risk. The ITC understands the need for and is supportive of such plans, and we hope to participate in developing the Strategy Implementation Plan, where we may have an opportunity to pursue the necessary and appropriate clarification of tribal roles in “priority setting.” We also hope to work with the WGA on assuring appropriate tribal participation in National Level decision-making on wildland fire issues. But ultimately, we ask that the U.S. Congress and the Executive Branch fully recognize and exercise your unique federal trust and treaty responsibilities to protect tribal governments, our communities, and our resources.

Sincerely,

NOLAN C. COLEGROVE, SR.,
President.

WESTERN GOVERNORS’ ASSOCIATION,
September 11, 2001.

Hon. ROBERT C. BYRD,
Senator of West Virginia, U.S. Senate, Washington, DC.

DEAR SENATOR BYRD: We seek your continued support for substantial funding for wildland fire management activities. Based on the agreement with the previous Administration and with the Bush Administration under the recently endorsed 10-year Comprehensive Strategy, “A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Comprehensive Strategy,” the Western Governors’ Association (WGA) fully supports substantial funding in the areas of fire preparedness, rehabilitation and restoration, hazardous fuel reduction and community assistance.

WGA believes that the reduction of fuel loads on public lands and in those areas adjacent to communities in the wildland-urban interface is critical for protecting the health of the nation’s resources and ensuring public safety. We support hazardous fuel mitigation through increased prescribed fire, thinning and the restoration of degraded watersheds. Active management and restoration treatments will require not only investment by the federal government if the forest health and reforestation goals are to be achieved in a timely manner, but will also require partnerships with the states and implementation at the local level on all land ownerships as called for by the Congress in the committee report for the FY 2001 Interior and Related Agencies Appropriations Act (P.L. 106-291). In fact, the report calls for states to be “full partners in the planning; decision-making, and implementation” of the 10-year Comprehensive Strategy. This same language, along with the associated language addressing the 10-year Comprehensive Strategy should be incorporated in the conference report of the FY 2002 Interior and Related Agencies Appropriations Act.

Wildland fire threats, impacts and consequences across the nation are real and substantial. Our states are again feeling the impact this summer. In 2000, over 8 million acres burned in the United States, and suppression costs alone reached a record \$1.6 billion. At least 3 million acres have burned so far this year. We can significantly reduce these figures in the future with up front investments to improve the health of these lands. Accordingly, we urge your support for the provisions of the Senate and House marks as detailed in the attachment.

JOHN A. KITZHABER, M.D.,
Governor of Oregon.
 WILLIAM J. JANKLOW,
Governor of South Dakota.
 RICK PERRY,
Governor of Texas.
 MICHAEL O. LEAVITT,
Governor of Utah.
 GARY LOCKE,
Governor of Washington.
 JIM GERINGER,
Governor of Wyoming.

[Attachment.]

WESTERN GOVERNORS' ASSOCIATION (WGA), FY 2002 INTERIOR AND RELATED
 AGENCIES APPROPRIATIONS ACT, WILDLAND FIRE MANAGEMENT NEEDS

Western governors are committed to accelerating restoration of unhealthy forests and watersheds, working in partnership with stakeholders, and federal and local partners.

Restoration Rehabilitation, Fuels Treatment and Suppression

WGA supports the House mark regarding funding of restoration and rehabilitation work and accompanying language allowing for the funds for fuels and rehabilitation in the National Fire Plan of the Forest Service to be used for projects on adjacent non-federal lands in the wildland urban interface. We also support the fire suppression and hazardous fuel reduction funding in the House mark for the Forest Service account.

Emergency Appropriations and Volunteer/Rural Fire Assistance Programs

WGA supports the emergency appropriations designation for the Department of the Interior under wildland fire operations in the Senate mark. We commend both the House and Senate on its continued funding of the state and volunteer fire assistance programs of the Forest Service and we support continued funding of the rural fire assistance program for the Department of the Interior. Rural fire departments are a critical link for fire preparedness throughout the West.

Community and Private Land Assistance

WGA supports continued funding of the community and private land fire assistance account under State and Private Forestry of the Forest Service that was established in last year's appropriations bill. This account enabled federal and state partners to more directly engage private landowners and communities to recover from and respond to severe wildfire. For FY 2002, neither the House nor Senate marks provide funding in this account. We would strongly encourage agreement during conferencing to provide continued assistance through this account.

Forest Resource Information and Analysis (FIA)

WGA supports the FIA work of the Forest Service with the states and supports the four-year ramp up of forest inventory and analysis funding according to the FIA business plan developed via direction from the 1998 Farm Bill Research Title. States cannot accurately and effectively plan and respond to wildfire without the timely and thorough information provided by the FIA program.

OREGON NATURAL RESOURCES COUNCIL,
WESTERN FIELD OFFICE,
Eugene, OR, October 5, 2001.

SUBCOMMITTEE ON PUBLIC LANDS AND FORESTS,
Senate Committee on Energy and Natural Resources, Dirksen Building, Washington,
DC.

Subject: Written testimony for the Sept. 25, 2001 hearing on the National Fire Plan

DEAR SENATOR WYDEN AND MEMBERS OF THE COMMITTEE: Please accept the following written testimony from Oregon Natural Resources Council Fund (ONRC) concerning the effectiveness of the National Fire Plan, including fuel reduction efforts, and the 10-Year Comprehensive Strategy for Reducing Wildland Fire Risks to Communities and the Environment that was recently agreed to by the Western Governors' Association, Secretary of the Interior Gale Norton and Secretary of Agriculture Ann Veneman.

We'd like to supplement the record with the follow principles relating to wildland fires and fuel management:

1. Let's stop doing things that exacerbate the fire/fuels problem, e.g., inappropriate fire suppression, timber harvest that removes large wood and leaves small fuels, livestock grazing that shifts vegetative composition and structure, etc. If the lack of fire management plans are an impediment to letting fires burn, by all means let us make it a high priority to prepare these plans.

2. Fire suppression must be radically rethought. When conditions warrant, we must learn to let fires burn. Fire suppression is what got us in this situation. We should now view most fires as our friend. Aggressive fire suppression should be the exception rather than the rule.

3. Fuel reduction and fire suppression efforts should be focussed on the urban interface where human lives and infrastructure is most at risk. Wild unroaded forests and rangelands should be the last place we spend precious fire plan dollars.

4. Fuel reduction should focus on landscapes and forest types that were naturally visited by frequent fire. Many areas of the west, such as north slopes and high elevation areas, naturally had high vegetation density.

5. Use prescribed fire to implement fuel management objectives when ever possible. Prescribed fire (appropriately used) is much lighter on the land than logging. Whenever logging or heavy equipment is proposed, the land management agencies should be required to first analyze prescribed fire as an alternative management tool.

6. We must be mindful that fuel management efforts may increase our ability to control low intensity fires while doing nothing to help us control the high-intensity fires. The irony here is that most Americans probably want and expect us to control the high-intensity fires that we can't realistically do much about, while control will be exerted over low-intensity fires that we should let burn in the interests of restoring ecosystem processes.

7. Fuel reduction efforts should focus on removing only the material that has accumulated since fire suppression has become prevalent, i.e., big old trees are not the problem and should not be cut in the name of fuel management.

