

Tree Mortality Task Force
Forest Health and Resilience Working Group (FHRWG)
Monthly Meeting Notes – September 7, 2016

I. Meeting Introduction; FHR Working Group Changes

FHR co-leader Pete Cafferata stated that Susie Kocher, UC Cooperative Extension, is now a member of the FHRWG.

II. Member Roll Call: Chris Keithley (CAL FIRE-FRAP), Tom Smith (CAL FIRE), Rich Wade (BOF), Lisa Thornley (BLM), Stewart McMorrow (CAL FIRE), Margarita Gordus (DFW), Larry Camp (FLOC), Chuck Henderson (AFF), George Gentry (CFA), Susie Kocher (UCCE), John Amodio (YSS), Brian Nowicki (CBD), Gabe Schultz (CAL FIRE), and Pete Cafferata (CAL FIRE).

Guests: Tadashi Moody (CAL FIRE-FRAP), Jodi Axelson (UCCE), James Savage (BLM), and Kelly Larvie (CAL FIRE-FRAP).

IV. Approval of August 2016 Meeting Minutes—all concurred.

V. Update on Contract with Dr. Greg Asner for a Second Aerial Flight for Moisture Stress

Chris Keithley updated the FHRWG on the contract with Dr. Greg Asner, Stanford University, to conduct a second aerial flight detecting tree moisture stress in the Sierra Nevada. Dr. Asner will use his aircraft for hyperspectral imaging before the end of October. Funding is being provided for this project by CAL FIRE-FRAP, USFS, and in-kind contributions by Dr. Asner. Data will be made available to the TMTF when data analysis is complete. A large part of the Sierra Nevada will be flown; **Chris will obtain a map of the footprint to be evaluated.** Aerial data will be field verified in the Bass Lake/Dinke Creek, Sagehen Creek, and Sequoia/Kings Canyon National Park areas.

Kelly Larvie informed the group that other similar efforts are also underway. For example, the USFS is going to fund a JPL flight in the upper San Joaquin River basin above the 3000 feet elevation for both LiDAR and hyperspectral imaging. It is anticipated that this flight will yield information on moisture stress, numbers and locations of dead trees, and locations of critical infrastructure. LiDAR data may be released within one month of the flight, but the hyperspectral data will take longer to analyze. **Kelly will inform the FHRWG when information from this project is available.**

VI. Update on USFS Green Tree Insect Monitoring Program

Tom Smith reported that he spoke to Chris Fettig regarding the USFS green tree monitoring program. While traps have been installed throughout the state, they have not yielded useful information regarding whether the western pine beetle population is increasing or decreasing (i.e., no useful predictive value). Dr. Fettig has published a paper with several co-authors on this topic; they state: *“Our results suggest monitoring western pine beetle populations through the use of pheromone-baited multiple funnel traps is not an effective means of predicting levels of western pine beetle-caused tree mortality. However, levels of western pine beetle-caused*

tree mortality can be efficiently predicted (adjusted $R^2=0.90$) at large spatial scales (forests; ~3,000-14,000 ha of contiguous host) by simply measuring stand density, specifically the basal area of all tree species or stand density index.” Dr. Fettig’s paper is posted at: [http://www.fs.fed.us/psw/publications/fettig/psw_2009_fettig\(hayes\)004.pdf](http://www.fs.fed.us/psw/publications/fettig/psw_2009_fettig(hayes)004.pdf)

VII. Update on USFS Forest Health Monitoring and Current Monitoring Needs

Agenda item postponed until the October meeting.

