

Region 5 Forest Health Protection Survey

Aerial Detection Survey – Update, July 26, 2013

Background: Annual aerial detection surveys for tree injury and mortality have been conducted in California since 1994. This is an update of survey status for the 2013 season.

Objective: Detect and map tree mortality and damage in California / USFS Region 5.

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Dates: July 23 to 24, 2013

Methodology: Recently dead or injured trees (trees still retaining dead foliage) were mapped visually by surveyors using digital aerial sketch-mapping systems flying in a light fixed-wing aircraft approximately 1,000 feet above ground level. Surveyors record the number and species of affected trees and type of damage (mortality, defoliation, branch flagging) at each mapped location.

Details:

- Yosemite National Park was flown, along with portions of the Stanislaus and Sierra National Forests. Figure 1.
- Large areas at the lower elevations of the Forests and Park were mapped with ponderosa mortality and topkill from western pine beetle and pine engraver, and typically contained scattered sugar pine mortality as well. See Figures 2 and 3.
- Lodgepole mortality from mountain pine beetle and defoliation from lodgepole needle-miner was mapped at the higher elevations, along with red fir mortality and damage from fir engraver and Cytospora, and to a lesser extent Jeffrey pine mortality.
- Mortality in knobcone pine and Douglas-fir was mapped in localized areas. See Figure 4.
- Gray pine mortality was seen throughout the foothills. Blue oak defoliation evident in prior flights to the south was not observed during these flights.

Figure 1. Flown area and mapped tree mortality



Figure 2. Sugar pine mortality in Yosemite National Park.



Figure 3. Large pocket of western pine beetle-caused mortality near Jawbone Stanislaus N.F.

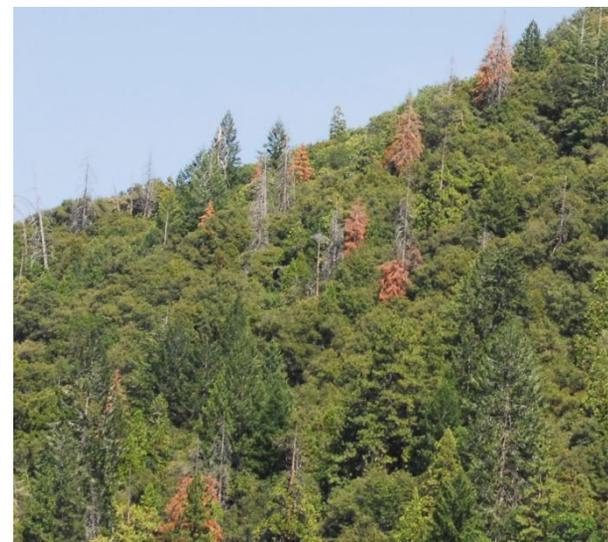
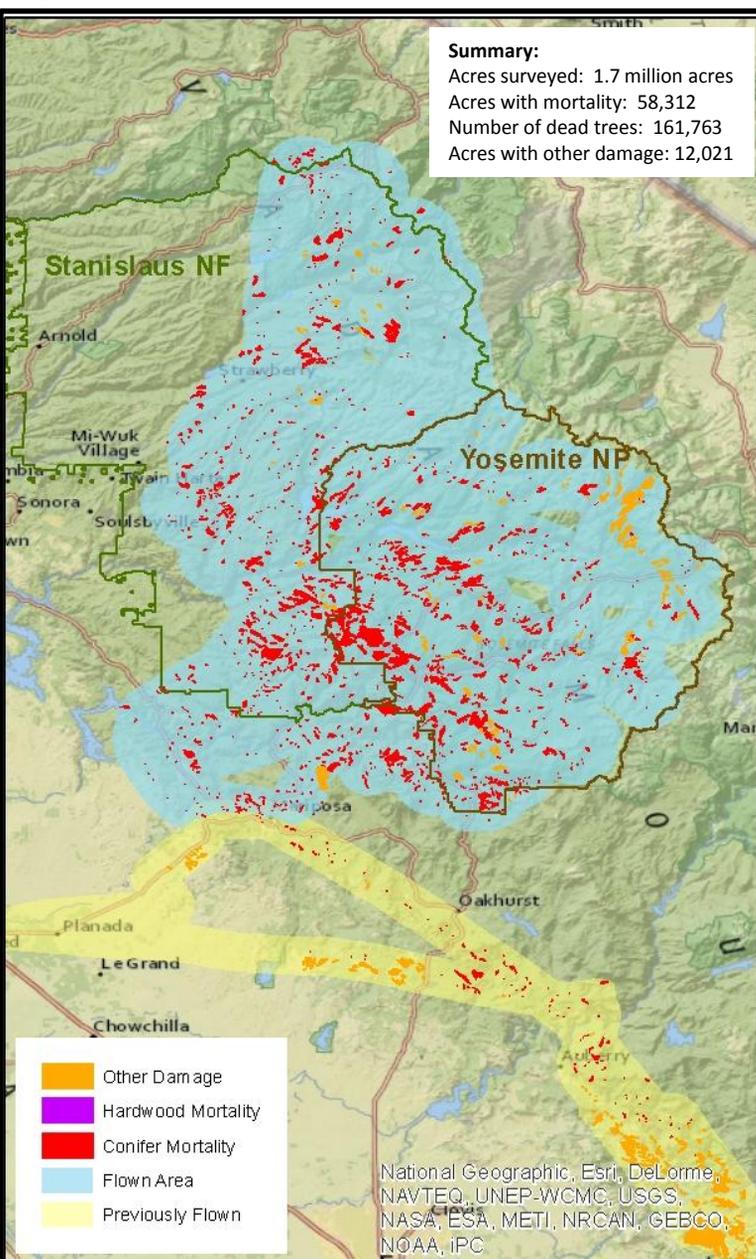


Figure 4. Douglas-fir mortality near the Tuolumne River on the Stanislaus.



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