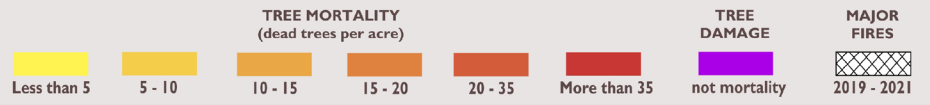
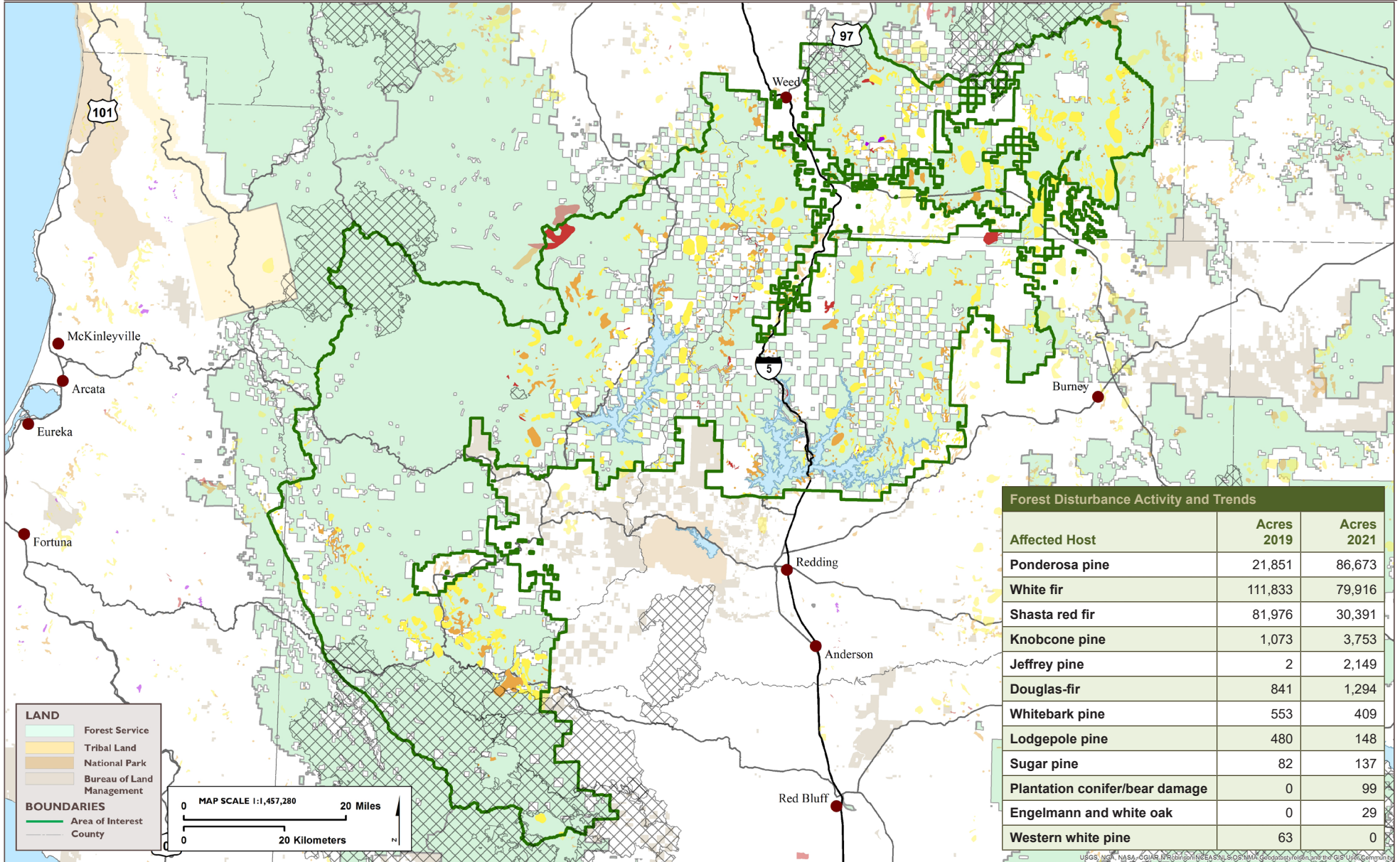




AERIAL DETECTION SURVEY, 2021 SHASTA-TRINITY NATIONAL FOREST



Highlights

Overall mortality decreased from an estimated 1,348,000 trees across 214,000 acres in 2019 to ~1,209,000 dead trees across 205,000 acres in 2021. However, some of this reduction is due to large portions of the Forest not being surveyed in 2021 because of recent multiple large fires.

- Ponderosa pine mortality increased from an estimated 114,000 trees across 22,000 acres in 2019 to ~373,000 dead trees across 87,000 acres in 2021. Mortality was common throughout much of the Forest but was particularly concentrated south and east of Mount Shasta.
- White fir mortality decreased from an estimated 495,000 trees across 112,000 acres in 2019 to ~396,000 dead trees across 80,000 acres in 2021, typically occurring at light intensities throughout much of the Forest but with intense in areas south and east of Mount Shasta.
- Shasta red fir mortality decreased from an estimated 675,000 trees across 82,000 acres in 2019 to ~371,000 dead trees across 30,000 acres in 2021. Mortality was common throughout much of the Forest at light to moderate intensities but was particularly concentrated south of Russian Peak.
- Knobcone pine mortality increased from an estimated 9,100 trees across 1,100 acres in 2019 to ~29,000 dead trees across 3,800 acres in 2021. Areas east of the Trinity Mountains were particularly active.
- Jeffrey pine mortality increased from approximately 60 trees in 2019 to ~18,000 dead trees across 2,100 acres in 2021, mostly located south and west of the Trinity Mountains.
- Douglas-fir mortality remained fairly consistent with 2019 numbers, with an estimated 4,200 trees across 840 acres in 2019 compared to ~4,000 dead trees across 1,300 acres in 2021, located primarily east and north of Shasta Lake.
- Whitebark pine mortality decreased from an estimated 48,000 trees across 550 acres in 2019 to ~15,000 dead trees across 410 acres in 2021 and was particularly concentrated on the north slope of Mount Shasta.
- Lodgepole pine mortality decreased from an estimated 3,100 trees across 480 acres in 2019 to ~430 dead trees across 150 acres in 2021, located in the Mumbo Lakes area.
- Sugar pine mortality increased from approximately 310 trees across 80 acres in 2019 to ~1,600 dead trees across 140 acres in 2021, primarily located south of Tamarack Lake.
- Engelmann and white oak mortality increased from zero records in 2019 to approximately 330 trees across 30 acres in 2021 located east of Shasta Lake.
- No western white pine mortality was recorded in 2021, down from approximately 60 trees across 60 acres in 2019.



Severe Shasta red fir mortality attributed to fir engraver, west of Mushroom Rock, Shasta-Trinity National Forest.