

2024 HIGHLIGHTS OF TREE MORTALITY

FROM INSECTS AND DISEASES AS SEEN BY AERIAL SURVEY

Approximately 40.1 million acres surveyed in California

PACIFIC SOUTHWEST REGION



CALIFORNIA PINES

WESTERN, MOUNTAIN, and JEFFREY PINE BEETLES

- Native insects which attack several pine species
- Pine mortality remains elevated (~2x background levels)
- Pine beetle accounted for **18% of detected mortality** in California in 2024
- ★ Working across ownerships and landscapes to improve resilience to insects, diseases and wildfire

CALIFORNIA OAKS

GOLDSPOTTED OAK BORER

- Invasive insect which attacks several western oak species
- First identified in San Diego County in 2008, now present in four additional counties (Riverside, Orange, Los Angeles, and San Bernardino Counties)
- GSOB-caused mortality detected from aerial survey has **remained low** in recent years
- ★ Monitoring and treating high-value individual trees

HAWAI'I 'ŌHI'A

RAPID 'ŌHI'A DEATH (ROD)

- Invasive fungal pathogen that kills hundreds of thousands of 'ōhi'a trees annually
- Researching disease spread primarily through ambrosia beetles, invasive feral hoofed animals, and wind
- Implementing management techniques to monitor and suppress ROD
- ★ Developing a disease resistance program for ROD
- ★ Developed an updated 2025-2029 ROD Strategic Plan

CALIFORNIA FIRS & DOUGLAS-FIR

FIR ENGRAVER (FEB)

- FEB is a native insect significantly impacting California red fir and white fir
- FEB-caused mortality made up **78% of detected mortality** in California in 2024
- Flatheaded fir borer is a native insect attacking Douglas-fir, and accounts for less than 1% of detected mortality in California in 2024.
- ★ Working across ownerships and landscapes to improve resilience to insects, diseases and wildfire

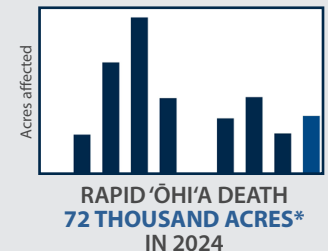
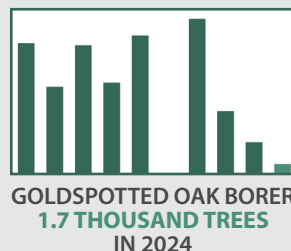
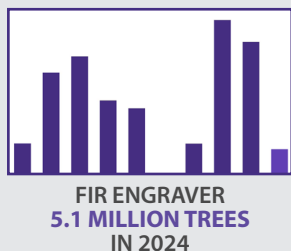
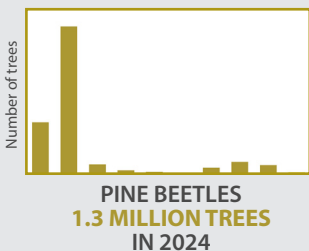
CALIFORNIA OAKS

SUDDEN OAK DEATH (SOD)

- Exotic tree disease which kills several oak species and tanoak in coastal forests
- SOD spreads primarily during wet spring events
- Although SOD mortality did increase, it continues to be **historically low** since drought suppresses disease spread.
- ★ Cooperating with Tribes and other partners to evaluate tanoak for resistance against SOD

☆ An action the Forest Service is taking.

TREE MORTALITY SURVEY TRENDS 2015 - 2024



Note: The units of measurement of mortality for above charts vary by pest. No statewide data for California available for 2020 due to COVID-19 precautions.



2024 INSECT AND DISEASE SURVEY

