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# THE DEVASTATING IMPACTS OF WILDLAND FIRES AND THE NEED TO BETTER MANAGE OUR OVERGROWN, FIRE PRONE NATIONAL FORESTS

U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON NATURAL RESOURCES, SUBCOMMITTEE  
ON FEDERAL LANDS

ONE HUNDRED FOURTEENTH CONGRESS, FIRST SESSION

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Chairman, Subcommittee on Federal Lands

**Rep. Niki Tsongas (D-MA)** [*no pdf available, see [28:57 of webcast](#)*]  
Ranking Member, Subcommittee on Federal Lands

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Deputy Director, Yakama Nation, Department of Natural Resources

**Ms. Diane Vosick** [[view pdf](#)]  
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**Mr. Andy Fecko** [[view pdf](#)]  
Administrator, Placer County Water Agency, Placer County, CA

**Mr. Mitch Friedman** [[view pdf](#)]  
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*AVAILABLE WEBCAST(S):*

**Full Hearing:**

<https://www.youtube.com/watch?v=f2PEAHyvWTM&feature=youtu.be&list=PLTb5lxCVS1x2Hle6TnfyUrAGKmcEpulG&t=1401>

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**Testimony of Phil Rigdon**  
**President, Intertribal Timber Council**  
**Before the House Committee on Natural Resources**  
**Hearing on “*The Devastating Impacts of Wildland Fires and the Need to Better*  
*Manage our Overgrown, Fire-prone National Forests.*”**  
**April 23, 2015**

I am Phil Rigdon, President of the Intertribal Timber Council (ITC) and Natural Resource Deputy Director for the Yakama Nation in South-central Washington State. On behalf of the ITC and its member Tribes, I appreciate today’s opportunity to share concerns and recommendations over the management of our nation’s forests.

I can summarize my testimony in three sentences:

1. Indian forests are more economically and ecologically productive, with superior forest health and smaller, more controllable wildfires than on other federal lands.
2. Indian forests achieve these outcomes under the same regulatory framework as other federal lands at a fraction of the cost.
3. This phenomenon boils down to innovation, willpower and the accountability of our decisions to our tribal culture, tribal government and our generations of family members.

On a total of 334 reservations in 36 states, 18.6 million acres of forests and woodlands are held in trust by the United States and managed for the benefit of Indians. Pursuant to both tribal direction and federal law, our forests must be sustainably managed. Indian Tribes work in partnership with the Bureau of Indian Affairs and others to care for the land. We operate modern, innovative and comprehensive natural resource programs premised on connectedness among the land, resources, and people. Our approach is holistic – sustaining a “triple bottom line” of economic, ecological, and cultural values. We care for the land through active management and do our utmost to aggressively treat problems such as wildfires and insect or disease infestations before they can reach disastrous proportions.

Indian tribes are neighbors to federal forests and many tribes retain and exercise treaty and reserved rights on these lands to hunt and fish, gather foods and medicines and for other purposes. Unhealthy forests impact these activities on federal lands, as well as on our own land.

Our National Forests are being lost by the failure to undertake active management. Tribes can offer federal forest managers new tools and a holistic approach badly needed to restore forest health.

Unlike Forest Service and BLM forests, Indian forests and their management are reviewed by an independent scientific panel every ten years. In 2013, the Indian Forest

Management Assessment Team (IFMAT) released its third report to Congress since 1993. On one hand, the IFMAT report shows that Tribes are suffering from chronic underfunding and challenges created by the loss of leadership and staffing. On the other, it also shows significant progress being made on tribal forests.

Funding: One of the key findings of the IFMAT report is that Tribes are able to accomplish more in their forests with far less funding than other federal land managers. On a per acre basis, tribes receive about one-third the funding for forest and wildfire management as the Forest Service.

Using my own Reservation as an example, the Yakama Nation is funded for fire preparedness at \$0.57 per acre per year while the adjacent Gifford-Pinchot National Forest is funded at \$1.18 per acre per year; and the Mount Hood National Forest at \$2.11; the Columbia Gorge National Scenic Area at \$2.83 – nearly five times what we receive at Yakama.

Unfortunately, the effect of under-funding has very real results. Again using the Yakama Nation as an example, we typically have 55 BIA forestry positions to help manage our forest. Currently 33 of those are vacant because of an insufficient pool of available manpower, B.I.A. slowness and budget shortfalls. The tribe has diverted funds from other tribal functions to help mitigate that loss, but cannot do so in the long term without a decline in either our tribal services or production from our forest.

While Indian forests operate on a shoestring budget, that shoestring is about to break. The ITC continues to work with the Administration and Congress to increase funding for tribal forest management.

Wildfire & Recovery: Tribes are better able to use scarce resources to prepare our forests for fire, recover after fire and ensure the continuity of forest resources for generations to come.