8. Post-fire salvage is virtually irrelevant to reducing fire risks. We must learn to leave these fragile landscapes to heal without human intervention. First, the high risk fine fuels are mostly consumed while the large wood that remains is not highly inflammable. Second, the post-fire landscape will be severely harmed by salvage logging. Soils, water quality, and wildlife are all vulnerable to disturbance and logging will almost universally retard recovery of the ecosystem.

9. We should support studies to better understand fire recovery under natural conditions. To that end, the Forest Service should designate a system of representative burned but unlogged areas such as the Warner Fire Recovery Area on the Willamette National Forest as Research Natural Areas.

Please review Oregon Natural Resources Council's attached policy statement on wild and prescribed fire in the Intermountain west.

Sincerely,

DOUG HEIKEN,
Western Oregon Field Representative.

[Attachment.]

[Oregon Natural Resources Council Policy Statement]*

WILD AND PRESCRIBED FIRE IN FORESTS OF THE INTERMOUNTAIN WEST

Over a hundred years of logging, grazing, fire suppression, road-building, and development have resulted in widespread fragmentation and degradation of the magnificent coniferous forests of the Intermountain West. Many of these forests are recognized by the scientific community as being critically destabilized. Still, significant areas, including wilderness, roadless areas, and moist forests, remain relatively unchanged.

Originally, most ponderosa pine and mixed-conifer forests of the Intermountain West were open and park-like, with large, majestic trees underlain by dense grass swards. These low- and mid-elevation forests were shaped by millennia of recurrent forest fire, which helped maintain the forests' ecological integrity by reducing tree densities, controlling forest pests, and releasing a steady supply of nutrients into the soil. Many of the plant and wildlife species in these arid western forests evolved with fire-return intervals as short as 7-30 years and are dependent on the conditions created by fire for regeneration, rapid growth, food, and shelter.

Due to nearly a century of active fire prevention, fire-fighting, and livestock grazing, which eliminates the fine fuels necessary to carry low-intensity surface fire, ever greater numbers of tree seedlings and saplings have survived to maturity. Forests that were once open and park-like due to periodic thinning by low-intensity ground fire now develop into dense thickets. During dry seasons and prolonged drought, these trees become stressed, limbs fall to the ground, and trees die. Consequently, dead woody debris accumulates and forests become increasingly prone to intense fire. Without periodic fire to reduce this fuel load and limit tree numbers, species composition of the forests changes from dominance by fire-tolerant, sunlight-loving species such as ponderosa pine and western larch, to dominance by fire-sensitive, shade-tolerant species such as Douglas-fir and true firs. These changes, in combination with selective logging of large, fire-tolerant trees, have created conditions in which many of the original park-like forests have been converted into dense, fire-prone, and increasingly disease- and insect-prone stands.

Nevertheless, many forests in the region have not been significantly affected by recent changes in the fire regime. Riparian forests and wetter forests on north-facing slopes and at higher elevations traditionally experienced fewer fires. And forest types such as high-elevation lodgepole pine and Engelmann spruce-subalpine fir have always developed into dense flammable forests, which were periodically consumed by stand-replacing fires.

Because of drought, selective logging, high tree densities, high fuel loads, and the loss of a mosaic of burned and unburned forest stands, low-elevation forests and those on south-facing slopes are now more vulnerable to destructive fire, insects, and disease than they were formerly. ONRC advocates that land managers initiate measures that mimic nature in reducing fuel loads, so as to return forests to their pre-EuroAmerican-settlement densities and fire regimes. These activities (see next page) include prescribed burning, thinning of small fire-sensitive trees, removal of livestock, a let-burn policy in some areas, and less destructive fire-fighting techniques. Salvage logging, as currently practiced, should be prohibited since it damages already disturbed soils, watersheds, and wildlife habitat. Despite pronouncements by the timber industry, commercial thinning and post-fire logging may not reduce the frequency of fire. In fact, these activities often increase the intensity and rate of spread of fire because of increased fuel loads from logging debris left on the ground. Consequently, salvage logging is incompatible with ecosystem-based management.

PRESCRIBED FIRE

The long-range goal of fire management policy should be to restore forest types, fire cycles, and habitat mosaics to those found before EuroAmerican settlement. For some areas, this is best achieved by manually igniting fires, which thin the understory and remove excess fuels.

A region-wide, long-term plan for restoring intermountain forests needs to be developed. The plan should include a 30-year schedule of prescribed fire to reduce fuels, as well as district-by-district maps delineating areas targeted for a let-burn policy, fire prevention, or fire suppression.

*Statement was peer-reviewed by noted fire and forest ecologists of the Intermountain West.

Priority for prescribed burning should be given to forests near developed areas (the urban/wildland interface), low-elevation or south-facing forests most transformed by past fire suppression, and areas with unnaturally high fuel loads.

Where absolutely necessary to reduce ladder fuels that carry fire into canopies, small noncommercial trees may be thinned, lower limbs pruned, and litter raked away from large tree trunks and snags.

FIRE PREVENTION

Fire prevention should not be a goal of forest management in the Intermountain West except when human life and extraordinary ecological values are at stake. Since fire is an inevitable and ecologically essential component of forest ecosystems, managers should focus on restoring historical fire regimes.

Artificial firebreaks should be constructed only where proven effective, and not at all in wilderness, wild and scenic rivers, roadless regions, municipal watersheds, or ecologically sensitive areas.

Livestock grazing should be eliminated from public forests and wild ungulates maintained within their year-round carrying capacities so that dry grasses can once again fuel low-intensity surface fires.

Private property owners should be required to take measures to "fire proof" their property by clearing flammable vegetation, adding fire-resistant roofs and shutters, and taking other reasonable precautions. By choosing to live in or adjacent to wildlands, homeowners must assume the risk of protecting or replacing their property rather than relying on taxpayers through their funding of firefighting agencies.

FIRE SUPPRESSION

Fire suppression activities should be conducted only when absolutely necessary and with utmost care for the long-term integrity of the ecosystem. Low-impact firefighting techniques should be used.

Fire suppression should be conducted only where human life, developed property, or irreplaceable ecological values (e.g. rare forest types or a major portion of the population of an endangered species) are at stake, or in areas that should be protected until prescribed burning can reduce excess fuels.

Fire suppression should not be allowed in wilderness, wild and scenic rivers, and roadless regions, unless these areas have irreplaceable natural values and are scheduled for prescribed burning.

Fires should not be actively fought where nearby natural fire barriers such as bodies of water or rocky ridges are likely to extinguish the fire.

Due to the risk of de-watering, surface water should not be taken from small streams and lakes for fire suppression. Fire-fighting retardants and foams, which are toxic to fish and other aquatic organisms, should never be used near streams.

Bulldozing and other forms of disturbance should be prohibited in stream channels, riparian areas, wetlands, and on sensitive soils and steep slopes.

As much funding should be available for restoring natural forest ecosystems as for fire suppression.

POST-FIRE ACTIVITIES

"Restoration" activities such as salvage logging, grass seeding, bulldozing, and stream clearing may be as damaging to forests as fire suppression and should be prohibited unless proven effective and beneficial.

Note: Municipal watersheds should be evaluated for non-commercial thinning, prescribed fire, and fire suppression on an individual basis. These activities are appropriate for some, but not all, watersheds.

Yakima, WA, October 15, 2001.

Hon. CHAIRMAN WYDEN,
Forest and Public Lands Committee, U.S. Senate.

