

# Region 5 Forest Health Protection

## Aerial Detection Survey

**Background:** Annual aerial detection surveys for tree injury and mortality have been conducted in California since 1994. This survey was part of the Swiss needle cast survey and was conducted much earlier than normal.

**Objective:** Conduct a pre-season flight in preparation for the 2013 flights and detect tanoak mortality in northern Humboldt County.

**Surveyors:** Z. Heath, J. Moore, B. Noyes.

**Dates:** May 14<sup>th</sup>, 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:

- 539 miles were flown, covering about 1.2 million acres in Humboldt, Del Norte, Trinity, Mendocino and Glenn Counties. Small areas of the Six Rivers and Mendocino National Forests were flown, as was much of Redwood National and State Parks. See Figure 1.
- Several areas with tanoak mortality were visible in the Dobbyns Creek watershed near Alderpoint in Humboldt County. Areas with tanoak mortality were observed reaching into Trinity County, and within 1/3 mile of the Six Rivers National Forest. About 44 acres containing 140 dead tanoak were mapped in the watershed. See Figure 1 inset and Figure 2.
- Signs of sudden oak death were not as visible near the SOD treatment area in the Redwood Creek Valley. Herbicide treatment, bear damage to conifers and off-color of hardwoods (due to recent budbreak) obscured the signature of recently dead tanoak in this area.
- Bear damage was prevalent through much of the survey area, totaling over 6,000 acres with mortality.
- Large areas of gray, ponderosa and knobcone pine mortality were observed on the east side of the Mendocino National Forest.

Figure 1. Flown area and tree damage

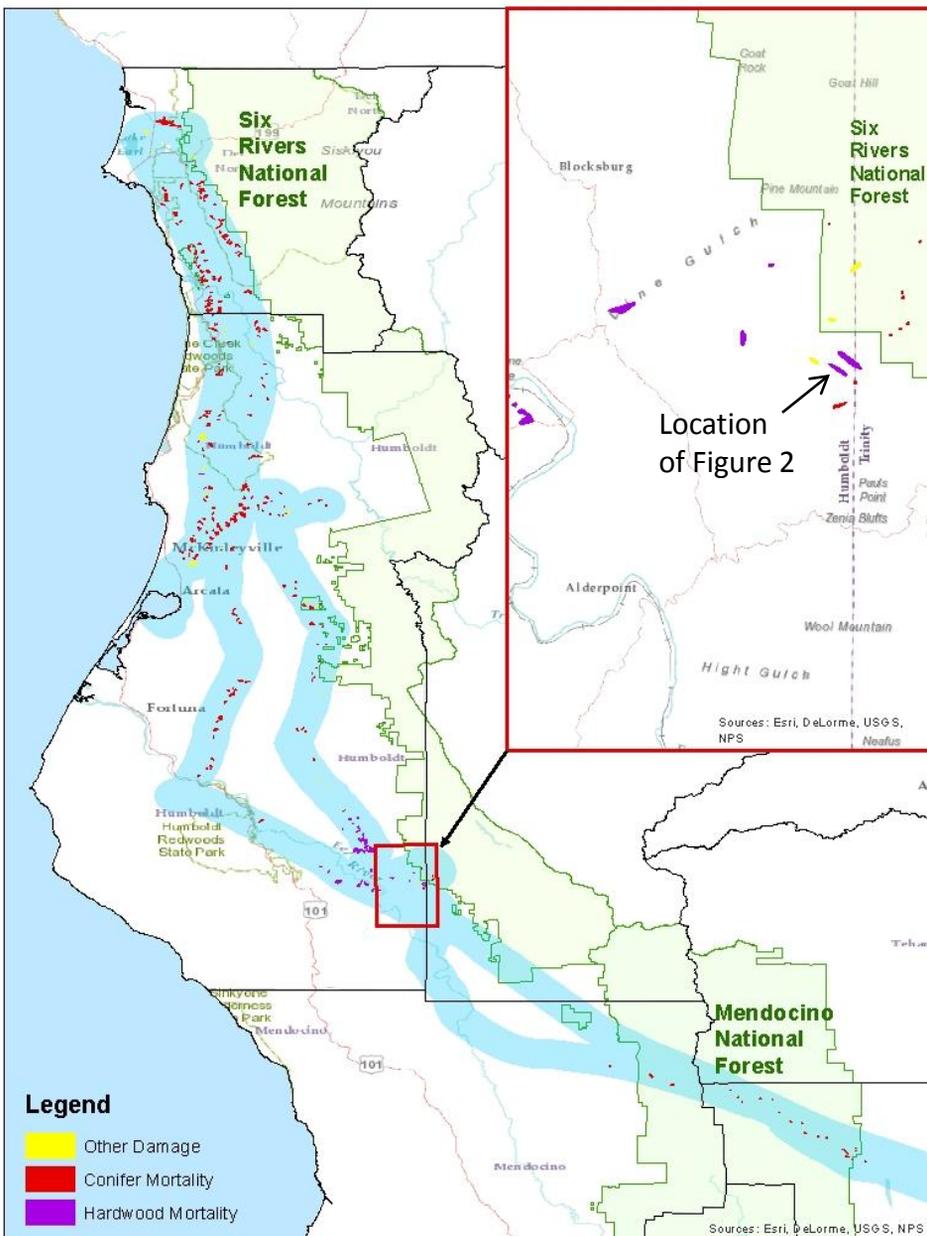


Figure 2. Drainage with multiple dead tanoak off Dobbyns Creek.

Direct questions pertaining to this report to Zachary Heath (email: [zheath@fs.fed.us](mailto:zheath@fs.fed.us) phone: 530-759-1751). Report Date May 16<sup>th</sup>, 2013.

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