



Fire Safe San Mateo County

February 10, 2021
General Meeting Minutes

Online conference call. No in-person meeting

Commence 9:35 AM

Attendance:

Online Zoom conference call in lieu of in-person meeting due to COVID-19 meeting restriction due to sheltering-in-place order.

71 members attended the meeting.

I. Introduction

Council President Denise Enea welcomed all members who called into the meeting. Introduced first presenter, Isabel Pares Ramos from the San Mateo Office of Sustainability, and Dr. Leroy Westerling from UC Merced

II. Changes in fire risk from climate change in San Mateo County

- Isabel Pares Ramos – San Mateo Office of Sustainability
- Leroy Westerling – UC Merced

- Climate Ready SMC – working to reduce greenhouse gas emissions
 - o Founded in 2019
 - o Understanding the risk
 - o Plan and prepare
 - o Engage and implement

- Modeling Climate Risks in SMC: Climate Ready Viewer
 - o Extreme Heat
 - o Wildfire Areas
 - o Debris Flow

- Leroy Westerling – Fire modeling for California’s 4th and 5th climate assessments
 - o Funded by California Energy Commission – EPIC program, UC lab fees
 - Pyregence – wildfire projections under a changing climate

- Overview
 - o Climate drivers of change in fire

- Observed changes
- Projected changes
- 5th assessment overview
- Drivers of change in fire
 - Western forest wildfires and spring – summer temp
 - Increased temps in the western US
 - Higher rates of evapotranspiration – which leads to drier fuels
 - Higher latitudes are heated faster than the equator
 - As the pole warms faster than the equator, the jet stream slows, and weather patterns become more persistent
 - Precipitation is becoming more variable
 - Conditions are becoming hotter and drier later in the year, when they overlap with strong wind events in the fall
 - Shifting weather patterns are resulting in a longer fire season
- Annualized, allocated simulations multiple realizations per scenario and year
 - Accumulate scenarios over time to obtain mean, compound distribution
 - Randomly sampled simulated fires can have drastically different outcomes
 - With thousands of random simulations over several years you can generate a projected heat map, where fires are most likely to burn
 - In projections, much of the projected fire locations are in highly forested areas where:
 - There is unburned fuel, and temperature changes are most drastic
 - Caveat: Lightning projections are not included – hard to project clustering of lightning events that occurred in August 2020
- Specifically, San Mateo County
 - Course spatial scale for simulations
 - Vulnerability Assessments and Adaptation Support for San Mateo County
 - On average, later in the century we expect to see more fire in the western portion of San Mateo county
 - We sat down with fire suppression and emergency personnel to combine statistical data with on-the-ground expertise
 - The 2020 fire was in a similar footprint as predicted/projected fire perimeter
 - The tool developed for SM county included:
 - Monthly fire ignition and fire size simulations for 10 climate models to develop a probability of any particular spot on the map burning
 - Fire probably map combines statistical simulation and local expert opinion from fire personnel
- Pyregence – free and open access to the next generation of wildfire risk models for grid resiliency – developing the 5th climate assessment for California
 - Science -> models -> tools -> implement -> impact
 - Looking at impacts, the central impacts we look at first are the energy grid
 - Developing new fire behavior and spread models, fuels layers, etc.
 - Looking at how extreme weather as affected extreme fire events

- Producing two outputs
 - Scenario analysis of long-term projections – the part that Dr. Westerling is coordinating
- Extreme Weather and Weather Stations
 - Analytical approach for optimizing the placement of weather stations
 - Pilot testing of upper air profiler for situational awareness
 - Algorithm to identify regional archetypical weather conditions associated with rapid fire growth
 - Based on analysis of historic fire weather data
 - 8 weather regions
 - Regional analysis is refined by hyper-local coupled airflow – fire modeling
- Fire behavior
 - Predicting heat release rates across the range of fuel structures and environmental conditions found in wildland areas
 - New fuel measurement and mapping system
 - Map current and projected future fuel conditions in areas of elevated tree mortality
- Near term wildfire forecast system
 - Open access and intuitive web-based fire forecast platform
 - Fire weather forecast
 - Active fire forecast
 - Risk forecast
- 5th assessment – long-term wildfire projection
 - Inputs: veg, climate, topography, WUI
 - Can all be altered with future fuel management scenarios, development scenarios, etc.

