

**Statement of Christopher Topik, Ph.D.
Director, *Restoring America's Forests*
The Nature Conservancy**

**Investments in Forest Restoration Represents a
Responsible Investment for People and Nature**

**Subcommittee on Conservation, Forestry and Natural Resources
United States Senate Committee on Agriculture, Nutrition and Forestry**

November 5, 2013

Chairman Bennet, Ranking Member Boozman and members of the Committee, thank you for the opportunity to participate in this important conversation about the role of fire in our nation's forests and communities. My name is Christopher Topik and I am the Director of The Nature Conservancy's *Restoring America's Forests* Program. The Nature Conservancy is an international, non-profit conservation organization working around the world to protect ecologically important lands and waters for people and nature. Our mission is to conserve the lands and waters upon which all life depends.

I want to thank this Committee for holding this hearing and for seeking to find solutions to the issues our nation faces concerning damaging and deadly fires and the need to invest in treatments that reduce fire risk and restore resilience to our forests over the long term.

In brief, I feel that now is the time for society and the Congress to alter the current downward trajectory of US forest conditions. It is time for a sizable increase in action. We know many steps that will help, and we know that this involves commitment of more resources by more sectors of society. It also requires much greater efficiency of federal, state and local activities that reduce wildfire risks, while enhancing the resiliency of both forests and forest-dependent communities. Twelve years ago the Congress, the Administration and the states stepped up activity with the National Fire Plan. It is time again to collectively make a major change in how we budget and manage our federal forests and wildfires. We know that up-front investments in forests and communities reduce fire danger, and in most cases will ultimately reduce the costs and impacts of continued emergency fire suppression.

This has been a particularly tragic year regarding the loss of wildland fire fighters. We must collectively and immediately dedicate ourselves to finding a way to effectively support both essential emergency wildfire preparedness and response and the proactive fuels reduction and forest restoration that are needed to reduce the demand for emergency expenditures in the future. Our current approach to wildland fire and forest management creates a false choice, pitting the viability of one against the other. In reality, we cannot afford to short-change either. The potential costs are too great.

There are a number of steps we can and should take this year, which I describe in more detail below. But first I want to make it clear that there are actually several fire problems, so we should be looking for several or more solutions. There is no single magic bullet, but there are a lot of logical investments that many sectors of society and government can make to change the course of history. This is why I am so pleased that the Senate Agriculture Committee is committing to help solve this situation.

The Nature Conservancy approach to forest restoration:

The Conservancy's work across North America is guided by an ambitious vision that involves developing nature-based solutions to some of humanity's most pressing global challenges. Among our primary North American priorities is our *Restoring America's Forests* program, through which we aim to foster a dramatic increase in the proactive, science-based, collaborative restoration of our nation's federal forests, thereby reducing the tremendous human and environmental costs associated with unnaturally large and damaging megafires ¹.

In short, we are convinced that science-based collaboration and open, public processes can foster community and economic conditions that create the social license allowing more forest treatments to be done, with locally based goals and benefits to local communities, water, and wildlife. And, by creating a new method of funding emergency fire suppression, we can ensure funds are available to meet those needs without continuing to hold hostage the important restoration, fire risk reduction and other vital conservation projects that are essential for sustaining our forests and communities into the future. We can also set the stage for encouraging other sectors of society to invest in and share the benefits of proactive forest management and community preparedness.

SUMMARY OF KEY RECOMMENDATIONS

I. Budgetary

1. Increase federal funding for hazardous fuels reduction, Collaborative Forest Landscape Restoration and associated proactive federal land management operations and science
2. Create and fund a new federal fire suppression funding mechanism to free up resources for proactive management referenced above
3. Permanently authorize stewardship contracting authority
4. Increase capacity of states and communities to become fire adapted
5. Increase research on economic, social and ecological impacts of forest investment

II. Management Decisions

6. Seek policy adjustments that foster innovation and improvement in NEPA implementation, thereby increasing the scale and quality of resulting projects and plans
7. Increase shared commitment and support for forest restoration by states and local governments
8. Enhance participation of additional sectors of society, such as water and power utilities, recreation and tourism, public health, and industrial users of clean water
9. Increase the safe and effective use of wildland fire

¹ For more information see: <http://www.nature.org/ourinitiatives/habitats/forests/index.htm>

Background:

As the Committee well understands, forests are vital for America. Our forests--

- a) Cover more than a third of our nation;
- b) They store and filter half our nation's water supply;
- c) Provide jobs to nearly a million forest product workers;
- d) Absorb 13% of our nation's fossil fuel carbon emissions;
- e) Generate more than \$13 billion in recreation and other related economic activity on Forest Service lands alone;
- f) And, of course, provide habitat to thousands of American wildlife and plant species.

