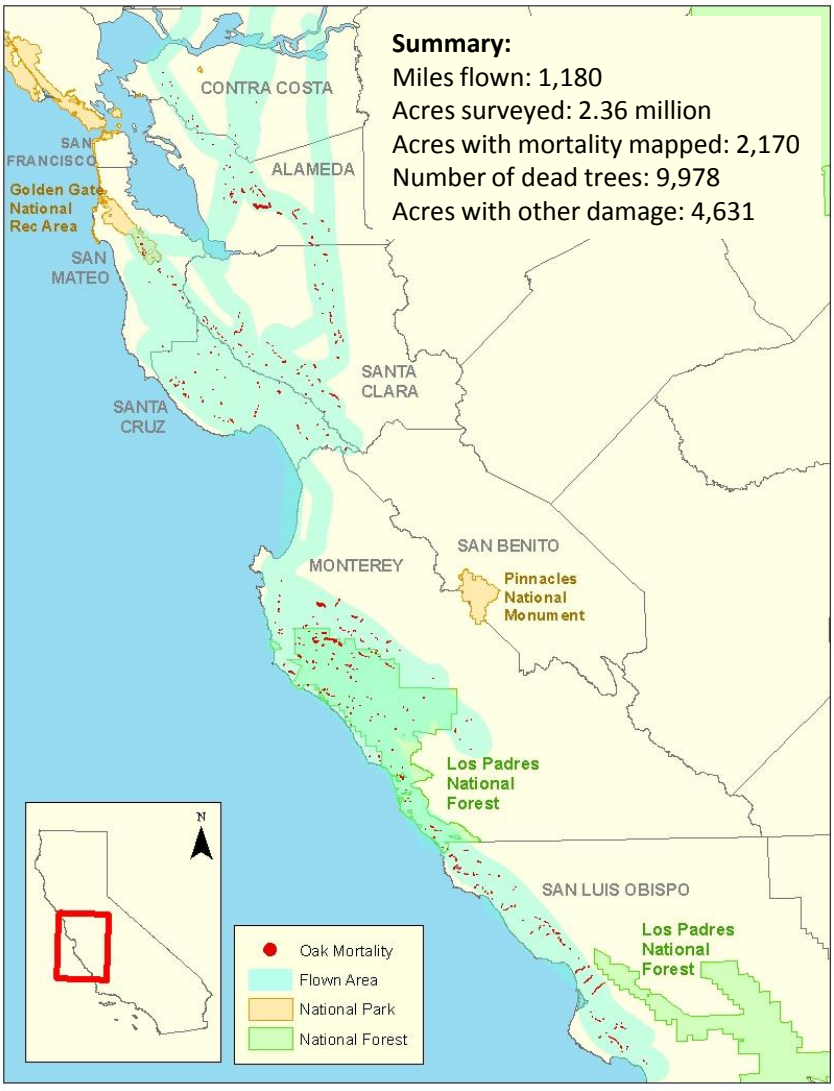
Aerial Detection Survey – Update, June 7th to 9th, 2011

Background: Annual aerial detection surveys for tree injury and mortality have been conducted in California since 1993. This is an update of survey status for the 2011 survey season from June 7th to June 9th, 2011.
Objective: Detect and map tree injury and mortality in California / USFS Region 5.
Surveyors: Z. Heath, B. Oblinger and R. Noyes
Date: June 7th and 9th, 2011. The early timing was selected to avoid seasonal color change of California buckeye.
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. Photographs were also taken of the mapped trees to aid in ground visits. Surveyors recorded number and species of dead trees and type of damage (mortality, defoliation, branch flagging) at each mapped location.
Details:

