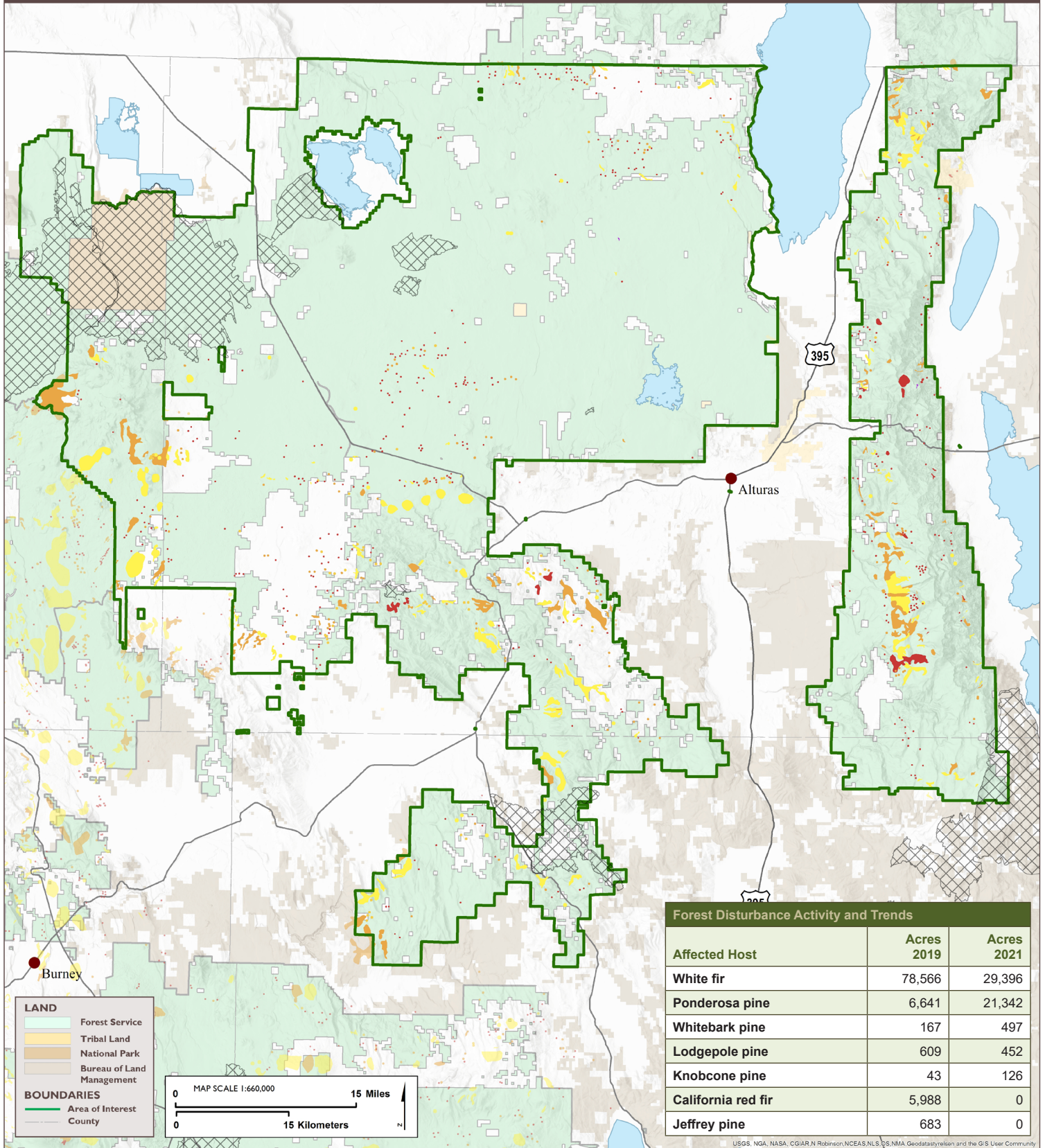




AERIAL DETECTION SURVEY, 2021 MODOC NATIONAL FOREST

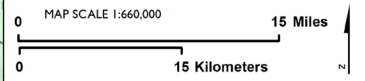


LAND

- Forest Service
- Tribal Land
- National Park
- Bureau of Land Management

BOUNDARIES

- Area of Interest
- County



Forest Disturbance Activity and Trends

Affected Host	Acres 2019	Acres 2021
White fir	78,566	29,396
Ponderosa pine	6,641	21,342
Whitebark pine	167	497
Lodgepole pine	609	452
Knobcone pine	43	126
California red fir	5,988	0
Jeffrey pine	683	0

USGS, NGA, NASA, CGIAR, N. Robinson, NCEAS, NLS, OS, NMA, Geodatasystem and the G.S. User Community

TREE MORTALITY
(dead trees per acre)

Less than 5 5 - 10 10 - 15 15 - 20 20 - 35 More than 35

TREE DAMAGE
not mortality

MAJOR FIRES
2019 - 2021

Highlights

Overall mortality decreased from approximately 865,000 dead trees across 93,000 acres in 2019 to ~435,000 dead trees across 52,000 acres in 2021.

- White fir mortality decreased from an estimated 771,000 dead trees across 79,000 acres in 2019 to ~270,000 dead trees across 29,000 acres in 2021. Mortality was most common in the far southern and far northern Warner Mountains.
- Ponderosa pine mortality increased from an estimated 75,000 dead trees across 6,600 acres in 2019 to ~157,000 dead trees across 21,000 acres in 2021, located primarily in areas around Canby.
- Whitebark pine mortality increased from an estimated 1,900 dead trees across 170 acres in 2019 to ~5,200 dead trees across 500 acres in 2021, located in the Warner Mountains near Clear Lake and Mount Bidwell.
- Lodgepole pine mortality increased from an estimated 530 dead trees across 610 acres in 2019 to ~1,300 dead trees across 450 acres in 2021, located west of Medicine Lake.
- Knobcone pine mortality increased from an estimated 40 dead trees across 40 acres in 2019 to ~1,300 dead trees across 130 acres in 2021, located north of Whitehorse Flat Reservoir.
- No California red fir mortality was recorded in 2021, down from an estimated 16,000 dead trees across 6,000 acres in 2019.
- No Jeffrey pine mortality was recorded in 2021, down from an estimated 730 dead trees across 680 acres in 2019.



Severe ponderosa pine mortality attributed to western pine beetle northwest of Iron Mountain, Modoc National Forest.