The societal, environmental and fiscal costs of fire in our nation's forests continue their precipitous climb. During the 2012 wildfire season, alone, a relatively small 68,000 fires burned across nearly 10 million acres and resulted in a \$1.9 billion bill for federal wildfire suppression (on top of the nearly \$1.5 billion required to staff the federal fire programs). The cost of wildfire management currently consumes more than 40% of the U.S. Forest Service budget, leaving an ever smaller pool of funds to support hazardous fuels reduction, timber management, wildlife habitat improvement, recreational access, watershed protection and the wide variety of other important services that the American people value and expect.

The real economic and social impacts of uncharacteristic wildfires are not fully known, but we do know that the cost of fire suppression alone is at least \$4.7 billion (\$2.5 billion for federal agencies, \$1.2 billion for State agencies and about \$1 billion for local governments)². We also know that the cost of fire suppression is only a small part of the direct cost of fires. Recent analysis of 6 wildfires showed that fire suppression expenditures were as little as 3% or 5% of the total direct financial impact cost of the fire³. Much more research is needed to help us understand and plan for the true costs of fire. Currently, too much of the federal fire funding policy and decision space has focused only on costs of fire suppression and not all of the other fiscal and societal impacts. There are a myriad of difficult to quantify economic, social, and health impacts caused by the recent decade of unusually severe fires.

Climate change is exacerbating the fire problem as our forests are becoming warmer, dryer and subject to both more extreme weather events and longer fire seasons. The Forest Service itself expects severe fires to double by 2050⁴. 2012 was the third biggest fire year since 1960, with 9.3 million acres burned—the Forest Service is estimating 20 million acres to burn annually by 2050. We are already seeing these impacts: the Four Corners region has documented temperature increases of 1.5-2 degrees Fahrenheit over the last 60 years.⁵

² International Association of Fire Chiefs, WUI Fact Sheet, August 2013. available at: http://www.iawfonline.org/pdf/WUI_Fact_Sheet_08012013.pdf

³ "True Cost of Wildfire in the Western U.S." – Western Forestry Leadership Coalition. Lakewood, Colorado. April 2010

⁴ <http://www.globalchange.gov/what-we-do/assessment/nca-overview>;
http://www.denverpost.com/breakingnews/ci_22943189/feds-project-climate-change-will-double-wildfire-risk?source=email

⁵ Managing Changing Landscapes in the Southwestern United States, Center for Science and Public Policy, 2011, find here: http://azconservation.org/downloads/category/southwest_regional

The recent comprehensive climate science synthesis for the U.S. Forest Sector suggests that, whereas currently forests sequester fully 13% of the nation's fossil fuel carbon emissions, trends in forest cover loss due to fire, urbanization and other impacts will make forests a net emitter of carbon by the end of the century⁶. This is another major reason why society should invest in keeping forests as forest. Besides all the historic and substantial benefits of forests mentioned above, maintaining forest cover is probably one of the most cost effective ways our nation has to mitigate climate change simply by helping forests adapt and become more resilient.

Key recommendations- budgetary

1. Increase federal funding for hazardous fuels reduction, Collaborative Forest Landscape Restoration and associated proactive federal land management operations and science

a. Hazardous fuels reduction

It is essential that the Congress and the Administration increase federal investments to reduce fire risk in a manner that makes forests more resilient and resistant to fire and other stressors. Strategic, proactive hazardous fuels treatments have proven to be a safe and cost-effective way to reduce risks to communities and forests by removing overgrown brush and trees, leaving forests in a more natural condition resilient to wildfires. A recent meta-analysis of 32 fuels treatment effectiveness studies, conducted on behalf of the Joint Fire Science Program (JFSP), confirmed that when implemented strategically, fuels treatments can make a crucial difference in the size, spread and severity of wildfires.⁷ These treatments can improve the safety and effectiveness of firefighters and provide protection for a community or essential watershed that might otherwise see extensive loss.