I am Kathie Fitzpatrick, the mother of Karen Lee Fitzpatrick. Karen, at only 18 years old, died working on the 30-Mile Fire on July 10, 2001. She had only worked for the U.S. Forest Service for about three weeks. Karen had completed a 40 hour training course, and was supposed to be working as a "Forestry Aid," which could include firefighting. But Rookies are supposed to be kept at the "hind end" of a fire mopping up, and working under the protection, supervision and direction of more experienced firefighting staff. But after only three weeks, and on only her third fire, suddenly she was an "Initial Attack Firefighter," on the 30-Mile Fire. That's what it reads on the bronze plaque that will be inset on her gravestone.

Karen was excited to be working for the U.S. Forest Service over the Summer to earn money to use for College in the Fall. She was going to start courses toward her Associate of Science degree in Fire Science at Yakima Community College, and eventually wanted to become a bi-lingual EMT for the City Of Yakima Fire Department, she hoped. Now that dream will never be realized. How many people may she have helped in her future? She was very athletic, and talented; a 4.0 student and a member of the National Honor Society at West Valley High School. Karen was a young woman who could always seem to rise out of a difficult situation, and win. She was like the clever, quick cat who always seemed to land on her feet, seldom caught by surprise or defeat. But Karen didn't know that she would report to a fire on July 9th, 2001, and be dead by the early evening July 10th because her Incident Commanders, whom she entrusted with her very life, would disregard every safety rule she, and all other firefighters had just learned in fire training school. Karen didn't know that the "experienced men" who would lead them around that death-trap canyon, would not even regard the most common sense danger-reaction to this fire. She was too young to know that things like this can, and do happen. She and her other three colleagues. Tom, Jessica, and Devin didn't know they might as well have signed up for a suicide mission. They all loved life way too much for that!

This fire was no "Sudden Surprise." This fire, which started out small, grew at a steady rate, always leaping far ahead of them. There was no reason to believe it would ever be contained by a 21-man crew! The Entiat Hot Shot Crew who came in originally to work on the fire, late in the night of July 9th, later ordered a helicopter at 2 AM to drop water on the fire early the next morning. Because of the distraction of the South Libby Fire, some 40 miles south, no helicopter, no fire retardant, and no water came. In the words of the Entiat Hot Shot crew still present about 9 AM, "You'd better get out of here or you're gonna die!"

Since when should a crew be expected to fight a fire with only a pulaski?

This is pretty ridiculous! Some water was pumped from the creek, but this proved to be too feeble of an attempt to put this fire out. Other delays had to do with questioning whether or not to dip water out of the Cheweuch River, as it was home to endangered fish! Meanwhile, this fire was spreading at a dangerously fast rate. A fairly accurate summary from the investigative report dated September 2nd, done by the Yakima Herald Republic, chronicles the day from the log, and also describes how fast the fire was spreading. These unfortunate young people were put in a dead end canyon without adequate escape routes, and the only road out, which was also the only road in—was eventually cut off, causing a fatal entrapment for four of the firefighters. Their Commanders led them into a frontal assault on a fire that brought them squarely into an entrapment! Not very smart.

The summary of the day at the fire site plainly demonstrated that the Incident Commanders overlooked every danger signal, and every warning sign that should have obviously lead them to dis-engage their crew from the fire. Where did common sense go that day? Where did a respect for the fire go? Was somebody drunk, insane, or a little too seduced by the fire? Were egos raging out of control? Yes, the fire blew up. But this happened late in the day about 5 PM. The crew had already been kept there all day at highly unreasonable risk. The U.S. Forest Service wants to retort, "Firefighting is dangerous work." Yes, sometimes. But so is crossing the train tracks when the light is flashing, and the whistle is blowing. You can walk across the tracks safely, by using good judgment—or you can lie down and wait for the train to come and run over you! What happened at the firesite of the 30-Mile fire on July 10th was just as extremely reckless, and the lives of four very talented individuals were needlessly sacrificed—for what? Flowers, and brush that will grow back next Spring? The Forest Service should have just closed the road and let it burn! It's necessary for the health of the forest to let it burn once in awhile to clean out underbrush, and diseased trees, etc. When God managed the forests, and lightning strikes ignited fires—this is how it used to be!

This brings up another matter. This crew was sent into fight this fire because it was not a lightning strike, but was man-made—originating from a campfire that "got away." This is ridiculous. When a fire starts in a heavy, dense, designated research area, it needs to be put out as quickly as possible by the nearest fire department, or private agency. It ridiculous to call in young kids from 200-300 miles away, and two or three states out, because they need to earn their college money! The Cheweuch Canyon, full of dry pine needles, old, dry wood, full of turpentine, and heavy fuel load—had not burned in over 200 years. It was a tinder box—a bomb waiting to happen! We stuck prime young people in this situation on purpose? Talk about being seriously violated. The Forest Service pays personnel to take the inventory of the fuel load up there acre by acre, so they will know what will happen when a flame gets into it. They had no excuse for not knowing what would occur up there that day! A computer print out would show that there were 74 private/contractors

or agencies in the region that could have reported to that fire immediately and had it put out before the fire was the size of a house.

Whether a fire starts from a lightning strike or a campfire—it burns the same, and it kills the same! This should never be an issue. Don't you think some cave men had a fire get away from them? Any fires in heavy, dense research areas should be put out as quickly as possible—or get the crew out as quickly as possible! The main consideration should always be: can a ground crew realistically be put out in a particular setting to effectively and safely put out a fire? Do they have the tools and resources to fight the fire? If not, they should by no means be there! Some fires should only be fought from the air with water and fire retardant, as ground crews would too easily be entrapped or consumed, as was the case at the 30-Mile Fire.

Incident Commanders who put crews at an unrealistic risk, need to be disciplined in a way that stings . . . in a way they will definitely remember! They need to be liable in some way, so they will be sure to exercise proper caution. They need to be thinking: "I could get in trouble, I could lose my job . . . I could go to jail!" Unfortunately, at the present time, nothing at all happens to them! Pete Kampen, and Ellreese Daniels still hold their jobs with the Forest Service. I understand from some of the crew, that Pete Kampen even got a raise, and a promotion! I consider this very strange, indeed!

Other primary issues are: The U.S. Forest Service should not be allowed to investigate itself! If someone commits a crime, they don't get to be their own judge, jury, and set their own disciplinary action! No one else does.

Fires in heavy, dense research areas should be treated with extreme caution. They are bombs waiting to go off! Policies prohibiting them from burning on their own should be lifted, regardless of their origination! If they are curtailed, they should be hindered and fought only by air attack crews, not ground crews. Crews on the ground are far too vulnerable.

Any reinforcements that show up to assist in the fire, first need to check in with the Incident Commander on the status of the fire. At 30 Mile—there was no communication whatsoever! The two fire engines from Twisp, radioed by the heli-attack, and came in from about one hour away, had no idea what the status of the fire was when they arrived about 2 PM—on July 10th, and they didn't ask! They arrived, unexpected key the ground crew. They immediately pulled crew from Tom Craven's group, and Tom Taylor's group, and started ordering them around to put out spot fires. Ellreese Daniels needed to tell them, "We've decide to dis-engaged from this fire. We just need to get out of here so we don't die!" This did not happen. About 4 PM, one of the fire engines radioed, and reported that the fire was seriously encroaching on the road. The fire engines pulled out, but a crew of 14 were ultimately trapped inside by about 4:45 PM. It is not clear why the IC's waited so long to try to pull everybody out. Once again, they obviously did not take this fire seriously!