First, tribes understand that a “let it burn” approach is not always acceptable given the forest health conditions found across our nation’s landscape. Instead we are effectively responding to and reversing unnatural conditions in the forest. One such example is the response to budworm infestation on the Yakama Reservation. Timber sales were prioritized as a tool to treat areas that were most severely affected by the budworm. Between 1999 and 2003, silvicultural treatments were implemented on approximately 20,000 acres of budworm habitat per year. 97,000 acres were treated with a biological control agent between 1999 and 2001 to control tree mortality.

The epidemic peaked in 2000 when the budworm defoliated trees on 206,000 acres. As a result of the Yakama Nation’s silvicultural treatments, defoliation decreased dramatically. In 2002, only 1,207 acres were defoliated – a reduction of over 99%. Significant economic value was recovered from dead and dying trees, and forest density has been reduced, promoting forest health and resiliency. While such forest health treatments are common on tribal lands, it would be a challenge to find similar

speed, scope and effectiveness on other federal forests.

In addition to restoring forest resilience, Tribes also respond to fires more effectively. While the comparison is not completely equivalent, the average size of a fire on BIA-managed lands is one-third the size of fires on Forest Service land. On a per-acre basis, suppression costs on BIA and BLM lands are one-fifth the cost of fires on Forest Service lands.

Even after fires, tribes are able to respond much quicker than other federal agencies to recover economic value and rehabilitate landscapes. The 2002 Rodeo-Chediski fire burned 467,000 acres of tribal and federal land, including half the timber on the Fort Apache Indian Reservation. While significant damage was done to tribal forests, the intensity of the fire was dramatically less on tribal land. This is because, since 1945, the Apaches have conducted commercial thinning coupled with prescribed burning on 30,000 acres annually.

Likewise, tribal salvage and reforestation began within months of the Rodeo-Chediski fire – removing up to 500,000 board feet of fire-killed timber a day. The Forest Service sales faced litigation that delayed salvage operations, reducing resource value and increasing operational costs.

Tribal interests in healthy landscapes goes beyond reservation boundaries. Many tribes maintain off-reservation treaty rights on ceded lands that now are National Forests. Catastrophic wildfire on these forests directly and negatively impact tribes. Many of these fires burn into tribal forests. Even with effective treatments to our own lands, severe wildfires from adjacent federal lands inflict significant damage and economic costs to tribal forests.

Ecological Conditions: Tribal forests must meet - and often exceed - the same goals as other federal lands -- all subject to NEPA, ESA and other federal regulations. But Tribes are able to manage our lands in harmony, because we live with the consequences of our actions. We must meet the “triple bottom line.” If forests are overcut or devastated by wildfire, we lose revenue and jobs, a myriad of ecological benefits we rely upon from our forests, and the traditional and cultural sustenance our forests have provided since time immemorial. The active management tribes employ to realize the “triple bottom line” is facilitated by three elements:

- The fact that our forests held in federal trust are for the use and benefit of our tribes and their members and, within the scope of the trust, are subject to the direction of our tribal governments,
- The federal law guiding B.I.A. and tribal management of these trust forests, the National Indian Forest Resource Management Act of 1990 (PL 101-630, Title III), is the most recent and most flexible federal forest management statute, and
- The Indian Self-Determination Act (PL 93-638) has enabled tribes to assume direct and comprehensive management of our forests.

While IFMAT certainly identifies possible improvements for tribal forest management, our existing successes offer empirical examples that can and should be replicated across landscape ownerships. The ITC offers the following legislative recommendations that will help all rural communities and federal forests; tribal and non-tribal.

### **Recommendation #1: Anchor Forests**

Chief among the legislative recommendations made in the IFMAT III report is the “Anchor Forests” concept. It is modeled on a landscape-wide partnership in central Washington State, covering Forest Service, Yakama Nation, state and private forest lands. The goal is to coordinate ecological and economic goals across ownership boundaries, rather than stopping at them, in an effort to preserve forest products infrastructure needed both for economic vitality and forest health treatments.

Currently, ITC is working with four tribes - the Yakama Nation, the Confederated Tribes of Colville, the Spokane, and the Coeur d’Alene, the Forest Service Region 6 and other forest stakeholders on three Anchor Forest test sites in the states of Washington and Idaho. Elsewhere around the country, ITC has received expressions of interest in Anchor Forests from tribes in the Lakes States, the Midwest and the Southwest. We would like to work with Congress to create legislative direction for this concept.

### **Recommendation #2: Improve the Tribal Forest Protection Act**

When Congress authorized the Tribal Forest Protection Act (TFPA) in 2004, it was intended to enable tribes to propose projects on adjacent federal lands that would protect the tribe’s rights, lands, and resources by reducing threats from wildfire, insects, and disease.