Many of these hazardous fuels reduction projects are also providing jobs and other economic benefits to rural communities. For example, a recent economic assessment of forest restoration in eastern Oregon revealed that “an investment in forest health restoration has the potential to save millions of dollars in state and federal funds by avoiding costs associated with fire suppression, social service programs and unemployment benefits.”⁸ In addition, for every \$1 million invested in hazardous fuels treatments, approximately 16 full-time equivalent jobs are created or maintained, along with more than half a million in wages and over \$2 million in overall economic activity.⁹

It is absolutely essential that we maintain federal investments and skilled capacity in reducing hazardous fuels. The Ecological Restoration Institute's valuable study on the efficacy of hazardous fuels treatments joins the JFSP analysis referenced above in building a growing body of

⁶ Vose, James M.; Peterson, David L.; Patel-Weynand, Toral, eds. 2012. Effects of climatic variability and change on forest ecosystems: a comprehensive science synthesis for the U.S. forest sector. Gen. Tech. Rep. PNW-GTR-870. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. See p 61.

⁷ Martinson, E.J.; Omi, P.N. 2013. Fuel treatments and fire severity: A meta-analysis. Res. Pap. RMRS-RP-103WWW. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 35 p.

⁸ National Forest Health Restoration: An Economic Assessment of Forest Restoration on Oregon's Eastside National Forests. Prepared for Governor John Kitzhaber and Oregon's Legislative Leaders. November 26, 2012. Quote on page (iv). http://www.oregon.gov/odf/BOARD/docs/2013_January/BOFATTCH_20130109_08_03.pdf.

⁹ The Employment and Economic Impacts of Forest and Watershed Restoration in Oregon. Max Nielsen-Pincus and Cassandra Moseley, Institute for Sustainable Environment, University of Oregon. Spring 2010, page 1.

literature documenting the many instances in which on-the-ground actions have modified wildfire behavior, thereby allowing firefighters to safely engage in protecting infrastructure and landscapes.¹⁰

The post-fire assessment of Arizona's record-setting 2011 Wallow Fire also clearly demonstrated that homes and forest were saved in and around the town of Alpine by management treatments applied in tandem with FireSafe practices near structures. I had the good fortune of flying with Project Lighthawk last year over the entire Wallow Fire burn site. The fire area was huge, over half a million acres, and a very complicated and complex burn pattern occurred. It was clear that the extensive tree thinning treatments around the town of Alpine caused the fire to calm down so that firefighters, including the Conservancy's own Southern Rockies Wildland Fire Module, could protect extensive infrastructure.

The Nature Conservancy was very disappointed to see that the President's FY 2014 Budget proposed devastating cuts to the Hazardous Fuels Reduction programs for both the U.S. Forest Service and the Department of the Interior. As mentioned below, the pending House and Senate FY 2014 appropriations bills are an improvement, but much more needs to be done. The Forest Service and the Interior Department have the capacity to productively utilize at least 50% more funds than currently available. That should be an achievable target.

We are also concerned that the President's FY 2014 budget request emphasizes directing hazardous fuels funding to protect structures nearly to the exclusion of natural areas that support life and livelihood. The Conservancy agrees that funding is urgently needed to create community protection buffer zones that can limit the damage from wildfire. Fighting fires will remain costly until such buffers are in place and people feel safe. But shifting too much funding away from undeveloped forest areas where fires have been excluded for a century, and conditions remain overly dense and susceptible to unnaturally damaging wildfire, will have a long-term negative impact on forest health and resiliency. The Nature Conservancy urges a balanced allocation of funding between treatments in wildland and developed areas.

Strategic mechanical fuels reduction in wildlands, combined with controlled burning to reduce fuels across large areas, can significantly reduce the chance that megafires will adversely impact the water supply, utility infrastructure, recreational areas and rural economic opportunities on which communities depend.

b. Collaborative Forest Landscape Restoration (CFLR) Program

The CFLR Program has been a valuable vehicle for prioritizing and testing a variety of collaborative, science-based approaches to forest restoration that both reduce wildfire risks and contribute to local jobs and economic opportunities.

In just three short years since its inception, the CFLR Program has provided support to 20 projects in 14 states, with an additional 3 high priority restoration projects receiving support from non-CFLR funds. Through these projects, the CFLR Program is demonstrating that collaboratively-developed forest restoration plans can be implemented at a large scale with benefits for people and the forests. From fiscal year 2010 – fiscal year 2012, the cumulative outputs generated by the funded projects already total: 94.1 million cubic feet of timber; 7,949 jobs created or maintained;

¹⁰ <http://library.eri.nau.edu/gsdll/collect/erilibra/index/assoc/D2013004.dir/doc.pdf>

\$290 million in labor income; 383,000 acres of hazardous fuels reduction to protect communities; 229,000 acres of fire prone forest restoration; and 6,000 miles of improved road conditions to reduce sediment in waterways¹¹.

