



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.

91 members attended the meeting.

I. Introduction

Council President Denise Enea welcomed all members who called into the meeting. Introduced first presenter

II. The Changing Face of Western Forests and Their Fire Regimes: Options for Resilient Landscapes – Dr. Paul Hessburg, Senior Research Ecologist – USDA – FS, PNW Research Station, UW, OSU

- Landscape level forest changes as a result of wildfire suppression
 - o Landscape transitions from grass dominated landscapes to forest dominated landscapes
 - o Dry south slopes and ridgetops filled in with trees in low elevation dry mixed conifer forests
 - o Varied forest age and density patchworks became uniform in mid elevation moist mixed conifer forests.
 - Bug pests fill in as the major disturbance in the absence of fire
 - o Patchworks of burned and recovering forest became continuous forest in upper elevation cold forests.
- What changed?
 - o 1850 – 2021
 - Timber harvest – logging large old fire tolerant trees
 - Fire exclusion – loss of indigenous burning, grazing, development, fire suppression
 - Climate change – warmer, drier, windier, escalating.
- Inland NW wildfires and regional water deficit
 - o In high fire years, evapotranspiration exceeds the level of water uptake by the plants

- A cooler climate aided fire suppression in the Western US
- Forests and fire regimes
 - o Dry forests used to have frequent low severity fire, on the scale of every 5-25 years
 - o More extreme climate/weather drove more extreme fires
 - o Frequent fires reinforce low severity fire.
- Mid elevation mixed conifer forests
 - o Fires every 20-50 years, reinforced low and moderate severity fires
- Locally, more frequent fires continually thinned forest patches, reducing density and fuels.
 - o Negative feedback against severe fire
- What happens when you take fire out of the system for 80-100 years
 - o Regeneration proceeds creating dense stands of homogenous aged and sized trees
- High severity fire regime
 - o Common in upper elevation wet and cold forests
 - o Infrequent every 75-200 years
 - o Mild climate weather conditions favored milder fires
 - o Created variation in fire severity and event patch sizes.
- Fire tolerant tree species abundance decreased; intolerant species increased.
- Ponderosa pine gave way to Douglas-fir and grand fir – in the absence of fire
- Relation to pests and pathogens
 - o Vulnerable, overly stocked forest are now more continuous, leaving forests susceptible to pests and pathogens, even native pests.
- Non forests are also vital to resilient forest landscapes
 - o Large grasslands were common even in wetter climates like the coastal pacific northwest
 - o Patches of non-forest occur as:
 - Bare ground
 - Wet and dry meadows
 - Shrublands
 - Savannahs
 - Stand initiation (new forest)
 - Mixes of these
 - o These states can persist for 10s to 100s of years if maintained by fire
 - Short persistence for smaller patches
 - Long persistence for larger patches
 - Influenced by seed dispersal
 - Distances and reburning frequency
- Non-forest conditions provide vital context to forests
 - o Non-forest nearly as abundant as forest in many historical provincial landscapes
 - Tug of war between factors that are growing forests and factors that are removing them.
 - o Interplay gives clues to what we can expect with climate change
 - Warmer and drier – less forested area and lower canopy cover