Rookies need more training, and time in less vulnerable and dangerous situations! There also needs to be more training on correctly deploying shelters. The manual says that rocks are a good place to deploy. There are not. It creates extra heat that bakes you!

The U.S. Forest Service promised the families of the victims, after the tragic loss of life in the South Canyon Fire in Colorado in 1994, that this would never happen again.

The policies and procedures that were developed after that tragic loss of 14 young firefighters in Colorado, after similar circumstances as the 30-Mile Fire, were supposed to have been put into effect by 1999 (The Tri-data Study). However, they were not. These ideas also included stern discipline for Incident Commanders who put their crews at unreasonable risk. Do you think Ellreese Daniels and Pete Kampen were thinking about any promises made to the families of the Storm King victims while they were out at the firesite July 10th? I doubt it! But they might remember that they themselves might be liable, or seriously "Get in trouble."

Unfortunately, IC commander Ellreese Daniels, claimed he gave a command to "Come down off the rocks to the road." In this case, those who deployed their shelters on the road because they already were there, lived. The facts, and eye witness accounts of those present, proved that a command like this never happened, and exposed this to be a lie. This was a serious attempt by the Forest Service to put blame on the dead who could not testify for themselves.

It seems like we know the answers, but will we have to lose even more of our brightest and best young people? How many more will die before something is done? Myself and the families request additional Senate hearings, and Congressional hearing to fully and truthfully lay the facts on the table. Some individuals and evidence will only be available through subpoena power. We hope as things in our nation stabilize, this will be one of the issues that will be given priority. As long as firefighters are going out to fight fires, and new Rookies continue to be trained, and put out

in the fields and forests to fight fires, we owe it to all of them to solve these important issues. Thank you for your help, and support!
 Yours Truly for More Safety In Firefighting,

KATHIE FITZPATRICK.

STATEMENT OF STEPHEN J. PYNE, PROFESSOR, BIOLOGY & SOCIETY PROGRAM,
 ARIZONA STATE UNIVERSITY

[Wildlife Fire in America: A Commentary]

INTRODUCTION

Let me express, first, my regrets that I could not attend the hearings. The invitation came with too little time to unravel my prior commitments, all of which involved other people and two of which required travel out of town. The staff suggested that I submit instead a written testimony. They indicated its substance should address the National Fire Plan and the prospects for a repetition of the 1910 fire season. I'm pleased to do so.

I am not a member of any fire agency; federal, state, or private. Nor do I presently receive any funds for research from any such agency. From 1967-1985, I worked seasonally for the National Park Service (save 1982). I have once operated under a cooperative agreement with the Forest Service, 1977-81. I may become a subsidiary partner to a contract, now under negotiation, to write a history of fire management in the national parks. And, shortly, I will receive funding from the Canadian Forest Service to inaugurate a history of fire in that country. The only official connection I hold with American agencies is that I serve, as of last summer, on the stakeholders advisory committee for the Joint Fire Science Program. The good news is, I am not obligated to any of the parties of the National Fire Plan. The bad news is, I do not have detailed, current knowledge about its particulars. This matters because the program will triumph or collapse to the extent that it can produce local, site-specific projects that address the true hazards and opportunities for fire management.

A SPECTRUM OF COMMENTS

The West's fire problem

The American West does not have a fire problem: it has many fire problems. Some are old, some new. Some have technical solutions, some must rely on cultural choices. We can keep houses from burning. We can't as easily determine how best to administer fire in wilderness or roadless areas or how to cope with wildlands that suffer poor ecological health, including disturbed fire regimes. These involve judgments, not simple engineering. The National Fire Plan will achieve useful goals to the extent that it splits the lumped flames that floods TV screens into specific problem fires. A generic solution will only yield a generic failure.

The intermix fire

The most visible crisis—the intermix fire (what the agencies prefer to call the “wildland/urban interface” fire)—is a dumb problem to have because technical means exist to fix it. It will more or less disappear if we abolish wooden roofs, do some basic yardwork, and provide minimal on-site fire protection. Zoning and building codes would help enormously; so would a broader-brush manipulation of surrounding wildlands. The most critical reforms, however, pertain to the houses and their immediate environs. Such fires often spread house to house, particularly roof to roof, without regard to intervening vegetation. Conversely, some houses at Los Alamos burned from, simple contact with burning pine needles piled against the siding; someone with a whisk broom and squirt gun could have extinguished them. A solution requires us to imagine these settings not as wildlands but as exurban environments that demand, for fire protection, the same kinds of standards that have lessened free-burning fire in cities. This is something that existing fire institutions can do.

The larger drivers behind this process, however, lie beyond the control of fire agencies. Rural America is, in effect, being recolonized. In the 19th century, colonization meant clearing, which heaped fuels about the land, and wooden structures, which were vulnerable to burning. In more recent years colonization has meant not clearing, which has also bloated the land with fuels, and wooden structures, again susceptible to fire. The current process, however, does not involve rural folk living off the land but rather urban outmigrants who bring urban values and expectations and whose livelihood does not require them to engage the land on

which they reside. The agencies cannot influence the larger social and economic pressures behind this outflow; they can reduce the prospects that such sites will burn. My reading of the NFP is that it clearly identifies both the nature of the problem and its scope.

Some qualifications: Not all intermixed landscapes are at risk. Those that are most susceptible are those with a natural disposition toward fire, which means they exhibit regular patterns of climatic wetting and drying, they have abundant combustibles, and they have routine ignition. Places like the American West that experience annual dry seasons, hold public wildlands, and know dry lightning are particularly vulnerable. Places like New England are not. It is also clear that the most critical sites are the structures themselves and their immediate surroundings. This argues that broadcast treatments have far less effect than raking and trimming adjacent to buildings. It means that, except where public lands abut housing developments, the federal agencies have only limited control over, and responsibility for, the necessary treatments to create a defensible space or to shield those houses. I believe the agencies' most powerful role is to advise, to set examples, to work with rural fire districts, and, where public and private lands meet, to render less fire-prone the public lands.

All this will take time because it will involve intimate working with local communities and specific sites. A crash program of clearing or fuelbreaks based on global prescriptions, couched as a program of rural jobs, will more likely wreck rather than reform. Over the last century, problem fires like the intermix seem to come and go on a rhythm of 20 years. If that pattern holds—and I believe it does—then by my reckoning we are halfway through its the intermix era. The crest of the wave will pass over the next five years. It may be time to begin imagining fire's new new thing.

Fuel treatments

This is an immense topic on which I will offer only two observations—on fuelbreaks and on more broadacre mechanical thinning.

Fuelbreaks rarely succeed. They flourish best when they are built into a larger pattern of land use; they work least well when they are retrofitted, usually by simple cutting or clearing. They can help in, say, tree farms, where they are integrated into the planting scheme. But slashing swathes through dense forest is worthless. Such fuelbreaks fail precisely when they are most needed, during extreme conditions when winds carry firebrands across them. A fuelbreak around a community offers no more protection than a moat around a wooden stockade. It's a nuisance, not a barrier. Moreover, fuelbreaks demand endless maintenance. Typically, a decade or two after they are installed, labor-intensive upkeep tends to fade and the fuelbreaks vanish. This, in fact, is precisely what happened to the thousands of miles of fuelbreaks constructed by the CCC during the Roosevelt Administration.