Collaboration is a foundation for success. The scale and complexity of the situation facing our nation's forests and communities means that we must find ways to forge agreement among diverse interests about the "where, when and how" of forest management and then focus our resources on those landscapes that are poised for success. Collaboration, once considered "innovative" and "new," has become an essential tool to reduce wildfire risks, increase forest restoration and contribute to the sustainability of local economies. By bringing together county commissioners, local mill owners, water and utility managers, fire protection officials, conservation groups, scientists and others, collaborative groups can identify mutually beneficial solutions to forest health challenges and, sometimes by enduring a few bumps and bruises, pave the way for smooth and successful projects on the ground. Equally important is the long-term commitment these projects have fostered to both community sustainability and forest resilience.

The Congress needs to fully fund the CFLR Program, including the matching funds and monitoring requirements, as well as the project planning and preparation activities that facilitate implementation success, over the ten year life span of the projects. Future expansion should be considered. We must also increase our emphasis on and support for collaboration as a fundamental aspect of successful forest restoration planning and implementation. This should involve applying lessons learned through the CFLR Program to improve National Forest management throughout the system as collaborative, large-scale projects are created and new land management plans are developed under the new forest planning rule. It is encouraging that various funding sources, and even the state of Oregon, are providing funds that support the community collaborative capacity that will enhance implementation of the CFLR program.

c. Other key forest operations

The current and recent budgetary stresses to Forest Service management have taken a real toll as evidenced by the substantial reduction in the agency's overall staffing for non-fire personnel. One attempt to enhance efficiency is the Integrated Resource Restoration (IRR) budgetary tool that attempts to increase efficiency by blending funding sources for a variety of forest, watershed and wildlife habitat programs. The IRR is being employed in three regions on a pilot basis (Northern, Southwest and Intermountain). This Committee should encourage this pilot to be continued, and for the Forest Service and outside parties to closely monitor the efficiency claims.

d. FY 2014 funding decisions

The federal government is once again being funded by a continuing resolution. Now is the time for this Committee to work with the Appropriations Committee, the Administration and others to foster funding that facilitates proactive management and hazardous fuels reduction, including the use of fire as a safe and cost-effective management tool, at a meaningful scale. We also encourage sustained investment in applied research, such as the Joint Fire Science Program, that develop both information and tools that enable land managers to maximize the effectiveness and ecological

¹¹ People Restoring America's Forests: 2012 Report on the Collaborative Forest Landscape Restoration Program. Dec. 2012. CFLR Steering Committee. Available at: <http://www.fs.fed.us/restoration/documents/cflrp/CoalitionReports/CFLRP2012AnnualReport20130108.pdf>

benefit of fuels treatments.

The draft FY 2014 Interior and Environment appropriations bills currently pending in both the House and the Senate take positive steps for funding hazardous fuels reduction and CFLR, but much more can be done. Both chambers have far exceeded the remarkably bad funding request in the President's budget, but more should be done.

I encourage this Committee to get involved and to investigate how the use of emergency funding declarations by both the Senate and the House could be immediately employed to help direct needed resources to the vital fire risk reduction programs described above. The House subcommittee bill includes \$1,280,488,000 for the Forest Service and \$285,878,000 for the Department of the Interior in emergency funds for fire suppression¹². The draft Senate bill includes a separate title with emergency funding intended to reimburse fire borrowing this past fire season with \$600,000,000 for the Forest Service and \$75,000,000 for the Department of the Interior¹³. Thankfully these latter funds for fire borrowing reimbursement were included in the current FY 2014 Continuing Resolution¹⁴, but this technique could be used to provide the up-front resources needed to reduce fire risk and subsequent fire borrowing and fire damage.

2. Create and fund a new federal fire suppression funding mechanism to free up resources for proactive management referenced above

It is essential the Congress take actions that guarantee adequate resources for wildland fire first responders, but do so in a way that allows needed investments in the up-front risk reduction programs discussed above.