Questions and comments:

- Would the greater variability (in weather) also lead to more thunderstorm potential?
 - Some studies indicate for every degree of warming there is a 13% increase in lightning strike probabilities. So yes, climate change could potentially mean more lightning strikes, but hard to determine variability or location. Historical data on lightning strikes is limited. Equipment types for detecting lightning strikes has changed.
- How long can a burned area provide a fire break, based on historic fire maps?
 - It depends on climate. Referenced Yellowstone fires of '88 – areas that burned recently can burn with high severity in extreme weather conditions. There is no hard and fast rule. It depends on what vegetation is remaining, what vegetation has grown back, what the climate conditions are, etc.
- What is the 5–10-year cumulative effect of changed weather patterns? Can you compound the effect into a realistic model?

- Yes, for the 5th assessment we are using dynamic vegetation models. The model is well parameterized with available data throughout the state.
- How is human activity factored into the model?
 - Changes to fuel management, development, etc. is factored directly into the model. With changes to ignition, the inputs are fairly static. It is hard to incorporate the randomness of ignition sources.
- Do models incorporate structures in the WUI?
 - We are developing models for more suburban areas. We use different metrics for WUI areas than areas that are more rural or sparsely populated.
- Do the models include embers and wind?
 - My (Dr. Westerling) models model whether a fire starts at a particular point. It's not a dynamic model, so it does not explicitly include embers and wind. However, climate data for 5th assessment will have hourly wind, hourly RH, hourly precipitation, hourly temperatures. Future projections will be based on weather.
- What about fires that create their own weather?
 - Working group on extreme weather and fire behavior has been partitioning fires based on plume and wind driven fires. We are trying to differentiate between those two types of fires and model them separately.

Contact:

- Dr. Leroy Westerling
- leroy.westerling@icloud.com
- 209-756-8793

III. 2020 Wildfire Temporary Jobs

- [Celia Hare – Center for Employment Training – La Coop Wildfire Program](#)
- Outreach Recruiter Intake
- Center for Employment Training
 - Nonprofit organization based out of San Jose
 - Helping the community since 1967
 - Primarily a skills-based training center that also offers supportive services and job placement for natural disasters
 - Helped thousands of individuals start their career
- Mission
 - Assist communities affected by the 2020 wildfires in Santa Clara and San Mateo county by creating temporary jobs cleaning up burned debris
- National dislocated workers grant project
 - Project funded by La Cooperativa Campesina de California and the Employment Development Department (EDD)
 - They incur all payroll liabilities and workers' compensation
- Know of an area in need of assistance?

- We are looking for fellow non-profit organizations that were damaged in the fires as well as public hazard sites
 - Must be in Santa Clara or San Mateo counties
- Land must be public or non-profit owned
- Work sites must provide power tools and other materials
- Temporary workers needed?
 - Workers can work up to 800 hours or \$12,000 in earnings and paid the prevailing wage for the foundation they are working for
- Worker qualifications
 - Anyone whose job has been affected by the 2020 wildfires or those who have been unemployed the least 15 weeks out of the previous 26
 - Must be in good physical condition
 - Job duties include fire damage cleanup, debris removal, and trail repair
- Goggles, boots, safety vests, and covid masks are provided through La Coop

Questions:

- Is hazardous fuel work included?
 - Only if the area has been damaged by the fires.
- What equipment are the workers authorized to use?
 - Chainsaws, chippers, etc. Essentially anything that is required of the job site.
- How many people have entered your program and are successfully working?
 - We are currently establishing worksites. Currently approving 1 work site.

