# TREE MORTALITY TASK FORCE

## State of Emergency Proclamation

# STATE OF EMERGENCY

Executive Department
State of California

**PROCLAMATION OF A STATE OF EMERGENCY**

**WHEREAS** the State of California is experiencing record drought conditions, which have persisted for the last four years; and

**WHEREAS** on January 17, 2014, I proclaimed a State of Emergency to exist throughout the State of California due to severe drought conditions; and

**WHEREAS** a lack of precipitation over the last four years has made trees in many regions of California susceptible to epidemic infestations of native bark beetles, which are constrained under normal circumstances by the defense mechanisms of healthy trees; and

**WHEREAS** these drought conditions and resulting bark beetle infestations across broad areas have caused vast tree mortality in several regions of the state, with the United States Forest Service estimating that over 22 million trees are dead and that tens of millions more are likely to die by the end of this year; and

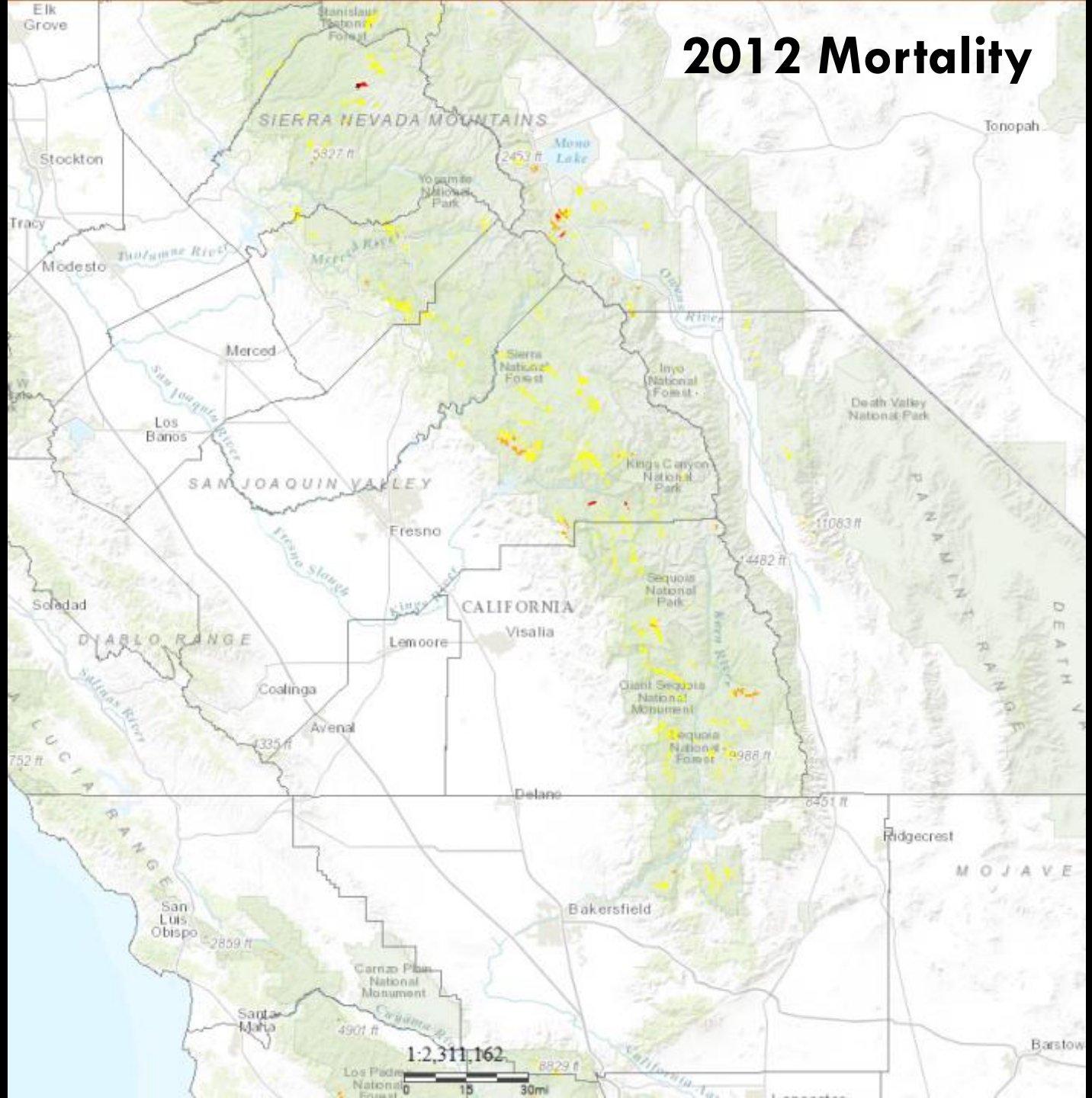
**WHEREAS** recent scientific measurements suggest that the scale of this tree die-off is unprecedented in modern history; and