Fuelbreaks need to be broad, sustainable, integrated into the life of a community or forest. A greenbelt half a mile wide will help; a 20-foot-wide gouge through the woods will not. The protection the latter offers is wholly illusory. Better to lay out a network of recreational trails and parklands or even a golf course. (For the record, I do not golf.)

Secondly, if narrow belts are problematic, then perhaps a more expansive cutting program could succeed. Again, it depends. It depends on the kind of forest, it depends on site-specific features, it depends on how such a project might be conducted. For almost a decade I have watched the treatments proposed for ponderosa pine around Flagstaff, Arizona, under the direction of Dr. Wally Covington and his colleagues. The treatment calls for extensive thinning of small trees, for sparing the large trees, and for various other measures to reestablish grasses and forbs and some regular regimen of burning. This seems to me an entirely justified experiment that merits expansion. The prescriptions, however, are particular to ponderosa. There may or may not exist analogous prescriptions for other environments.

The aggressive thinning has encouraged some observers to label it "logging." Some logging companies would like to call the practice logging since that might help justify the cutting of larger trees. Similarly, some environmental critics want to tar the practice as logging in order to prevent any kind of cutting. Both—in my mind—involve deliberate distortions. A better expression would be "woody weeding." To leave the most robust timber trees is hardly logging according to any conventional definition; the thinning is not conducted to advance specifically silvicultural ends; the outcome may very well expend more money than it takes in. (But we have long subsidized logging on the public lands anyway.)

For the record, I dislike the expression "restoration." But the calculated confusion sown by critics intent on smearing the technique as "logging" is a disservice. Whether adjacent to exurban developments or not, such treatments may well deserve sup-

port. As always, the devil will reside in the details. Broadcast treatments will almost certainly fail. Site-specific ones have a chance to yield real improvement.

Would outright logging bring improvement? Not likely. Nearly every large fire of American history has been associated with landclearing or logging, and lands so cut that were not quickly converted to agricultural fields became highly flammable as slash and reproduction mingled. Not only do clearcuts burn, they tend to burn with far greater ferocity than uncut forests. The only strategy by which logging might enhance security from wildfire is if it occurs within a context of intensive cultivation, if logging is part of a suite of other practices that in effect render wildlands into tree farms.

It is worth repeating that biomass does not equate with fuel. Large living trees tend to be heat sinks, not heat sources. From the perspective of fire, the critical vegetation is the fine stuff—the grasses, branchwood, slash, brush, densely-needed canopies. Large-diameter material is not a fire hazard, save as standing snags that are capable of throwing sparks.

Likewise, doing nothing does not solve the problem either with regard to fuel buildup or to ecological hygiene. Many of the most disturbed forests are, like the ponderosa pine, those that had experienced a long history of frequent, light, surface fires. This fire regime began to unravel in the 1870s throughout the West because of overgrazing and the removal of a major source of ignition, the American Indian, and then because they became permanently part of a public domain for which fire exclusion was a goal. Many of such sites are no longer “natural” in any meaningful sense. They are currently primed to burn in ways far outside their evolutionary adaptations. The fact is, fire can be as ecologically powerful removed as applied. There is no neutral position possible.

Fire suppression

Over the past 20 years, the American fire establishment has decayed. It has shed experience, suffered from confusion over its purposes, and relied on sheer brute force—the ability to spend enormous sums of money—to address crises when they occur. The dollars are there to fight fires; they are not there to do all the unglamorous things a fire agency must do. It is as though the nation committed to a health care system in which unlimited funds were available for emergency medicine, but little for much else. It makes good theater—great TV—but lousy land or fiscal management.

The NFP addresses many of these issues. Some matters it can resolve quickly—a buildup of personnel, for example. Other concerns are more subtle and will require patient attention. The simplest approach to an anticipated outbreak of wildfires is to close off public lands to public access, to position suppression forces to detect and attack fires while they are small, or if they escape, to mass firefighting forces to beat them back. This approach can work, for a time, much as a declaration of martial law can quell a riot. But it is not a formula for governing those lands.

What is missing is experience—not bureaucratic longevity, but on-the-ground, bred-in-the-bone knowledge. This is tougher to acquire: it can't be bought. Since only so many fires occur (and many happen simultaneously), a larger permanent staff means, paradoxically, that there will be fewer fires by which to acquire that experience. Clearly, the agencies need better methods of training. Probably they need better ways to integrate firefighting and fire lighting so that real field knowledge can accrue, year in and year out. This will demand a more robust approach to the overall mission of wildland fire management, of what precisely one needs to know and do and of how one can acquire not merely those skills but the wisdom to apply them in the field.

There will always be breakdowns in fire management—wildfires will evade initial attack, prescribed fires will fizzle or escape, firefighters will suffer injury or even death. “Experience” alone is not sufficient insurance against such events. But I believe a good case can be made that the usual guidelines for fireline safety, for example, are simply inadequate. They are so generic that they have no meaning in particular circumstances. The ability to recognize how a unique set of environmental conditions actually expresses more global guidelines is something learned by doing. There must occur a great deal of systematic doing over the next few years if the agencies are to reacquire the experience they have lost.

Prescribed fire

Many of the fire problems of the public lands have resulted from the loss of fire—the absence of fire as an ecological catalyst, the disruption of erstwhile fire regimes, the active and de facto removal of flame from lands that had long accommodated it. The problem is not simply that we have suppressed fires but that we quit setting them. It would seem that restoring fire must be an essential task of the agencies

and that fire lighting could begin replacing fire fighting, that fire is “natural,” that it is an inevitable “tool” for land management.

The best answer is, yes and no. It should be clear by now that the process by which fire was removed is not easily reversible. Restoring fire is much like restoring a lost species. It will flourish or falter depending on whether a suitable habitat exists. Thrusting flame into a site that bears little resemblance to one that existed in the distant past will not only fail to restore fire but possibly lead to a detonation. A century and a half ago Mexican grey wolves likely roamed through Glendale, Arizona where I now reside. But dumping a wolf into Arrowhead mall will restore neither the wolf nor the land. So it is with fire. Flame is not some kind of ecological pixie dust that one can sprinkle over the land and convert the ugly and dangerous into the beautiful and benign. Fire will synthesize its surroundings. Messed-up landscapes will only spark messed-up fires.

Free-burning fire is mandatory in some places, useful but optional in others, and either too hazardous or too alien for still others. It is essential in those landscapes in which it does biological work for which there is no surrogate. In such places, we must create a context for fire, and we must expect to continue burning in perpetuity. In other places, fire may be cheap or useful but not necessary. It is not required, for example, to use fire to reduce fuel buildup. In fact, a first fire may yield more fuel than it consumes, and an overgrown site may not burn in benevolent ways but with overgrown fires. It will likely prove necessary to prepare the place to burn properly. If you want to reduce fuel, there are many ways to do so. Fire is not mandatory for all of them.

The problem is not to restore fire (or to reverse suppression) but to oversee the right mix of fire applied and fire withheld—to manage the right fire regime. This requires a relatively firm conception of what we want the land to be. Our inability to agree on that objective results in confused, sloppy, contradictory, often ineffective fire practices.

