



Restoration on the Stanislaus National Forest

Forest Supervisor says many actions make up forest restoration

By Jason Kuiken, Forest Supervisor, Stanislaus National Forest

In many ways, we are tied to the landscape around us. The mountains and forests are not only the backdrop for our community, they are also within our community and a part of our daily lives. Whether it's through recreation, employment, or our water source, the health of the landscape is integral to the health of our communities and ourselves. Therefore, as the prevalence of catastrophic wildland fire and insect and disease outbreaks increases, the impacts are also becoming ever greater.

Historically, fire played a pivotal role in shaping and maintaining mixed-conifer ecosystems. If you travel today onto the Stanislaus National Forest, you'll find forest stands have increased in density and shifted composition from shade-intolerant pine and hardwood species to shade-tolerant conifer species. These changes in forest structure have altered the role of fire on the landscape, creating unsafe and challenging fire management conditions, diminishing forest health and integrity and degrading old forest wildlife species habitat. You'd also see that too many trees are crowded together, competing for limited water, rather like having too many straws in one glass of water. These and other characteristics are signs of increased fire risk.

Conditions like these developed slowly over the years. On the Stanislaus, as on most Sierra Nevada mixed conifer forests, fire- and drought-resilient pine and hardwood species predominantly occurred on dryer, upper slopes where frequent fires were more likely to occur. Conversely, shade-tolerant and less fire-resilient species, like white fir and incense cedar, were better suited for growing in denser stands located in cool, moist drainages and seeps found on lower slopes that were less frequented by fire.

In the early 1900s, pine was the preferred timber species, which made it valuable for timber harvest. At the same time, we substantially modified the natural fire regime by our highly successful suppression of wildfires. Due to logging methods, fire suppression, and other landscape changes, having fewer mature pine trees allowed more shade-tolerant conifers to successfully grow, increasing stand densities and reducing suitable conditions to regenerate pine and oak.

Due to these compounding factors, forests find themselves in this high-risk fire condition. We, the state's and the nation's foresters, are emphasizing the importance of learning from historic conditions to determine sustainable conditions. Historically, topography and fire influenced forest structure and composition in the Sierra Nevada. Management that mimics those historic structures and fire-mediated processes will help restore the natural role of fire on the landscape, create diverse forest conditions and improve habitat quality by providing multilayered canopies and other key structures associated with sensitive wildlife species.



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In a series of future articles, I'd like to talk about some of the tools we have in the toolkit to help our forest become healthier – to restore forest health, and become more resilient to fire, insects, disease and drought. I want to explain how and why we reduce stand density with mechanical thinning, how we determine when mechanical methods work and when hand crews are better, discuss how the forest benefits our local community and what benefits our urban centers gain from a healthy forest, as well as help residents understand why we use prescribed fire – including our efforts to reduce smoke. I also want to discuss how important recreation is and how a healthier forest helps restore wildlife habitat for threatened and endangered species.

There is a lot of work to do, but often the first step is the biggest. We are working with local and state partners to bring diversity and ecological health back to the forest. We know that revenue from recreation visitors benefits local and valley communities, but one of the most important benefits found in a healthy forest is clean water. There is much to say about that benefit and how it affects us all.

We call the forest and surrounding communities home, so I hope you'll watch for my future articles that will reinforce some things you already know and hopefully share a perspective you hadn't considered before.

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