



Tree Mortality Task Force Forest Health and Resilience Working Group Minutes

March 14, 2018

California Natural Resources Agency
1416 9th Street, Sacramento, CA

- I. **FHRWG Member Roll Call:** Stewart McMorrow (CAL FIRE), Dr. Chris Keithley (CAL FIRE-FRAP), Dr. Tom Smith (CAL FIRE), Kelly Larvie (CAL FIRE-FRAP), Tadashi Moody (CAL FIRE-FRAP), Larry Camp (FLOC), Paul Mason (PFT), Rich Wade (BOF), Kevin Conway (CAL FIRE), Joe Sherlock (USFS), David Pegos (CDFA), Coreen Francis (BLM), and Pete Cafferata (CAL FIRE).

FHRWG Participants: Dr. Russ Henly (CNRA), Liz van Wagtendonk (SNC/UW), Emily Meriam (CAL FIRE-FRAP), Mark Rosenberg (CAL FIRE-FRAP), Kristen Merrill (CAL FIRE), Sarah Campe (SNC), Len Nielson (CAL FIRE), Dr. Curtis Ewing (CAL FIRE), and Craig Bailey (DFW).

- II. **Approval of February 2018 Meeting Minutes:** The February 2018 meeting minutes were approved. Minutes from past FHRWG meetings are posted on the TMTF website: <http://www.fire.ca.gov/treetaskforce/workinggroups>
- III. **Update on the Third White Paper on the Long-Term Outlook for the Sierra Nevada**
The status of the third FHRWG white paper titled "Synthesis of Relevant Studies Exploring the Long-Term Outlook for Sierra Nevada Forests following the Current Bark Beetle Epidemic" was briefly discussed. The current working draft dated February 14th has not been updated since the February FHRWG meeting. Kelly Larvie and Tadashi Moody stated that they will have time in the next month to conduct modeling work for determining areas most likely to experience type conversions from mixed-conifer forest to shrub lands. GIS layers for this analysis will include fire threat, climate change (using Dr. Jim Thorne's past work), and topographic position index (TPI) metrics. **The goal is to have a modeling product to discuss at the April FHRWG meeting.** The end result of the GIS modeling will inform landowners regarding the general locations where successful reforestation will be most challenging. **Additionally, summary information from the March 12th Sierra Nevada Tree Mortality 2017 Field Season Results Workshop held at the McClellan Wildland Fire Training Center will be incorporated into the document prior to the next meeting.**
- IV. **Discussion on Development of a Reforestation Strategy for California**
Stewart McMorrow stated that a small sub-committee held a conference call on February 26th to provide initial guidance for the revised reforestation strategy. From this effort, Stewart developed a list of ongoing or planned strategic efforts, focused on nonindustrial



forestlands in California. He summarized the “CAL FIRE reforestation strategy for tree mortality” document distributed to FHRWG participants prior to the meeting, which includes the following strategic efforts for reforestation:

- Reopening the LA Moran Reforestation Center nursery.
- Establishing yearly speculative sowing orders and making seedlings available to impacted areas.
- Increasing cone and seed collection efforts in mortality-affected seed zones.
- Reviewing seed bank storage and processing activities and implementing changes to bring continuity between USFS R5 and CAL FIRE operations.
- Revising and improving seed zone seed transfer guidelines.
- Creating a Reforestation Guide or Handbook that stresses and encourages reforestation needs on private lands.
- Providing planning tools and other resources to landowners wishing to conduct reforestation projects on their own.
- Working cooperatively with other entities (e.g., USFS, utilities, timber companies, nurseries, counties) to facilitate successful reforestation in California.
- Releasing the Reforestation Manual for California.
- Conducting and releasing the findings from the Reforestation Needs Assessment for California.

Stewart asked for feedback from FHRWG participants on the items included in this planning document, using track changes in the Word document previously distributed. Following the incorporation of comments received, he will send the document to the TMTF leaders for their approval.

Discussion items included (1) encouraging the use of animals or herbicides to control competing vegetation, (2) using a tracking tool to record the success of reforestation projects (CalMAPPER exists for CAL FIRE-funded program or grant projects; **Mark Rosenberg will discuss alternative approaches with Stewart**; NRCS EQIP funding may have privacy standards), (3) considering the revised stocking standards being discussed by the Board of Forestry and Fire Protection, (4) engaging the California Climate Hub and Dr. Steve Ostoja for prescriptions addressing climate change, and (5) considering posting all the assembled reforestation materials online on a website (see for example, the California Department of Parks and Recreation site “Reforest California” at: http://www.parks.ca.gov/?page_id=25721). .

V. Update on Progress Made by the Seed Zone Map Update Group (FHRWG Subcommittee)

Stewart McMorrow rapidly informed the group on the status of the Seed Zone Map Update Group. The subcommittee last met on February 6th and brainstormed guidelines for standardized cone and seed collection, and seed storage information/policies/procedures.



Priority actions include: (1) standardizing data that seed banks collect for both the USFS and CAL FIRE, and (2) funding a research project with Dr. Jessica Wright, USFS PSW, to develop species-specific climate-based seed transfer guidelines. This CAL FIRE contract will inform strategic planning and decisions with regard to updating the seed zone framework for the collection, curation, propagation, and planting of tree species in California. Products from these efforts will be presented to the FHRWG for feedback. The next subcommittee meeting will be held in April.