But is not fire a “tool”? It is certainly a technology, though an odd one. A flame can sit on a candle as an axehead does on a handle. Here is concentrated heat and light, a tool. But much burning (in fields, for example) more resembles a domesticated animal. It must be bred, fed, trained, directed; its power derives from the larger landscape, also domesticated, in which it roams. In yet another sense, controlled fire behaves like a captured ecological process, analogous to an elephant taught to haul logs or a grizzly bear to dance. Its “wild” properties are its strength, yet it remains ever prone to go feral. Its context determines its character. The image of fire as a “tool” is not only inadequate: it suggests a potential degree of manipulation and a style of use that wildland settings cannot provide.

Controlled burning may well—in certain landscapes—be necessary or helpful. But it is not intrinsically easier, cheaper, or safer than suppression. Many of its costs lie buried in the infrastructure provided by fire suppression. The agencies often trot out statistics showing a small number of prescribed fire failures (1-2%). I have no confidence in such numbers, which depend entirely on definitions. They do not record frequent slop-overs, only those fires that require major suppression campaigns to recontain them. They say nothing about fires that fail to do the job expected of them. In fact, the public failure rate from major escapes is eerily similar to that for suppression in which about 3% of wildfire starts account for 95% or more of the burned area. The failure rate, as measured by the number of fires that evade initial action, is almost identical. Why this means prescribed burning is successful and suppression a failure is not clear.

Since the reintroduction of fire as a formal policy, some of the largest and most damaging fires in certain years have been prescribed burns that went bad. The two most costly fire campaigns in American history began as prescribed burns that blew up—the Yellowstone complex in 1988 (which commenced as “prescribed natural fires”) and the Cerro Grande fire of 2000 that savaged Los Alamos. That the National Park Service lost two such fires in the spring of 2000 (the other forced the evacuation of the North Rim of Grand Canyon) suggests that there is some systemic bias at work in favor of burning, even when conditions don’t warrant the risk.

Prescribed fire’s failures and costs will likely rise in the near future with no noticeable reduction in suppression efforts or expenses. A significant shift in funding will probably require 20 years, for the reason that prescribed burning, in order to work properly, demands that we fashion suitable habitats to accept the kinds of fires we want. This will take time, money, and ingenuity; and it will not involve a simple trade-off of controlled fire for wild fire. Both will co-exist for many years, and indeed prescribed burning may become itself a significant source of wildfires.

For a number of landscapes, prescribed fire is the right choice, even an obligatory choice. That decision derives from biological and cultural values. It does mean burning will be simple, cheap, or safe. The choice is not between starting and stopping

fires over getting the right fire regime for a particular place. That is not a decision that will likely reside within the hands of fire managers.

The limitations of policy

The 2000 season might well suggest to someone with an open mind that the United States could no longer either suppress or start fires with anything like the outcomes its fire administrators intended. The National Fire Plan was one response to this reasonable perception. One might also question, however, to what degree the problems even reside within the realm of policy.

The National Park Service installed a new policy to better balance fire use with fire control in 1967-68; the Forest Service modified its policies in 1972, and converted fully in 1978-79. The other federal agencies have steadily fallen into alignment, with a wholesale reconfiguration in December, 1995. The fact is, policy has been adequate to support a more pluralistic program for 25-35 years. Yet results have not appeared in the field commensurate with announced ambitions. One should not be surprised that, after less than a year, the National Fire Plan has also failed to create new facts on the ground. One might well conclude that flawed policy has not, in truth, been the problem and that more policy will not solve it.

I confess to being a policy skeptic. The intermix fire problem does not depend on policy for a solution: it requires homeowners to better fire-proof their homes and lands. Since fire folks are familiar with “fire triangles,” I propose a triad to replace a naive belief in policy. We need, along with policy, both practice and poetry.

By “practice,” I mean a suite of techniques and tools that can actually make policy happen in the woods. I don’t believe we have those techniques. Even current strategies for fire restoration revolve around simple variants of slashing and burning. We need a wider, more nuanced approach, more akin to integrated biological control than starting and stopping fires and shoving biomass around. We need crews that forage fire. We need more varied controlled burning techniques (current practices work in slash and grass, but stumble in more complex landscapes). We need to trail fires, to spot burn, to kindle prescribed crown fires. We can’t treat controlled burning as fire suppression stood on its head. And not least, we need practices to allow new fire regimes to appear; that is, we need to look at air quality, endangered species, liability law, labor restrictions, and the rest. Fire is not a bureaucratic category. Fire management is not a 9-5 job. This is where I would put the bulk of my research dollars, where I would concentrate my training efforts, and where the federal agencies can best assist local authorities. Policy per se is mere blather until practical links connect it to the field.

By “poetry,” I mean that we need compelling reasons to change the existing system, preferably wrapped in a story. The Great Fires of 1910 bequeathed a magnificent story for fire suppression. We have no equivalent tale for a mixed program of fire fighting and fire lighting. Why should we expend billions of dollars on ecosystem health when public health may be starved for funds? Why should we deliberately burn instead of mincing the forests into woodchips or letting nature roar on as it chooses? Why should fire claim pride of place, if or when it conflicts with other environmental values? It is not enough to say that fire is natural. The present regimes—and, I would add, North America’s fire regimes throughout the Holocene—have always been the outcome of humans and nature interacting. Nor is it enough to say, suppression is the problem. Fire suppression is not the problem. The problem is that we don’t have the right fire regimes, and that requires we agree on what we want the land to be and why and how we can shape those regimes. I don’t see that denouncing suppression tells a story about why we should, at considerable cost and risk, create a new geography of fire.

The fire agencies have understood the general issues for some time and appreciate the limitations to what they can do. I do not know, however, that they appreciate the limitations of policy alone or of funding. It may be that we have to reconstitute the entire fire establishment. If one will pardon a military metaphor, we have the capability to wage extensive (if indeterminate) campaigns against large fires. We have the logistical capacity to fight the fire equivalent of the Gulf War. It is not clear we have the mixed capabilities to cope with more elusive, post-Cold War insurgencies or the fire equivalent of terrorism.

Could the 1910 season repeat itself?

The Great Fires of 1910 remain the fire season of reference. Could they happen again? The answer must be, yes and no. It is extremely unlikely to reoccur today as it did in 1910 for the same reasons that the stock market crash of 1929 is unlikely to be recycled, while it is wholly probable that other, analogous crashes might occur (as in 1987 and 2001). Large fire complexes can return: they did so in 2000. Whether similar damages could result is trickier to assess.

The environmental conditions underlying large fires persist. Drought, vast quantities of combustibles, dry lightning, and moistureless cold fronts—all these continue. They made the 2000 season in the Northern Rockies an eerie echo of 1910. The heaping of fresh slash that helped stoke the Great Fires is far less today because of diminished logging and landclearing. Against that plus, however, stands the onslaught of wooden houses and overgrown lots, often planted amid forests turned into conifer-thicket jungles, that can stoke fires of equivalent fury. If large-scale logging were to renew and punch into uncut lands, these could also become points of fire infection. So while the fuels situation has changed, it has not been abolished to the point that free-burning fire will starve. Similarly, while the old settlement pattern of homesteaders, miners, and townfolk no longer exists, the contemporary swarm of tourists and exurbanites has proved just as vulnerable.⁷

What differs are two factors. One, we can shut down the forests to human use, which will squeeze the number of fire starts. And two, we can attack fire with considerable force, particularly as new ignitions begin. How large fires might become during a crisis season will depend on our ability to fight them, especially our capacity to catch new starts before they scale up. For the 1910 season to truly repeat itself, our suppression capability would have to collapse. Could it?

