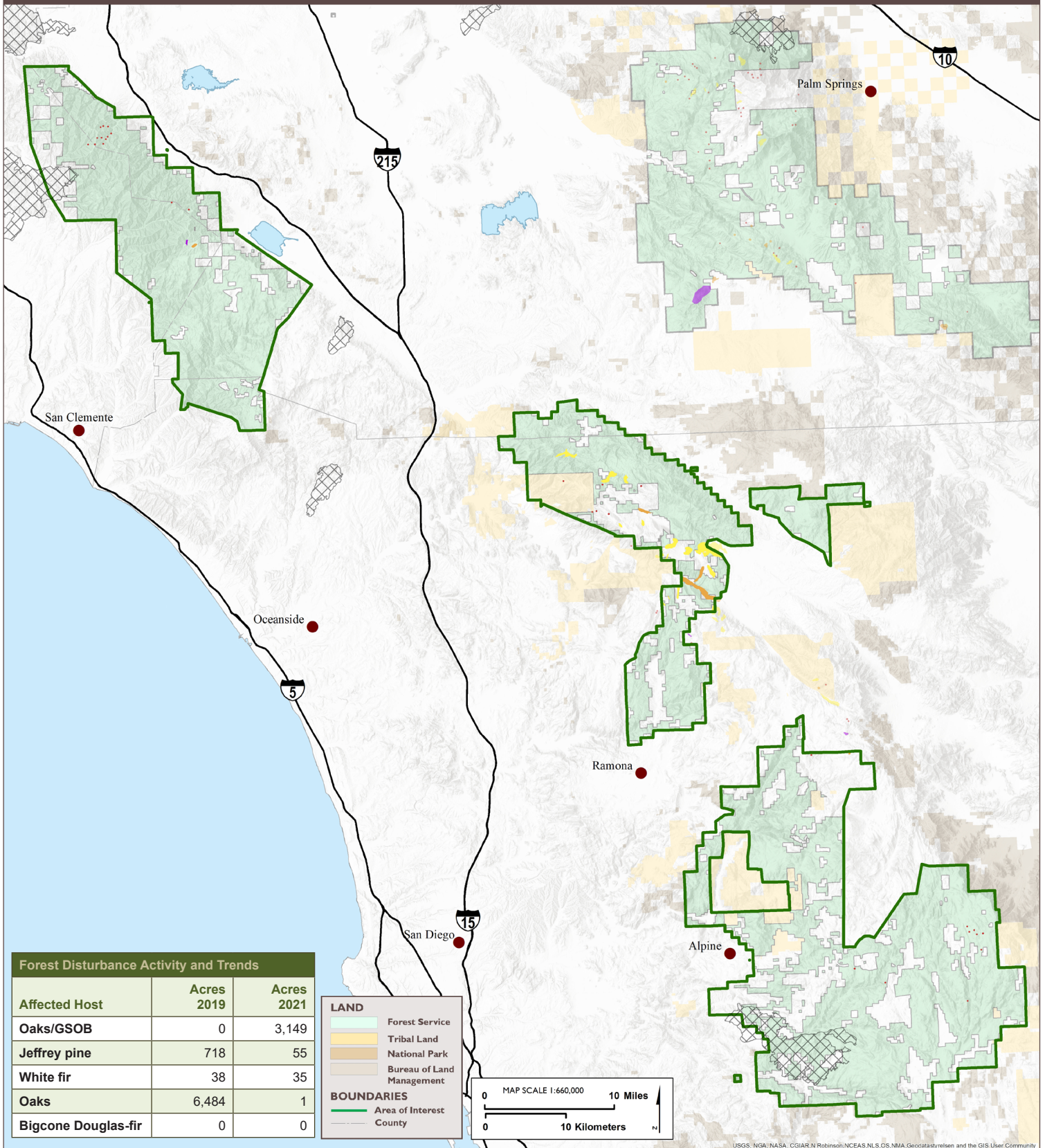




# AERIAL DETECTION SURVEY, 2021 CLEVELAND NATIONAL FOREST



### Forest Disturbance Activity and Trends

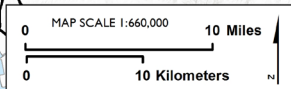
Affected Host	Acres 2019	Acres 2021
Oaks/GSOB	0	3,149
Jeffrey pine	718	55
White fir	38	35
Oaks	6,484	1
Bigcone Douglas-fir	0	0

**LAND**

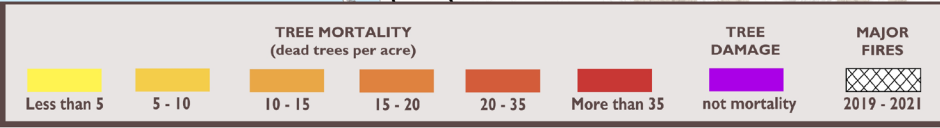
- Forest Service
- Tribal Land
- National Park
- Bureau of Land Management

**BOUNDARIES**

- Area of Interest
- County



USGS, NGA, NASA, CGIAR, Robinson, NCEAS, NLS, OS, MIA, Geocitastreten and the GIS User Community





## Highlights

Tree mortality increased from approximately 14,000 dead trees across 7,000 acres in 2019 to an estimated 16,000 dead trees across 3,000 acres in 2021. Mortality was mostly concentrated around Palomar Mountain.

- Oak mortality attributed to goldspotted oak borer (GSOB) increased from ~11,000 dead trees across 6,500 acres in 2019 to ~15,600 dead trees across 3,100 acres 2021. Damage was most widespread east of the La Jolla Band of Luiseño Indians Reservation near Palomar Mountain.
- Jeffrey pine mortality decreased from ~2,400 dead trees across 700 acres in 2019 to ~670 dead trees across 55 acres in 2021.
- White fir mortality decreased from approximately 250 dead trees across 40 acres in 2019 to ~100 dead trees across 35 acres in 2021.
- Bigcone Douglas-fir mortality remained low, with 5 trees recorded in 2021 compared to 3 trees recorded in 2019.



Oak mortality likely due to goldspotted oak borer (*Agrilus auroguttatus*) on Palomar Mountain, Cleveland National Forest.