

Southern California Oak Mortality Aerial Survey - Spring 2010

Background: Goldspotted oak borer (GSOB) was first detected in California (San Diego County) in 2004. This borer has since been linked to elevated levels of oak mortality in San Diego County detected via aerial surveys since 2002. To date, over 20,000 dead oaks across 620,000 acres have been mapped.

Objective: Detect and map oak injury and mortality on the periphery of the known gold-spotted oak borer (GSOB) infestation zone. Mapped mortality will be ground-checked for the presence of GSOB.

Surveyors: T. Coleman, Z. Heath, and J. Moore

Date: May 20 -21, 2010.

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. Mapped oak mortality will be ground checked to determine cause of death.

Details:

- Seven hundred miles were flown, covering 1.3 million acres over 3 counties – San Diego, Riverside, and San Bernardino Counties. Nineteen Indian reservations were included in the survey as well as two National Forests. See figures 1 and 2.
- A total of 179 dead trees were mapped. Sixty acres of defoliation and branch flagging were also mapped. Seventeen trees mapped were black oak, the rest were live oak.
- Although oak mortality was mapped throughout the surveyed area, it was most abundant around the northern edge of the known GSOB-infested area, in the vicinity of the southern edge of the Palomar Ranger District, Cleveland National Forest.
- 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/2010/kmz/index.shtml>

Figure 1. Flown area and mapped oak mortality

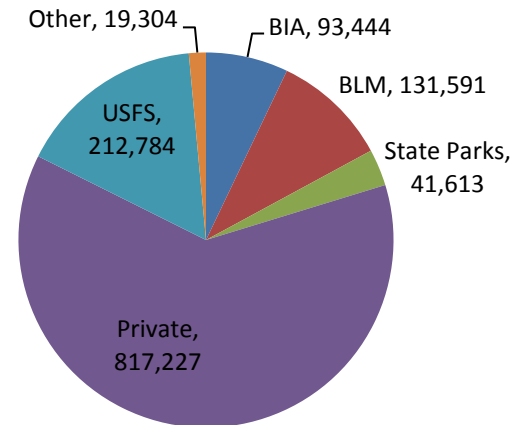
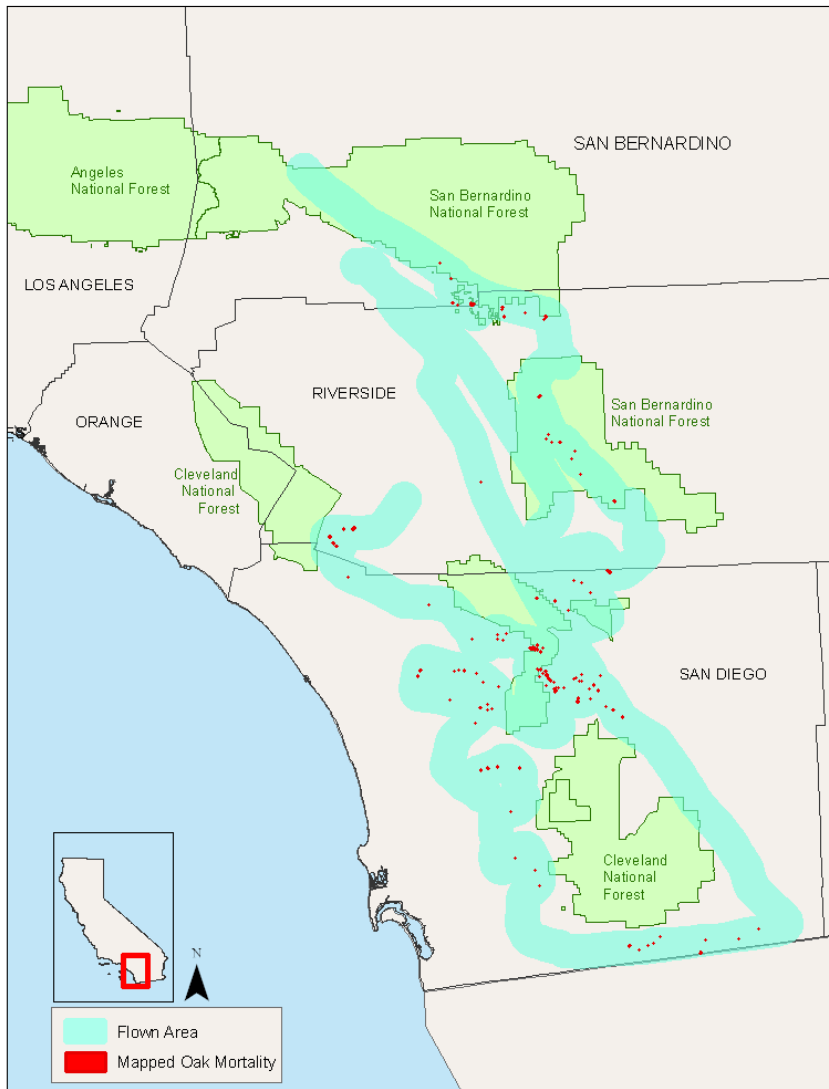


Figure 2. Surveyed Land Ownership

Summary:

- Miles flown: 700
- Acres surveyed: 1.3 million
- Acres with mortality mapped: 147
- Number of dead trees: 179
- Acres with defoliation: 8
- Acres with branch flagging: 52

Direct questions pertaining to this report to Zachary Heath (email: zheath@fs.fed.us phone: 530-759-1751) or Tom Coleman (email: twcoleman@fs.fed.us phone: 909-382-2871). Report Date June 21, 2010.

