# Aerial Detection Survey, Pacific Southwest Region
# Northern Interior CA Preliminary Report, October 2022

**Preliminary Summary**
**(numbers may change)**
Area surveyed: 8.1 million acres
Acres with mortality: 677,420 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 typically recorded as point data and have no acreage assigned until later processing.

**Survey Highlights:**
This report presents preliminary findings in and around the Klamath, Shasta-Trinity, and Mendocino National Forests. The North Interior 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 prior two years, reducing overall acreage covered.

- White and California/Shasta red fir mortality was most common and detected across approximately 410,000 acres with 64% of the mortality rated at moderate to severe intensity.
- Ponderosa, knobcone and Jeffrey pine mortality was collectively detected across ~150,000 acres with approximately 68% categorized as light or moderate intensity. Most of the higher-intensity and expansive yellow pine mortality was recorded in eastern portions of the Shasta-Trinity NF and south of the Mendocino NF.
- Douglas-fir mortality was detected across approximately 110,000 acres with 69% mapped as either moderate or severe intensity. Mortality occurred throughout the reporting area but was particularly active in areas around Lake Trinity.
- Incense-cedar mortality was detected across approximately 5,600 acres primarily at moderate to severe intensities. Incense-cedar mortality was likely significantly underreported due to the generally smaller size class of trees affected.
- Lodgepole pine mortality was recorded on approximately 540 acres west of Medicine Lake, mostly as moderate intensity.
- Oak mortality is difficult to detected using arial survey and very little was recorded especially since the area was flown late in the season (September-October) when many oaks were in fall color. However, discoloration and early leaf drop was a commonplace drought response throughout the area and significant mortality is possible.

| Tree Species Affected | Acres with Mortality |
|---|---|
| California red, Shasta red, and white fir | 410,000 |
| knobcone, ponderosa and Jeffrey pine | 150,000 |
| Douglas-fir | 110,000 |
| incense-cedar | 5,600 |
| sugar pine | 580 |
| lodgepole pine | 540 |
| juniper | 470 |
| oaks | 230 |
| Total | 677,420 |

Ongoing mixed conifer mortality along the Pit River tributary east of Shasta Lake. Ground observations indicate most of the mortality is Douglas-fir.


Please direct questions pertaining to this report to Jeffrey Moore
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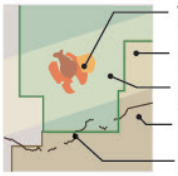
# FOREST HEALTH PROTECTION
## AERIAL DETECTION MONITORING

## 2022 SURVEY
## North Interior



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