# TREE MORTALITY
## NORTHERN FRESNO COUNTY

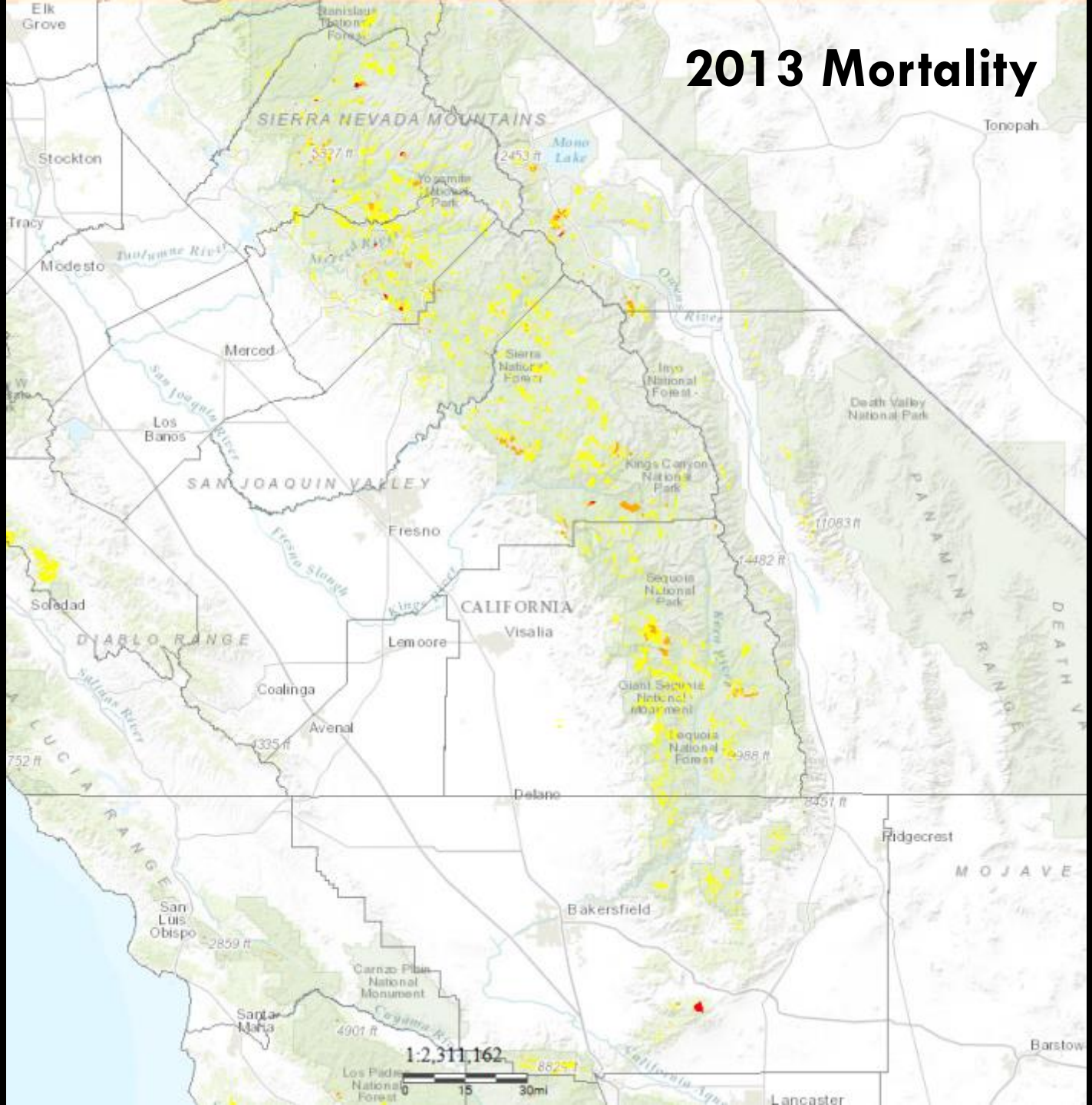
# MARIPOSA COUNTY MARCH 21, 2015

November 11, 2015 Madera/Fresno County line

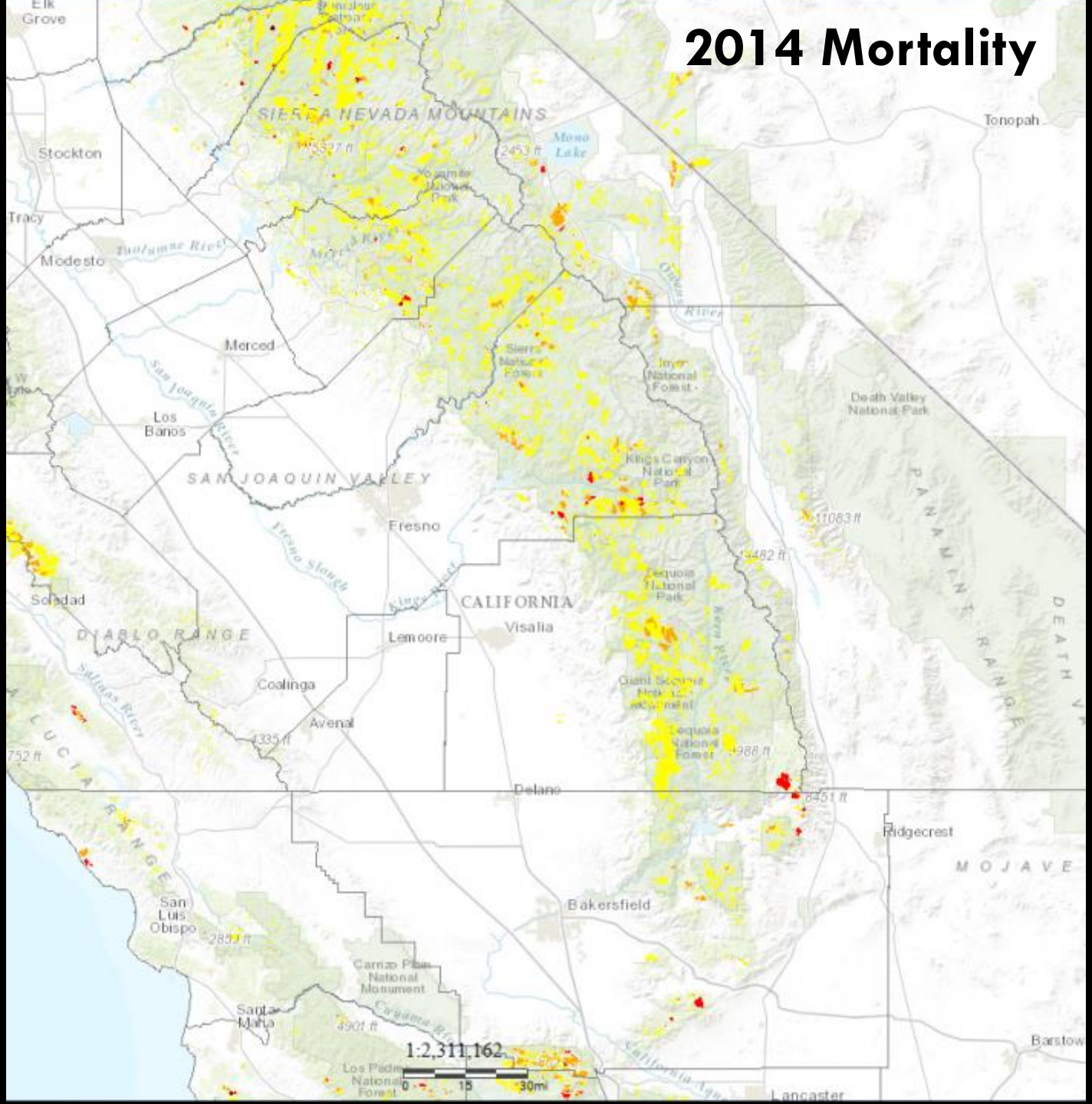
# 2012 Mortality



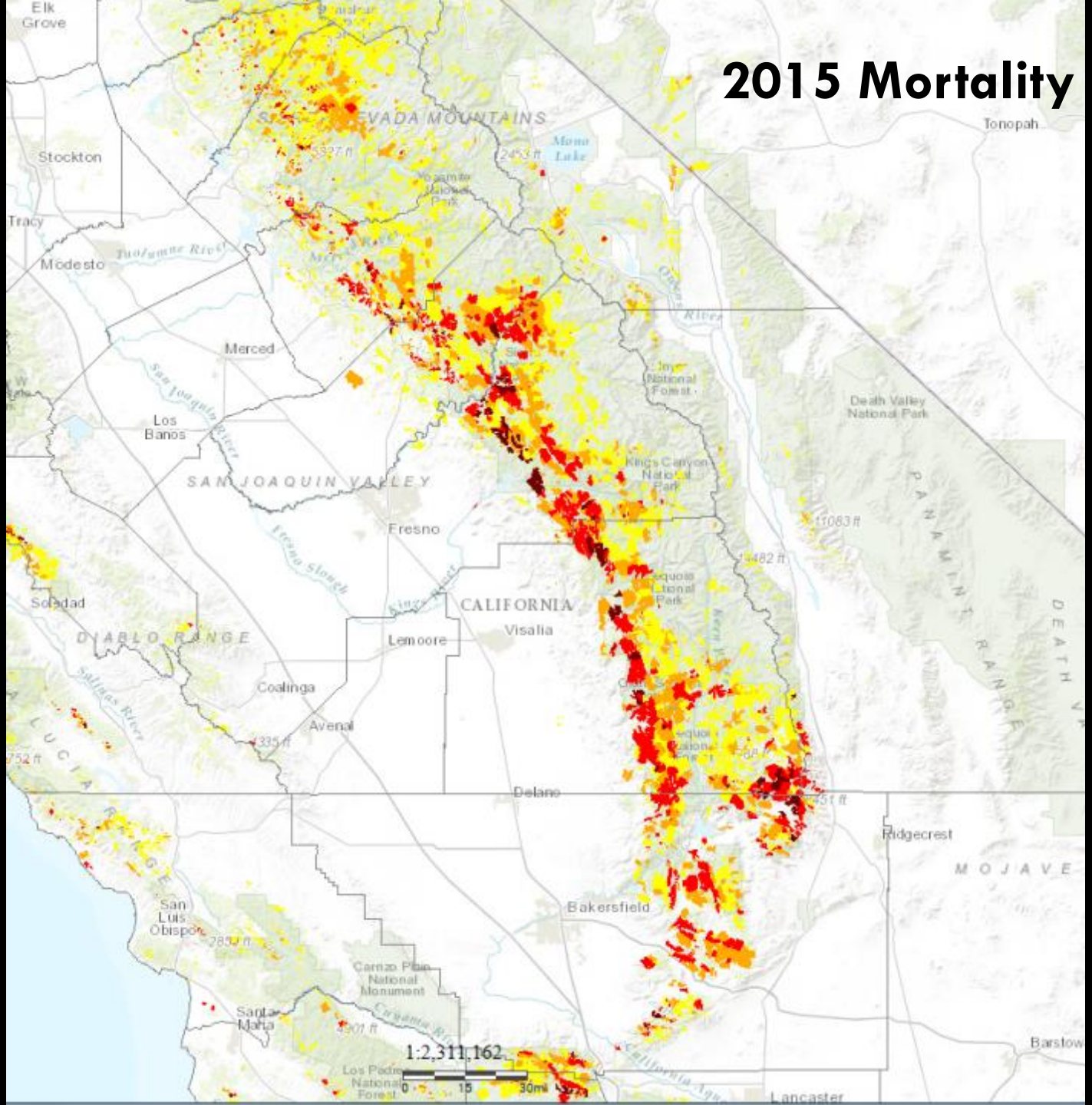
# 2013 Mortality



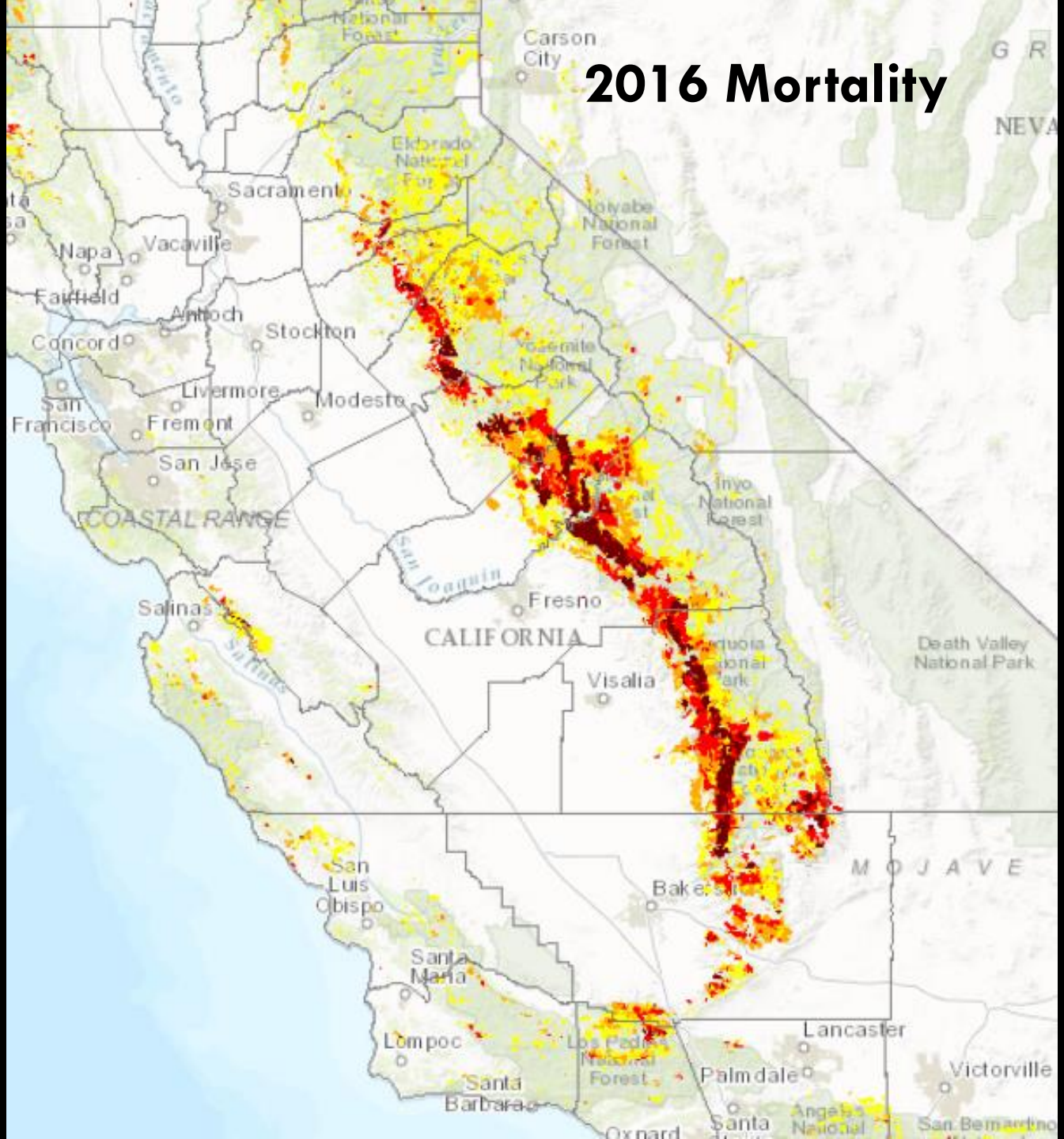
# 2014 Mortality



# 2015 Mortality



# 2016 Mortality



# CURRENT TRENDS- MORTALITY EXPANSION

Per year expansions-

- 2010-2015- 11 million
- 2015- 29 million statewide
- 2016 -62 million additional dead trees for a total of 102 million since 2010

# CURRENT SITUATION

5.5 million hazardous(life threatening) trees have been identified

- 2/3 on Forest Service Land
- 1/3 on Private lands

# COSTS OF TREE MORTALITY EMERGENCY

- $2.8 billion estimated cost to remove
- $562 million USFS (approximately $150/tree)
- $2.2 billion non-USFS (average $1,200/tree)

