Aerial Detection Survey, Pacific Southwest Region
Northwestern CA Preliminary Report, October 2022

Preliminary Summary
(numbers may change)
Area surveyed: 6.5 million acres
Acres with mortality: 181,130 acres

Objective: The objective of this survey is to detect and record recently dead and damaged trees. Most of the mortality and damage is caused by insects and diseases.

Surveyors: J. Moore, N. Stevens, S. McKelvey

Methodology: Recent tree mortality was mapped using Digital Mobile Sketch Mapping systems. Surveyors drew polygons and annotated percent of forested area affected along with damage type, tree species, and causal agent. The five-class rating system is: Very Light (1-3%), Light (4 -10%), Moderate (11-30%), Severe (31-50%), and Very Severe (>50%). Small groups of trees were recorded as point data and have no acreage assigned until later processing.

Survey Highlights:
This report presents preliminary findings in and around the Six Rivers National Forest, Redwood National and State Parks, Point Reyes National Seashore, and private and industrial timber lands. The North Coast had a high incidence of point data that is not tabulated in this report but is depicted on the map at an exaggerated scale. Flights avoided large fire footprints within the last three years, reducing overall forested acreage covered.

- Douglas-fir mortality was detected on approximately 61,000 acres and was mapped at light to moderate intensities. Additionally, Douglas-fir mortality commonly occurred as single trees or in small groups which were captured using point data collection which are no included in this preliminary report.
- Bear feeding damage on young plantation mixed conifer was recorded on approximately 52,000 acres, typically at light to moderate intensities.
- Tanoak mortality, most likely caused in some areas by Sudden Oak Death, was recorded on approximately 4,300 acres, mostly as light to moderate intensity. Mortality overall decreased significantly from 2021 and other recent years.
- True fir mortality including CA and Shasta red, white and grand fir was detected across approximately 38,000 acres at mostly light to moderate intensity.
- Ponderosa and Jeffrey pine mortality collectively was detected across ~22,000 acres mostly at moderate intensities. Mortality was especially common around and south of Round Valley.
- Knobcone pine mortality was detected across approximately 3,200 acres at light to moderate intensity mostly located near Clear Lake.
- Tree mortality was also recorded in Monterey, sugar, gray and bishop pine, redwood, incense-cedar, Port-Orford cedar, oak, and other hardwoods but was mostly captured as point data with no acreage yet assigned.

Tree Species Affected	Acres with Mortality
Douglas-fir	61,000
Mixed conifer (bear damage)	52,000
True fir (CA red, shasta red, white, grand)	38,000
Jeffrey and ponderosa pine	22,000
tanoak	4,300
knobcone pine	3,200
Other conifer (Monterey and bishop pine, incense-cedar, redwood)	490
Other hardwood	140
Total	181,130

Severe Jeffrey pine mortality north of Paradise Valley, Lake County CA. Notice the grey pine is unaffected.

Please direct questions pertaining to this report to Jeffrey Moore
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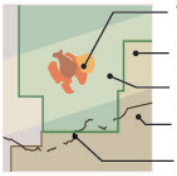
UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST HEALTH PROTECTION
AERIAL DETECTION MONITORING

2022 SURVEY
North Coast



Tree mortality
Surveyed Area*
National Forest
National Park
County boundary

*This map depicts tree mortality **only** within the surveyed area.

Percent Trees Affected

- Very Light (1-3%)
- Light (4-10%)
- Moderate (11-29%)
- Severe (30-50%)
- Very Severe (>50%)

Number of Trees Affected (points)

- Very Light (1 tree)
- Light (2 - 5 trees)
- Moderate (6 - 15 trees)
- Severe (16 - 30 trees)
- Very Severe (>30 trees)

Map only depicts dead trees surveyed in 2022.
Areas of tree mortality are for visualization purposes only.

FOREST SERVICE

https://www.fs.usda.gov/detail/r5/forest-grasslandhealth/?cid=fsbdev3_046696