It could happen because of over-extension from multiple large fires or disasters; or from a loss of firefighting forces and supporting equipment, a falling off of funds and training because of several lax seasons; or from a breakdown in modern communications—a critical satellite or two disabled; or, more generally, from a condition of war that would drain attention and commitments elsewhere. Even a mass death of firefighters is possible. The 1985 Butte fire in southern Idaho entrapped 73 firefighters. Had they not had a bulldozed clearing in which to plant their fire shelters, they might all have perished.

There is no reason to believe the country is exempt from fires of historic magnitude. Rather, our whole history of fire management on the public lands has, paradoxically (perhaps perversely), ensured that the necessary conditions have endured. In such circumstances, one either has to convert the landscape to something less flammable or do the burning oneself. Without such steps, suppression cannot forever keep the lid on the cauldron.

Coda

I apologize for being both wordy and sketchy. Wildland fire is a complicated topic, and while some general principles exist, the subject is best treated in particulars. I hope you can find my observations useful. And I look forward to being able to testify directly at some time in the future.

STATEMENT OF ANDREW O. MOORE, VICE PRESIDENT, PUBLIC & GLOBAL AFFAIRS,
NATIONAL ASSOCIATION OF SERVICE AND CONSERVATION CORPS (NASCC)

NASCC, the national membership organization for 116 state and local youth service and conservation corps operating in 31 states and the District of Columbia, appreciates the opportunity to submit written testimony to the hearing record.

NASCC has worked closely with the Federal land-managing agencies and Congress to ensure that the energy and conservation service commitment of the nation's youth and young adults is brought to bear on the fire prevention, education, and restoration needs of the nation. Language in the FY2001 appropriations bill encouraging the involvement of conservation and service corps as a community partner—language repeated in contracting guidance on paper and on the Internet—has helped open doors and led to several early successes. Corps partnerships are underway in Arizona, Colorado, Idaho, Minnesota, Montana, Nevada, New Mexico, Oregon, and Utah.

Notably among those successes NASCC would point to:

- The Fire Fuels Reduction Program of the Southwest Youth Corps (profiled below) working with the National Park Service, USDA Forest Service, and Bureau of Land Management in the Four Corners states of New Mexico, Colorado, and Utah; and
- The Fire Education Corps of the Student Conservation Association (also profiled below), active in Idaho and Nevada.

In two puzzling cases, efforts to further corps partnerships in pursuit of Fire Plan objectives have met with what are apparently bureaucratic slowdowns or resistance, as follows:

- Forest Service staff informed the Washington Conservation Corps-Department of Ecology that a proposal to train additional corpsmembers in fire fighting and

prevention could not go forward—that the Forest Service could only train Forest Service staff; and

- A letter from Forest Service headquarters, informing field personnel of opportunities to enter into Fire Plan partnerships with state and local corps, has remained marooned at headquarters for some six months.

To get more young people involved with fire-related work, NASCC suggests:

1. Continued emphasis in legislative language and guidance on partnerships with corps, and consideration of setting aside funds for such partnerships;
2. Instructing Federal land-managing agencies to promote corps partnerships among field personnel, and requiring the agencies to report on such promotion and its results.

[Attachment.]

FIRE PREVENTION, EDUCATION, FIGHTING, & RESTORATION:
HIGHLIGHTS OF CORPS PROJECTS

Coconino Rural Environment Corps of Flagstaff, Arizona

Engaged in numerous projects with Coconino, Kaibab, and Coronado National Forests; Grand Canyon National Park; several National Monuments; Coconino County Parks; and the Arizona State Land Department in 2001. Projects included chainsaw thinning Ponderosa pine forests, preparing for prescribed burns, felling and piling beetle-infested Englemann spruce, constructing fire lines, surveying forests with GPS, constructing and maintaining trails, closing forest roads, eradicating exotic weeds and revegetating with native species. The corps also specializes in thinning projects adjacent to private homes.

Minnesota Conservation Corps

Trains all participants in wildland firefighting (S130/131/190) and participates in wildfire suppression, prescribed burning for habitat improvement and fuels reduction, as well as fire prevention. MCC has also assisted with fire pre-suppression related to the 1999 blow-down event in the Boundary Waters.

Montana Conservation Corps

Works with the USDA-Forest Service, Montana Department of Natural Resources, rural volunteer fire departments, BLM, and the National Park Service on a wide variety of fire prevention and restoration projects.

Northwest Service Academy of Vancouver, Washington

Received \$48,000 in National Fire Plan grant funding to support the training, supervision, and transportation of three AmeriCorps members attached to local fire departments in three counties in Central Oregon. An Oregon Department of Forestry staff person will coordinate the efforts of the three as they initiate community-wide Firefree volunteer events and encourage hazardous fuels treatment in targeted interface communities in the area.

Northwest Youth Corps of Eugene, Oregon

Deployed two 10-person youth crews for a total of three weeks this summer to rehabilitate wilderness trails within the confines of the Hash Rock Fire, using National Fire Plan Funds. Another recent project include removing non-native thistles introduced during suppression and post-fire soil stabilization efforts from hundreds of acres of burned forest ground. In 2000, for Oregon State Parks, NYC reconstructed an extensive array of stairs, boardwalks, bridges and puncheons at a park that had been heavily burned. NYC has also done a significant amount of work to reduce fuels prior to prescribed burns intended to both restore natural ecosystems and reduce fuels near the urban interface.

Rocky Mountain Youth Corps of Taos, New Mexico

Has a crew thinning privately-owned forested land as part of National Fire Plan efforts, in a cooperative venture involving RMYC, Red River Fire Department, New Mexico State Forestry, and Carson National Forest-Questa Ranger District. This Wildland-Urban Interface project shows landowners how to thin the timber they own, what building materials to avoid, and other safety measures.

Southwest Youth Corps, Durango, Colorado

With the assistance of three Federal agencies, SYC has mounted a large effort under the National Fire Plan. See attached description.

Student Conservation Association

Supplies numerous highly educated interns to assist with community outreach fire education, and is increasingly involved with GIS mapping and fire audits as well as part of National Fire Plan. SCA interns worked with state and private forestry officials in Idaho and Nevada in 2001 and will soon carry out activities in many more western states. See attached description.

Utah Conservation Corps, Logan, Utah

The Utah Corps received \$8,000 in National Fire Plan funding to underwrite four weeks' of work in the Blackrock Ranger District of the Bridger-Teton National Forest. Corpsmembers rehabilitated eight miles of trail, putting in 150 checkdams and 50 waterbars to restore recreational opportunities in a burned area.

Washington Conservation Corps (Dept. of Ecology) arranged for USDA Forest Service training for participants. The trained corpsmembers have aided the Forest Service and local agencies in responding to wildfires throughout Summer 2001.