# HAZARDS OF DEAD & DYING TREES

- Changing forest conditions
- Initial increase in fire behavior
- Structural weakness

CAL FIRE's MMU-Bass lake FFS.
October 2016

# TREE MORTALITY TASK FORCE

- October 30, 2015 - Proclamation of a State of Emergency Executive Order
- November 16, 2015 First TMTF meeting in Sacramento

# TREE MORTALITY TASK FORCE

- 19 DIRECTIVES
- 80 ENTITIES
- 10 COUNTIES

# TMTF LEADERSHIP

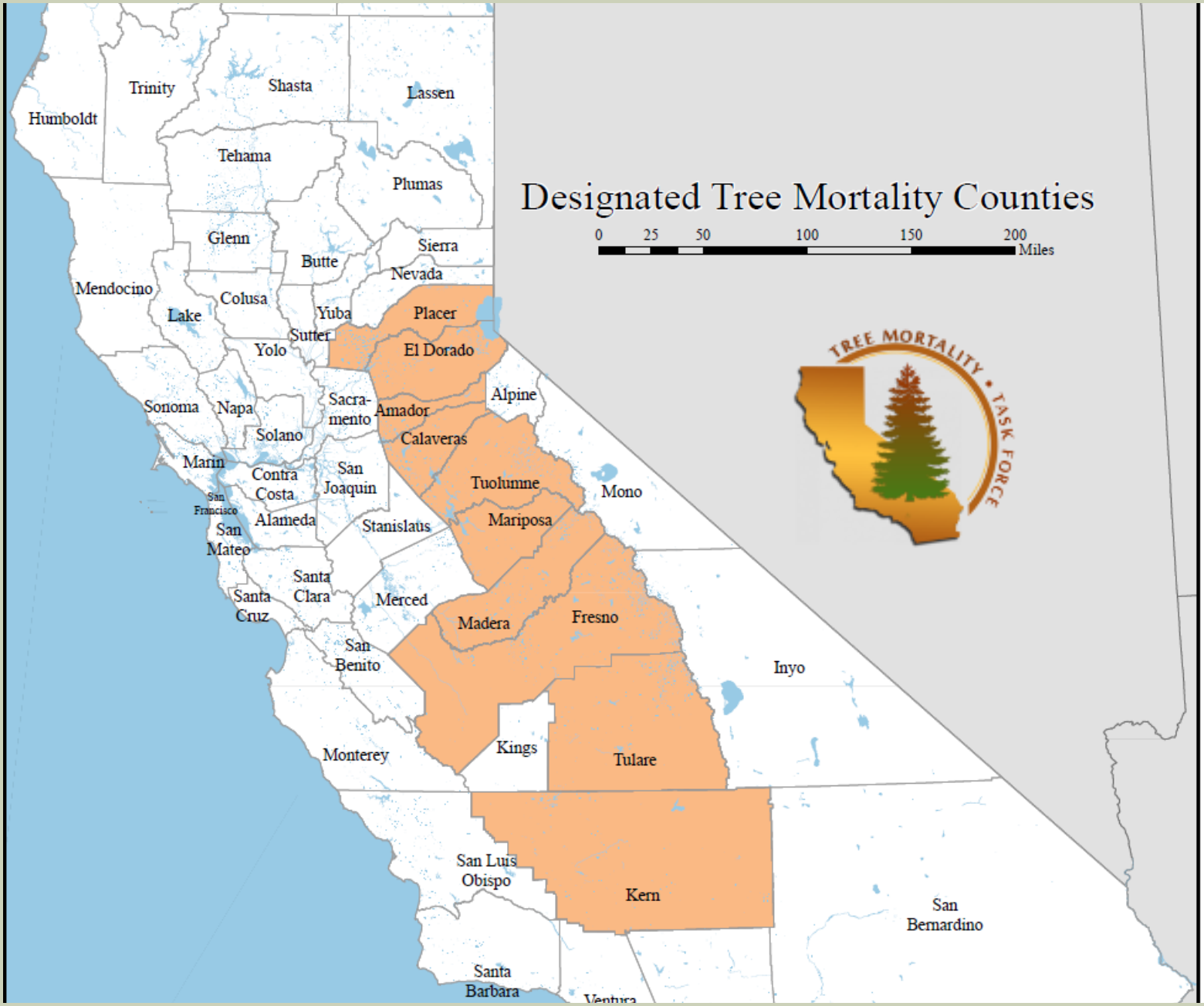
**Task Force Chairs**: CAL FIRE Director Ken Pimlott, OES Director Jon Moore, & the Governor's Office Deputy Cabinet Secretary Saul Gomez

**Task Force Leaders**:
Gabriel Schultz
Rick Carr
Kevin Conway
Kristin Merrill

**Liaison Officers**:
CSAC
RCRC
CAL FIRE

# TMTF WORKING GROUPS

- Resource Allocation
- Regulations
- Mapping & Monitoring
- Forest Health & Resilience
- Utilization- Bioenergy
- Utilization – Market Development
- Public Outreach