Contact:

- Celia Hare – outreach recruiter intake
- Phone: 408-534-5339
- Email: chare@cetweb.edu

IV. Updates

- Sarah Collamer – CAL FIRE VMP forester for San Mateo County – SFPUC Prescribed Fire
 - Mitigated negative declaration for the project – the contract has a life of 8 years
 - Project activities: thinning, mastication, and broadcast burning
 - The last prescribed burn was 18 and 12 years ago
 - Burning is only permitted within prescription included in the document
 - CAL FIRE is taking all liability for the burn
 - There are several biological benefits to the prescribed burn
 - Disturbance based ecology is important in the bay area
 - Reducing density and continuity of coyote brush
 - The document is currently up for public comment
 - Hopefully, we will start burning in the fall – however that may be ambitious

To provide comment:

- If submitted prior to the close of public comment, views and comments are welcomed from reviewing agencies or any member of the public on how the proposed project may affect the environment. Written comments must be postmarked or submitted on or prior to the

date the public review period will close (as indicated on the NOI) for CAL FIRE's consideration. Written comments may also be submitted via email (using the email address that appears below), but comments sent via email must also be received on or prior to the close of the 30-day public comment period. Comments should be addressed to:

- Sarah Collamer
VMP Coordinator, Forester I
California Department of Forestry and Fire Protection
CZU Resource Management
6059 Highway 9
Felton, CA 95018
Phone: (831) 224-1215
Email: sacramentopubliccomment@fire.ca.gov

After comments are received from the public and reviewing agencies, CAL FIRE will consider those comments and may (1) adopt the mitigated negative declaration and approve the proposed project; (2) undertake additional environmental studies; or (3) abandon the project.

Document can be found at: <https://ceqanet.opr.ca.gov/2021020321>

- Fire prevention grant:
 - Grant has been announced and opening statewide
 - Close on May 12th
 - Focused on critical infrastructure, WUI, shaded fuel breaks
- Forest health
 - Larger, has a minimum acreage amount, focuses on collaborating between landowners.
 - Also closes on May 12th
- Need to work with our local CalFire unit to ensure that it is prioritized for this region

Questions and comments:

- Georgia Reid – currently works in wood utilization in Portland, Oregon - Wants to see if Skylonda area is incorporated in larger fuel reduction projects
 - Denise Enea explained the highway 35 fuel reduction project. It will be a community-based event. Be on the lookout for emails regarding meetings and team development.
- Is burning landscape waste considered a prescribed burn? – Robyn Souza
 - Reach out to Sarah Collamer. There may be an avenue to help you reduce that waste.
 - Contact: Sarah.collamer@fire.ca.gov

V. Announcements and Discussion – For the good of the group – All membership

- RCD currently working on chipping list for San Mateo County. Comprehensive list of coastside and bayside communities.
- Chris Auby – Captain for Redwood City Fire Department – applied for RFQ #2 for Office of Sustainability grant
 - Fire Safe Demonstration Garden
 - Redwood City Fire Department
 - Redwood City Demographics
 - 85,000 population
 - 60% minority
 - 50% residences are rentals
 - 2 hospitals, clinics, care homes
 - Very high fire hazard severity zone
 - Redwood city fire department
 - Formed in 1861
 - Has 80 professional firefighters
 - Runs 10,000 calls a year
 - 7 stations
 - Project
 - Located at station 12 – in the center of the fire hazard severity zone
 - Create a fire safe demonstration garden
 - Give people an example of how they should landscape their homes with information on species, spacing, etc.
 - Provide an example of a safe landscape
 - Looking for the full funding of \$50,000
 - Living classroom for people to understand how they should landscape their own home
 - Project overview
 - ½ acre landscape portioned of the property
 - Re-landscape with thought put into firesafe landscaping
 - Signage that tells story of how to build a firesafe landscape
 - Low succulent plants, no ladder fuels, etc.
- Update from Alert Wildfire – regarding wildfire cameras
 - Rich Sampson – CalFire
 - Several cameras have gone up in the last year
 - Very successful to get several sites in San Mateo county
 - Proposed sites
 - Pescadero
 - Chalks
 - Half Moon Bay
 - Above highway 92/35
 - Denise has 18 additional sites on east side of highway 35 in LRA areas.
 - Surpassed goal of 100 more cameras in California in 2020
 - Funding through PGE and greenhouse gas funds
 - Looking for more funding through climate change money
 - Mission
 - Put cameras focusing on remote areas as well as in WUI areas.

- The first goal is to place cameras in areas where it's hard to get in person visuals.
- Alert Wildfire – not an agency, just a group of individuals from universities. Looking at placing cameras in the entire western United States.

VI. Adjourn

- Meeting adjourned at 11:30 A.M.
- Meetings the second Wednesday of every month
- **Next Meeting: April 14, 2021**