



2008 Forest Health Protection Aerial Survey Results for California



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Aerial surveys have been conducted since 1994 to map conifer and hardwood mortality, defoliation and other tree damage on Forest Service land in California. In recent years the aerial survey program has expanded to include more forested land under State and private ownership. The 2008 surveys covered 41 million acres over all National Forests, 10 National Parks and 52 California counties. Overall, mapped mortality decreased from last year by roughly 100,000 acres. Major mortality events in 2008 mostly involved mountain pine beetle in northeastern California and sudden oak death along the coast.

Mapping Mortality

Tree mortality and injury were mapped using a digital aerial sketch mapping system (DASM). The DASM allowed surveyors to digitize areas of mortality and injury onto a realtime, scrolling map displayed on a touchscreen. Surveyors mapped the targets as polygons, recorded affected host species, then estimated the number of dead trees per acre and the damage-causing agent.



Flight Information

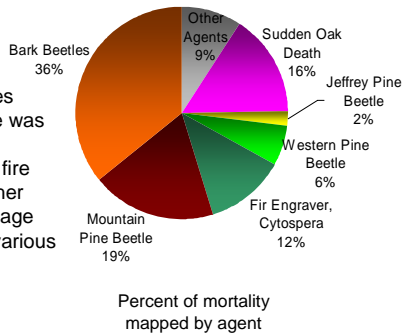
The 2008 aerial detection surveys were flown by two aircraft; a Cessna 206 and a Cessna 182. Flights took place from July 14th through October 29th. Data was collected by seven observers; Zachary Heath, Greta Carroll, Jeff Mai, Bill Woodruff, Bob Schroeter, Daniel Huerta and Kim Camilli. Flights were typically flown on a three mile grid with two observers mapping out each side. A total of almost 24,000 miles were flown over 230 hours, covering 41 million acres.

Area surveyed by ownership:

USFS :	20,000,000 acres
Private:	16,000,000 acres
State & other Federal:	5,000,000 acres

2008 Highlights

A total of almost 230,000 acres of mortality and other damage was mapped in 2008. Due to the extent of wildfire this year fire damage was not mapped. Other agents mapped included damage from bears, weather events, various defoliators and diseases.



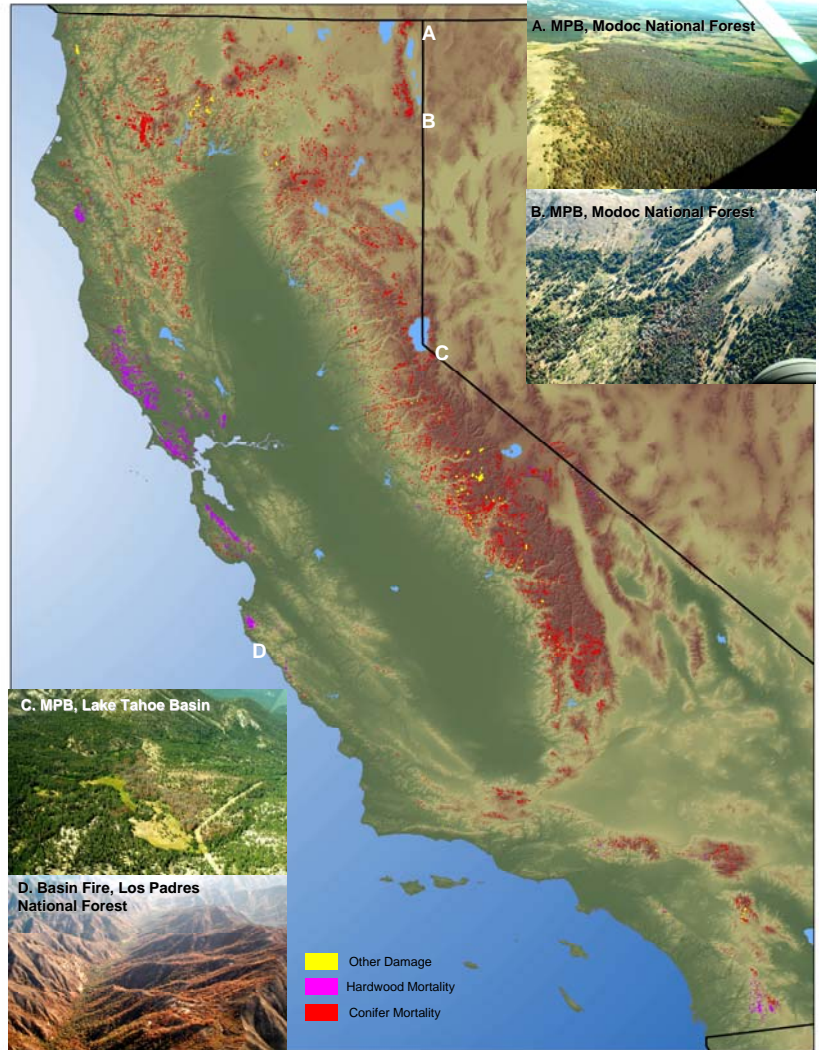
Bark Beetles

- Approximately 163,000 acres were mapped as bark beetle mortality, about 30,000 acres less than last year.
- Areas of mountain pine beetle activity were mapped throughout the Sierra Nevada, Warner and Cascade Mountains, contributing to about 1/3 of the total estimated number of dead trees.
- Fir engraver mortality was common in the Sierra Nevada and the Warner Mountains.
- Relatively little conifer mortality was mapped in Southern California. Oak mortality from Gold-Spotted Oak Borer in San Diego County remained constant.

Sudden Oak Death

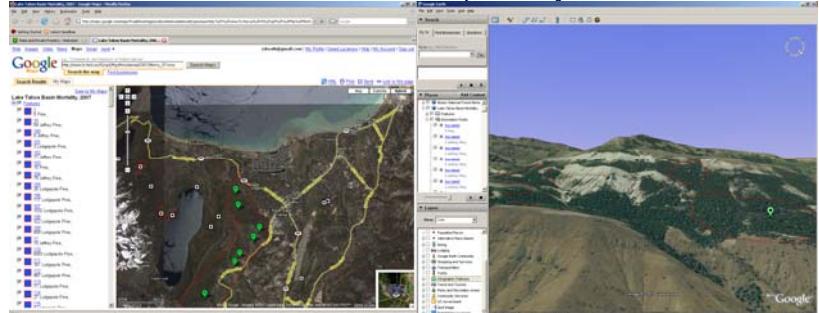
- Tanoak and coast live oak mortality decreased from last year both in terms of intensity and acreage. A considerable number of SOD-killed trees were burned in the Basin fire of 2008.
- Roughly 34,000 acres with recent tan oak and live oak mortality in infested counties were mapped, about 1/3 the acreage of last year.

2008 Aerial Survey data. Fire perimeters are not displayed.



Survey data in Google Maps.

Survey data in Google Earth.



Download Aerial Survey Data at:

<http://www.fs.fed.us/r5/spf/thp/fhm/aerial>

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