PAYSON ROUNDUP
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Restoration crucial to saving forest

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Want to peek into the future?

Google "California Wildfires."

California's on fire. Hundreds of thousands of people have evacuated. Hundreds of homes have burned. The electric utility company's broke. Millions have lost power. The 80-mile-an-hour winds are blowtorching thickets of trees and brush that haven't burned in decades. And during those decades, people wedged whole towns into the chaparral and overgrown forests.

Now, forested Arizona's heading for just such a disaster.

Granted, we've got fewer people and fewer homes to burn. But the communities that will burn include Payson, Pine, Show Low, Springerville, Lakeside, Pinetop, Alpine and a few other places close to home.

The best chance of avoiding such a fate lies in the success of the faltering Four Forest Restoration Initiative (4FRI). And that's why the fine print in the plan to burn and thin 1.4 million acres holds the key to the survival of the whole region. The fires in California have only underscored the mostly neglected lessons of the 500,000-acre Rodeo-Chediski Fire. We can't stop the fire forever. Either we do something now — or watch it all burn. Maybe soon.

The Forest Service recently released the environmental impact statement (EIS) on the second phase of its unprecedented effort to avert disaster by restoring the ecosystem of an entire region. This series delves into that massive environmental report. Today's installment looks at the desperate wildfire danger facing the region — and the plan for avoiding California's agony.

The section on fire in the massive EIS runs for hundreds of pages, filled with terrifying detail on the transformation of a healthy, fire-adapted forest into a wood-choked tinderbox, filled with towns and subdivisions.

The devastating changes stemmed directly from misguided federal policies, combined with a lack of county and town codes to reduce the chance of a town-destroying fire like the one that consumed Paradise, Calif. last year, killing 85 people who couldn't flee the onrushing flames fast enough.

Consider the transformation of the ponderosa pine forests that cover millions of acres across the middle of Arizona — including all of the White Mountains and Rim Country. The key point in avoiding a town-destroying wildfire lies in avoiding crown fires. In a passive crown fire, flames spread from tree to tree as fast as the wind can blow. In an active crown fire, a wall of flame roars through the forest, reaching from the saplings and debris on the ground up into the treetops. This generates a merciless wall of flame, with arms reaching out 100 or 200 feet. That's the kind of fire that incinerated people in their cars fleeing Paradise.

The forest once had about 50 trees per acre. Grass grew tall as a horse's belly between the giant, 500-year-old trees, each with the lowest branches well above the reach of the flames from frequent grass fires. The low-intensity fires burned through every 2 to 22 years. These low-intensity ground fires took out the saplings and brush, returned nutrients to the soil and did little harm to the big trees. Less than 5 percent of the forest could generate an active crown fire and less than 20 percent could generate a passive crown fire.

In that forest, communities like Payson and Show Low would face little danger of burning to the ground — especially if they had Firewise codes to prevent the buildup of brush and tree thickets in town and wildland-urban interface (WUI) building codes to prevent embers from a distant fire from setting scores of homes on fire all at once.

But we've warped that natural forest beyond recognition. First, we unleashed cattle, which ate all the grass and stopped the frequent ground fires. Next, we cut down most of the big trees, letting small trees grow in their wake. Finally, the Forest Service rushed to put out every single fire within 24 hours, allowing tons of dead and downed wood to build up on every single acre.

And how did that work out?

Some 78 percent of the ponderosa pine forest in the 1.4-million-acre study area is now vulnerable to crown fires. A horrifying 23 percent of the forest can generate an active crown fire, with that unstoppable wall of flame.

The news gets no better when you look at other forest types. Some 70 percent of the mixed ponderosa pine/oak woodland could sustain a passive crown fire and 36 percent an active crown fire. In the dry mixed conifer dominated by Douglas firs 77 percent of the land faces the threat of a passive crown fire and 54 percent an active crown fire.

The analysis offers lots of other grim statistics on the dire threat of catastrophic fire, from the destruction of watersheds to fires that burn so hot the forest can never come back. But you can grasp the overview if you keep focused on the danger of a community destroying crown fire. Remember, not one of the counties or towns in the study area has adequate Firewise or WUI building codes to slow the spread of flames through the community.

