

Aerial Detection Survey, Pacific Southwest Region Northwestern CA Preliminary Report, October 2021

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.

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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. 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.

Survey Highlights:

This report presents preliminary findings in and around the Six Rivers and Mendocino National Forests, Redwood National and State Parks, Point Reyes National Seashore, and private and industrial timber lands.

NOTE: Most areas within the extensive fire footprints from 2020 and 2021 were not flown; however, a few observations may have been made while ferrying through those areas or before 2021 fires started. Additionally, large areas of the Shasta-Trinity and Klamath National Forests were not flown due to smoke cover and fire restrictions.

- Bear feeding damage on young plantation mixed conifer was recorded on approximately 34,000 acres, typically at light to moderate intensities.
- Tanoak mortality, most likely caused in some areas by Sudden Oak Death, was recorded on approximately 17,000 acres, mostly as light to moderate intensity. The heaviest mortality occurred west and north of Healdsburg and around Garberville. Mortality overall was greatly decreased from 2019.
- White, red, and Shasta red fir mortality was detected across approximately 17,000 acres at mostly light to moderate intensity. Areas of more extensive and severe mortality occurred in areas around Sims Mountain on the Six Rivers NF. Much of this mortality was likely in the topkilled trees commonly sighted during the 2019 survey.
- Douglas-fir mortality was detected on approximately 10,000 acres and was mapped at light to moderate intensities. Mature Douglas-fir mortality was common but usually occurred as single trees or in small groups which were captured using point data collection with no assigned acreage values in this preliminary report.
- Ponderosa and Jeffrey pine mortality was detected across 11,000 acres and was mostly recorded at light to moderate intensity. Mortality was especially common around and south of Round Valley.
- Knobcone pine mortality was detected across approximately 650 acres, mostly categorized as moderate intensity and located east of Willits.
- Tree mortality was also recorded in Monterey, sugar, shore, gray and bishop pine, redwood, incense-cedar, grand fir, oak, eucalyptus and other hardwoods but was mostly captured as point data with no acreage yet assigned.
- Moderate to severe branch flagging in bishop pine due to pitch canker was detected across 600 acres along the Point Reyes crest.
- Severe spruce defoliation, likely caused by spruce aphid, was detected in several discrete areas: north and south of Salt Point State Park, north of Smith River near the Oregon border, and on the south side of Big Lagoon.

Preliminary Summary (numbers may change)

Area surveyed: 6.1 million acres

Acres with mortality: 89,800 acres

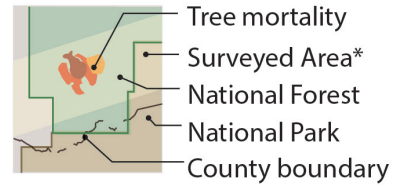
Tree Species Affected	Acres with Mortality
Mixed conifer (bear damage)	34,000
California Red and White fir	17,000
Tanoak	17,000
Douglas-fir	10,000
Ponderosa and Jeffrey pine	11,000
Knobcone pine	650
Other Hardwood	90
Other Conifer	60
Total	89,800



Ponderosa pine mortality NE of Willits, Near Foster Mountain, Mendocino county.

FOREST HEALTH PROTECTION AERIAL DETECTION MONITORING

2021 SURVEY NORTH COAST



*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 2021.

Areas of tree mortality are for visualization purposes only.