The Nature Conservancy recognizes that even with a robust, proactive approach to land management, federal fire preparedness and suppression resources will still need to be maintained at an effective level to protect life, property and natural resources. But emergency preparedness and response resources must be provided through a mechanism that does not compromise the viability of the forest management activities that can actually serve to reduce risks to life and property and mitigate the demand for emergency response in the future. The current system of funding fire preparedness and suppression at the expense of hazardous fuels and other key programs threatens to undermine – and eventually overtake -- the vital management and conservation purposes for which the USDA Forest Service and Department of the Interior bureaus were established.

The dramatic increase of homes near natural areas that are prone to frequent and unnaturally damaging fire has added significantly to the cost of fire suppression. In the past, paying for this tremendous cost often resulted in “borrowing” or outright transfer of funding from critical land management and conservation programs into fire suppression accounts. Fire borrowing, and the

¹² FY 14 Full Committee print, House Interior and Environment Appropriations Subcommittee. Available at: <http://appropriations.house.gov/uploadedfiles/bills-113hr-fc-ap-fy2014-ap00-interior.pdf> see page 41 for DOI and page 73 for USDA-FS

¹³ FY14 subcommittee draft bill from Senators Reed and Murkowski. Available at <http://www.appropriations.senate.gov/news.cfm?method=news.view&id=b3e22f9d-a060-45eb-90ef-1225244125a7> see page 144

¹⁴ P.L. 113-46 Division A, Sec 135 and Sec 136 of Continuing Appropriations Act, 2014

threat of fire borrowing, has a chilling effect on the ability of land managers to plan the complex activities that modern forestry requires and retain skilled contractors and workforce. Previous hearings and GAO work documented the tremendous adverse impacts of this fire borrowing helping to generate the public outcry and Congressional action that led to the FLAME Act¹⁵.

The FLAME Act of 2009¹⁶ was signed into law as part of a bipartisan effort to change the funding mechanism for wildfire suppression by establishing two emergency wildfire accounts funded above annual suppression. These FLAME reserve accounts were intended to serve as a safeguard against harmful fire borrowing and should have represented an important change in the funding mechanism for wildfire suppression.

Disappointingly, the implementation of the FLAME Act has not proceeded as intended. Due to several factors, during both of the past two years the Administration had to again transfer hundreds of millions of dollars from the agencies' non-suppression programs into emergency response accounts¹⁷.

The current budget structure has not worked so a new method needs to be employed. The critical life and safety mission associated with wildfire suppression should be guaranteed adequate funding, with oversight and efficiency safeguards, but this funding should not come at the expense of the other vital conservation, public service and science activities for which the federal land management agencies, and other agencies and bureaus which share the same federal funding source, were established.

The Conservancy recommends that a new, separate federal funding source be established so vital fire suppression activities are funded distinct from existing land management requirements. One option the Committee might consider is the establishment of a "Wildland Fire Suppression Disaster Prevention Fund" that could be utilized to support vital federal fire suppression actions during emergencies just as the Disaster Relief Fund is utilized to help communities recover after disasters. Fire suppression is different from other natural disasters, since the federal response is needed most acutely during the actual event. Such support should complement prevention and risk reduction activities discussed earlier, and post-fire recovery and restoration actions. It would also be wise and appropriate to enhance state participation in such a fund. This wildland fire suppression disaster prevention fund could be established in the pending FY 2014 appropriations and it could be supported using declarations similar to those in the pending House Interior and Environment appropriations bill mentioned above, or the emergency wildfire title in the draft Senate bill.

Note, we also commend the pending legislative concepts being discussed by Senator Mark Udall and Rep. Tipton for increasing the ability of the Federal Emergency Management Agency (FEMA) to provide states impacted by wildfire with additional resources for fuel hazard mitigation. As discussed in item 1 above, broadening and diversifying the investments in

¹⁵ Wildfire Suppression Funding Transfers Cause Project Cancellations and Delays, Strained Relationships, and Management Disruptions GAO-04-612, June 2004

¹⁶ Federal Land Assistance, Management and Enhancement Act of 2009. Title V of Division A of 123 STAT. 2904 PUBLIC LAW 111-88—OCT. 30, 2009.

¹⁷ See Taylor, Phil. 10.30.13. Greenwire. 'It's just nuts' as wildfires drain budget yet again. available at: <http://www.eenews.net/greenwire/stories/1059989688>

proactive management and mitigation activities is far more cost-effective than continuing to focus tremendous resources on emergency response.

