

## Aerial Detection Survey, Pacific Southwest Region Southern California, Preliminary Report, June 2019

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

**Surveyors:** J. Moore, L. McAfee

**Methodology:** Recent tree mortality is mapped using Digital Mobile Sketch Mapping systems. Surveyors draw polygons or affix points (points not shown on map) and annotate 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%).

### Survey Highlights:

This report is of preliminary findings in and around the San Bernardino, Angeles, and Cleveland National Forests. Recent tree mortality is mostly comprised of Jeffrey pine, white fir, and mixed oak.

- Jeffrey, ponderosa, and Coulter pine mortality was detected on 8,250 acres and was primarily concentrated in the San Bernardino Mountains and in the foothills surrounding Big Bear Lake on the San Bernardino NF at very light to moderate intensities.
- White fir mortality was detected on 8,350 acres and was scattered throughout its range, at mostly very light to light intensities.
- Other conifer mortality, consisting of lodgepole pine, bigcone Douglas-fir, and pinyon pine, was detected on 750 acres. Mortality ranged from very light to moderate and was observed between Big Bear Lake (San Bernardino NF) and Mt. Williamson (Angeles NF).
- Mixed oak mortality was observed across 10,700 acres. Mixed oak was comprised of Engelmann, white, black, and canyon oaks. The mortality ranged from very light to severe, but 99% of the damage area was categorized as light to moderate. Mortality was mostly concentrated on the mountains around Lake Henshaw, on the Cleveland National Forest.

### Preliminary Summary

(numbers may change)

Area surveyed: 2.9 million acres

Acres with mortality: 28,900 acres

| Host                                 | Acres with Mortality |
|--------------------------------------|----------------------|
| Mixed oaks                           | 10,700               |
| White fir                            | 8,350                |
| Jeffrey, ponderosa, and Coulter pine | 8,250                |
| Other conifer                        | 750                  |
| Live oak                             | 450                  |
| Unknown hardwood                     | 400                  |
| Total                                | 28,900               |



Ongoing oak mortality, likely due to goldspotted oak borer (GSOB), southeast of Palomar Mountain on the Cleveland NF.



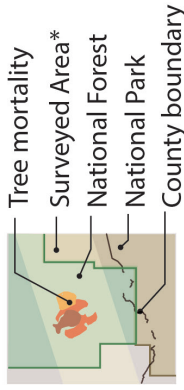
Oak mortality, probably due to GSOB, east of Japatul Valley Road on the Cleveland NF.



UNITED STATES DEPARTMENT OF AGRICULTURE

# FOREST HEALTH PROTECTION AERIAL DETECTION MONITORING

## 2019 SURVEY SOUTHERN CALIFORNIA

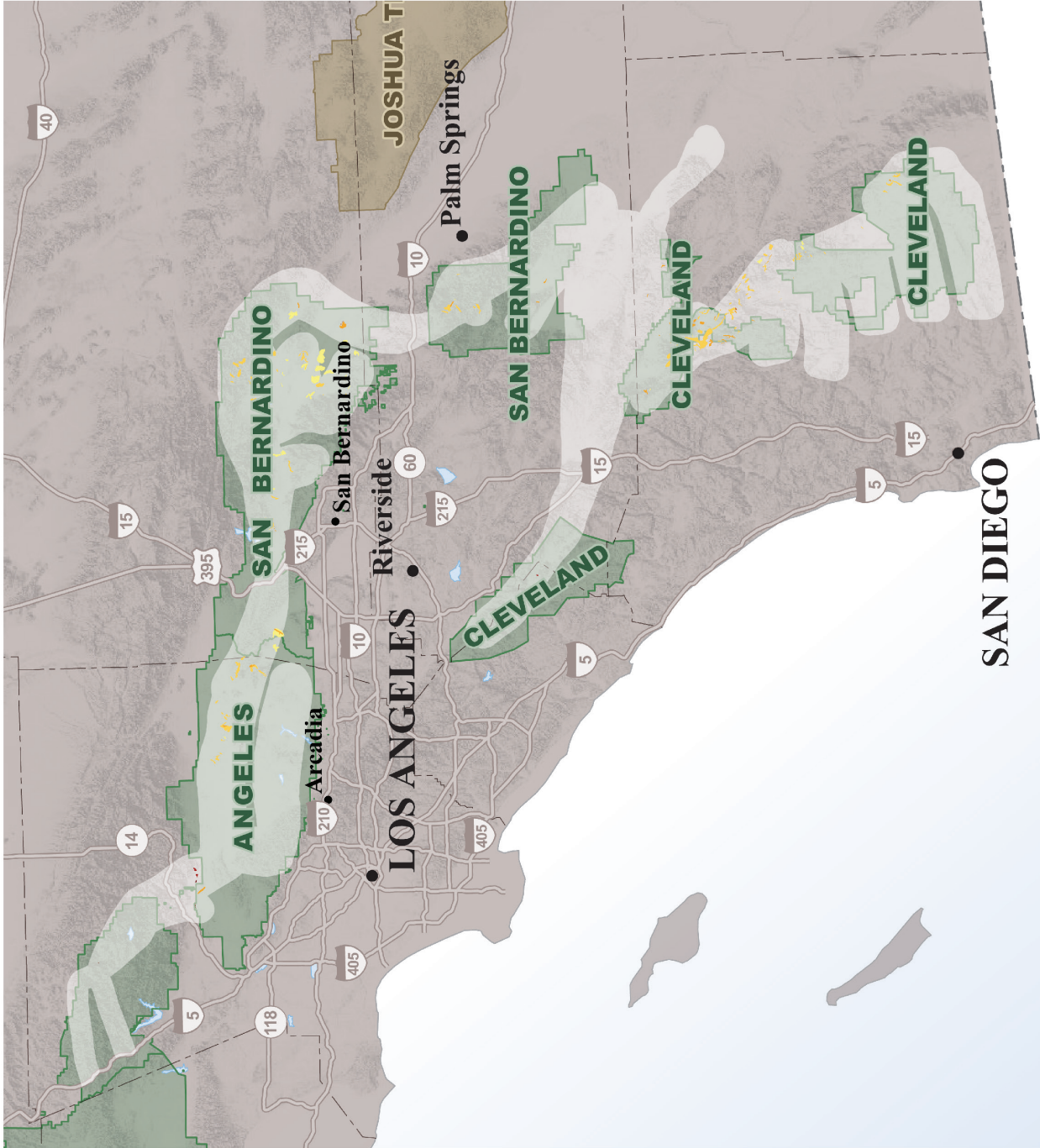


\* This map depicts tree mortality only within the surveyed area.

### Percent Trees Affected

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

Map only depicts dead trees surveyed in 2019.  
Areas of tree mortality are for visualization purposes only.



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