

Fire and Forest

Thoughts about Fire Abatement and Drought

by Chris Kramer

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A few months back at a board meeting of the Fire Safe Council, we discussed putting together some questions to present to our local government Forester's. We titled this "Questions to Shape Education".

The thought was to obtain answers on the correlation between the continuing drought and maintaining a healthy forest. Below are our questions and the answers that were provided by Gregg Bratcher our local CalFire Forester. This information is beneficial to all of us in the community as we try to maintain our yards and help the forest survive the current drought conditions.

- **Why should I worry? I've done fuel abatement on my property so I should be protected. How could my home burn?** Trees, shrubs, and grasses grow every year. Tree work may not be needed yearly, but the other work may need to be completed each year, every other year, etc.

Duff layer is also something that needs to be addressed depending on the depth and where it accumulates.

- **How can I get my neighbors to do some fire fuel reduction on their properties?** Educating yourself in regards to PRC 4291 and having a general understanding of fuels management may help you engage your neighbor in understanding the need for fuels work. The following website will answer questions in regards to 100' defensible space.

www.fire.ca.gov/communications/communications_firesafety_100feet.php.

- **Assuming we will get less precipitation, or at least less snow, what changes can we expect in the forest over the short and intermediate terms?** Continued mortality from bark beetle in the pine trees and continued activity of GSOB in the oak trees. Fuel moistures in trees and

brush will be at critical levels much earlier in the spring months leading to easier consumption in the case of a fire. Thin appropriately so your desired trees and brush get the water they need to survive.

- **As a homeowner, what is the right density I should aim for in the trees and shrubs on my property?** 40-60 Trees Per Acre (TPA) is generally a recognized healthy density for mature trees. You can calculate this by spacing your trees so canopies do not touch is a good general rule of thumb.
- **What steps should residents of the mountain communities take in response to less precipitation?** Thinning of your trees and brush is extremely important, and reducing grass and forbes. They are competing for water and nutrients when grown near each other. If trees and shrubs cannot compete for the available water they will dry out and become more susceptible to fire, insects and disease.
- **How can I best promote topsoil production and health and still be in compliance with fire abatement codes?** Keep the duff layers and chip depths to 2" or less. Keep the concentration of duff and chips under the drip line of the trees and brush. Keep it away from homes, outbuildings and firewood piles.
- **To what extent does a healthy topsoil mycorrhizal community promote forest health through water uptake in trees and shrubs?**

Mycorrhizae are symbiotic relationships that form between fungi and plants. The fungi colonize the root system of a host plant, providing increased water and nutrient absorption capabilities while the plant provides the fungus with carbohydrates formed from photosynthesis. This is typically accomplished when you have a good duff layer around the trees.
- **How has the continued drought and drier conditions affected the forest wildlife?** The drought stresses our local wildlife. Poor grass production, lack of pinecones, lack of acorns affects all of our critters in the forest. Their water supplies are also drying up.
- **During the periods of drought, should I thin out the new trees that are coming up on my lot?** I would hate to remove the new growth then also lose my established pines. 40-60 Trees Per Acre (TPA) is generally a recognized healthy density for mature trees. You can calculate this by spacing your trees so canopies do not touch is a good general rule of thumb. If the new tree is growing in an open area, generally with 18-24'

spacing away from the nearest tree then you can allow that tree to grow there.