

Tree Mortality Task Force – Forest Health and Resilience Working Group (FHRWG)
Monthly Meeting Notes – August 18, 2016

I. FHR Working Group Changes

FHR co-leader Pete Cafferata stated that Stewart McMorrow, CAL FIRE Stewardship Forester/LA Moran Reforestation Center Supervisor, is now the other FHRWG co-leader. Chris Keithley and Tom Smith continue to be members of the working group.

II. Member Roll Call: Chris Keithley (CAL FIRE-FRAP), Tom Smith (CAL FIRE), Lisa Thornley (BLM), Rich Wade (BOF), Paul Mason (PFT), Stew McMorrow (CAL FIRE), Margarita Gordus (DFW), Larry Camp (FLOC), Sherry Hazelhurst (USFS), Chuck Henderson (AFF), Brittany Dyer (Madera Co.), Nick Goulette (Watershed Research & Training Center), and Pete Cafferata (CAL FIRE).

Guests: Mirram Morrill (BLM), Russ Henly (CNRA), Jim Thorne (UCD), Tadashi Moody (CAL FIRE-FRAP), John Dingman (ARB), Michael Espoito (CAL FIRE), Dorus Van Goidsenhoven (CAL FIRE), Hyeyeong Choe (UCD), Dave Passovoy (CAL FIRE-FRAP), Kelly Larvie (CAL FIRE-FRAP), Ashley Conrad-Saydah (CalEPA), and Emily Meriam (CAL FIRE).

IV. Approval of July 2016 meeting minutes—all concurred.

V.(a) Revision of IAP Objectives for the FHR Working Group

The FHR Working Group discussed the new reforestation objectives listed in the July meeting minutes, with minor modifications made by Pete Cafferata. Several suggestions for improvement were provided, along with one new objective. Reflecting these changes, the objectives to be added to the IAP are:

- Develop a strategy to reforest areas deforested by bark beetles. Investigate which species and genotypes should be replanted considering elevation zones and seed zones, areas with high rates of mortality, and other considerations (e.g., climate change) in the high hazard counties.
- Utilize all relevant scientific investigations and analyzes to develop the reforestation strategy for the high hazard counties. [new objective]
- Coordinate with the CAL FIRE LA Moran Seed Bank, the USFS Placerville Nursery, and other private nurseries to determine seed/seedling availability for the appropriate conifer species and genotypes in the high hazard counties. Work to expand collection of seed from seed zones impacted from high rates of tree mortality.
- Prepare for implementation of the reforestation strategy at the appropriate time (i.e., plan the recovery phase).
- Coordinate the reforestation strategy with the Private Landowner Assistance sub-group of the TMTF Resource Allocation Working Group.

An additional objective was discussed regarding evaluating different management strategies to achieve desired outcomes/future conditions, but it was decided that this topic should not be included in the list of objectives at this time.

Pete Cafferata stated that the the Prescribed Fire Working Group (RxFWG) is now a sub-group to the FHRWG. RxFWG IAP objectives remain available to the FHRWG when needed. Nick Goulette, co-chair of the RxFWG, provided a brief overview of their accomplishments to date. These included:

- The RxFWG worked with the CA Air Resources Board (CARB) on allowable burn days available and with the USFS on burn day utilization. CARB and USFS staff summarized information on burn windows, the utility of those windows, and Forest Service use of available days to identify patterns for longer burn windows and to promote staffing for full potential of utilization to increase prescribed fire use.
- They worked on streamlining the permitting process for operating and moving curtain burners.
- The RxFWG is participating in the Fire MOU Partnership, a consortium of groups assembled to increase the use of prescribed fire as a management tool. Cooperative training is a key component of this effort (see: http://www.sierraforestlegacy.org/CF_ManagingFire/FireMOU.php).

Nick stated that the RxFWG will develop a list of potential areas for joint work with the FHRWG.

V.(b) Discussion of Information Obtained Regarding Seed Inventories

Stew McMorrow, FHRWG co-leader, provided an overview of the seed inventory data obtained over the last month from CAL FIRE's LA Moran Reforestation Center and the USFS Placerville Nursery. The LA Moran data were provided in histogram plots by species, seed zone, and elevation band (2000-4000', 4000-6000'), moving from north to south in the Sierra Nevada. Some significant gaps are evident, particularly for incense cedar. Using average germination rates, approximately 43,000,000 seedlings could be produced. Seed is available to the public, but a nursery to grow the seed must be secured. Stew stated that CAL FIRE LA Moran staff are attempting to collect as much seed as possible from the high hazard counties.

Stew also explained that 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 (see a detailed explanation posted at: <http://www.fs.usda.gov/detailfull/r5/home/?cid=FSEPRD501731&width=full>). An Excel spreadsheet was provided summarizing the Forest Service seed available by species, seed zone, National Forest, etc. Approximately 70,000,000 seedlings are available with their existing seed inventory.

V.(c) Presentation on Modeling Work for Expected Shifts for Tree and Shrub Species Under Future Climate Conditions

Dr. James Thorne, UC Davis, provided a detailed PowerPoint presentation titled “Modeling Work on Expected Tree Shifts in the Sierra Nevada, Providing Information on which Tree and Shrub Species to Plant -- An Overview of Recent Research Activities and Potentially Useful Directions for Future Work in the Sierra Nevada.” His talk was organized into three main components: (1) recent work for CDFW and CAL FIRE (climate exposure analysis, applications of climate exposure analysis, tree species modeling), (2) ongoing work with the USGS, and (3) ideas for use of existing data. Modeling work has focused on evaluating the potential species shifts with ~2 to 4° C temperature increases and ± 25% change in precipitation by the end of the century. Mid-elevation Sierra Nevada species are expected to be impacted (stressed). If current emission rates continue (i.e., + 4° C), approximately one third of the land base is expected to move into a stressed condition. Use of the data was illustrated with the 2013 Rim Fire (affecting possible planting strategies). The PowerPoint was provided to the FHRWG for further review.

A video to watch on this topic (Mapping Change in Sierra Nevada Forests) is posted at: <https://www.youtube.com/watch?v=ZGo-vl4Ey44>. A detailed report on this topic produced for the California Department of Fish and Wildlife titled “A Climate Change Vulnerability Assessment of California’s Terrestrial Vegetation” is posted at: https://lccnetwork.org/sites/default/files/Resources/California%20Climate%20Vulnerability%20Assessment%20of%20Macrogroup%20Vegetation_01.31.2016_FINAL.pdf

Additionally, Dr. Thorne stated that there will be a symposium on this topic titled “Natural Areas Conference 2016”, from October 18-21, at UC Davis. This conference will explore strategies and tactics that resource and natural areas managers can use to prepare for and respond to climate change. See this link for detailed information: <https://naturalareas.org/conference>

VI. Added Agenda Item: Update on FHRWG document titled “Achieving Long-Term Forest Health and Resilience in California.”

Tom Smith stated that he has received additional detailed edits on the document, and that he will complete a new version of the document by August 19th.

Agenda items V(d) through V(g)

These agenda items were postponed until the next FHRWG meeting.

Next FHRWG Meeting Date

The next FHRWG meeting will be held on September 7th, 2:00 p.m. to 3:30 p.m., following the TMTF Mapping and Monitoring Working Group meeting.