



Response to Audience Questions from *The West is Burning* Screening – Bend, May 25th, 2023

1. Realistically, how vulnerable is Bend to wildfire? Is Bend the next Santa Rosa?

We live in a fire-dependent ecosystem. Fire has and will always be a part of the landscape of Central Oregon. The region's forests are shaped by the frequency, pattern and severity at which they burn. Historically, ponderosa pine and dry mixed-conifer forests burned very frequently (every 10 to 25 years) and with relatively low intensity, resulting in open forests of large trees with a forest floor of grasses and scattered shrubs.

As is common across the western United States, fire exclusion across the landscape has led to denser stands setting up conditions for increased susceptibility to insects, disease and high-intensity fire. We are actively engaged in [restoration and hazardous fuels reduction projects across the forest](#) to improve forest health and resiliency to wildfire.

Bend has experienced several devastating fires over the past 40 years. The lessons learned from these events led to programs such as [Project Wildfire](#) and [Fire Free](#). Our collective goal is to make our communities and forests more resilient and adapted to fire so when one does occur, we are prepared and the impacts aren't as devastating. Smart development and building practices, defensible space around homes and proactive forest restoration are all necessary in the ecosystem we live in and enjoy here in Central Oregon. We all have a critical role to play in ensuring our community is resilient to wildfire.

2. I live in the River West neighborhood. On my 6,300 ft lot I have 8 large ponderosas. My neighbor has 2 very large junipers. How worried should I be about wildfire hitting Bend and my house burning down? Should we cut those trees down?

The large trees themselves aren't a primary hazard. Ponderosa Pine are resilient to fire; however, canopy connectivity can be a concern. Removing ladder fuels such as low hanging limbs and nearby brush or tall grass below the trees will help prevent a fire from spreading into the tree crown. It's best to focus on removing potential ignition sources within the ["home ignition zone"](#) that could spread fire to the house. To learn more about preparing your home or property for wildfire, visit [Fire Free's website](#).

3. What considerations are given to wildlife with the modern forest management methods, i.e. thinning and prescribed burns?

Wildlife habitat is a primary consideration during the analysis, planning and implementation of all of our projects. Each project undergoes a lengthy interdisciplinary team review with specialists who conduct an analysis for their discipline, provide inputs and collaborate on a final proposal. Wildlife specialists are included in these interdisciplinary teams and they work in coordination with fuels, botany, recreation, and many other specialists to develop project proposals. When making management decisions, we have to consider many different species, all with different needs for food, hiding cover, water and space. Therefore, it is important to restore forests to conditions

where they support a multitude of different habitat elements including clearings, dense patches of trees and shrubs, dead standing trees, dead downed trees and more variability in forest density all around. Much of this can be done through strategic thinning and controlled burning.

Land managers pay close attention to species that use habitats which benefit a multitude of other species (what ecologists call umbrella species) and sensitive species that may be indicative of healthy, rare or sensitive habitats (what we call indicator species) when making land management decisions. Land managers are also legally required to manage land for threatened or endangered species where they exist – such as spotted owls or grey wolves – and we take this requirement very seriously.

4. Is the process of thinning the forest first, then controlled burning (as shown in the film) the process being applied in the forests surrounding Central Oregon?

Generally, yes. However, it depends on the specific reforestation needs and requirements of an area. Every project undergoes a lengthy interdisciplinary team review with a variety of specialists who conduct an analysis for their discipline, provide inputs and collaborate on a final project proposal. Specialists include fuels, wildlife, silviculture, soils, botany, heritage, recreation and many others. This interdisciplinary team assess the needs of each project area and individual stands to determine how to meet multiple discipline objectives while also meeting the project's purpose and need.

We often implement small diameter thinning, mowing and/or mastication treatments before prescribed burning to remove ladder fuels. This reduces the likelihood of fire spreading from the ground into the canopy. It also results in low to moderate fire intensity when we do introduce fire which benefits the ecosystem and further reduces hazardous fuels.

5. Does a portion of private lumber sale that is a beneficiary of clear cutting go back towards clearing and management?

Clear cutting is not a forest management tool used by the Deschutes National Forest. We conduct thinning of the forest guided by variety of silvicultural prescriptions. Revenue generated from the value of timber through integrated resource contracts can be used to complete small diameter thinning, fuels treatments and other resource improvements such a wildlife habitat and treating invasive species.

6. Is there any way we could build structures to be more fire resistant?

Yes! The [International Code Council](#) and [National Fire Protection Association](#) have model interface building codes. Key items are noncombustible roofs (class A rating), siding (wood composites), boxed in eaves, vent screening ¼” or less and double pane tempered glass windows. These features make the structure more resistant to direct fire spread. The most important aspect is the [“home ignition zone”](#) that extends from 0-30’ from the structure. Reducing natural and human made fuels in this area will reduce the risk of fire impacting the structure from both direct flame and flying embers.

7. With all the mechanical clearing of small trees, is there any concern around the loss of nutrients that come with shipping those trees out?