3. Permanently authorize stewardship contracting authority

We commend the Senate Agriculture Committee for including permanent stewardship contracting authority in the pending Farm Bill. This is a vital and necessary step to enhance forest management and efficiency. Stewardship contracting is an innovative and critical tool that allows the U.S. Forest Service and Bureau of Land Management to implement projects that restore and maintain healthy forest ecosystems, foster collaboration and provide business opportunities and local employment. Stewardship contracts are the only administrative tool that can ensure up to 10 year supplies of timber, a level of certainty that encourages job creation and long-term industry investment. Without Congressional action, Stewardship Contracting authority will sunset on January 15, 2014. Permanent reauthorization is urgently needed to provide surety for contractors and communities and to ensure that the USFS and BLM retain this important proactive tool to address our daunting forest restoration needs.

4. Increase capacity of states and communities to become fire adapted

Programs such as State and Volunteer Fire Assistance and forest health protection provide important resources to help states and local communities develop and sustain community wildfire protection capacity. We encourage both the federal land management agencies and this Committee to prioritize programs that foster the development of fire-adapted communities and, specifically, to allocate other federal resources in a way that rewards communities for proactive actions that collectively result in national benefit.

Relatively small federal and state investments in community capacity can have substantial results for lowering wildfire risk. Building local community capacity to learn to live with fire is the most cost effective way of reducing harmful impacts to society, while also allowing for enhanced, safe and controlled use of fire to restore wildlands as appropriate.

Given the potential for devastating increases in both values lost and public expense, a diverse range of agencies and organizations (including The Nature Conservancy) have begun promoting the concept of “fire-adapted communities.” The U.S. Forest Service defines a fire-adapted community as a knowledgeable and engaged community in which the awareness and actions of residents regarding infrastructure, buildings, landscaping, and the surrounding ecosystem lessen the need for extensive protection actions and enables the community to safely accept fire as a part of the surrounding landscape.¹⁸

The U.S. Forest Service and other members of the Fire Adapted Communities Coalition are working to get communities the information and resources they need to successfully live with fire. The web site www.fireadapted.org provides access to a wide variety of educational materials and tools in support of community wildfire protection planning and action. Coalition members are also working to develop local, grassroots leaders and partnerships. These partnerships are essential for engaging all relevant stakeholders to assess and continually mitigate a community’s wildfire risk.

¹⁸ http://www.fs.fed.us/fire/prev_ed/index.html.

This level of individual and community preparedness goes beyond just developing a plan and begins to make the fundamental shift that must occur if we are going to get beyond our current wildfire suppression burden and toward restoring resilience to our nation's forests.

5. Increase research on economic, social and ecological impacts of forest investment

It is imperative that the federal government and other sectors invest in monitoring, research and accountability studies. This requires relatively small investments, when compared to the costs of fire suppression and fire damage, but it is essential if we are to really learn what works and what does not. Furthermore, new technologies, including remotes sensing, LIDAR, and focused social science studies can offer creative new perspectives to increase efficiency of action.

Key recommendations- management decisions

6. Seek policy adjustments that foster innovation and improvement in NEPA implementation, thereby increasing the scale and quality of resulting projects and plans

The Nature Conservancy strongly supports the Administration's goal of accelerating restoration in our Nation's forests as described in the February 2012 report, *Increasing the Pace of Restoration and Job Creation on Our National Forests*¹⁹. In this report, the agency acknowledges that the pace and scale of restoration must dramatically increase if we're going to get ahead of the growing threats facing our forest ecosystems, watersheds and forest-dependent communities. In order to facilitate this accelerated rate of treatment, we must make effective use of all available management tools and explore opportunities to increase the efficiency of planning and implementation processes.

We are committed to the principles of public engagement and environmental review embodied in the National Environmental Policy Act (NEPA), we believe there may be opportunities to significantly increase the efficiency of these processes through targeted adjustments in policy and implementation. The U.S. Forest Service is currently testing and tracking a variety of innovative NEPA strategies that hold promise for broader application. Adaptive NEPA, for example, is a relatively new approach in which the official record of decision allows sufficient leeway for some variety of subsequent federal actions, thereby greatly streamlining the analysis, allowing for more efficient project implementation, and enabling land managers to more effectively incorporate emerging science. These innovative approaches to NEPA should be expanded and additional opportunities sought for streamlining policies and processes in a way that increases the pace and scale of implementation while holding true to the core values inherent in the Act.

