

## Aerial Detection Survey – Update, July 3<sup>rd</sup>, 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.

**Surveyors:** J. Moore, R. Noyes

**Dates:** July 2 and 3<sup>rd</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:**

- The flown area covered the Six Rivers National Forest and vicinity, including the Hoopa Indian Reservation and parts of Mendocino and Shasta-Trinity National Forests. See Figure 1.
- Bear damage to Douglas-fir comprised much of the damage in the northern and western portions of the survey area, as well as the majority of the damage observed on the Hoopa Indian Reservation.
- Ponderosa and knobcone pine mortality was common in the southern extent of the survey area, while fir mortality was observed mostly in the higher elevations. Western pine beetle activity comprised the majority of damage observed in the northern Mendocino National Forest.

Figure 1. Flown area and mapped tree mortality



**Aerial Survey progress update:**

As of July 3<sup>rd</sup>, the Region 5 aerial survey program has flown 7,155 miles, covering 13.97 million acres of Federal, State and private lands on California's northern and central coastal ranges, including the Los Padres and Six Rivers National Forests, Redwood State and National Parks, Golden Gate National Recreation Area, Point Reyes National Seashore, Pinnacles National Monument and Jackson Demonstration State Forest. A total of 101,095 acres with tree mortality or damage have been mapped in this area so far. Figure 2 lists the mortality in terms of number of trees killed and acres affected, by species, mapped so far in 2013.

**Figure 2. Mortality by Host, 2013**

Regionwide, as of July 3<sup>rd</sup>, 2013

	Acres	Trees
Tanoak	37,376	252,657
Douglas-fir	23,533	70,734
Gray pine	14,918	19,099
Ponderosa pine	4,644	10,988
Jeffrey pine	3,698	11,236
Coast live oak	2,499	4,837
Bishop pine	2,241	9,753
Redwood	2,096	6,428
White fir	2,011	4,120
Knobcone pine	896	4,882

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 July 5<sup>th</sup>, 2013.

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