



Tree Mortality Task Force Forest Health and Resilience Working Group Minutes

August 2, 2017

CAL FIRE FRAP Office, 1300 U Street, Sacramento, CA

- I. **FHRWG Member Roll Call:** Stewart McMorrow (CAL FIRE), Dr. Chris Keithley (CAL FIRE-FRAP), Larry Camp (FLOC), Rich Carr (CAL FIRE), Rich Wade (BOF), Paul Mason (PFT), Staci Heaton (RCRC), Susie Kocher (UCCE), Tadashi Moody (CAL FIRE-FRAP), Dr. Jodi Axelson (UCB), George Gentry (CFA), Sherry Hazelhurst (USFS), Nick Goulette (WRTC), and Pete Cafferata (CAL FIRE).

FHRWG Participants: Dr. Russ Henly (CNRA), Emily Meriam (CAL FIRE-FRAP), Mark Rosenberg (CAL FIRE-FRAP), Dave Passovoy (CAL FIRE-FRAP), Liz van Wagendonk (SNC), Kristen Merrill (CAL FIRE), Tricia Maloney (UCD), Coreen Francis (BLM), Dr. Steve Ostoja (CA Climate Hub), and Sarah Campe (SNC).

- II. **Approval of June 2017 Meeting Minutes:** The June meeting minutes were approved (the July meeting was cancelled). Minutes from past FHRWG meetings are posted on the TMTF website: <http://www.fire.ca.gov/treetaskforce/workinggroups>

- III. **Update on the FHRWG Tree Mortality Seed Zone Map/Reforestation Story Map**

Emily Meriam and Kristen Merrill stated that the tree mortality seed zone map was finalized in July and is now posted on the TMTF website (see: http://www.fire.ca.gov/treetaskforce/downloads/TMTFResources/20170626_SeedZones_letter_port.pdf). The final version of the tree mortality-seed zone poster (8' x 5') Emily produced for the Esri GIS User Conference held in San Diego from July 10th-14th was displayed. **After CAL FIRE Executive Staff approval, the poster will also be placed on the TMTF webpage.**

Emily also presented a revised version of the draft Seed Zones and Reforestation Story Map under development. There are 15 slides with 4 map images. Main topics include drought information, the bark beetle epidemic/increased fire risk, TMTF information, seed zone information, reforestation, and resources available to landowners. **Emily asked the FHRWG participants to review the Story Map (link provided in an email message) by August 11th and provide feedback to her and Heather Williams. In particular, they are seeking more appropriate photographs and refined text for some of the images.** Comments received during the meeting included: (1) show pine seedlings rather than coast redwood, (2) qualifiers needed regarding accuracy of the data layers, and (3) state that CFIP funding is sometimes limiting for reforestation.



IV. **Discussion on Development of a Reforestation Strategy for California**

Stewart McMorrow and Dr. Steve Ostoja provided background information on a draft reforestation strategy outline that will be used by the California Climate Hub for generating a prospectus for hiring a postdoctoral researcher to lead the effort. This outline was developed by Steve, Stewart, and others following the California Drought and Tree Mortality Symposium held on July 25th at McClellan. Questions discussed at the conference regarding reforestation included: (1) will 1970 seed zone map work with climate change?, (2) where and when is reforestation necessary for private landowners?, (3) what planting density and spatial arrangement will produce greater resilience to drought and wildfire?, (4) what cover and distribution of shrubs will provide ecosystem benefits without overtaking regenerating stands?, and (5) how can we reforest in a way that allows for early reintroduction of prescribed fire?

Main topics covered in the draft reforestation outline are: (1) an overview of expected future conditions, (2) conceptual approaches/management principles, (3) general strategies to achieve desired outcomes, and (4) specific approaches and actions to undertake. The project will cover both reforestation and vegetation management concepts for future climatic conditions, and will complement the revised California Reforestation Manual that is largely completed. The goal is to use the FHRWG as an oversight committee for the project. Currently the vision is to include all landowners for the project's audience, including the USFS. **Stewart asked FHRWG participants to use track changes for the Word document outline to provide feedback to him by August 16th.** Suggestions during the meeting included using information in a draft paper written by Hugh Safford and Jens Stephens for the first section of the outline, developing a cell phone application for widespread use, and involving NRCS early on in the process.

