Tree Mortality and Wildfire Prevention
California Forest Initiatives

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Annual Meeting of the California Forest Pest Council – 2019
Forest Health Management: Technological and Conventional Approaches
Natural Resource Challenges: Wildfire, Tree Mortality

- Wind, warmer, drier and longer fire seasons, exacerbated by climate change
- Overstocked forests after 100 years of fire suppression, including Native American burning
- Historic management removing large fire-resilient trees
- No management
Total Land: ~101 million acres
Forestland: ~33 million acres
Rangeland: ~57 million acres
• Executive Order B-52-18 May 10, 2018 (Brown): Double the total statewide rate of forest treatments within 5 years to at least 500,000 acres per year

• Executive Order N-05-19 January 8, 2019 (Newsom): 35 fuels reduction projects, 90,000 acres, this year
  Vulnerable communities
  High fire risk

• Funding, GGRF, $200 million/year next 5 years

• Liability Reform

• Actively managed forests
Senate Bill 1260

- Revised the CAL FIRE Vegetation Management Program to allow for Cooperative burning, “joint prescribed burning operations”
- Repealed sections for cost share requirements
- Shared liability with Cooperators based on threat, complexity and level of CAL FIRE involvement with the burn, “when using a proportionate share of liability ...the maximum percentage of liability for the person contracting with the department shall be 75 percent”
- Fire Marshal, Burn boss certification and training
- Vegetation Treatment Program Programmatic Environmental Impact Report the programmatic environmental document for prescribed fires
Senate Bill 901

- CAL FIRE and Air Resources Board (CARB), standardized approach for quantifying carbon emissions and decay from fuel reduction activities in order to meet the GGRF accounting requirements
- Wildfire Resilience Program, technical assistance to nonindustrial timberland owners
- Prescribed fire, thinning, and fuel reduction projects on federal lands exempt from CEQA if NEPA is complete
- Advance payments for forest health grants
- Appropriates $165 million for healthy forest and fire prevention programs, and $35 million for prescribed fire and other fuel reduction projects, through Fiscal Year 2023-24, from the GGRF.
AB 2518 - Innovative Forest Products and Mass Timber

Natural Resources Agency: working group on expanding wood product markets

CAL FIRE, Board of Forestry and Fire Protection: Identify barriers to in-state production of mass timber and other innovative forest products, develop solutions that are consistent with the state’s climate objectives on forest lands

Collaborate with the Agency working group, other state agencies, and independent experts, including with apprenticeship programs of organized labor, community colleges, and others with similar expertise, on innovative forest products and mass timber workforce training and job creation

Forest Management Task Force, Joint Institute for Wood Products, Board: Recommendations for the siting of additional wood product manufacturing facilities in the state
Goals

Wildfire Resilience, Reduce Wildfire Impacts

Healthy Forests

Diversity

Carbon Sequestration
Solutions

• Increase pace and scale of fuels reduction activities

• Thin excessively dense forests

• Increase timber harvesting

• Build out wood products infrastructure
  a. Process low value, small diameter timber – mass timber
  b. Utilize forest waste (limbs, tops, breakage, mortality)
Toolkit

Land use planning
Retrofit existing homes
Building codes for new homes
Evacuation Planning, including ingress, egress
Power line clearance
Utility wildfire mitigation plans
Education
Enforcement
Vegetation management - need both prescribed fire and thinning
Tradeoffs and Challenges

Widely spaced trees, mix of age and size classes, large trees, clumps & openings

- How many trees per acre / BA to remove? Size class? Species? Ownership?
- How pay for it?
- How many “large” trees / acre? “Large” = 24” / 28” / 36”?
- Optimal tree density? Timber yield / Forest health / Water yield?
Area under a THP that was declared substantially damaged timberlands from bark beetle epidemic

Tuolumne County
Tradeoffs and Challenges

• Carbon storage versus fire resilience

• Desired vs achievable future conditions – hard to restore historic natural fire regimes, forest conditions with 46 million people

• Frequent light ground fire – people’s tolerance for smoke is limited

• Accept some impacts in the short term to achieve long term goals

• Insurance, liability, homeowners
California Climate Initiative (CCI)

- Funding, GGRF, $200 million/year next 5 years
- WUI Structure protection
- Landscape level forest health and fuels reduction
- Grants and direct funding
CCI Project Selection Criteria

• Geographic location, relationship to other/past projects

• Reduce wildfire impacts to ecosystem services
  - Surface water, carbon storage, standing timber, site quality, large trees
  - Communities, Fire Hazard Severity Zones
  - Restoring pest and drought damaged areas, High Hazard Zones
  - Restoring fire damaged forests, Burn Severity
Prescribed Fire

Fire Threat (2018)

Threat Class
- Extreme
- Very High
- High
- Moderate
- Ecoregions
Disadvantaged & Low-income Communities Investments

https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/communityinvestments.htm
<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Total Allocation, $ Millions</th>
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<td>FY 14-15</td>
<td>$24</td>
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<tr>
<td>FY 16-17</td>
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CAL FIRE Prescribed Fire Crews

5 Crews in the Southern Region, 5 in the Northern Region

- 1 Fire Captain
- 1 Fire Apparatus Engineer
- 1 Forestry Assistant II
- 1 Equipment Operator
- 9 Forestry Technicians

National Guard Crews

- 100 people, or five 20-person crews
- 2 CAL FIRE Fire Captains
- 4 CAL FIRE Firefighter 1’s

5 crews with each crew having two fire captains and four firefighters to cover staffing needs five days per week.
Cooperative Efforts

• MOU, private forest landowners, USDA Forest Service, CAL FIRE

• Prescribed Fire MOU

• Good Neighbor Authority, USDA Forest Service

• Shared Stewardship Agreement
Wood Products/Mass Timber

- Adopt International Code Council’s Tall Wood Buildings code
- DGS to identify 3 Cross Laminated Timber buildings to use CLT
- Institute for Joint Wood Products Innovation
- CPUC to review and update procurement of small bioenergy to ensure long-term programmatic certainty
- New markets needed for increased volume of raw material, increased use of small diameter, low value materials
- Can use any size material
- Carbon storage
BioRAM

• 146 MW from existing bioenergy facilities

• Requires High Hazard Zone (HHZ) fuel

• 5-10 year contracts
BioMAT

- Feed in Tariff created by Senate Bill 1122 (2012)
- 1-5 MW biopower plants totaling 50 MW
- Feedstock must come from “Sustainable Forest Management” as defined by CPUC with input from CAL FIRE
Increase pace and scale

More material hauled out of the woods

More wood products facilities. Distribute across the state to reduce transport costs and keep infested material from moving from infested to non-infested zones
Thank You!

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