Under the TFPA, the Secretaries of Agriculture and Interior are authorized to enter into agreements or contracts, pursuant to tribal proposals, to address risks and threats originating on nearby Forest Service and BLM administered lands.

Although well-intentioned in Washington, D.C., the TFPA has not met expectations on the ground. Since 2004, only six TFPA projects have been effectively implemented on Forest Service lands.

One project proposed by the Tule River Tribe took over ten years to navigate the Forest Service’s environmental review process. Another project, proposed by the Warm Springs Tribe in Oregon, was abandoned because of the threat of litigation from environmental organizations. Without treatment, a Forest Service fire in 2014 spread onto Warm Springs tribal land, burning an area being considered for carbon sequestration. The opportunity was lost due to this fire.

The Forest Service and the ITC recently completed a formal review of the TFPA and identified several recommendations to better accomplish its intended outcomes. These included greater education of Forest Service staff about the TFPA authority and finding

other ways to encourage tribes to commit the time and resources to the TFPA process. ITC and the USFS - are conducting regional workshops for USFS, other federal personnel, tribes, and interested parties to learn about TFPA and to start forging TFPA agreements that help restore healthy, resilient landscapes.

ITC would like to work with this Committee to explore ways to amend TFPA or other authorities to expedite consideration, approval, and implementation of TFPA projects. These include addressing environmental compliance through categorical exclusions and faster timelines.

### **Recommendation #3: Tribal Stewardship Leasing**

Third, ITC recommends new legislative authority for Tribes to enter into long-term “stewardship leasing” agreements with federal agencies to address emergency situations on Forest Service and BLM lands that threaten both tribal forests and tribal rights and interests on federal land such as hunting and protection of cultural resources. This concept differs from TFPA projects in that the Tribe itself would be managing the resource over a longer period of time to achieve optimal forest health conditions. Tribes would operate under tribal NEPA procedure as we do on tribal land.

Summary: We believe the nation would benefit by looking to Indian forestry as models of sustainability. We can help move the country forward to create a healthier, sustainable future for our forests and natural resources. We invite this Committee to come visit Indian forests for a firsthand look, and we also look forward to working with the Committee on our recommendations.

Testimony of Diane Vosick, Director of Policy and Partnerships  
The Ecological Restoration Institute, Northern Arizona University  
<http://www.eri.nau.edu/>  
Before the House Federal Lands Subcommittee

April 23, 2015

**Hearing entitled, “The Devastating Impacts of Wildland fires and the Need to Better Manage our Overgrown, Fire-prone National Forests”**

Chairman McClintock, Representative Tsongas, and members of the Committee, thank you for the opportunity to talk to you about fire, forest restoration and solutions to restore healthy forests.

My name is Diane Vosick. I am the Director of Policy and Partnerships at the Ecological Restoration Institute at Northern Arizona University. Our Institute, under the direction of Dr. Wally Covington, is well known for scientific research on how to restore western forest ecosystems and lower fire risk to communities. In addition to examining the biological responses to forest restoration we also examine the economic and social implications of forest restoration throughout the West. Also, and perhaps most important, we take the best available knowledge about restoration and communicate it in a language that is accessible to a wide variety of audiences, including collaborative groups and land managers who are designing and implementing forest restoration approaches at large scales. We have over 350 scientific papers published in peer review journals testing forest restoration approaches and related subjects.

My testimony today will briefly recap: 1) Why the West is burning; 2) What science tells us we can do, 3) How we know it works.

**Why is the West burning?**

The fact is that for thousands of years the West has burned, albeit in different ways than it does today. Prior to Euro-American settlement the ponderosa pine dominated areas of the West burned frequently as a result of lightning strikes and Native American ignitions. Tree densities in ponderosa pine forests were much lower and the forest had a diverse grass, flower and shrub understory depending on where you were in the forest. During this time fire would primarily stay on the ground, burning through grass, while occasionally torching into the crown of small groups of trees. This fire, on the ground, limited tree seedling establishment, keeping the number of trees within natural conditions and sustainable conditions, that is, within the carrying capacity of the land.

In the late 1800s people began changing the forest. As ranching moved westward livestock removed the grasses that typically carried fire, leaving bare soil available for trees to germinate. By the early 1900s any form of fire was viewed as the enemy of a productive forest and a threat to human safety. As a result of reduced competition from grasses and the absence of low intensity fires, the forests filled in with an overabundance of small trees that contribute to today's historically unprecedented fuel loads and unnatural crown fire.

These overstocked forests impact other natural resources as well, such as reduced snow pack accumulation (essential for surface water flow and ground water recharge), reduced forage production, and steadily accumulating fuel loads at the landscape scale. Finally, as we all know the forest in this condition has become liability, threatening not only ecologic health, but also economic livelihood and the social well-being of rural communities.

