

*Boggs Mountain Demonstration
State Forest*
Reforestation and Rehabilitation Plan

October 1, 2015

A decorative graphic consisting of several horizontal lines of varying lengths and colors (teal, light blue, white) extending from the right side of the slide towards the center.

Start of Valley Fire

September 12, 2015 - North of Cobb



Highway 175 evacuation of Cobb



Boggs Mountain DSF on Fire



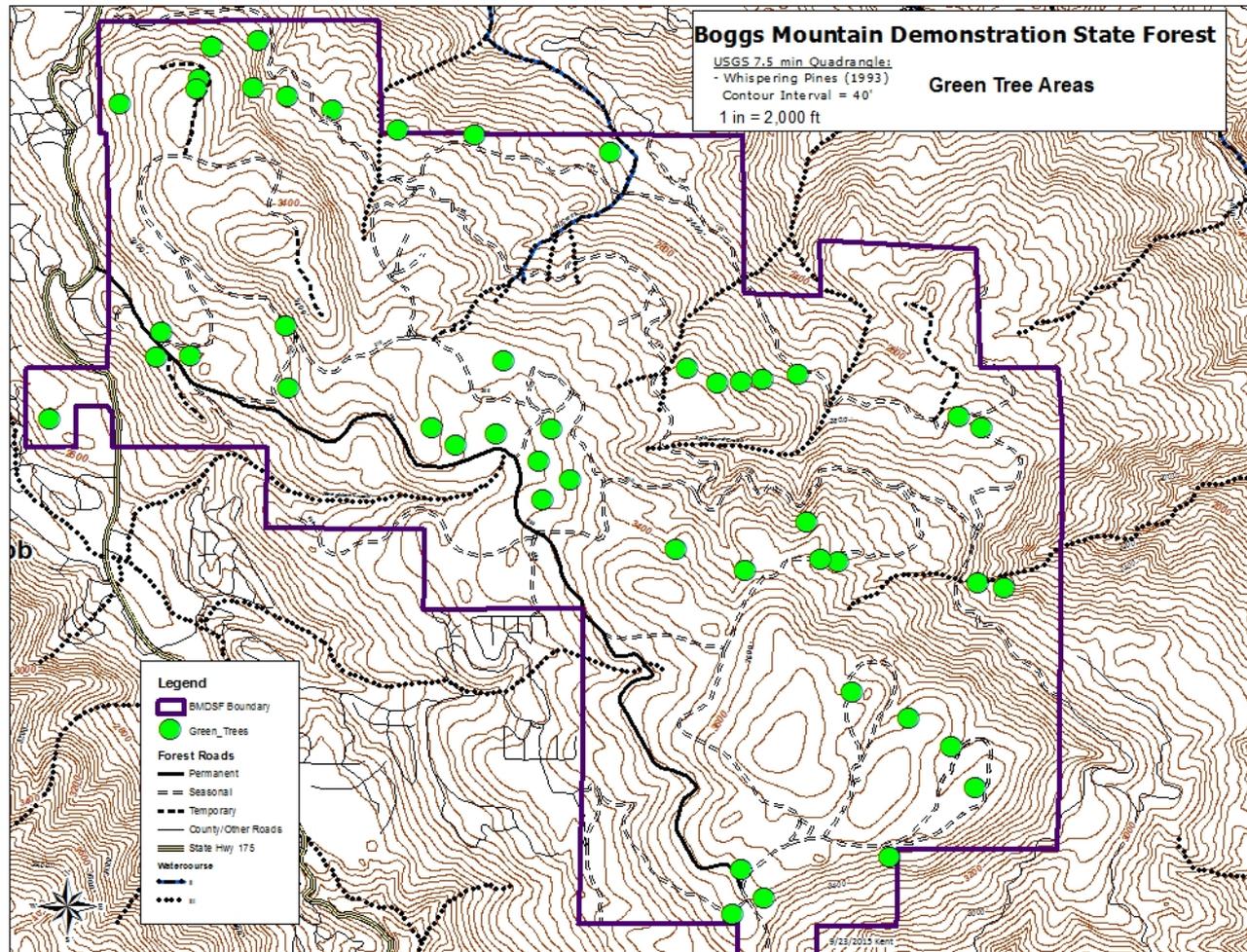
Aftermath



Crown Fire



Green Trees after Fire



Impacts

- 99% of Forest area has burned
- 80% of mature trees are dead and 95% of regeneration is dead
- Forest is closed indefinitely to public access

Boggs Vol **2015 Acreage** **3,400** volumes in net board feet Scribner short log scale