We do not support short-cuts that eviscerate NEPA procedures, but we do believe that routine forest management projects can more often be implemented utilizing the categorical exclusion procedures that the NEPA allows. The Conservancy believes that the full public participation and transparency of federal decision making, based on science and public discourse, required by the NEPA results in better management decisions that in the long run are more effective and efficient.

We were pleased to see the emphasis on collaborative, science-based adaptive management contained in the new National Forest System Land Management Planning Rule and draft Directives. We hope that, once finalized, this new framework will be promptly implemented and

¹⁹ USDA Forest Service, Feb. 2012. available at: <http://www.fs.fed.us/publications/restoration/restoration.pdf> see page 7

will guide a new round of forest planning that is both more meaningful *and* more efficient, and sets the stage for timely implementation of projects that achieve multiple benefits on the ground. Clear guidance and support for the development and implementation of monitoring strategies will also be essential to the Rule's success.

7. Increase shared commitment and support for forest restoration by states and local governments

Federal agencies alone cannot prevent the loss of homes, infrastructure and other values in the wildland-urban interface (WUI). Individuals and communities living in the WUI must meaningfully invest in preparing for and reducing their own risk from fire. Post-fire studies repeatedly show that using fire resistant building materials and reducing flammable fuels in and around the home ignition zone are the most effective ways to reduce the likelihood that a home will burn.²⁰ Similarly, community investments in improved ingress and egress routes, clear evacuation strategies, strategic fuel breaks and increased firefighting capacity can go a long way toward enabling the community to successfully weather a wildfire event.

Community commitment is also necessary to effectively shift our national approach to wildfire from a costly emphasis on disaster response to a balanced and proactive strategy with multiple benefits. Research increasingly shows that rising wildfire suppression costs are directly linked to the growing presence of homes and related infrastructure in the wildland-urban interface.²¹ A corresponding analysis by Headwaters Economics revealed that 84% of the WUI is still undeveloped, so there is tremendous potential for the costs associated with wildfire protection to exponentially increase.²² According to the same study, if just half of the WUI is developed in the future, annual firefighting costs could explode to between \$2.3 and \$4.3 billion. States and communities need to pay close attention to the ramifications of their planning on the resulting wildfire environment, especially since future decades will no doubt bring more and more severe droughts and wildfire incidents.

Federal public lands and surrounding communities also need to foster greater partnerships and multi-lateral cooperation and coordination. There are many opportunities for states and municipalities to directly participate and even help fund beneficial forest management activities on nearby federal forest lands. The Eastern Oregon study cited above⁷ demonstrates that state investments in federal land management can yield great savings to the state in reduced unemployment costs, reduced social services, and increased tax revenue. Elsewhere, such as in Flagstaff, Arizona, communities are contributing directly to restore forest conditions that reduce fire risk in order to protect existing watershed and recreation resources²³. There are great future opportunities for many states and communities to investigate a wide spectrum of innovative funding mechanisms that will support up-front investments that increase the livability of forest dependent communities and reduce fire risk.

²⁰ See, for example, Four Mile Canyon Fire Findings. Graham, et al. Pages 64-69.

http://www.fs.fed.us/rm/pubs/rmrs_gtr289.pdf.

²¹ Wildfire, Wildlands and People: Understanding and Preparing for Wildfire in the Wildland Urban Interface. Stein, et al. Page 7. http://www.fs.fed.us/rm/pubs/rmrs_gtr299.pdf.

²² <http://headwaterseconomics.org/wildfire/fire-research-summary/>.

²³ See: <http://www.flagstaffwatershedprotection.org/about/background/> summary of Forest Health and Water Supply Protection Project \$10 million bond passed in November 2012.

8. Enhance participation of additional sectors of society, such as water and power utilities, recreation and tourism, public health, and industrial users of clean water

There are tremendous opportunities for diverse and sustainable sources of non-federal funding to provide an effective complement to federal land management resources, thereby facilitating an overall increase in landscape-scale forest restoration on federal lands. There are a number of efforts underway, including water funds, which produce revenue for upstream forest restoration that benefits downstream water users and water companies while enhancing the restoration and maintenance of federal forests. Other utility and industrial partnerships can be developed.