It's worth noting that scientists beginning with Aldo Leopold predicted the current forest crisis beginning 75 years ago. More recently, in 1994, Dr. Wally Covington was senior author on a paper which stated that the West could anticipate exponential increases in the severity and extent of catastrophic fire. In that same paper he suggested that there was only a narrow window of opportunity to take preventative actions to restore forest health and minimize the losses of civilian and firefighter lives as well as the mounting damage to our nation's natural resources. We all know now how accurate those 1994 predictions have become.

### **What can be done?**

There is abundant scientific research that began in the 1890's that guides the development of restoration treatments for ponderosa pine and related frequent fire forests. This research analyzes the outcomes of restoration treatments and provides confidence that we are on the right path to restoring forest health. This broad body of science allows us to:

- determine pre-settlement forest conditions and determine how many excess trees there are on the landscape and how many should be removed;
- determine how fire regimes (frequency and intensity) have changed over the last century so we can determine when and how to reintroduce managed fire;
- determine how too many trees impact the health of individual trees and the overall resilience of the forest;

- determine that overall there are positive ecological responses to thinning and prescribed burning—the key elements of any attempt to restore ecosystem health in ponderosa pine and related ecosystems;
- demonstrate that restoration treatments substantially reduce fire hazard by thinning trees to decrease tree canopy density, break up interconnected canopy fuels, raise the crown base height, and reduce accumulated forest floor fuels and debris with prescribed fire. Where tree density is great, fire alone is inadequate. Without thinning, fire can lead to increased mortality, especially among old growth trees, and transition from a controlled surface fire to an uncontrolled crown fire. Excessive tree density is the typical case over most of the ponderosa pine and dry mixed conifer types throughout the West.

One caution about treatments, we do not advocate a “one-size fits all approach”, but rather that treatments should be based on a specific location, its natural condition and therefore sustainable numbers of trees, and its relationship to the broader forest and local communities. In this sense, ecological restoration should not be viewed as a strict recipe or a rigid set of treatments. Rather, ecological restoration should be viewed a broad framework for restoring and enhancing not only ecosystem health, but also sustainable human uses of the land.

A second, critical element for success is to increase the pace and scale of restoration treatments. Fires occur at the scale of hundreds of thousands of acres. In order to reverse the trend of mega-fire on federal land, NEPA must occur on large scales in order to increase efficiency. In addition, the problem won't be solved just by building moats around rural communities. Recent mega fires start in the back country and move like a torpedo across the landscape. Smart treatment planning will configure treatments to reduce the potential for miles of backcountry fuels while simultaneously providing restoration around key landscape features and irreplaceable habitat.

### **How do we know restoration and hazardous fuels reduction works? What are the consequences of inaction?**

In January 2012, the Office of Wildland Fire at the Department of Interior asked the Ecological Restoration Institute to conduct a third-party analysis of several persistent questions asked by the Office of Management and Budget and the Government Accountability Office about the effectiveness of fuel reduction treatments. We assembled a group of noted wildfire economists to examine five questions:

1. Have the past 10 years of hazardous fuel reduction treatments made a difference? Have fuel reduction treatments reduced fire risk to communities?

2. What are the relative values of treatment programs at the landscape scale?
3. How can we improve current and future economic returns to restoration-based hazardous fuels reduction treatments?
4. What are the fuel treatment, Wildland Urban Interface, and climate change effects on future suppression costs?
5. When or will investments in fuel reduction treatments lead to a reduction in suppression costs?

Rather than going into detail on the answers to each of these questions, I will focus on how we know treatments work and how they can be more effective. Copies of the full report have been provided to you.

The answers are straightforward and reinforce what I have said earlier in this testimony--we need to be more aggressive about solving the underlying problems of forest health and excess fuel accumulation by implementing restoration treatments strategically across the landscape. Our study provides ample economic and ecological evidence for why this makes sense.

- Using an evidence-based approach informed by the best available science, similar to the approach used in medicine to identify effective therapies, we concluded that fuels and restoration treatments can reduce fire severity and tree mortality in the face of wildfire. Treatments also increase the amount of carbon stored on site long term.
- In addition, various wildfire simulations show that treatments can change fire behavior and fire severity and increase fire-fighting effectiveness, thus reducing suppression costs in some circumstances.
- Treatments are shown to be effective in protecting communities in wildfire simulations and in real wildfire experiences. HOWEVER, if treatments occurred at broader scales—such as outside the Wildland-Urban Interface, then there would be a greater impact on reducing damage from large fires.
- We can improve the economic and ecological effectiveness of treatments by acting before forests become too departed from their natural conditions.
- Finally, one of our key findings is that if present development trends in the WUI continue and warmer and drier conditions persist, we will see acceleration of increases in fire suppression costs.