Not here in the East Cascades, but certainly in places like the tropics. We have new soils of volcanic origin and a fairly dry climate, so the soils are not as leached of nutrients as older or more weathered soils in humid regions. However, our dry-forest soils have a high silica/sand content and drain readily. Therefore, our forests are mainly limited by the availability of water. Densely grown small trees are actually competing for nutrients and water, and so having unnaturally dense forests actually results in poorer forest health and more vulnerability to insects and diseases since the struggling trees are not vigorous enough to defend themselves from being attacked. Having a diverse understory of deep-rooted forbs, shrubs and grasses, rather than dense trees, is pretty important here since many of those species can actually help return carbon and nutrients to the soil. Fires also help return charred carbon to the soil, which is more stable and retains more soil nutrients than decomposing small diameter wood.

8. What is being done with the trees smaller in diameter than those cut for lumber? What space is ideal among the trees left for standing?

Many mills in Oregon – both large and small – have modernized their operations to use smaller diameter material to create wood products including finish materials for homes, decking and post and poles. With more innovative manufacturing technologies, industries and municipalities are looking into using this material for energy, fiber products and soil amendments (via a specific charcoal processing method that produces “biochar”). The continued challenge is that it isn’t currently very economical to remove this smaller diameter material. Land managers often pile and burn the smaller woody debris that isn’t removed in the fall and winter.

The desired density of trees varies depending on the vegetation type and the management objectives for that area. For example, thinning to reduce heavy mistletoe infestation may be much more aggressive than thinning to reduce the susceptibility of forests to bark beetles. If the objective is to reduce fire risk, trees are thinned enough to reduce the continuity of fuels (reducing the overlap in tree canopies, understory shrubs, and small-diameter dead wood) while limiting the amount of ladder fuels (vegetation that grows from the ground and up into the canopy). Many various objectives can be met through strategic thinning treatments, but maintenance and follow-up treatments are often necessary since forests are continually changing.

9. Please explain a bit about the local restoration work.

We have so many great restoration [projects](#) being planned and implemented across the forest! If you are interested in a specific area or type of restoration project, please reach out to us at (541) 383-5300 and we can provide more details.

All of our projects are rooted in [NEPA \(National Environmental Policy Act\)](#) and the objectives are always tied to the specific purpose and need of the project. Each project

undergoes a lengthy interdisciplinary team review with specialists who conduct an analysis for their discipline, provide inputs and collaborate on the final proposal. Years of analysis, planning and preparation go into each project before we even begin implementation.

10. How do you decide where prescription burns need to occur?

The forest uses past fire and treatment history and analytic fire modeling – which evaluates stand structure, forest type and predominant weather patterns – to determine what types of treatments will benefit the landscape. Factors such as proximity to communities, infrastructure and forest use also influence the appropriate location and type of treatment chosen.

Each of our prescribed burn units comes with a prescription that is derived during the National Environmental Policy Act (NEPA) process that is conducted for every prescribed burn. This prescription includes specific parameters that need to be met in order to effectively conduct the prescribed burn to meet the intent of the work to restore forest and ecosystem health while reducing hazardous fuels to decrease the risk of catastrophic wildfire. The parameters include specific temperatures, relative humidity, vegetation moisture levels, etc. that must be met to conduct the prescribed burn. Firefighters take all of these factors into account when determining if it is appropriate to move forward with a prescribed burn.

11. What happens to an area after a big fire? To trees, recreation, etc.

Restoration efforts will vary depending on the severity of the fire. Repair of fire suppression activities and reforestation will often occur. Reforestation can include hazard tree removal along travel or recreation corridors and replanting or reseeding of trees or native plants. Temporary closures may be implemented to allow restoration and hazard mitigation work to be completed.

12. Do prescribed fires ever get too hot / burn too severely? Example Hwy 97 near Sunriver on the west side of the road – trees look crispy.

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During the ignitions phase of a prescribed burn, firefighters can moderate the intensity of the burn by how they are lighting the fire. Firefighters use a tool called a drip torch, which has a flame-producing wick. They can vary the amount of fire they are applying to

landscape by increasing or decreasing the frequency in which the flame is touched to the landscape in the ignition process.

A qualified burn boss leads prescribed burns. Qualified burn bosses typically have 15+ years of experience fighting wildfire and implementing prescribed burns. The burn boss closely monitors the weather and fuels conditions and is in frequent communication with the National Weather Service to ensure they are updated on current and expected conditions. Occasionally, weather conditions will shift unexpectedly which can impact fire intensity. We are always prepared for this, we have a number of contingency engines, firefighters and firefighting equipment, for each prescribed burn that are ready to respond if conditions change.

13. What increase in budget is needed to do what is required to properly manage Oregon's forests?

This is a difficult question to answer. We are starting to see what it costs to maintain fire-dependent forests through time as we continue forest restoration in these ecosystems. The challenge is that every acre is different. For example, is it near a community? Is it a place where wildlife habitat is the highest priority? What vegetation species are present (lodgepole, ponderosa pine or mixed conifer)? The funding we currently have will help us in the coming years to better define the long-term costs of maintaining these landscapes to be resilient to fire, insects and disease and warming climates.