Species	Mix	Net/Ac	Harvest	Vol/Ac	Total Harvest
DF	55%	10,191	80%	8,153	27,719,904
SP	10%	1,853	70%	1,297	4,409,985
DF	35%	6,485	90%	5,837	19,844,932
Total		18,529		15,287	51,974,821

Total		62,999,783			83%
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Short Term Plan

- **Salvage harvest prior to insect infestation during dry periods this fall and winter. Goals are to reduce fuel loading and store carbon in wood products vs black carbon loss from decomposition. Mechanized and cable harvesting**
- **Safety of Community – Prioritizing startup in areas near neighborhoods, Cobb Elementary School, and Entry Point**
- **Stabilization of Roads and Hillslopes – Assessing sensitive areas and designing stabilization measures. Road rocking to allow winter salvage logging**
- **Provide the local affected communities with milled lumber from the forest for rebuilding their homes and buildings**
- **Support local efforts through NRCS, Lake County Emergency Services, UCCE, CAL FIRE Forest Improvement Program to clean up and reforest the local area**

Logistics:

- Focus this late summer/fall on minimizing surface erosion and mass wasting/water quality contamination associated with the Forest. – Ripping, reshaping and rocking main haul roads, upgrading crossings to handle increased flows.
- Work closely with the community and inform them of progress on a regular basis. Reopen portions of the Forest when safe for recreation. Network with local schools regarding education opportunities.
- Incorporate lessons learned from past discussions at MSG pertaining to post-fire operations.
- Engage forest research community and facilitate funding mechanisms

Long Term Plan

- **Reforest with local species from Boggs seed bank**
- **Demonstrate techniques to restore a resilient and biologically diverse forest that has been severely impacted by wildfire**
- **Initiate and support research in current fields of interest including:**

Research and Demonstration

- Site preparation, contour ripping, herbicides. Treatment vs no treatment. Effects on soil, water, erosion, growth and yield
- Effectiveness of leave strips along watercourses in reducing surface erosion
- Evaluate various dead tree structure retention levels to benefit wildlife habitat. Designing newly established forest structures to provide rapid creation of NSO habitat

Research and Demonstration

- Competitive vegetation chemical release treatments vs. manual treatments
- Effectiveness of the 2014 Road Rules in controlling post fire erosion
- Evaluate effectiveness of the 2015 Tree Notes #33, Survival of Fire-Injured Conifers in California (Owens et al)

Research and Demonstration

- Effects of timber salvage vs no salvage on soil nutrients, water, erosion, growth and yield
- Effects of leaving burned trees vs salvage on fuel loading and carbon life cycle calculations (black carbon from slow methane release of decomposition vs carbon stored in wood products)
- Hydrologic and geomorphic monitoring / research
- Assisted Migration: different planting stock, climate adaptation
- Evaluate various stocking standards, i.e. planting densities, thinning trials, manual vs. herbicide release methods (spot vs. broadcast spray)

Research: UC Berkeley Fire Ecologist - Scott Stephens

- “An experiment could be designed to look at different way to do this (*examine post fire recovery*) from leaving some areas untouched to extensive salvage and planting. Different planting designs could also be explored. Life cycle analysis could be done to determine the carbon benefits/losses from all treatments. There is a team of 4 people here on campus that could engage such a study and as you said, it seems some of the GHG funds should be in line for such a project.”

Research & Demonstration, Planning:

- **Co-ordinate research projects and Forest management (near term, salvage)**
- **Co-ordinate recreation and redesign trail system; assess recreational uses and potential**
- **Experiment, demonstration, education areas and outreach**
- **Maintain and create opportunities for future management and research**

Public Outreach

- Meetings in Cobb and Middletown to inform the public on access, tours, rehabilitation efforts
- Engage hike/bike/ride stakeholders in redesigning the trail system and helping with trail reconstruction
- Include local schools and stakeholder groups in tree planting
- Plant trees near Cobb Elementary School with the school children's participation
- Construct kiosks and signage and web page postings regarding reforestation efforts
- Network with Friends of Boggs Mountain, Bike Monkey, NorCal Bike League, Lake County News and keep them informed via interviews, photos, Q&A and web postings of latest and planned work and outings

Results

- Create a model forest that is biologically diverse and resilient
- Use prescribed burning on regular intervals to incorporate natural disturbance regime and stimulate forest structure development, heterogeneity and ecosystem health
- Demonstrate state of the science techniques for reforestation and hillslope stabilization
- Re-open the Forest to an engaged public and integrate recreation and demonstrations of forest management
- Create a model for post fire rehabilitation efforts that promotes forest resiliency and maximizes carbon storage