VI. Update on Progress Made by the Sierra Nevada Forest Science Coordination Group (FHRWG Subcommittee)

The Sierra Nevada Forest Science Coordination Group was setup to identify ongoing research and focused monitoring projects related to tree mortality in the Sierra Nevada. A web-based survey tool allows researchers to delineate a polygon(s) around their research or monitoring project area; they are then prompted to enter information about the project:

[http://calfire-](http://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=3d9ca2f2bc524d40a1ecedf078b6f5bc)

[forestry.maps.arcgis.com/apps/webappviewer/index.html?id=3d9ca2f2bc524d40a1ecedf078b6f5bc.](http://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=3d9ca2f2bc524d40a1ecedf078b6f5bc)

The survey tool was launched on November 15th, with a detailed email message sent to 60 researchers requesting data input by December 15th. To date, we have received input from 21 researchers who have input data for 102 polygons.

To improve our response rate, (1) Kelly Larvie and Liz van Wagtenonk produced a brief video to demonstrate the ease of use of the tool and the alternatives for sharing the information, and (2) Tadashi Moody produced a short online survey form. **A second email message was sent on March 5th to a list of 64 researchers requesting geospatial data documenting their research and monitoring projects related to tree mortality in the Sierra Nevada.** This email message included links to the video demonstrating how to input data into the online geospatial database and to the online survey form.

Kristen Merrill will post the link to the video under the FHRWG tab on the TMTF page. Susie Kocher will be requested to ask participants at the March 12th McClellan workshop to ensure that they have entered their data in the geodatabase when she sends out the weblink to the PowerPoint presentations from the workshop. When the SNFSCG determines that sufficient data have been received, the subcommittee will (1) work to identify additional research needs, and (2) determine how to best summarize the data to benefit current field researchers.

VII. Roundtable Discussion on Future Direction for the FHRWG

Five main ideas were expressed at the February FHRWG meeting regarding future directions for the group. These were:

1. Validate and present effective reforestation/forest management treatments.
2. Document when treatments such as prescribed fire are appropriate.



3. Provide detailed information on how to accomplish prescribed fire for small landowners.
4. Provide detailed information on how to meet the goals stated in the 2017 Climate Change Scoping Plan and the California Forest Carbon Plan.
5. Provide expanded forest health education and outreach.

There was insufficient time at the March meeting to discuss these topics. Dr. Russ Henly did, however, provide brief descriptions of key goals included in the 2017 Climate Change Scoping Plan and the California Forest Carbon Plan, which is currently being reviewed at the Governor's office. Len Nielson, CAL FIRE, will address prescribed fire at the next FHRWG meeting.

VIII. New Business and Announcements

Emily Meriam announced that she has updated the seed zone map by incorporating the 2017 Aerial Detection Survey (ADS) data. This is an update from the map produced last year using 2012-2016 data. The new updated map is displayed in a 3D view. The primary change on the map is that seed zones 525, 562, 772, 781, 782 all moved up a class in the percent of total seed zone with tree mortality. **An Excel spreadsheet table with the data will be distributed to FHRWG participants.**

Larry Camp updated the group on the status of Governor Brown's new task force dealing with forest health issues. The group of <10 people will meet a second time during the week of March 19th in Sacramento. Currently no charter exists and planning is in the very preliminary stages. Planned focus items likely will include prescribed fire, forest resilience, and carbon sequestration.

Kristen Merrill rapidly summarized key points from the Sierra Nevada Tree Mortality 2017 Field Season Results Workshop held on March 12th at the McClellan Wildland Fire Training Center (see the Results Summary document provided as a handout at McClellan). These points included:

- Elliot Kuskulis summarized the UC Berkeley drought mortality survey work at 8 sites from the Plumas NF in the north to Mountain Home DSF in the south (70-80% mortality in sugar pine, 60% for ponderosa pine).
- Christina Restaino, TRPA, described how forest treatments influence tree mortality in the Sierra Nevada (treatment effectiveness decreased the further south because drought stress was more intense).
- Sheri Smith, USFS, stated that tree injections with emamectin benzoate (EB) were not effective, since the trees were too dry to move the chemical upward.
- John Battles, UC Berkeley, informed the workshop audience that there has been a 30% loss of live tree biomass, which will double the 1000+ hour fuel load by 2030 and greatly increase the potential for mass fires.
- Lauren Cox reported that there was little pine regeneration in Sequoia-Kings Canyon NP plots.



- Stella Cousins summarized FIA inventory plot data for California forests from 2012-2015 (145 million dead trees statewide; in order of mortality cause: fire, harvest, unknown, disease, competition, weather, insects).
- Carmen Tubbesing reported on mapping dead tree biomass from the recent mortality event (the majority of the dead biomass is located in the southern Sierra; 88% is in the 10 high hazard counties).

IX. Next FHRWG Meeting

The next meeting will be held on April 11th, 2:00 p.m. in Sacramento (note that this is the second Wednesday in March). The location will be the California Natural Resources Agency conference room (Room 1305).