The Forest Service has been particularly active and innovative in Colorado. Since 2009 they have established partnerships with five water utilities (Denver Water, Aurora Water, Colorado Springs Utilities, Northern Water and Pueblo Water), several major corporations (such as MillerCoors, Vail Resorts, Coca-Cola) and several philanthropic entities²⁴. Such efforts, often spearheaded by the National Forest Foundation²⁵, are exciting beginnings for greater shared responsibility that can reduce wildfire risk while enhancing forest health and enhancing the values those companies and other entities rely on.

Other witnesses today are documenting in detail additional, important partnerships with forest products industries. Forest products industry investments in new biomass and wood products development can play a substantial role to facilitate the removal of overstocked trees, while enhancing the condition of the forest and streams following harvest.

The insurance and reinsurance industries are closely involved in wildland fire issues and are important partners in such efforts as the Fire Adapted Communities coalition²⁶. There are important opportunities for greater engagement of these industries since they have such direct contact with citizens and they have such a direct involvement and desire to see fire risks reduced²⁷.

There may be additional opportunities to bring various compensatory mitigation funds for the support of forest restoration.

Wildfires and even controlled fires can have sizable impacts on public health due to smoke²⁸. There is a great need to increase engagement with public health agencies and air agencies concerning impacts of smoke, and the relative merits of massive, uncontrolled smoke events from severe wildfires versus controlled smoke episodes from prescribed burning accomplished to reduce severe wildfire risks.

²⁴ Personal communication Nov. 1, 2013, Brian Ferebee of USDA Forest Service R2

²⁵ See: <http://www.nationalforests.org/connect/corporate/partners>

²⁶ See: <http://fireadapted.org/>

²⁷ Munich Reinsurance America, Inc. April 2013. Focus on Wildfire Firefighting. Available at:

<http://www.munichreamerica.com/mram/en/publications-expertise/research-spotlight/wildfire-firefighters/index.html>

²⁸ Knowlton, K et al. 2011. Health Affairs (Millwood) Nov 30(11):2167-76. Six climate change-related events in the United States accounted for about \$14 billion in lost lives and health costs.

Kochi, I et al. 2012. Valuing mortality impacts of smoke exposure from major southern California wildfires. J. of Forest Economics 18:61-75

9. Increase the safe and effective use of wildland fire

The beneficial use of fire as a tool for resource management is another area where greater forest restoration efficiency and effectiveness could be achieved. By increasing the use of both controlled burns and naturally ignited wildland fires to accomplish resource benefit, land managers can accomplish both ecological and community protection goals on a larger scale and at reduced cost. In fact, some states annually reduce fuels on more than 100,000 acres in wildlands with fire treatments. The Nature Conservancy recommends that both Congress and the Administration make it clear that the safe and effective use of fire is a priority for land management agencies, and provide the necessary funding, training and leadership support needed to foster increased fire use where appropriate.

The Conservancy also stresses how important it is to maintain regular use of fire as a habitat and restoration tool for our Nation's public lands, including National Forests, Parks, Refuges, and BLM lands, as well as support for our Native American trust lands.

Many communities across the nation are already deeply engaged in trying to proactively address their role within fire driven forest ecosystems, but this engagement must be both sustained and increased. For more than 10 years, the Nature Conservancy has worked cooperatively with the U.S. Forest Service and the Department of the Interior to foster the Fire Learning Network (FLN) that brings communities together and helps them build collaborative, science-based strategies that protect both people and ecosystems²⁹. The FLN supports public-private landscape partnerships that engage in collaborative planning and implementation, and provides a means for sharing the tools and innovations that help them scale up. Locally, the FLN helps federal land managers to: convene collaborative planning efforts; build trust and understanding among stakeholders; improve community capacity to live with fire; access training that helps fire professionals work with local communities; and address climate change and other emerging threats.

Conclusion

It is timely and important that the Senate Agriculture Committee is holding this hearing during this very busy time of conferencing the Farm Bill. These are vital issues that deserve attention by the Congress in the near term, and on a continuing basis. It is essential that the various Congressional Committees with jurisdiction, as well as a broad array of state, local, industrial and citizens groups all work together to seek solutions. We appreciate the opportunity to offer the Nature Conservancy's perspective on how we might shift our focus toward a more proactive and cost-effective management approach that provides multiple benefits to people and nature. Please let us know if we can provide any additional information or assistance to the Committee as you move forward in this arena.

²⁹ See: <http://www.conservationgateway.org/ConservationPractices/FireLandscapes/FireLearningNetwork/Pages/fire-learning-network.aspx>