Aerial Detection Survey, Pacific Southwest Region
Northeastern CA Preliminary Report, August 2019

Preliminary Summary
(numbers may change)
Area surveyed: 11.2 million acres
Acres with mortality: 699,500 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.

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Methodology: Recent tree mortality is visually surveyed and documented using Digital Mobile Sketch Mapping systems. Surveyors draw polygons or affix points (not included in this report) 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%). Multiple hosts are sometimes killed in the same area and this preliminary report assigns only the primary host affected.

Survey Highlights:

This report is of preliminary findings in and around the Tahoe, Plumas, Lassen, and Modoc National Forests.

- White and California red fir mortality was detected across approximately 670,000 acres. Approximately 70% of the mortality area had light or very light intensity. Mortality was extensive and more concentrated in the Warner Mountain Range of the Modoc NF, southern Plumas NF, and throughout the Tahoe NF. In addition, topkill was very common but not captured well during the survey.
- Jeffrey, Washoe, and ponderosa pine mortality was detected across 21,000 acres and approximately 74% had light or very light intensity. Most of the more intense mortality was recorded in the Goose lake area near the Oregon border.
- Lodgepole pine mortality was detected across 7,500 acres with approximately 82% being light or very light intensity. Most of the mortality was in and around the Lassen Volcanic National Park.
- Light intensity Douglas-fir mortality was detected southeast of Lake Oroville on approximately 1,500 acres. This is an underrepresentation because some were lumped with multiple-species calls.
- Five-needle pine, which includes whitebark and western white pine, mortality was detected at moderate to severe intensities in several small isolated areas in the southern Warner Mountains and another area south of Loyalton on the Tahoe NF. Topkill and branch flagging also occurred in these areas, as well as south of Lake Almanor, due to white pine blister rust.
- Aspen defoliation was common and severe, especially in the far north and far south areas of the Warner Mountains.
- More than 2,700 acres of severe white fir defoliation caused by white fir sawfly were recorded west of Sierraville on the Tahoe NF.

Tree Species Affected	Acres with Mortality
California red and white fir	669,000
Ponderosa, Jeffrey , and Washoe pine	21,000
Lodgepole pine	7,500
Douglas-fir	1,500
Whitebark pine	400
Other pine	100
Total	699,500

Aspen defoliation in the Northern Warner Mountains, Modoc NF.

Ongoing whitebark pine mortality in the Southern Warner Mountains, Modoc NF.

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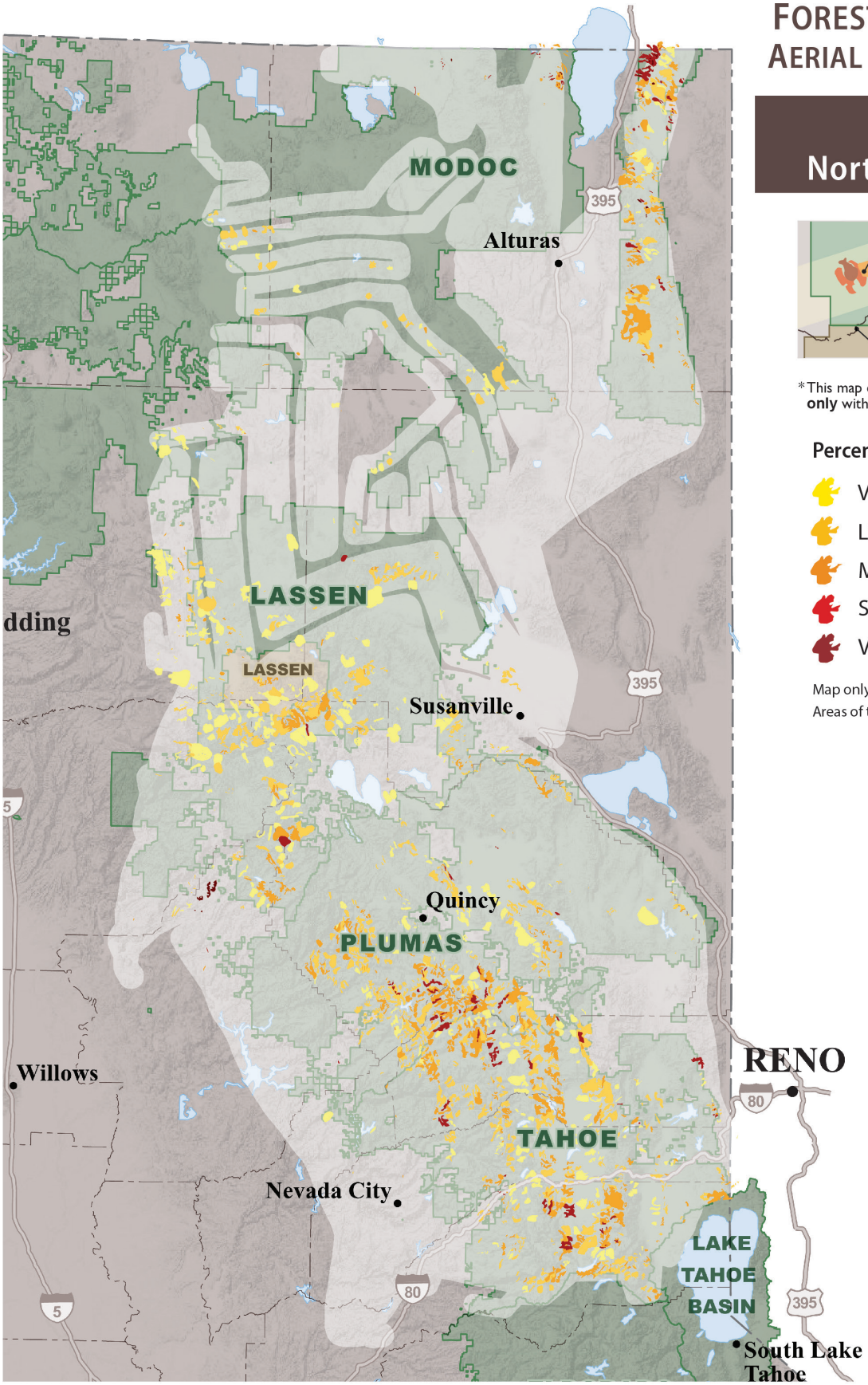
FOREST HEALTH PROTECTION
AERIAL DETECTION MONITORING

2019 SURVEY
Northeastern California



- 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%)

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