

Wildland Urban Interface - June 2008
US Forest Service
Shasta-Trinity National Forest

Historically, there has been a sharp distinction between wildland and urban environments. People clustered in cities and towns, and farms and forested areas were miles apart. Aside from the occasional hunter or trapper, few individuals actually made their home in the vast tracts of wilderness. Wildland fires pose a serious threat to human life and property when homes are built in fire-prone ecosystems.

Native peoples understood that living with fire was part of the process and there is evidence they used low-intensity fires to clear areas of land. Lightning-caused fires also played an important role:

“The landscape of northern California had a fire return interval of seven to fifteen years...and that means that on average, most parts of the landscape were exposed to a fire with a fairly high frequency...and because of that, the fuel on the forest floor never really accumulated, we really didn’t develop high fuel loadings on the forest floor, and because fires burned through the forest with some frequency, you never developed fuel ladders from the small trees into the crowns of the larger trees.”

Mike Hupp is the District Ranger for the Shasta-Trinity National Forest Mount-Shasta McCloud Management Unit. He says that the popular “Hollywood” notion of a National Forest as an unbroken tract of pines stretching to the horizon is inaccurate:

“It resulted in a landscape that had a lot of variety; it was a very diverse landscape...in the sense that it had a lot of small patches of trees and small openings all intermingled together that resulted from the fire history.”

In the latter half of the 19th century, all that began to change:

“European settlement occurred, had the influx of people in the late 18-hundreds, and along with that came grazing, which had a big impact on the fire environment, in that livestock ate the grass that carried fires, and also tended to change the systems from grass-dominated to brush dominated, because the brush wasn’t eaten by the cattle or sheep, so you had that effect. And then in the early 19-hundreds, in the first part of the century, we began to suppress fires.”

The forest ecosystem wasn’t the only thing that underwent change; advances in transportation and communication meant people could live further from where they worked and shopped and the suburbs were born. Rapid development combined with the long-standing policy to put out every fire as quickly as possible meant that fuels that would normally have burned off continued to accumulate year after year.

Paige Boyer is the Fire Management Officer with the Shasta-McCloud Management Unit:

The fuels conditions that we see here that affect fire behavior are similar to most other places on national forest lands in general, and we’re basically dealing with situations where we’re out of the typical fire regime condition class in much of the area. And that’s due to past suppression

practices and the population moving out into the forest and building structures and different types of improvements.

While prescribed burns have long been an important tool in reducing the threat of a catastrophic wildfire in what fire managers call the Wildland-Urban interface, or WUI (WOO_EEE), they are not always the best solution. A long-term effort at thinning the amount of vegetation in the Mount Shasta area by removing much of the brush and selected trees in a manner which has minimal impact is showing great results in both a healthier forest environment and reduced threat of uncontrollable fires.

Wildland fire specialists call this “Changing the Trajectory”: Less fuel to burn on the ground and fewer opportunities for the flames to spread into the forest canopy as a devastating crown fire. Mike Hupp takes us on a tour of one of the project areas, known as “Mountain Thin” just outside the City of Mount Shasta...with a large subdivision with high-end homes just a few hundred yards away.

“This project that we’re looking at up here, was designed to do several things... first of all we wanted to remove the fuel ladder, and we did that by removing trees three to ten inches in diameter, and putting those in a pile to be chipped. So that’s the biomass part of this project. And those chips will be hauled to Burney, California, to Burney Forest Power, more than likely, and used to generate electricity, and every van-load of chips that goes out of here has the b-t-u equivalent of somewhere around 39-40 barrels of oil. So, there’s a substantial amount of energy in this, in this project, this unit alone will generate about 350 vanloads of chips, so, you know, we’re talking 12-thousand barrels of oil here, in terms of b-t-u equalvalance.”

Selected larger trees that are suitable for timber products are harvested and sold, making the project able to sustain itself. With less competition, the remaining healthy trees are able to grow more rapidly, you trees soak-up or sequester more carbon dioxide, they become more resistant to insect pests like the highly destructive bark beetle and encourages a diversity of other trees, including aspen, willow and oak.

Without the natural fire cycle, land managers must use a number of techniques to keep fuel loading under control to reduce the risks of catastrophic wildland fires that can result in billions of dollars in property loss and incalculable damage to the environment.

City of Mount Shasta Mayor Russ Porterfield is also an agent for a major insurance company. He often finds himself in the role of having to educate newcomers to the area when it comes to covering those homes against loss from fire:

“When folks move in, particularly from out of area, but generally move into some of these more outer areas, that are more rural, and one of the main reasons they want that is for their security or privacy, and so they leave the brushfields there, so people can’t see them, kind of like a natural fence...the problem is, the fence may be a hundred yards thick. I do have a problem when their foliage comes right up, the fuel comes literally right up against the house.”

Porterfield, who is also a member of the local FireSafe council, believes the Forest Service is but one part of the solution, but the other part includes homeowners that live in fire-prone communities. An important concept for homeowners living in hazardous areas is that of

defensible space. Defensible space is the buffer area between wildland fuels and homes . . .this area allows firefighters to protect the home or, in absence of firefighters, allows the home to better survive on its own.

Poterfield says defensible space and projects like Mountain Thin will help provide a lasting benefit to the community and, although there is still much work to be done, are a step in the right direction:

“If I can judge the forest service on what’s happening locally here, I’m kind of optimistic that somewhere along the lines we might get some reality back into the program here.”

Paige Boyer agrees, saying that a “Leaner, Greener” Forest will mean fewer high-intensity fires, and give firefighters a much better chance at protecting lives and property for residents who live along the Wildland Urban Interface:

As we clean up the fuels and reduce those ladder fuels, it allows the fire to either run through under the canopy and stay on the ground, it doesn’t go into the torching and spotting scenario. It also allows firefighters access, where in many places right now, they’re so brush-laden, you can’t get through them. The firefighters have easier access, and then if we’re using aerial resources, that type of thing, they can actually get retardant and water through the canopy if it becomes a bigger fire.

((music up and out))

The Forest Service encourages all Californians to make their homes, neighborhoods and communities fire safe. To find out more about California FireSafe Councils visit www.firesafecouncil.org. If you would like to know more about the Wildland Urban Interface and how the Forest Service is working to reduce the fire threat, contact the Shasta-Trinity National Forest at www.fs.usda.gov/stnf

This Podcast is produced by Belongie Entertainment Enterprises for the Shasta Trinity National Forest , Public Affairs and Communications.

The Forest Service is an equal opportunity provider and employer.

Our theme music is DAYDREAMER, composed by George Wood, provided by the Podsafes Music Network and used by Permission.

In Redding , California , I’m Bob Belongie.

[End of recorded material]

Wildland Urban Interface - 2008
US Forest Service
Shasta-Trinity National Forest