- Regardless, natural carrying capacity of forests is seldom realized
- Regional landscapes are multi-scale
 - Broad lifeform patchworks
 - Forest successional patchworks
 - Tree clump/gap patterns within patches
 - Adapt patterns, connectivity, and processes at each level
 - Disturbances interact at every scale of patchwork
- Topography provides a natural template for adapting vegetation and habitat patterns
 - Use it to tailor more characteristic forest age, species composition, density, and lifeform patterns to the landscape
- Fire, forest successional patchworks, and climate are the engine that drives this system
 - Create supportive lifeform and forest successional/ fuel patterns to adapt the fire regime
 - Climate change will continually adapt these patterns
- Predictable patch size distributions historically emerged from landscape climate fire interactions
 - Restore typical size distributions of successional patches and allow climate change and disturbances to adapt
- Widely distributed large and old trees provide a critical backbone to landscapes; they are climate change and wildfire adapted and a genetic legacy
 - Keep what you have, make more of them – remove understory fuel ladders, duff and accumulated litter that are threatening, dry and moist mixed conifer forests
- Successional patches are small landscapes w/ in a larger landscape
- Land ownership and allocation patterns disrupt ecological boundaries
 - Work collaboratively across land tenures to develop adaptation projects
- Key takeaways
 - Adaptations are need to recreate more characteristic lifeform patterns; use SWE and Deficit predictions to inform 21st century lifeform and forest type patterns
 - Create diverse patterns of forest successional conditions, open vs closed canopies, tailor to topography
 - Rebuild hardwood forest patches where appropriate, after forests, harvests, influential to fire behavior
 - Historical landscape complexity – product of forest REBURNING
- Time tested methods for creating resilient landscapes
 - Forest thinning and Rx burning
 - Rx burning only
 - Managed wildfires in the backcountry
 - Expand areas of hardwood forest were adapted to the conditions
 - Work at sufficient pace and scale
 - Use the appropriate tool for the conditions
 - This is an enduring trans-generational social, financial, management commitment
- Questions and Answers
 - Does archaeology tell us about the vegetation of pre-Spanish landscapes
 - There are great papers out of the American southwest

- In areas that have had decades to build up fuel, is prescribed burning still a beneficial practice?
 - Capable burn bosses and fire managers know the conditions with which they can operate
 - Pre treatment with thinning is often necessary
- As forests transition from moist forests to dry forests, will forests continue to accumulate fuels?
 - Yes, moist forest produce more biomass, and as they get hotter and drier they accumulate fuels. There will be a mismatch between the forest type and the amount of fuels.
- What comment do you have about oak woodland on steep slopes, with homes at the top of the canyons?
 - There are several pieces to that question
 - We created the built environment under a different climatic environment – during a period of fire suppression and cooler and wetter temperatures.
 - We are the first generations to not be burning oak woodlands.
 - Oak woodlands need to be thinned out and followed with prescribed burning and/or grazing.
 - 70% of new housing starts in the western US are happening in the WUI environment – we need to stop building in high fire hazard severity zones.
- Should something be done to reduce conifer encroachment in oak woodlands?
 - In order to maintain oak woodlands, you need to remove Douglas-firs. Douglas fir are a weeds that increase fire hazard and ultimately burn oak woodlands.
- How are beetles kept in check?
 - Beetles have co evolved with their conifer hosts. They've been around for a long time. What's different is that they are in a non-native role with more trees and more adjacent patches. There used to not be over crowding. Deep droughts prevent trees from repelling beetles and they prey on non-vigorous trees. Beetles are responding to more forest area, denser conditions, and less vigorous trees.
- How do we deal with invasive weeds when we open up the canopy?
 - Thinning work should be done alongside weed management work. Try not to increase invaded areas. In invaded areas, apply tried and true remedies to knock out existing populations and maintain populations.
- Has your research conducted studies on loss of large grazing animals?
 - Domestic livestock are not native herbivores, but they can be helpful if applied correctly. Sheep and goats can be applied for fuel reduction. Cattle and sheep grazing can be a useful augmentation in controlling the fire situation, if herd management is done in the correct way. We can't allow grazing animals to linger too long in a single area.
- As we plan fuel reduction projects – how would you prioritize projects?
 - When you thin forests you manage fire behavior. You start on the ground and move into the surface fuels and fuel ladders. You break the transition from ground to canopy fuels.

- If you thin without following up with slash removal you make the situation worse.
 - What is your research on maintaining projects?
 - Maintenance is critical and maintenance needs to be timed based on the productivity of the landscape.

