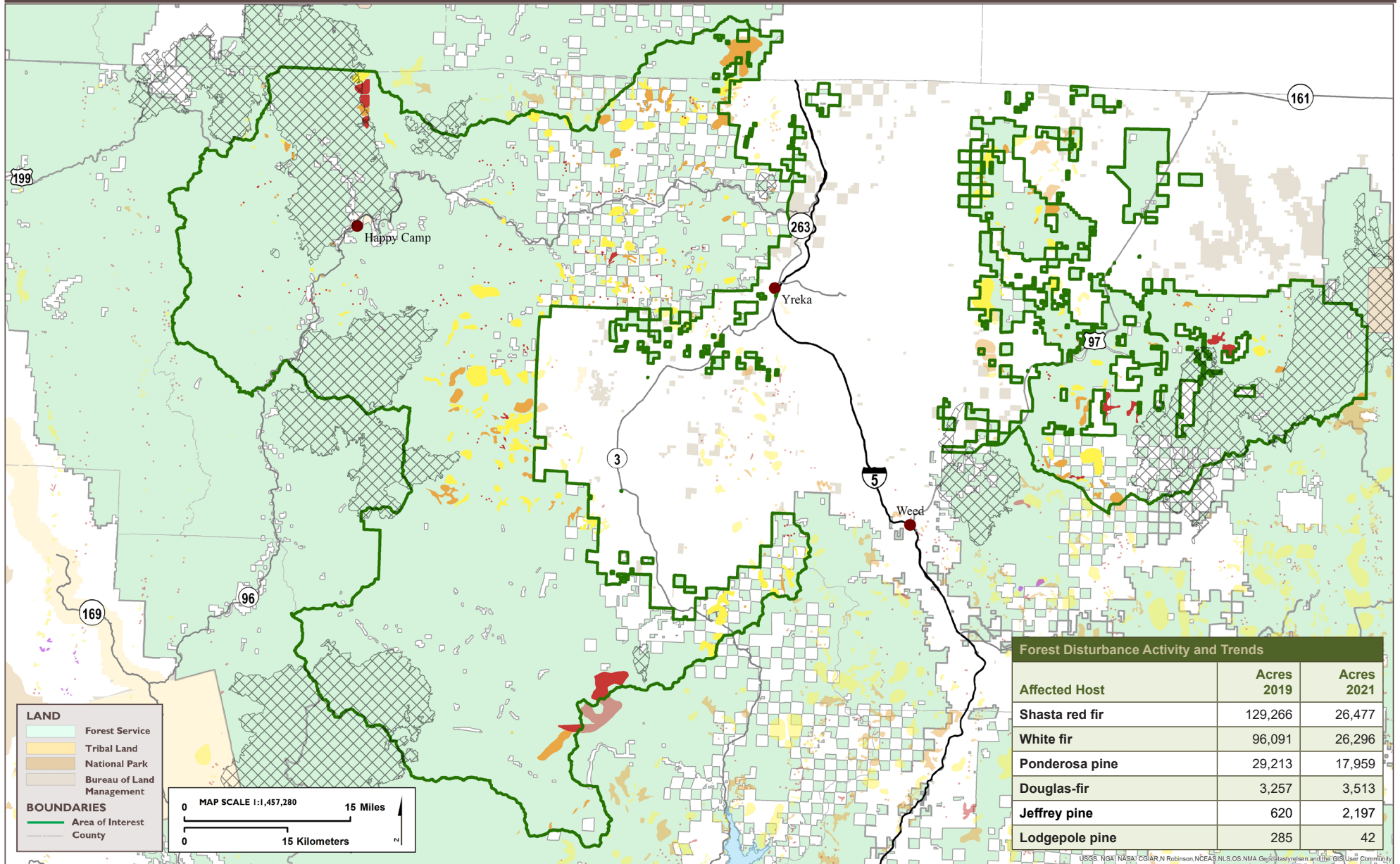


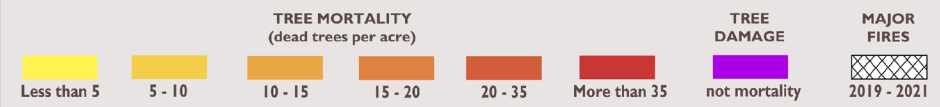


# AERIAL DETECTION SURVEY, 2021 KLAMATH NATIONAL FOREST



Forest Disturbance Activity and Trends		
Affected Host	Acres 2019	Acres 2021
Shasta red fir	129,266	26,477
White fir	96,091	26,296
Ponderosa pine	29,213	17,959
Douglas-fir	3,257	3,513
Jeffrey pine	620	2,197
Lodgepole pine	285	42

USGS, NGA, NASA, CGAR, N. Robinson, NCEAS, NLS, OS, NMA, Geospatial, and the GIS User Community



## Highlights

Overall mortality has decreased in the Klamath National Forest since 2019 from an estimated 1,860,000 dead trees across 253,000 acres in 2019 to ~745,000 dead trees across 76,000 acres in 2021. Several large wildfires and recent burn scars significantly reduced the ADS coverage in 2021. Survey coverage was partially complemented with late- season satellite image scanning, the results of which are included in this report.

- Douglas-fir mortality increased from an estimated 12,000 dead trees across 3,300 acres in 2019 to ~85,000 dead trees across 3,500 acres in 2021, particularly in northwestern areas of the Forest.
- Jeffrey pine mortality increased from an estimated 600 dead trees 600 acres in 2019 to ~5,900 dead trees across 2,200 acres in 2021. The most active area was within the Marble Mountain Wilderness.
- Lodgepole pine mortality decreased from an estimated 6,900 dead trees 300 acres in 2019 to ~480 dead trees across 40 acres in 2021, located in the Hells Canyon area.
- Ponderosa pine mortality decreased from approximately 208,000 dead trees across 29,000 acres in 2019 to ~140,000 dead trees across 18,000 acres in 2021. Mortality was common throughout the Forest, but the more severe areas were mostly in the south.
- Shasta red fir/California red fir mortality decreased from approximately 1,030,000 dead trees 130,000 acres in 2019 to ~297,000 dead trees across 26,000 acres in 2021 and was especially concentrated in southern areas and south of the Marble Mountain Wilderness.
- White fir mortality decreased from an estimated 598,000 dead trees 96,000 acres in 2019 to ~216,000 dead trees across 26,000 acres in 2021. Mortality was common in many areas and often at severe intensity, particularly north of Rainbow Mountain.



Moderate Shasta red fir mortality attributed to fir engraver on Dry Lake Mountain, Klamath National Forest.