So what's the plan?

The environmental study considers three possibilities.

Alternative 1: Keep on keeping on — the "no action" alternative. In this scenario — things keep getting worse and the area subject to crown fires will grow to 84 percent.

Alternative 2: Dramatically thin the forest, with both logging projects and a big increase in controlled burns. This "preferred" alternative involves treatments on 77 percent of the 1.4 million acres. That includes 900,000 acres of thinning projects, followed up with at least two controlled burns in the ensuing 10 years. Another 63,000 acres would be treated with only controlled burns.

Alternative 3: This alternative would reduce smoke in the short term, but treat only half as much land — about 47 percent of the landscape. However, the untreated areas would eventually burn in high-intensity fires — generating far more health-harming smoke in the long run.

So let's focus on Alternative 2, which would treat three out of four acres across a vast, tree-choked landscape. Granted — the Forest Service will have to overcome huge problems to hit that goal. Private industry will have to build a new timber industry, with paper mills, oriented strand board plants, saw mills and other businesses can turn a profit on small trees. Even more challenging, the Forest Service must do something with some 30 tons of brush and debris piled up on almost every acre, with little value beyond burning to generate electricity.

But set that issue aside for a future installment.

Focus on wildfire — and the forest we'll be living in if 4FRI works out.

So, let's start with whether your house will burn down.

If you're sitting in the ponderosa pine forest — the odds of an active crown fire hitting town would drop to about 1 percent. Only 2 percent of the forests around town would have a "moderate" fire risk rating and only 1 percent would have a "high" fire hazard Index rating. None of the ponderosa pine forests in the WUI interface would rate as "very high" risk.

The numbers look similar for many of the other vegetation types. About 11 percent of the dry mixed conifer would pose a risk of an active crown fire, 41 percent of the madrean pinyon oak, 13 percent of the wet mixed conifer and 25 percent of the pinyon juniper.

That's a dramatic reduction in risk. Still, the risk remains, which means counties and towns will still need Firewise and WUI codes to survive in the new era of frequent controlled burns and slowly diminishing crown fire risk.

The report notes that even though the number of controlled burns in the cooler months will increase, not acting will create far more harmful smoke. If we do nothing, wildfires will over time release 3,500 pounds of smoke emissions per acre. A combination of thinning and controlled burns will produce 2,000 pounds per acre. Burning biomass would have an even greater impact, since the power plants would capture most of the harmful emissions.

And here's an interesting tidbit.

Right now, 66 percent of the power lines go through areas at high risk of a crown fire. If we do nothing, that will increase to 74 percent. Please note, downed power lines started enough fires in California to bankrupt PG & E.

In a treated forest, only 6 percent of the power lines would pass through crown fire territory.

Nonetheless, the Arizona Corporation Commission recently decided not to require the utilities it regulates to generate some of their electricity from burning biomass, which remains the key to making 4FRI work. The commission

majority reasoned rate payers shouldn't have to subsidize forest thinning effort. They apparently didn't factor in the cost of wildfires or bankrupt public utilities.

Near the end of the massive environmental analysis, one graph summed up the impact of the thinning projects on the threat of active crown fires. The acres subject to crown fires would drop in every forest type:

Ponderosa pine: 22 percent vs. 1 percent

Pine/oak: 30 percent vs. 0 percent

Dry mixed conifer: 54 percent vs. 11 percent

Wet mixed conifer: 70 percent vs. 13 percent

Aspen: 5 percent vs 2 percent

Pinyon juniper: 67 percent vs. 25 percent

Pinyon/oak: 80 percent vs. 41 percent

Riparian: 19 percent vs. 2 percent

Moreover, the amount of dead and downed wood and duff on the forest floor would decline from perhaps 30 to 40 tons per acre to less than 20 tons per acre. That's still a lot more than the roughly 5 tons per acre estimated in the natural, pre-settlement forest. However, the amount of dead and downed material would continue to decrease as natural fire patterns returned.

So go watch the California fires burn on the TV.

That's our future.

Unless things change.

And 4FRI succeeds.

Source:https://www.paysonroundup.com/news/restoration-crucial-to-saving-forest/article_2848d259-3f20-52b7-9ec0-d2eec57c1f61.html