Southern California Oak Mortality Aerial Survey - Summer 2010

Background: Goldspotted oak borer (GSOB) was first detected in California (San Diego County) in 2004. This borer has since been linked to elevated levels of oak mortality in San Diego County detected via aerial surveys since 2002. To date, over 20,000 dead oaks across 620,000 acres have been mapped. This is the second oak mortality survey flown in 2010 in Southern California.

Objective: Detect and map oak injury and mortality within the known gold-spotted oak borer (GSOB) infestation zone.

Surveyors: T. Coleman, Z. Heath, and J. Moore

Date: August 10 and 11, 2010.

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:

- Twelve hundred miles were flown, covering over 2.1 million acres over 5 counties – Los Angeles, Orange, Riverside, San Bernardino and San Diego Counties. The Angeles, Cleveland and San Bernardino National Forests were covered during the flight. See Figure 1.
- A total of 1,532 dead oak trees were mapped, bringing the total number of dead trees from both spring and summer surveys to 1,711. Ten trees mapped in the summer flight were black oak, the rest were live oak.
- The majority of oak mortality was mapped in and near the Descanso Ranger District, Cleveland National Forest. However, an increasing amount of mortality was mapped in and near the Palomar Ranger District.
- Overall, the amount of mortality mapped is slightly less in comparison to previous years. 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/2010/kmz/index.shtml>

Figure 1. Flown area and mapped oak mortality

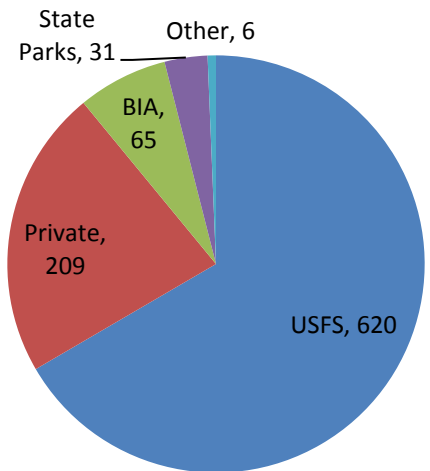
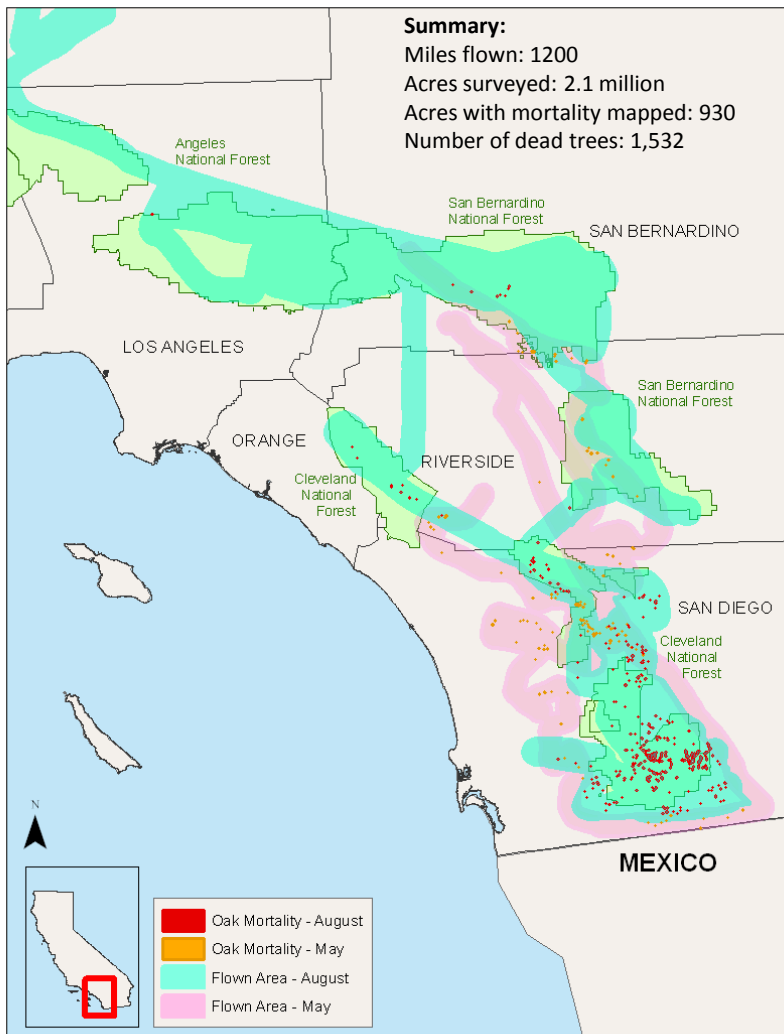


Figure 2. Acres with Oak Mortality by Ownership

Figure 3. Acres with Mapped Oak Mortality in San Diego County by Year, 2006-2010

Year	Acres
2006	2,752
2007	2,364
2008	1,803
2009	1,653
2010	1,077

Direct questions pertaining to this report to Zachary Heath (email: zheath@fs.fed.us phone: 530-759-1751) or Tom Coleman (email: twcoleman@fs.fed.us phone: 909-382-2871). Report Date August 13, 2010.