Youth Conservation Corps of the USDA Forest Service

Placed 93 participants in the Deschutes and Ochoco National Forests and the Crooked River National Grasslands in Oregon to handpile hazardous fuels, using a mix of National Fire Plan fuels treatment funding and other FS recreation, wildlife, fisheries, and hydrology funding.

Youth Corps of Southern Arizona

Having performed well on trails and related backlog maintenance projects funded by the NPS Public Lands Corps initiative at Chiricahua National Monument, entered into a \$30,000 fuels reduction project at the Monument in Autumn, 2001.

SOUTHWEST YOUTH CORPS FIRE FUELS REDUCTION PROGRAM

In 2001, Southwest Youth Corps (SYC) piloted a specialized conservation program—the Fire Fuels Reduction Crew (FFR). This program was developed to help reduce the threat of wildfires and improve the health of forested public lands in the Four Corners Region. Primarily, the FFR Crew has worked with Public Land Agencies to complete priority fire management projects, including urban interface projects (protecting archeological sites and modern buildings), thinning acres in preparation for Management Ignited Fire, as well as thinning projects that are aimed at wildlife habitat protection and improvement.

The Crew

The FFR Crew consists of two Crew Leaders (supervisors) and eight Corpsmembers 18-25 years of age. SYC recruits, hires, and provides the administrative oversight for all employees. The Crew has its own transportation, tools, equipment and safety gear, including chainsaws and extra parts, fuel, chaps, eye & ear pro, safety helmet, etc. The Crew also has adequate insurance coverage (workers comp, vehicle, general liability).

Southwest Youth Corps is a job training program. During the first week of the 23-week long program, all Corpsmembers are required to complete and pass the USFS Power Saw Training Class (S212). Additionally, the FFR Crew completed the S 130/S 191 Fire Fighting Classes and passed the Pack Test.

SYC completes all payroll for the crew. Crew Leaders are paid a weekly salary and Corpsmembers are paid \$7.00/hour and earn a \$2,400 AmeriCorps Education Award upon completion of the project. The FFR Crew works four 10-hour days typically; however, the Crew camps near projects that are more than a two-hour drive from the SYC headquarters.

Project Sponsors

During the 2001 Program Year, the FFR Crew has worked with the National Park Service, Bureau of Land Management, and United States Forest Service (specific contacts listed below):

National Park Service

El Malpais Nat'l Monument (NM)
Herschel Schultz or Mike Kessler
(505-783-4033)

Mesa Verde National Park (CO)
Jim Kitchen or Scott MCDermitt
(970-562-5069)

USDA Forest Service

San Juan National Forest (CO)
Ken Reed (970-882-7296)
Bob Frye (970-264-2268)

Bureau of Land Management
San Juan Field Office (CO)

Mark Lauer (970-247-4874)

Southeast Utah Field Office (UT)
Brenda Zimple (435-259-2194)

Fannington Field Office (NM)
John Hansen (505-599-6325)

Work Projects

The chart describes the type of projects that the FFR Crew has completed as well as revenue sources.

Project sponsor	No. of weeks	Revenue source	Project description
Mesa Verde National Park.	4 (1,404 hrs.)	75% PLC 25% Park Unit*	5 miles (66 ft. wide) firebreak created around three Pithouse ruin sites) and 62 truck loads of debris loaded and removed. Tree type: Pinon, Juniper, oak brush. Additionally, the Crew helped the Park Fire Crew dig a fire line on a wildfire that broke-out in the Park. Also cleared an old canyon trail that provides access for grazin permittees.
El Malpais National Monument.	3 (1,062 hrs.)	75% PLC 25% Park Unit*	8.2 miles of firebreak created (66 ft. wide). Tree type: ponderosa, pinon, juniper.
BLM Utah ...	1 (310 hrs)	BLM Fire Budget*	Thinned/cleared area for visitor center and created defensible space around three structures. Tree type: Pinon & Juniper.
USDA-FS Dolores District.	4 (1,098 hrs.)	Fire Budget*	Dolores Rim—Thinned/treated 47 acres in preparation for Mgmt. Ignited Fire Spring 2002. Tree type Ponderosa Pine.
USDA-FS/BLM.	1	Fire Budget*	Edgemont Ranch—Thinned/treated 7 acres to create defensible space on public lands interphased with private homes. Primarily removed the Oak Brush (underbrush). Mechanical thinning with Chainsaws is less disruptive than other thinning devices. Tree type: Oak Brush
USDA-FS Pagosa District.	2	Fire Budget*	Thinning to prepare for prescribed burn in Spring 2002. Also, protected snags for wildlife habitat in the area. Project currently being completed. Tree type: Ponderosa Pine.
BLM-Farmington.	2	Fire Budget*	Thinning to reduce risk of wildfire. Project scheduled to be completed at the end of Sept./beginning of October. Tree type: Pinon and juniper.

*National Fire Plan Funding directly supported the Agency Fire/Fuels Budget used to pay for the Services of the SYC Fire Fuels Reduction Crew.

Cost

The cost of the FFR Crew operation for one week is more than \$7,000.00 (including everything . . . wages, insurance, transportation, tools, supervision, administrative oversight, etc.). SYC has been fortunate to secure other sources of funding to

offset up to 30% the weekly fee for Project Sponsors. Thus, Project Sponsors are required to pay at least 70% (or \$5,000/week) for the services of the FFR Crew. In order to be financially sustainable, SYC strives to receive \$6,000/week for the FFR Crew; however, as a pilot program in 2001, the \$5,000 weekly fee was accepted.

Mechanisms

Southwest Youth Corps carried out its FFR Crew work under pre-existing cooperative agreements and challenge cost-share agreements, and developed new agreements with the Bureau of Land Management to pursue additional projects.

STUDENT CONSERVATION ASSOCIATION FIRE EDUCATION CORPS

The SCA Fire Education Corps is a volunteer community education program for property owners along the wildlands interface in Idaho and Nevada, conducted in cooperation with numerous federal, state and local agencies.

During July and August of 2001, 50 SCA college-age volunteers have aided 1.3 million area residents in the identification of wildfire risks and the adoption of proactive fire management strategies including the creating of defensible space around their homes.

The project is funded through a National Fire Plan grant and partners include the USFS, BLM, Idaho Dept. of Public Lands, local Resource Conservation and Development Councils, local fire departments, and Home Depot.

USFS Chief Dale Bosworth has cited the SCA Fire Education Corps as a national example of community education for fire prevention along the wildlands interface. Other supporters include Interior Undersecretary Dave Tenny and Idaho Gov. Dirk Kempthorne.

The SCA Fire Education Corps methods include home fire safety audits, defensible space seminars, safety demonstrations with local fire officials, community and event presentations, and information stations at regional Home Depot stores.

Plans are already underway to expand the SCA Fire Education program in 2002 to nine western states (CA, CO, ID, MT, NV, OR, UT, WA, WY) involving more than 250 volunteers.

Founded in 1957, the Student Conservation Association (SCA) is the nation's leading provider of conservation service opportunities, outdoor education, and leadership development for youth.

SCA volunteers annually provide more than one million hours of conservation service in parks, forests, refuges and urban areas in all 50 states.

For more information on the Student Conservation Association or the SCA Fire Education Corps, contact Kevin Hamilton, SCA Communications Director, at 603-5431700 or kevinh@sca-inc.org or contact Jody Handly, SCA Fire Education Project Leader, at 208-241-8881 or jody@sca-inc.org