

2017 HIGHLIGHTS OF **TREE MORTALITY** FROM INSECTS AND DISEASES

Approximately 500 million acres surveyed annually

EASTERN OAK

LYMANTRIA DISPAR DISPAR

- Lymantria dispar dispar defoliation can result in reduced annual growth, canopy dieback, and death
- Large defoliation events continue to occur in the Northeast
- ★ Successfully slowing the spread of this exotic insect by providing support for suppression and monitoring activities

PINE

SOUTHERN PINE BEETLE

- A major pest of southern yellow pine forests that greatly influences pine ecology and timber production
- In 2017, southern pine beetle (SPB) reached outbreak levels
- ★ The Southern Pine Beetle Prevention Program was formed to prevent SPB outbreaks using stand thinning and prescribed burning treatments

ASH EMERALD ASH BORER

- Ash trees in urban areas and rural settings are being devastated
- EAB continues to spread and was recently detected in South Carolina (2017), South Dakota, Vermont, and Maine (2018)
- ★ Supporting targeted surveying, hazard tree removal, and suppression activities including biological control

8.6
MILLION ACRES
WITH DEAD TREES
8.1
MILLION ACRES
WITH OTHER TREE

DAMAGE

'ŌHI'A

RAPID 'ŌHI'A DEATH

- A devastating tree killer caused by a vascular wilt fungus
- Spread throughout the Big Island of Hawaii and activity is increasing
- ★ Developed a new survey technology to map the extent of rapid 'ohi'a death

SPRUCE SPRUCE BEETLE

- Attacks spruce trees and occasionally other non-spruce conifers
- Activity has more than doubled in Alaska in 2017
- ★ Providing support for surveying and pest suppression activities that include hazard tree removals and eco-friendly treatments to protect trees

WESTERN FIRS

FIR ENGRAVER

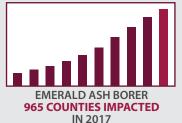
- Significantly impacting fir species on the west coast attacking white, red, and grand fir
- Activity has nearly doubled since 2015
- ★ Providing support for pest suppression, hazard tree removal, and surveying

WESTERN OAK SUDDEN OAK DEATH

- Tree disease which kills several oak species and tanoak
- Significant effects on forests in California and Oregon
- ★ Supporting treatments in targeted areas that help slow the spread

TREE MORTALITY SURVEY TRENDS 2008-2017











2017 INSECT AND **DISEASE SURVEY**SUBWATERSHEDS WITH TREE DAMAGE