VIII. Discussion on the Draft Sierra Nevada Health Treatments and Options Document

John Amodio and Larry Camp summarized the draft document circulated to the FHRWG prior to the meeting titled “Sierra Forest Health Report.” This white paper stresses the critical need for a comprehensive forest restoration program in the Sierra Nevada to improve forest health conditions. To help restore resiliency, it promotes the use of information in USFS GTR-220, An Ecosystem Management Strategy for Sierran Mixed-Conifer Forests (North et al. 2009); http://www.fs.fed.us/psw/publications/documents/psw_gtr220/psw_gtr220.pdf. The white paper also uses a considerable amount of information learned to date from (1) the Sierra Nevada Conservancy’s Sierra Nevada Watershed Improvement Program (WIP) (<http://www.sierranevada.ca.gov/our-work/sierra-nevada-wip>), and (2) studies conducted at the Stanislaus-Tuolumne Experimental Forest to promote forest health and resilience (http://www.fs.fed.us/psw/ef/stanislaus_tuolumne/; and <http://www.mymotherlode.com/news/local/245156/finding-compromise-on-forest-health-through-new-research.html>). The goal is to get all landowners, including small nonindustrial owners, to invest in forestry to improve forest health and resiliency in this region.

The draft white paper remains incomplete; sections on adaptive management and monitoring remain to be written, but were stressed by John as being very important. There was considerable discussion about the draft, with general concurrence that a coordinated state and federal effort in the Sierra Nevada would be valuable. **We will put this topic on the agenda for the October FHRWG meeting, with detailed comments to be provided to John and Larry at that time. They will endeavor to provide a completed draft white paper for the November meeting.**

VIII a. Update on FHRWG document titled “Achieving Long-Term Forest Health and Resilience in California.”

Tom Smith reported that he had incorporated edits he had received on the “Achieving Long-Term Forest Health and Resilience in California” document and that it was ready for distribution to the Tree Mortality Task Force. Brian Nowicki, CBD, stated that the edits incorporated in the document do not adequately address his concerns, and that it should not be released to the TMTF at this time. **Gabe Schultz, TMTF Co-Leader, stated that he would review Brian’s comments and determine how to proceed on this document.**

IX. Discussion on How to Approach Developing a Strategy for Reforestation

Stewart McMorrow, CAL FIRE, discussed a concept he has developed to potentially jump-start reforestation efforts in the high hazard Sierra Nevada counties. The idea is to determine if

CAL FIRE could use TMTF funds to pay for a sowing order to forest nurseries to grow conifer seedlings, so that they could be made available to small nonindustrial landowners who would not be likely to reforest their properties. The concept is to grow 100,000 seedlings (at ~40 cents apiece). **Gabe Schultz stated that he has asked CAL FIRE Deputy Director Helge Eng to review this request and determine if it is feasible.** If it were possible, we would have to decide what mix of species to grow, and unfortunately, seed is limited in the areas that have been hit the hardest by forest mortality. Rich Wade stated that the TMTF or CAL FIRE could act as a clearinghouse for available seedlings, similar to the Forest Seedling Network used extensively in Oregon and Washington (<http://www.forestseedlingnetwork.com/>).

Numerous options to assist with reforestation efforts, where they are needed, were then discussed. Susie Kocher stated that on the recent NorCal SAF Summer Meeting field trip in the Bass Lake area, small seedlings (e.g., incense cedar) were observed under dead overstory pines (different situation than with a wildfire). Stewart said that the High Speed Rail Authority is issuing grants for reforestation to offset emissions. Also, as discussed at the last FHRWG meeting, USFS Placerville Nursery seed can be utilized by private entities when orders for seedlings are requested through the El Dorado RCD. The El Dorado RCD's involvement in this process allows the Placerville Nursery to grow excess seedlings for private landowners after National Forest needs are met. All agreed that a coordinated, well thought out program for reforestation is needed. **The FHRWG decided to put this topic on the agenda for the October meeting for additional discussion.**

X.b. Status on Updating High Hazard Zones (HHZs)

Kelly Larvie, CAL FIRE-FRAP, informed the FHRWG that the Tier I High Hazard Zone map has been updated and is available on the FRAP website:

<http://frap.fire.ca.gov/projects/DroughtViewer>

The Tier II High Hazard Zone map should be available during the week of September 12th.

Next FHRWG Meeting Date

The next FHRWG meeting will be held on **October 5th, 2:00 p.m. to 3:30 p.m.**, following the TMTF Mapping and Monitoring Working Group meeting.