- Over two million acres over portions of 7 counties – Alameda, Contra Costa, Santa Clara, Santa Cruz, San Mateo, Monterey and San Luis Obispo Counties. The Monterey District of the Los Padres National Forest was surveyed, as well as a portion of the Golden Gate National Recreation Area. See Figure 1.
- The primary damage agent mapped was sycamore anthracnose, which had completely defoliated sycamores throughout most riparian areas in the survey area. See Figure 2. Also mapped was continued mortality within perimeters of the Basin fire of 2008, and about 400 acres with sudden oak death. Oak mortality from SOD was relatively rare, even in areas highly impacted in previous years. Also, 400 acres of defoliation from California oak worm was mapped near Carmel Valley. See Figure 3.
- Survey data, including locations of mortality, flight-lines, and photographs are available for viewing in Google Earth and Google Maps at: http://www.fs.fed.us/r5/spf/fhp/fhm/aerial/2011/kmz/index.shtml

Figure 1. Flown area and mapped tree damage



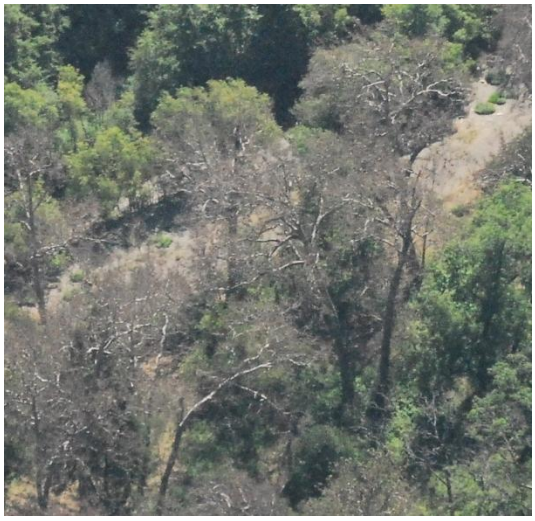


Figure 2. Sycamore defoliation near Livermore

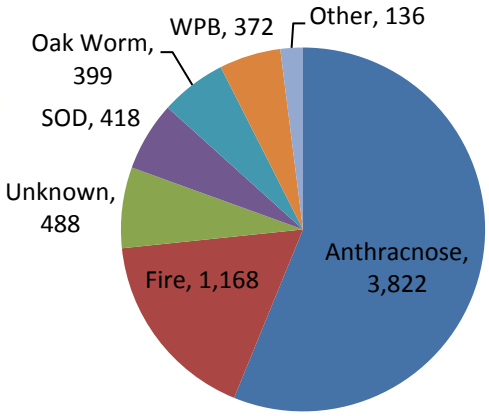


Figure 3. Agents mapped (in acres)

Direct questions pertaining to this report to Zachary Heath (email: zheath@fs.fed.us phone: 530-759-1751). Report Date June 10, 2011.

Central Coast Oak Mortality Survey – June, 2011

Background: Sudden oak death (SOD) was first detected in California in 1995. This disease, caused by *Phytophthora ramorum*, has since killed hundreds of thousands of oak and spread to 14 counties in California. Forest Health Protection (FHP) has conducted special flights to detect SOD via aerial surveys since 2001. San Luis Obispo and San Benito Counties on California's central coast remain uninfested despite having suitable habitat for SOD and proximity to infested counties.

Objective: Detect and map oak mortality in San Luis Obispo and San Benito Counties. Mapped mortality will be ground-checked for the presence of SOD.

Surveyors: Z. Heath, B. Oblinger and R. Noyes

Date: June 7th and 28th, 2011.