One of the key questions we were asked was when investments in federal fuel treatments will offset federal suppression costs. As I mentioned previously, well placed hazardous fuel reduction and restoration treatments can reduce suppression costs. However, the question is insufficient to illuminate all the collateral benefits of treatments that go beyond suppression savings. Also it does not address the full cost of catastrophic wildfire on all sectors of society if we fail to take action.

The case study of the Schultz Fire (which is included in the full report) provides a grim example of what happens when we fail to act. The Ecological Restoration Institute in partnership with the W.A. Franke College of Business sought to calculate the full cost of the fire and the post-fire flooding that impacted Flagstaff and Coconino County following the fire in June of 2010. Through surveys and interviews we calculated that the full cost of the 15,000 acre Schultz fire is between \$133 and \$147 million. The cost was spread across 4 federal agencies, 3 state agencies, 3 utilities, local municipalities, nonprofits and citizens. One of the largest costs was nearly \$60 million in lost property values associated with the event, and one of the most devastating losses was of a 12-year old child. In contrast, had we treated every acre that burned at the high cost of \$1,000 per acre we would have spent \$15 million dollars and saved between \$118 and \$132 million.

In conclusion:

- The evidence shows that fuels treatments are ecologically and economically effective.
- In order to get ahead of the cost of large and severe fire, more treatments will be needed outside the Wildland-Urban Interface.
- By treating degraded landscapes sooner we can maximize economic and ecological benefits.
- And finally, development in the Wildland Urban Interface and Intermix should be managed to reduce risk.

Thank you for the opportunity to speak before the Committee.

We respectfully submit the two studies referenced in this presentation as part of our testimony:

The Efficacy of Hazardous Fuel Treatments:

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

A Full Cost Accounting of the 2010 Schultz Fire:

<http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2013006.dir/doc.pdf>



**Testimony**

**Mr. Andrew Fecko  
Director  
Resource Development  
Placer County Water Agency  
Auburn, California**

**Presented Before**

**Chairman Tom McClintock  
Subcommittee on Federal Lands  
Committee on Natural Resources  
U.S. House of Representatives**

**April 23, 2015**

## **Introduction**

Thank you Chairman McClintock and Ranking Member Tsongas and members of the House Subcommittee on Federal Lands, for the opportunity to testify on the impacts of catastrophic wildfire on communities and vital water resources in the West.

My name is Andrew Fecko and I serve as the Director of Resource Development for Placer County Water Agency (PCWA), and as a member of the National Water Resources Association's (NWRA) Federal Affairs Committee and a Co-Chair of its Forest Health Working Group. I help operate PCWA's water, energy and recreation infrastructure in the heart of California's Sierra Nevada mountains.

## **About PCWA**

Placer County Water Agency owns and operates the Middle Fork American River Project, providing water supplies, hydroelectric power, public recreational opportunities and environmental stewardship for the people of Placer County and the region. The people of Placer County built the Middle Fork Project in the 1960s to develop local water resources for the long-term public benefit. Placer County Water Agency was created to ensure, and remains committed to supporting, diligent management of those water resources.

## **About NWRA**

NWRA is a nonpartisan, nonprofit federation made up of agricultural and municipal water providers, state associations, and individuals dedicated to the conservation, enhancement and efficient management of our nation's most important natural resource, water. NWRA represents a diverse group of agricultural and municipal water users and water providers from throughout the American West and portions of the Southern United States. Our members provide clean water to millions of individuals, families, agricultural producers and other businesses in a manner that supports communities, the economy and the environment.

## **California Water**

PCWA is one of some 50 water and energy utilities that operate in the Sierra Nevada mountain range, which provides approximately 65% of California's water supply on an annual basis. Simply stated, California's mountain headwaters and the rain and snow that falls in these watersheds make it possible to supply clean drinking water to 38 million Californians and the homes, farms and businesses that support a \$1.6 trillion dollar annual economy.

## **Why Federal Land Policy Matters in California**

Approximately 45% of California is owned and managed by the federal government, and well over 75% of our headwaters are managed by the US. Bureau of Land Management or the U.S. Forest Service. This means that while local agencies own and operate water and hydroelectric systems through-out these headwaters, the land from which our water and energy supplies are derived are managed by policies that are not locally derived and which often have far-reaching economic and societal impacts throughout the state.

## **Our Recent Experiences**

PCWA is located in the Middle Fork American River watershed, about 2 hours east of Sacramento, California. Our watershed spans some 412 square miles, and provides enough drinking water for 250,000 citizens and enough renewable hydroelectric energy for 100,000 homes. 36% our watershed, some 150 square miles – has burned since 2000. While some of these fires have been mild in nature, others have been increasingly devastating because of the intensity and severity with which they engulf the landscape. This troubling trend, fueled by decades of active fire suppression and changes in forest management policy and exacerbated by natural drought conditions, has led to a situation that puts California’s water supplies at great risk, and leaves local agencies like mine bearing the consequences.

