

**U.S. Senate Committee on Energy and Natural Resources**

*Testimony for Federal and Nonfederal Collaboration,  
including through the Use of Technology, to Reduce Wildland  
Fire Risk to Communities and Enhance Firefighting Safety and Effectiveness*

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Members of the Committee on Energy and Natural Resources, my name is Steve King and I have the pleasure of serving the City of Wenatchee as the city's Economic Development Director. I am honored to have this opportunity to present testimony on the value of multiagency partnerships and collaboration associated with efforts to reduce the risk of wildland fire disasters. The City of Wenatchee and other communities in North Central Washington have experienced a number of significant events in the last five years and thus wildfire is in the forefront of our minds. I would like to start this testimony with a recount of the night of June 28, 2015 when the City of Wenatchee lost 29 homes and several industrial warehouses to wildland fire that spread indiscriminately into the heart of our city. The seemingly harmless brush fire in the early afternoon of June 28<sup>th</sup> turned in to a torrent of flames traveling over a mile in less than 20 minutes when the winds picked up that late afternoon. I personally watched the whole event unfold from a distant vantage point watching helplessly and in horror as the edge of our city went up in flames. The Sleepy Hollow fires and the losses our community suffered is forever burned in my mind. Watching this event unfold in your beloved home town is incomprehensible. During the event itself, we saw emergency crews work to do everything they could to ensure people's lives came first and then to triage structures to save homes that had half a chance of being defended. I recall specifically standing below one neighborhood watching homes explode in flames when the radio reported warehouses on fire in the middle of the city. Just when we thought it couldn't get worse, it did with an agricultural chemical supply plant fully involved over two miles away from the wildland urban interface. Finally, after a couple more hours of chaotic conditions, thankfully the wind died down and the fire stopped spreading. I tip my hat to our firefighters who worked so hard in seemingly hopeless firestorm conditions that night. The next day, when dawn broke, the scene was not much better. I can honestly say that there is nothing worse than driving through a neighborhood where all that remains are chimneys and smoldering remnants of once beautiful homes. Occasionally, out of the blue, one home would be standing untouched with no rhyme or reason. This is the beginning of after the fire period in which the human and community impacts are just getting started. The human impacts after the fire last for years and is

heartbreaking to witness. I share this story as an introduction to illustrate the importance of employing preventative measures to reduce the chance of our community and others from ever having to experience this type of natural disaster tragedy in the future.

### **Employing What We Have Learned**

Since the Sleepy Hollow Fires of 2015, Chelan County Fire District No. 1 Chief Burnett and I have gone to extensive training concerning the Wildland Urban Interface. This training included attending the National Fire Academy Wildland Urban Interface course, securing and working through a Community Planning for Wildfire Assistance grant, and attending a 2016 National forum in Boulder Colorado to share and learn about the successes and challenges other communities face associated with this topic. Members of the committee, I want you to know how federal support of this type of training is highly valued and appreciated. We, in Wenatchee, can attest that this training does make a difference. Without this support we would not have learned that the risk of occurrence of the afore mentioned disasters can be substantially reduced through implementation of multipronged strategies and best available science. These strategies not only include more traditional response measures, but they also now include prevention strategies such as land use planning, community engagement, using fire resistant building materials for susceptible structures, creating and maintaining defensible space, and employing vegetation management practices in the wildlands. All of these strategies will be tied together in a Community Wildfire Protection Plan and the County Hazard Mitigation Plan which reinforces the need for partnerships among property owners; wildland managers; city, county, state, and federal government; as well as emergency response agencies. I cannot emphasize enough the importance of these partnerships as wildfire knows no boundaries. This is particularly important in Chelan County in which over 80% of the land area is in public ownership. In our County, our communities live down valley and downwind of the wildlands. The risk of wildfire starting in the wildlands and migrating into the urban areas is acute given our arid climate and susceptibility to dry lightning ignited wildfires.

### **Value of Risk Mapping and Modeling**

Understanding how risk is impacted by the implementation of multiple strategies while taking into account the complex science of fire behavior, weather conditions, vegetative environments, slopes, and wind speeds requires the use of technology based tools. Risk mapping and modeling is an amazing tool to help accomplish this intense and complicated task. Risk mapping and modeling also provides numerous other benefits as follows:

- Risk mapping gives us a way to communicate the importance of becoming fire prepared and the need to employ risk reduction strategies in specific locations of our community.