V. **Brief Presentation on the Southern Sierra Conservation Cooperative**

Sarah Campe, SNC South Region, provided an overview of the Southern Sierra Conservation Cooperative (SSCC). It was formed in 2009 to identify and address regional issues in the southern Sierra. Partners, including land management agencies, research organizations, and NGOs, signed an MOU to work in concert to make the best use of each partner's resources and efforts to conserve the regional native biodiversity and key ecosystem functions within the southern Sierra in the face of climate change. The SSCC met through 2012, was dormant from 2013 to 2015, and reconvened in 2016. A two day workshop was held in May 2017 to begin to translate conceptual ideas into on the ground practices, with a second workshop planned for this fall to address fire on the landscape. Additional information on the SSCC is posted at: <https://www.nps.gov/seki/learn/nature/sscc.htm>



VI. **Update on FHRWG White Paper Synthesis on the Long-Term Sierra Outlook**

Pete Cafferata briefly reviewed the information that is currently available to write the white paper synthesis on the long-term outlook for the Sierra Nevada. These sources include (1) the PowerPoint presentation by Dr. Jodi Axelson at the May FHRWG meeting and the papers used in her presentation (both are posted on the TMTF website at: <http://www.fire.ca.gov/treetaskforce/workinggroups>), (2) PowerPoint presentations and Steve Ostoja's detailed notes from the California Drought and Tree Mortality Symposium held on July 25th at McClellan (<https://www.climatehubs.oce.usda.gov/content/california-drought-and-tree-mortality-symposium>), (3) relevant FRAP assessment chapters, and (4) additional published papers. There was some concern expressed about duplication of efforts with the reforestation strategy, but it was agreed that a short 5-10 page white paper produced rapidly would be beneficial. **The goal is to have a draft completed before the next FHRWG meeting in September.**

VII. **Update on Sierra Forest Science Coordination Group**

Liz van Wagentendonk summarized how the Sierra Forest Science Coordination Group (SFSCG), a FHRWG sub-working group, is continuing to work on documenting ongoing research and monitoring projects in the high hazard counties. The contact list to query for information on existing studies related to tree mortality had 44 people prior to the California Drought and Tree Mortality Symposium; 20 new names were added from the attendee list following the conference. Liz worked with Kelly Larvie to develop an editable web map for capturing the data (i.e., collecting the data in a geodatabase that can be exported to an Excel spreadsheet table from an ArcGIS web map). **Beta testers are required prior to sending the product to the people on the contact list. Please let Liz, Kelly, and Pete Cafferata know if you are willing to help test the web mapping application.**

VIII. **New Business**

California Drought and Tree Mortality Symposium

Steve Ostoja stated that approximately 170 people attended the symposium on July 25th at McClellan. Eighty pages of notes have been produced, and approximately 100 ideas for next steps were recorded during the second day of the symposium. An AGU abstract is being generated, as are short Fact Sheets and a General Technical Report (GTR). The PowerPoint presentations from the symposium are posted at: <https://www.climatehubs.oce.usda.gov/content/california-drought-and-tree-mortality-symposium>



USFS Placerville Nursery/Eldorado RCD Seed Procurement Issue

Liz van Wagentendonk stated that small nonindustrial landowners need to be aware of the timeframes involved with obtaining seedlings from the USFS Placerville Nursery when ordered through the Eldorado RCD. Placerville Nursery seed can be utilized by private citizens when orders for seedlings are requested through the El Dorado RCD. The Eldorado RCD's involvement in this process allows the Placerville Nursery to grow excess seedlings for private landowners after National Forest needs are met. Landowners should order seedlings through the Eldorado RCD program with the understanding that it can take up to 18 months to receive them. Additionally, the CAL FIRE LA Moran Reforestation Center will soon be producing seedlings again after halting production 14 years ago.

Research on the Rate of Degradation of Standing Dead Trees in the High Hazard Counties

Kristen Merrill stated that there was a Beck Group suggestion from the Utilization and Market Development Working Group to have the FHRWG locate research available for determining the rate of degradation associated with standing dead trees in the high hazard counties. Pete Cafferata provided information from Lowell et al. 2010 (PNW-GTR-816), which included: (1) ponderosa pine decay rapidly after tree death because of their high proportion of sapwood; (2) blue stain shows up quickly, with almost all sapwood blue stained by the end of the first year after tree death; (3) by the third year, blue-stained wood in ponderosa is decaying, and by the fourth year, most sapwood in basal logs is decayed; and (4) sugar pine is notable for the slow decay of its heartwood. See Table 6 in Lowell et al. 2010 (<http://www.arlis.org/docs/vol1/B/644583459.pdf>).

IX. Next FHRWG Meeting

The next meeting will be held on September 6th, 2:00 p.m., at the CAL FIRE FRAP office in Sacramento.