### **King Fire**

Our experience with the King Fire in 2014 offers a good example. The King Fire was ignited on the afternoon of September 13, 2014 in El Dorado County. For the first 4 days, the fire burned in a mix of privately managed timberlands and the El Dorado National Forest, growing to approximately 20,000 acres by the morning of Wednesday, September 17, and spreading at a moderate rate. Wednesday afternoon brought extremely low humidity and increased wind speed, which drove the fire into the remote and densely forested Rubicon River canyon, an important tributary to the American River. Once it reached the Rubicon canyon, the fire exploded.

In the next 12 hours, the fire grew by almost 50,000 acres, making a run of almost 16 miles overnight. Fire officials on the ground used words like “unprecedented” and “unheard of” to describe the speed and intensity at which this fire destroyed the landscape. A rare mid-September rain storm and a calming of wind conditions were the only two factors that halted this fire from continuing its advance into the Lake Tahoe watershed and even more devastating consequences.

The King Fire ravaged the Rubicon River watershed with high-severity incineration. Complete loss of vegetative cover has exposed soils to erosion on thousands of acres of steep, sloping river canyons. Sediment and debris derived from this erosion threaten the integrity and function of hundreds of millions of dollars of water and power infrastructure, as well as miles of aquatic and riparian habitat vital to frog and fish species of concern to state and federal regulatory agencies.

All told, the King Fire burned 153 square miles in three watershed and two counties. More than 60% of the fire burned at high intensity. The costs were tremendous, and are ongoing:

\$118,500,000 in direct firefighting costs was borne by the public;

\$8,000,000 in immediate costs to repair and protect water and energy infrastructure was borne by local utilities like mine;

Untold costs to roads, cultural resources, and wildlife habitat, and soil resources;

Ongoing costs to local utilities that must now deal with the aftermath.

### **The Aftermath**

The effects of large catastrophic wildfire on natural and man-made infrastructure lasts for decades, and the effects on the forest itself can last for centuries. In the case of water and hydroelectric utilities that operate in California's watersheds, the aftermath is often worse than the event itself.

Wildfires in the Sierra tend to occur at the worst possible time of year, at the end of summer. Not only are forest fuels at their driest, but the transition from the arid California summer to the wet fall can happen quickly and with devastating results. Particularly in the case of high-intensity fire, trees whose root systems once held steep slopes in place are now dead. Soils that were once a rich and stable organic ecosystem that was resistant to erosion are now baked into a loose cake which has a tendency to reject water from rain events and then all at once become a muddy slurry that tumbles off of canyon walls and into rivers and streams. As the receivers of mud, rock and dead trees, our river systems become overwhelmed with this debris and transport it downstream during high flow events.

Once this debris enters lakes and reservoirs, it fills in valuable storage space, blocks spillways and ruins equipment and generating machinery. PCWA has experienced this before. The Star Fire that burned in 2001 is still depositing large dead trees and tons of sediment into our facilities some 14 years later. We, like many other utilities in the Sierra, must regularly, and at great cost to our ratepayers, clean our reservoirs of sediment, rock and trees or they would become useless mud flats.

In the case of the King Fire, the U.S. Forest Service estimates that over 300,000 of tons of topsoil are poised to erode into Rubicon River from King Fire burned area the first year after the fire. Ralston Powerhouse and Afterbay Dam are located a short distance below 19 miles of scorched Rubicon River canyon and when this reservoir fills up, hydropower production and water flow for our citizens is stopped for months at a time. This stretch of river has also been identified by PCWA in collaboration with regulatory agencies as important habitat for frog and fish species of concern, habitat which will be severely impacted by fire-induced sedimentation.

This impact can last for many years. While trees and brush can begin to regrow within a decade of even an intense fire, the fertile soils that have taken millennia to establish are damaged for many centuries. This long after-effect means that our facilities are ultimately less valuable, our water dirtier, and our ability to serve a growing California economy water and energy products diminished for many decades.

### **Destined for Disaster?**

Recent scientific findings point to an increase in the frequency and intensity of large wildfires in the West. While there are many potential causes, we believe that at least part of the problem lies with a century of wildfire suppression and a recent reduction in active timber management on public lands. It is clear in our watershed that fuel loads, particularly small trees and brush,

have increased to an extent that where a person could once walk through a forest of large, mature trees, one now finds impenetrable brush fields and thousands of small, unhealthy trees. Under natural conditions, the Sierra landscape would have seen much more frequent and lower intensity fires which would have cleaned the forest of these fuel loads and left the forest healthier for it.