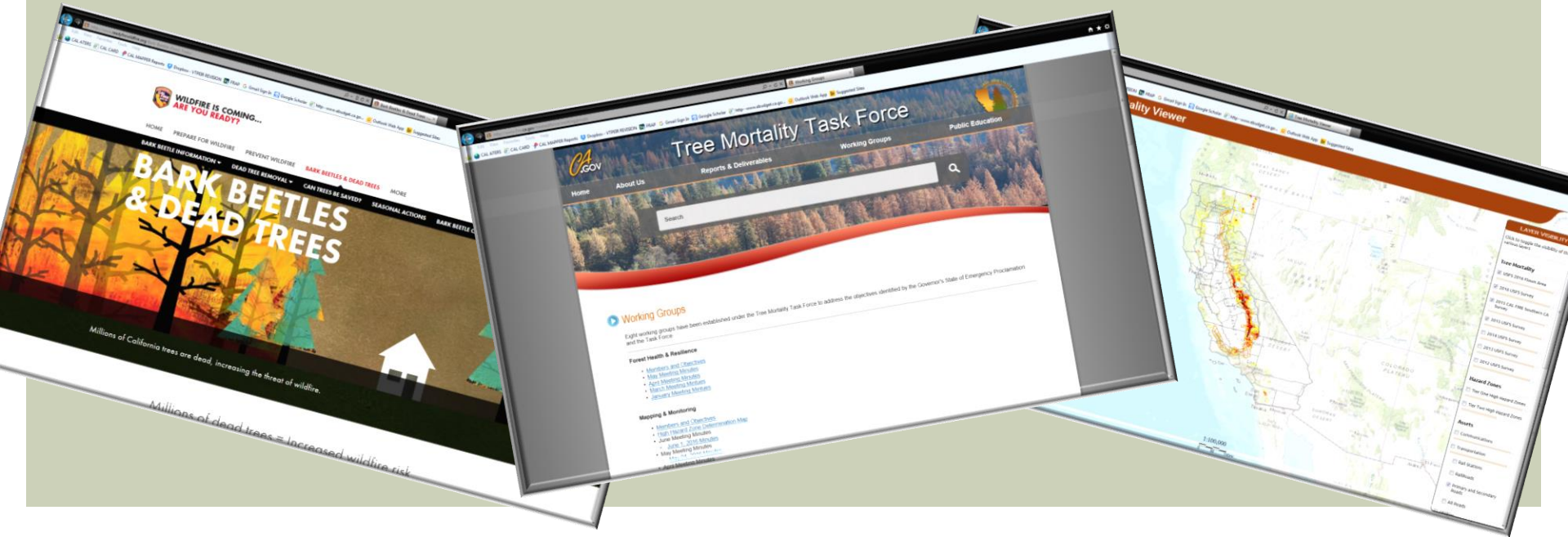

Designated Tree Mortality Counties
0 25 50 100 150 200
Miles
TREE MORTALITY • TASK FORCE
Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
Glenn
Butte
Sierra
Nevada
Mendocino
Colusa
Lake
Yuba
Placer
Sutter
Yolo
El Dorado
Sonoma
Napa
Sacra-
mento
Amador
Alpine
Solano
Calaveras
Marin
Contra
Costa
San
Joaquin
Tuolumne
Mono
San
Francisco
Alameda
Stanislaus
Mariposa
San
Mateo
Santa
Clara
Santa
Cruz
Merced
Madera
Fresno
San
Benito
Inyo
Kings
Tulare
Monterey
San Luis
Obispo
Kern
San
Bernardino
Santa
Barbara
Ventura

# WORK OF THE TASKFORCE

- Implement the Governor's Proclamation
- Statewide Taskforce efforts:
  - Provide coordination among agencies/entities
  - Establish High Hazard Zones (HHZs)
  - Identify funding sources
  - Provide public education
  - Identify & expand
    - Bioenergy
    - Log storage/utilization sites
    - Wood markets
- Core to this effort is supporting County TMTFs

# PUBLIC OUTREACH

- www.treetaskforce.org
- www.prepareforbarkbeetle.org
- Tree Mortality Viewer Overview http://egis.fire.ca.gov/TreeMortalityViewer



# CURRENT SUPPORT/FUNDING OPTIONS

- Cal OES
  - California Disaster Assistance Act (CDAA)
- CAL FIRE
  - Greenhouse Gas Reduction Fund
  - SRA/TM Grants
  - Ca Forest Improvement Program (CFIP)
- CA Fire Safe Council
- NRCS
- Resource Conservation Districts (RCDs)
- Local Fire Safe Councils
- PG&E
- EPIC grant funding

# CURRENT SUPPORT/FUNDING

- Approximately $275,000,000 Expended/Allocated to date…
  - Caltrans, Cal OES, CAL FIRE, USFS, Counties, NRCS, Fire Safe Councils, CCC.
  - Does not include Utility Company costs.

# CAL FIRE EFFORTS

- State and local Taskforce involvement
- 80,000 hours of staff time to mortality
- Redirected or focused $10.2 million to mortality
  - Equipment
  - Tree removal projects
  - HHZ mapping
  - Public education

# ACTION ITEMS – LOOKING AHEAD

- Utilization and Market Exploration
  - Sawmills full
  - Bioenergy contract extensions (CPUC)
  - Export markets
  - Storage sites
- Presidential Disaster Declaration?

