

Region 5 Forest Health Protection Survey

Aerial Detection Survey – Update, September 13th, 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: Sept 4th and 5th, 10th and 11th, 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:

- The Tahoe National Forest was flown, along with most of the Eldorado, eastern Plumas, and parts of the Tahoe Basin and Toiyabe National Forests were flown. See Figure 1. Conditions were smoky on the southern extent of the survey area with smoke from the Rim fire. The American fire was also still smoldering. See Figure 2.
- Mortality in this area was generally lighter compared to other parts of the State. Mortality of ponderosa pine was the most common type of damage, and was mapped throughout the lower elevations, typically as individual or small clusters of trees. See Figure 3.
- Douglas-fir mortality was mapped in higher numbers than in previous years. The majority of mortality appeared to be due to flat-headed fir borer activity, although areas with Douglas-fir beetle activity were observed on the east side of the Plumas National Forest.
- Areas with Jeffrey pine, lodgepole pine and white fir mortality were observed at the higher elevations, but no large outbreaks were detected.
- Areas of heavy flagging on ponderosa were observed in the lower elevations, especially in the Nevada City area. A ground check by CalFire found western gall rust causing branch dieback. See Figure 4.
- Large areas of blue oak defoliation due to drought conditions were observed in the foothills.
- Many defoliated stands of aspen were mapped throughout the east side of the survey area. Satin moth was reported earlier in the year in the general area.

Figure 1. Flown area and mapped tree mortality and damage.



Figure 2. Actively burning area within the American fire.



Figure 3. Ponderosa mortality on the Tahoe National Forest.

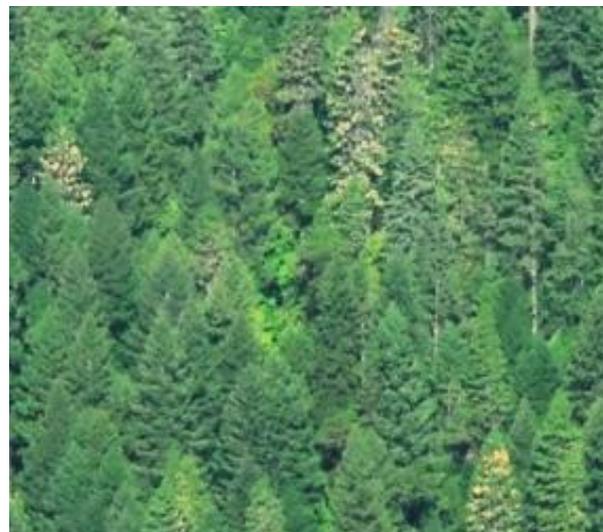
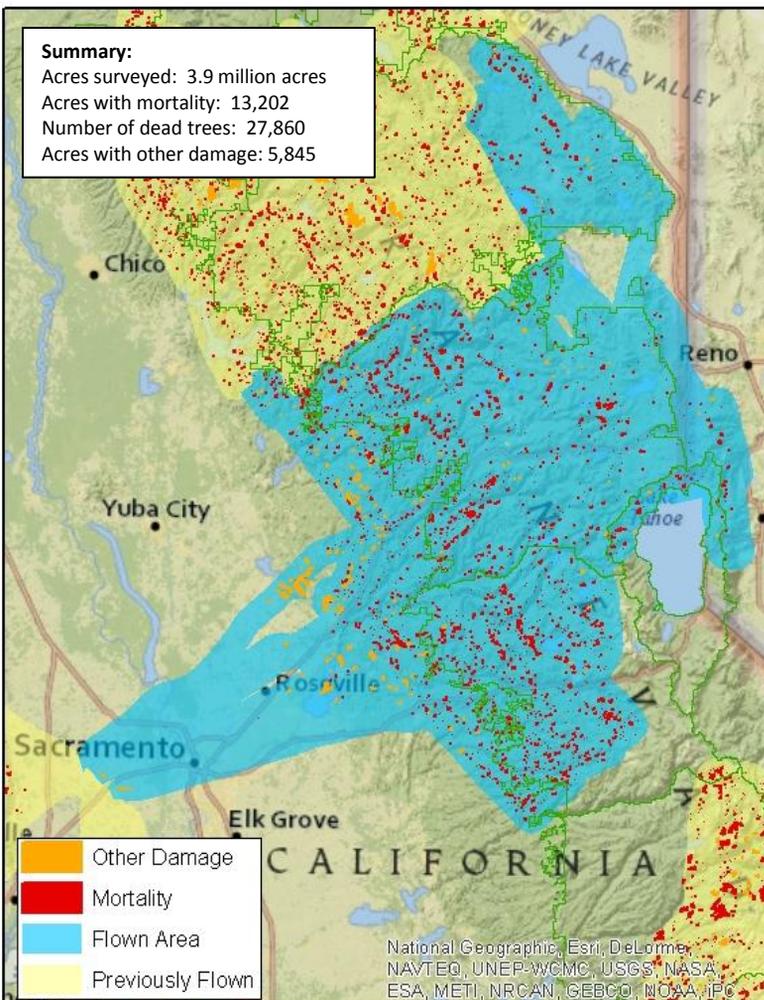


Figure 4. Ponderosa pine dieback from western gall rust.



Direct questions pertaining to this report to Zachary Heath (email: zheath@fs.fed.us phone: 530-759-1751). Report Date Sept 13, 2013.

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