- It helps us prioritize where to apply limited resources based on the greatest risk to the community and the largest potential for loss.
- Risk analysis becomes a tool for a call to action which helps professionals engage the public in terms in which they can understand. Interactive maps allow property owners to look specifically at their neighborhood and expected fire behavior in the adjoining wildlands.
- Risk maps provide a tool for cities and counties to adopted relevant codes such as the Wildland Urban Interface code. The City of Wenatchee will be making changes to our Wildland Urban Interface development codes based on information derived from risk mapping.
- Risk modeling helps us assess effectiveness of strategies when applied comprehensively or individually. More importantly, risk modeling tells us what happens when certain strategies are not implemented. For example, if a community develops a vegetation management strategy in the adjoining wildlands and it is only implemented by 80% of the landowners, risk modeling will show whether or not risk is actually reduced commensurate with the investment. It then becomes a call to action to secure 100% participation of landowners.
- Risk assessments allows communities to prioritize protection of critical infrastructure. For example, often times wildfire cause power outages which shuts down water pumps that support wildfire fighting efforts.
- In the case of Wenatchee, risk mapping taught us that the fire behavior in our shrub steppe environment is fairly predictable and relatively constant over time. Thus, this conclusion supports the implementation of strategies such as defensible space that will be just as effective in 20 years as it is today if it is maintained.
- Understanding fire behavior in the worst conditions helps fire and emergency response agencies understand how best to defend structures and a community when wildfire does strike. This is part of living in an environment prone to fire and recognizing that extreme fire events have happened, do happen, and will continue to happen. How we prepare ourselves for the next fire is our choice.
- Finally, risk modeling and other fire behavior tools are becoming more advanced as scientific research digs deeper into the causes of wildland urban interface fires. For example the science of ember cast and transport is currently being further developed. Ultimately, this science will be incorporated into risk models. Risk modeling will become more and more useful over time as technology and science is improved.

As demonstrated above, the value of these elements of risk mapping and modeling is tremendous. As our community continues to learn about wildfire and risk mapping is further refined for Chelan County, we have come to appreciate its importance.

## **Current Risk Mapping Efforts – Nonfederal and Federal Partnerships**

As part of the Community Planning for Wildfire Assistance (CPAW) grant, the city developed a risk map for the areas around Wenatchee in 2016. This opened the door to understanding and discussions around the complexity of our natural environment. In July of 2017, local agencies convened to work on a comprehensive risk map for Chelan County as part of the County's CPAW grant. This map is being developed by professionals from the U.S. Forest Service Rocky Mountain Research Station. The discussion, led by the Forest Service, brought together agencies including the Washington State Department of Natural Resources, Chelan County Planning, Chelan County Fire Districts (Nos. 1 and 6), City of Wenatchee, and the CPAW professionals. The discussion around the map that ensued was extremely valuable in helping agencies with different missions and goals understand comprehensively how wildfire is viewed and managed from a resource protection standpoint. I can't emphasize enough the value of convening multidisciplinary professionals from various agencies to work together on the development of risk mapping. The creation and maintenance of a risk map computer model requires input from experts in order to 1) understand the realities of the impact of fire and 2) develop risk mitigation strategies that make a difference while considering the values of each organization and the public.

Developing a risk model is not only a cost effective tool, but it leads to effective collaboration that extends beyond the map. Relationships and understanding organizational values are the keys to effective partnerships. For example, city and county agencies learn about forest health, environmental stewardship, and range management objectives from the Forest Service, Bureau of Land Management, and the State Department of Natural Resources. In addition, these agencies learn from cities and counties how the built environment interacts with the natural environment and the associated value sets shared by people living in urban areas and more particularly in the wildland urban interface.

Once the mapping effort is complete we will be able to approach the general public with a united front which will help us secure resources and empower individuals to take action to do their part to reduce the risk of wildfire disasters as we look to the future.

## **Conclusion**

We have experienced the horrors of wildfire and loss that extends far beyond the homes themselves. The emotional toll on people is indescribable. One of the homeowners that lost their home in the fire, told me it is like losing a limb at the same time as becoming homeless. Your home is a part of you as a person he said and losing your home takes a piece of you with it. The cost and resources expended to recover from a disaster are enormous, but not nearly as impactful as the human cost suffered by a community and individuals.

We hope that you will see in this testimony why we are so supportive of investment in resources that will help reduce the risk of this happening again in our community and just as importantly in other communities. In the era of mega fires in which human habitation is butted up against the wildlands, we know it is only a matter of time before smoke fills the air and more losses are suffered. Thankfully, we learn from our experiences and every step we take reduces the chance of disaster. This is why we put forth our efforts and resources to become more fire resilient. We sincerely appreciate the support of Senator Cantwell, this senate committee, and the federal agencies who are helping us with our efforts of becoming a fire adaptive community. Thank you.