# ACTION ITEMS – LOOKING AHEAD (CONT.)

## Federal Help

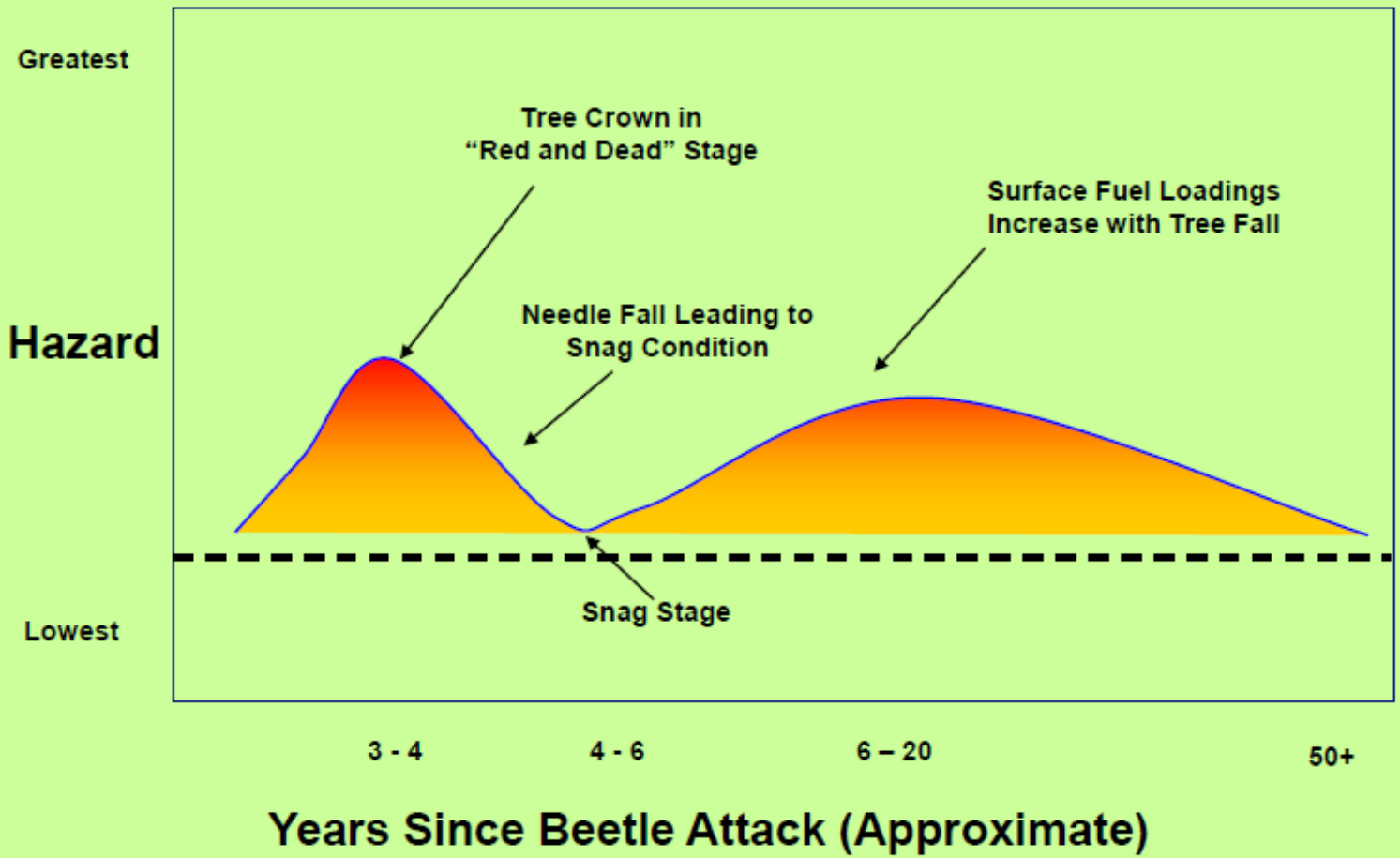
- Support a solution to fix wildfire funding at the Federal level
- Expansion of Farm Bill designation and more capacity to accelerate NEPA review
- Additional funding for USFS Region 5 (project and operational)
- NRCS – EQIP funding assistance to forestland owners

# IMPLICATIONS FOR FIRE PROTECTION

## Tree Mortality Effect on Fire Behavior

- Short Term
  - Red trees
  - Pine needles
  - Increase fire spread and intensity
- Mid Term
  - Standing dead
  - Burnout and failure of standing dead trees
  - Extended mop up
- Long Term
  - Downed heavy fuels
  - Resists control
  - Long residence time & extended mop up