In our view, because of decades of increasing fuel loads, it is not currently possible to return to this natural fire pattern without great risk to valuable human infrastructure. However, we believe that using a combination of techniques that include active mechanical harvesting of smaller fuels, logging of appropriate larger trees, controlled burning, and replanting, land managers can return the system to a much healthier equilibrium that brings the forest into balance without the risk that untrammelled natural burning would incur. Implemented appropriately, these programs have the potential to be financially self-sustaining, while benefitting the economies of rural communities in our watersheds.

Returning to a balanced approach to forest management will take time and focus. In California, much of the forest product infrastructure that existed in our rural communities in the past has been consolidated into centrally located mills that have limited capacity, and often cannot process smaller logs. If we can begin to rebuild our forest management capacity, we believe there will be opportunities to rebuild sustainable forest product infrastructure in our rural communities in the form of biomass energy, fuel wood and fuel pellet, and milled lumber products. Working within the construct of a public and private partnership, the health of our rural communities and the health of our watersheds can be sustained in perpetuity.

Water and hydropower utilities throughout the West have come together with private landowners and local governments to begin the conversation of returning our forests to a more sustainable condition. We believe that by applying the following principles to our publicly owned forest and rangelands, we can achieve a balanced result that will benefit our water supplies, our recreational opportunities, ecosystem health, and help to restore communities that rely on natural resources to power their economies.

#### Policy Principles:

- Current laws and regulations must be improved to reflect the urgency of reducing fire risk in Western forests and to recognize that catastrophic wildfire is the greatest risk to forest ecosystems and species, and to the water quality and water supplies that originate from our headwaters.
- Forest management tools such as forest thinning, biomass management and controlled burns that reduce fuel loading, and consequently, the risk of catastrophic wildfires should be accelerated to the extent feasible. Federal laws and regulations that slow or limit such efforts should be reassessed to enable broad and active utilization of these management tools.

- Best available science should be continually applied to forest management. New developments in landscape management techniques that benefit water quality and water yield should be integrated as pilot and demonstration projects in the ongoing management of federal lands.
- It is imperative that the Congress provide adequate and stable funding to the Department of the Interior and the Department of Agriculture to support sustained development and implementation of programs that improve the condition, trend and resiliency of federally managed headwaters. Stability in funding necessitates that the fighting of large, catastrophic fires be funded from emergency management funds rather than borrowed from regular agency operating budgets.
- For catastrophic wildfire mitigation projects intended to reduce the likelihood and severity of wildfire, National Environmental Protection Act (NEPA) and Endangered Species Act (ESA) compliance should weigh the long-term impacts to species and ecosystems of catastrophic wildfire when analyzing any short-term impacts of pre-fire mitigation actions.
- For post-fire forest restoration actions, time is of the essence to protect the natural and man-made infrastructure of our watersheds. National Environmental Protection Act (NEPA) and Endangered Species Act (ESA) compliance should be greatly streamlined and weigh the overall long-term health of the landscape against any short-term impacts of mitigation actions.
- Litigation is often the cause of lengthy delays in pre-fire mitigation and post-fire forest restoration projects. Given the risks and impacts of a catastrophic wildfire, a higher standard should be required to stop or delay projects in high-risk watersheds. Congress should act to limit the scope, standing and timelines associated with the filing of suits that delay action on federal lands.
- Federal law and agency policies should allow local stakeholders to partner with the federal land managers to pursue opportunities to conduct the planning and implementation of fuels reduction and restoration projects on federal lands.

### **Summary and Conclusion**

Land management in the West is at an important crossroad, and requires bold actions by Congress and compromise on the part of many stakeholders. As water and hydropower utilities that serve a growing population and are tenants and stewards of federal lands, we have a vested interest in the success of headwaters management. The science of forest management has advanced greatly, and to put it simply, federal, state and local land managers now know how to manage our forests better to achieve multiple ecosystem and societal needs in a balanced way. However, we require flexibility in federal law and federal agency rules and regulations to test, experiment and ultimately apply the best available science to forest management for the benefit of all. We hope that as Congress takes up the issue of federal land management, you call upon us to help define the parameters of a successful future so that the next generation of Americans will continue to enjoy our forest and rangelands.

April 23, 2015

Testimony of Mitch Friedman

Executive Director of Conservation Northwest

For the House Committee on Natural Resources, Subcommittee on Federal Lands' oversight hearing titled, "*The Devastating Impacts of Wildland Fires and the Need to Better Manage our Overgrown, Fire-prone National Forests.*"

Mr. Chairman, members of the subcommittee, thanks for this opportunity. I'm Mitch Friedman, a biologist and executive director of Conservation Northwest, which I founded in 1989. Conservation NW works across the State of Washington and the broader Northwest region to protect and connect wildlands and older forests to sustain healthy wildlife populations.

