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

Preliminary Summary
(numbers may change)
Area surveyed: 6.7 million acres
Acres with mortality: 623,800 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, L. McAfee, D. Depinte

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 Klamath and Shasta-Trinity National Forests.

- White and California red fir mortality was detected across approximately 534,000 acres with approximately 66% of the mortality rated as light or very light intensity. Mortality was extensive and more concentrated in areas around Platina, Weaverville, and Callahan. In addition, topkill was very common but not captured well during the survey.
- Ponderosa and Jeffrey pine mortality was detected across 79,000 acres with approximately 68% categorized as light or very light intensity. Most of the more intense mortality was recorded in areas around Yreka, Chanchelulla Peak, and Weaverville, as well as east of McCloud.
- Douglas-fir mortality was detected on approximately 7,500 acres with 92% mapped as either light or very light intensity.
- Knobcone pine mortality was detected across approximately 1,000 acres with 26% categorized as either light or very light intensity, and most of the remaining was moderate intensity and primarily concentrated in areas around Lake Shasta.
- Five needle pine mortality, including sugar, whitebark, and western white pine, was detected in several small isolated areas on and around Mt. Shasta, often at severe intensity. Topkill and branch flagging also occured in these areas due to white pine blister rust.
- Lodgepole pine mortality was recorded on approximately 900 acres with 33% categorized as light or very light. Most of the remainder was categorized as moderate to severe and was concentrated primarily around Deadman Peak in southeastern Shasta-Trinity NF.

Tree Species Affected	Acres with Mortality
California red and white fir	534,000
Ponderosa and Jeffrey pine	79,000
Douglas-fir	7,500
Knobcone pine	1,000
Five needle pine	900
Lodgepole pine	900
Mixed conifer (bear damage)	450
Tanoak	50
Total	623,800

Moderate red fir mortality south of Mt. Shasta on the Shasta-Trinity National Forest.

Ongoing whitebark and Jeffrey pine mortality on the north side of Mt. Shasta.

Please direct questions pertaining to this report to Jeffrey Moore
jeffrey.moore@usda.gov | 530.759.1753 | Report date: October 10, 2019

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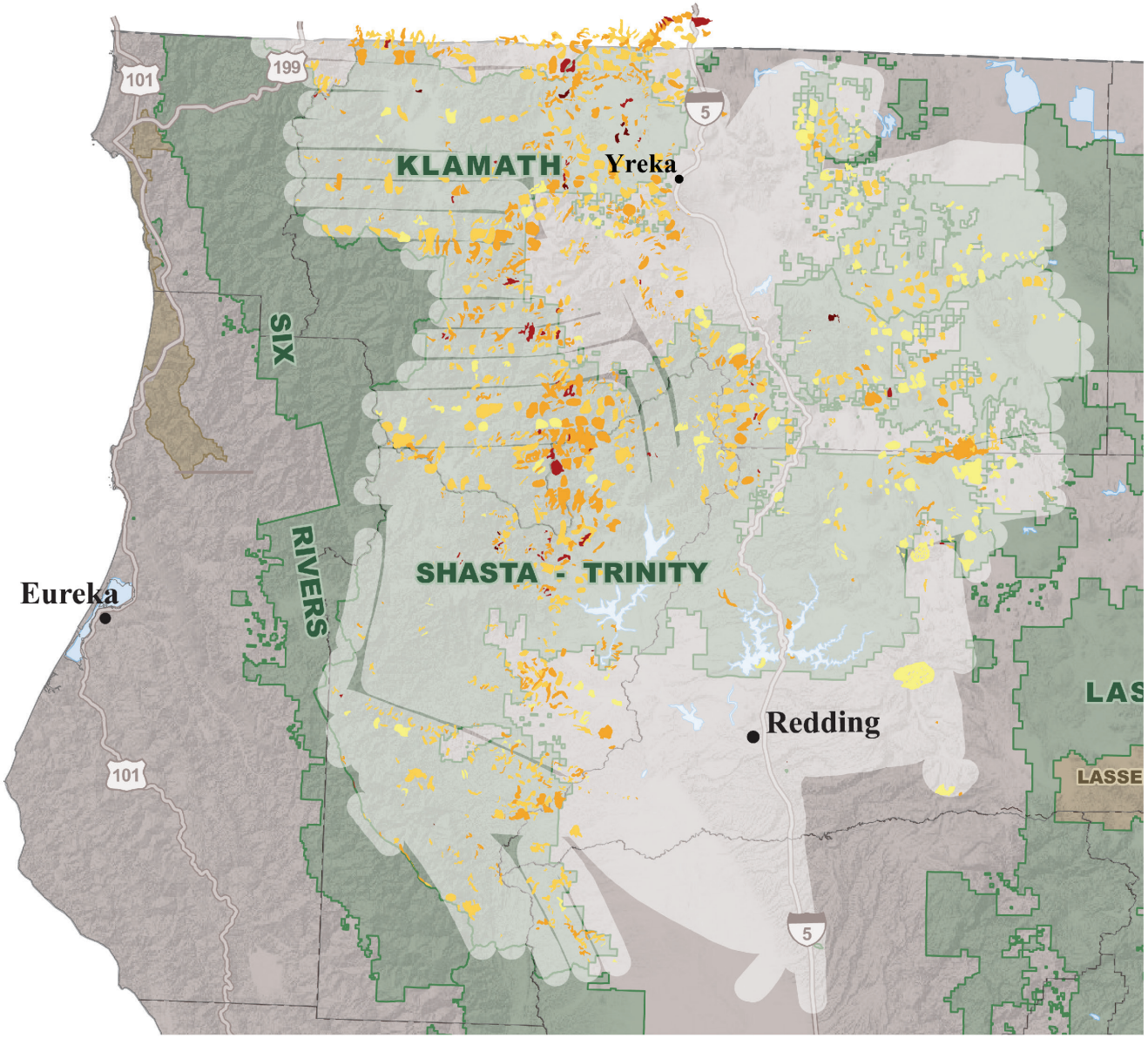
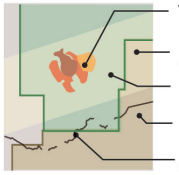


FOREST HEALTH PROTECTION
AERIAL DETECTION MONITORING

2019 SURVEY
Northern 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%)

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