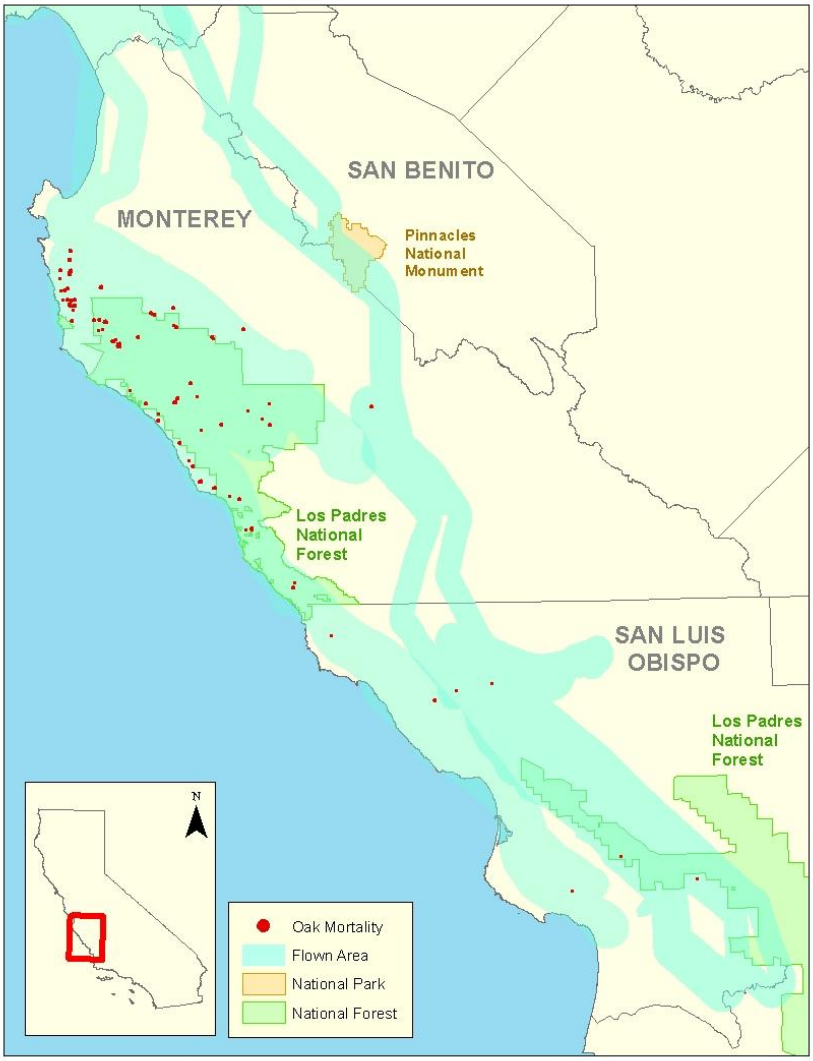
Methodology: Recently dead or injured trees (trees still retaining dead foliage) were mapped visually by surveyors using digital aerial sketch-mapping systems flying in a light fixed-wing aircraft approximately 1,000 feet above ground level. Photographs were also taken of the mapped trees to aid in ground visits. Mapped oak mortality will be ground checked by CalFire cooperators to determine the presence/absence of *P.ramorum*.

Details:

•About one million acres over San Benito and San Luis Obispo Counties were flown. Portions of the Los Padres National Forest was surveyed, as well as oak habitat on the Pinnacles National Monument. See Figure 1. The majority of area surveyed is under private ownership. See Figure 2.

•Six trees on six separate sites were mapped in San Luis Obispo County. None were mapped in San Benito County. Only one site was tanoak, the remainder were live oak. See Figure 3. In comparison, over 300 trees on almost 200 acres were mapped in Monterey County this year, a county known to have *P.ramorum*.

Figure 1. Flown area and mapped oak mortality



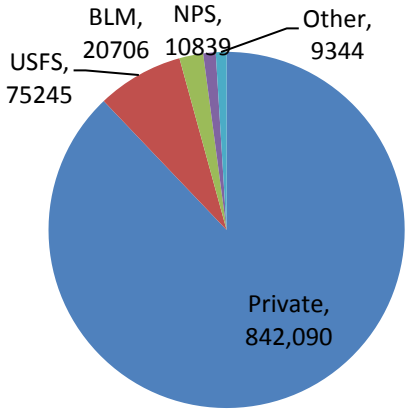


Figure 2. Surveyed ownership (acres)

Figure 3. Recently dead tanoak near San Luis Obispo.

Direct questions pertaining to this report to Zachary Heath (email: zheath@fs.fed.us phone: 530-759-1751). Report Date June 29th, 2011.