III. San Mateo RCD

- Collaborative Forest Health and Fire Resiliency for San Mateo County
 - Sheena Sidhu – Program Manager
 - Erica Harris – Project Manager
 - David Cowman – Project Manager
- San Mateo RCD
 - Special district to help people help the land
 - Since 1939
 - With USDA Natural Resources Conservation Service
- What we do
 - Work in partnership
 - Local hub for natural resource conservation
 - Non regulatory – work where invited
 - Primarily grant funded
- Work in partnership
 - Regional partnership leveraging partnerships and work closely with organizations and agencies without replicating efforts
 - Work directly with private landowners
 - Serve as liaison across environmental agencies.
- Fire Recovery
 - RCD contractors installed a new culvert and fire road that provided critical access for first responders at the Dark Gulch crossing
 - Additional access and mastication work was provided along Old Haul Road by RCD contractors
- Additional fire recovery resources provided
 - A web page with resources for recovering from the fire
 - Webinar series
 - County hosted public meeting for coastside residents about fire – the RCD presented
 - Produced a newsletter focused on fire sent to thousands of residents
 - Fire Safe Council coordination
 - Extensive individual contacts and distribution lists
- Post-fire recovery visits for technical assistance
 - 4 community visits within weeks of the fire in order to determine community needs
 - 35+ visits and 150+ interactions with individual residents/ landowners
 - In partnership with NRCS and the RCD of Santa Cruz County
- Fire Resiliency
- Fire Safe San Mateo Coordination
 - Assist in coordinating meetings and membership
 - Serve as hub for answering community questions
 - Oversee Neighborhood Chipper Program
 - Also a member and project partner.

- Neighborhood Chipper program
 - o Fire prevention program – you cut, we chip
 - o Neighborhoods are prioritized by local fire agencies and Cal Fire via the Fire Safe Council, and based on CWPP – Community Wildfire Protection Plan
- Permitting
 - o Addressing Regulatory Obstacles to Eucalyptus Control in San Mateo County (2011)
 - o Programmatic and streamlined permitting
- Hypericum canariense
 - o Prescribed fire and eradication
- Site Visits
 - o We work where we're invited
 - o Providing technical assistance across RCD programs
 - o Identify potential opportunities for funding or assistance
 - o Any landowner or land manager can request RCD assistance
- Forest Health
 - o Currently, the RCD in collaboration with our countless partners are in the planning, permitting, or implementation phase of about 1600 acres of forest health projects throughout San Mateo County
- Huddart and Wunderlich County Parks
 - o CalFire Forest Health Grant
 - o 400 acres of understory thinning through mechanical mastication to remove understory trees, shrubs, as well as dead and dying material
- Girl Scout Camp Butano and Butano State Park
 - o CalFire Forest Health Grant
 - Girl Scout Camp Butano – 44 acres
 - Butano State Park – 375 acres – currently funded for planning and implementation
- Permitting Pathways
 - o California Vegetation Treatment Program Programmatic Environmental Impact Report – Cal VTP PEIR
 - Relatively new permitting pathway to increase the pace and scale of forest health and fuel reduction projects in California
 - Each project needs a subsequent Project Specific Analysis – PSA
 - o PWP – Public Works Program – being developed by San Mateo RCD, SCRCD, and other partners to streamline the permitting process in the coastal zone and be used in lieu of a Coastal Development Permit
- SFPUC Rx Burn
 - o 775 acre prescribed burn project – targeting grass, shrub, and timber vegetation types
 - o Dual goal of restoring historic disturbance regimes (low to moderate intensity fire) and developing strategic fuels reduction in WUI areas
- Quiroste Valley Cultural Preserve
 - o Collaboration between Ca State Parks, Amah Mutsun Land Trust, and San Mateo RCD
 - o Quiroste Valley Cultural Preserve Vegetation Management Project – 115 acres in Ano Nuevo State Park
 - o Combines indigenous stewardship, habitat enhancements, and fuel reduction into one project to maintain coastal prairie and manage Douglas-fir
- Projects in Development
 - o Eucalyptus Management in San Mateo

- Highway 35 shaded fuel break
- La Honda Fuel break

IV. Updates

- Fire safe council clearing house grant has opened up
- <https://cafiresafecouncil.org/grants-and-funding/21-sfa-grant-program/>
- Have not heard back from the Office of Sustainability
- Firesafe applied for PGE grant, but has not heard back
 - \$100,000 to initiate the skyline project.
- Goat grazing discussion

V. Adjourn

- Meeting adjourned at 11:30 A.M.
- Meetings the second Wednesday of every month
- **Next Meeting: 5/12/2021**

Articles:

https://www.fs.fed.us/pnw/pubs/journals/pnw_2020_povak002.pdf

[https://www.fs.fed.us/psw/publications/skinner/psw_2005_skinner\(agee\)001.pdf](https://www.fs.fed.us/psw/publications/skinner/psw_2005_skinner(agee)001.pdf)