I have long been passionate about the management of our federal forests. In the mid 1980's I was one of the first people to sit high in a tree in protest logging of ancient forest, and I organized the first protest against logging spotted owl habitat. Through the 1990's, my scientific staff engaged in technical review of Forest Service timber sales across Washington State, and we appealed and litigated many. In 2003 Conservation NW helped pioneer community-based, multi-interest collaboration to improve national forest management. Over the past 13 years we have collaborated on timber and other projects across five national forests, working directly with forestry, ranching and other stakeholders. As a core member of the Northeast Washington Forestry Coalition, we've been part of a record of helping produce more than two dozen successful projects on the Colville National Forest, converting it from gridlock to a national model for collaboration.

I certainly agree that substantial national forest acreage warrants active management, though I don't see that through quite the same frame as the title for this hearing. The relationship between wildfire and forest management is complex, varying in need and cost-effectiveness by forest type and other considerations, and with somewhat unpredictable levels of benefit for taxpayers. A better frame and justification for the restoration and management of our forests is to improve their ecological health and ability to adapt to withstand the impacts of climate change. The need for such widespread and extensive work led me in 2008 to call for a restoration Marshall Plan.

An example of the counter-intuitive nature of wildfire and management is last summer's Carlton Complex Fire. It was the largest in my state's history, but three quarters of the burned area was grass and shrub land. Of the quarter that burned in forest, there were acres recently thinned for fire risk reduction and acres not, and fire behavior wasn't always what one might have guessed. It also burned in acres of forest types for which we have no known approach for reducing wildfire risk, especially not without excessive public cost and environmental damage. That's

why we think it's best to focus on restoration for ecological resilience, with reduced risk of uncharacteristic and harmful fires being a benefit but not the primary driver.

On these matters I've found substantial common ground between conservation and timber interests. Just last week, I met in Spokane, with a number of regional timber industry leaders and conservationists from various national and local organizations. We all agree to the following general points with respect to national forests of the West:

- There are substantial acreages that warrant active management for ecological objectives, often involving commercial timber production as an additional benefit;
- There are substantial areas that should be permanently protected as wilderness;
- There are substantial acreages on which active management can occur for objectives apart from ecological restoration;
- Such management should maintain environmental quality, including clean water, habitat for endangered species and other wildlife, etc.; and
- All of this should occur with due efficiency as a matter of good governance.

A product of our discussions will be suggested legislative language to incentivize collaboration. For instance, we agreed to propose bold new ideas with respect to environmental review of collaborative products at landscape and project scales. I look forward to being involved in discussions on such potential legislation in the near future.

I'm one of many conservation leaders who believe that environmental review is a means to the essential ends of public engagement, quality decision-making, and protection of the environment on our public lands, rather than an end itself. The more efficient and cost-effective environmental review can be in achieving these objectives, the better.

It's important to note that many matters of Forest Service efficiency are not constrained by legislation. Programmatic environmental review of very large national forest landscape projects has always been consistent with NEPA, and is being attempted in places. Third party environmental review is also legal, allowing us to support experimental outsourcing of review to both a local conservation district – which didn't go so well - and, currently, a so-called A to Z purchase by a timber interest. Along with others, I have called for a range of other already-authorized reforms and actions, including:

- Reducing the disruptive transfers of Forest Service leaders;
- Modifying employee performance reviews;
- Modernizing training;
- Encouraging risk-taking among contract officers; and
- Larger appropriations.

What I believe can work best is bona fide, quality collaboration among private, public, national and local interests. In the Northeast Washington Forestry Coalition, we not only built trust and a culture of problem-solving and production among former adversaries, for over a decade we've made quality projects rain on the national forest. We agreed upfront to firm sideboards on such things as roadless areas, big trees, and roadbuilding, so that we wouldn't have to waste valuable time. We collaboratively developed a highly informed land management plan for the entire Colville National Forest, including mapping the landscape into three general zones: proposed wilderness, restoration area, and active management areas. We've agreed to, and in many cases led or helped design, over two dozen stewardship projects that have been impressively implemented. We've focused effort first in areas of general agreement, such as thinning of dry forest types, and then incrementally took on design of prescriptions in more challenging forest types by bringing in outside scientific guidance and memorializing our agreements so that forward progress continues. We have a memorandum of agreement signed by all core parties that guides our efforts, and guidelines that inform what nature of Forest Service management proposals warrant our focus or not. We've won substantial grants from the Collaborative Forest Restoration Program and won recognition from the Secretary Vilsack and others. We have grown and learned a lot together, much of which is embedded in these remarks.

It's this sort of collaborative framework that I believe can lead to more efficient and broadly beneficial and sustainable management of our public lands. I appreciate you inviting my thoughts, and hope we can work together to improve and protect the rich national heritage that our public forests comprise while fostering sustainable and prosperous local communities.