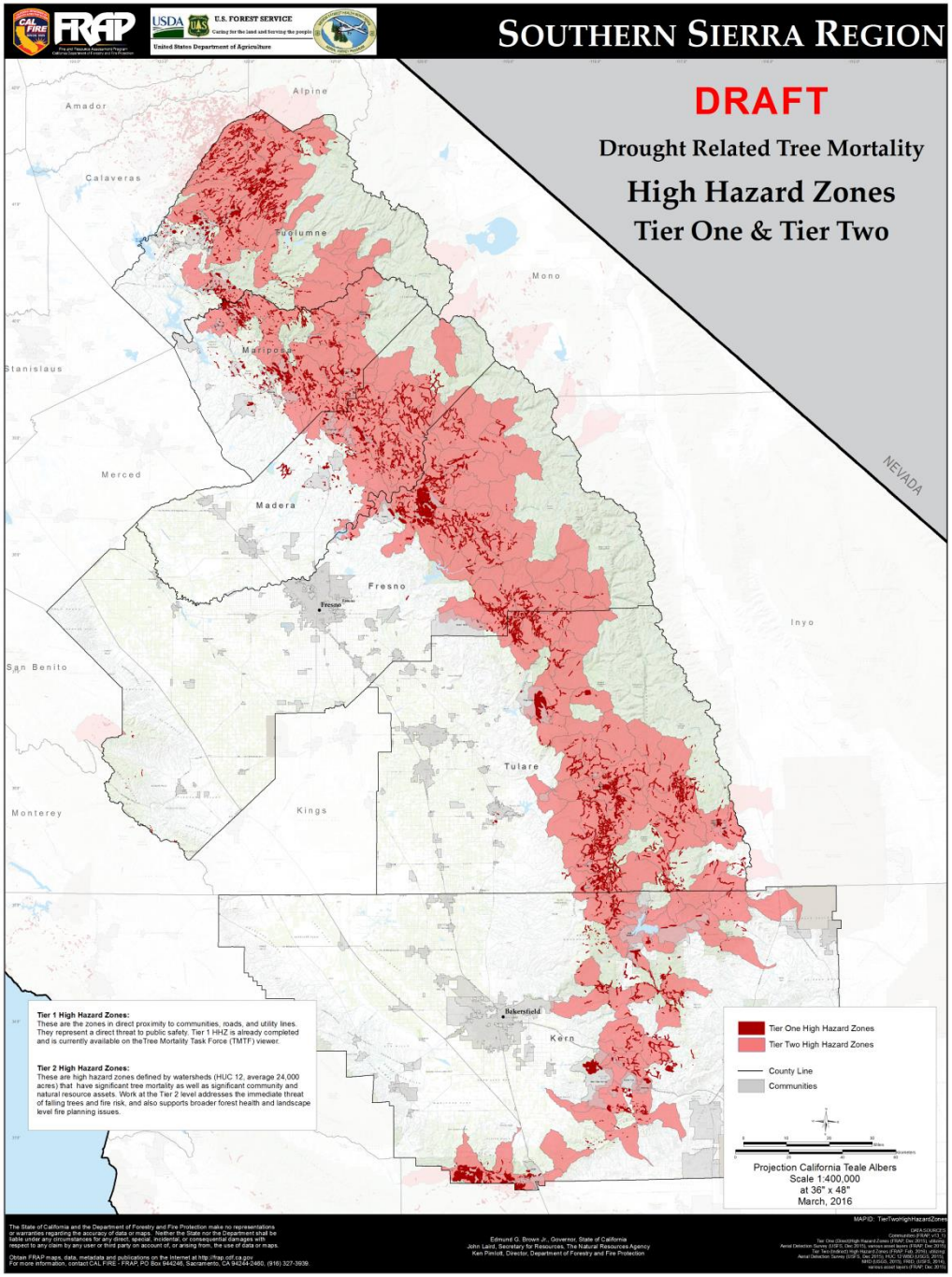
# Fuel Profile Hazard Associated with MPB Mortality



# HIGH HAZARD ZONE DESIGNATION

- ***HHZ Direct (Tier 1)**: These are high hazard zones that are in close proximity to communities, roads, and utility lines. They represent a direct threat to public safety. Mapping of Tier 1 HHZ is complete and available on the TMTF viewer.*

- ***HHZ Indirect (Tier 2)**: These are high hazard zones that are defined by watersheds (HUC 12) that have significant tree mortality, combined with community and natural resource assets. Work at the Tier 2 level supports broader forest health and landscape level fire planning issues.*




# HIGH HAZARD ZONES (MAP)

***(Tier 1)**: These are high hazard zones that are in close proximity to communities, roads, and utility lines. They represent a direct threat to public safety. Mapping of Tier 1 HHZ is complete and available on the TMTF viewer.*

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# PUBLIC SAFETY AT RISK

# PUBLIC INFRASTRUCTURE AT RISK

# HAZARD TREE REMOVAL EFFORTS

With limited outlets, safe storage of material on a county level has been a focus.

Storage sites are continuously being identified to safely store logs from higher hazard areas

# SPECIAL EQUIPMENT TO HELP REMOVAL

**TREE MORTALITY TASK FORCE**
**EQUIPMENT**

Type: Chipper
Make: Morbark
Model: Beever M18RX

Type: Track Chipper
Make: Bandit Industries
Model: 250XP Track

Type: Sawmill
Make: Wood-Mizer
Model: LT70 Super Hydraulic

Type: Air Burners, Inc
Make: Air Curtain Burner
Model: S-220 Portable Firebox

January 22, 2016

**TREE MORTALITY TASK FORCE**
**EQUIPMENT**

Type: Excavator (for Masticating)
Make: Caterpillar
Model: 323F

Type: Mulching Head (for Cat 323E Excavator)
Make: RDM Series
Model: 52EX

Type: Compact Track Loader
Make: Caterpillar
Model: 299D2 XHP

Type: Wheel Loader
Make: Caterpillar
Model: 938M

January 22, 2016

# TRACK CHIPPER

# AIR CURTAIN BURNER

# TRACKED LOADER

# EXCAVATOR W/MASTICATOR

# PORTABLE SAW MILL

# MULTI-PURPOSE USE EQUIPMENT

We have never seen an event which will so profoundly impact the forests of California and its associated resources including

- water,
- wildlife,
- fire regimes,
- public safety,
- forest products,
- recreation, and
- their associated economics.