

# Regions 4 & 5 Forest Health Protection Cooperative Survey

## Aerial Detection Survey – Update, September 24th, 2013

**Background:** This is an update of survey status for the 2013 season and includes a cooperative survey with Region 4 FHP to survey forested lands along the Nevada/California border.

**Objective:** Detect and map tree mortality and damage in California and Nevada / USFS Regions 4 and 5.

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**Dates:** Sept 9<sup>th</sup> to 12<sup>th</sup> and Sept 24<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:

- The Toiyabe and Inyo National Forests were flown, along with some of the Tahoe Basin, Eldorado, Stanislaus and Sierra National Forests and the Kings Canyon National Park. See Figure 1.
- Mortality from mountain pine beetle comprised half of the dead trees mapped in these surveys. Areas such as June Mountain on the Inyo and Mount Emma, Antelope Peak and the Sweetwater Mountains on the Toiyabe had large areas with elevated mortality. See Figure 2.
- Pinyon pine mortality was observed in the Pine Grove Hills, the Pine Nut Mountains and the Excelsior Mountains in Nevada and the Benton Range in California.
- A few dead limber and bristlecone pine were observed in the White and Inyo Mountains.
- On the portion flown on the Stanislaus, ponderosa mortality was by far the main type of mortality mapped, followed distantly by Jeffrey and gray pine mortality. Many areas of mortality that had been mapped earlier in the year on the Stanislaus, including some intense areas of mortality due to western pine beetle activity, had been burned by the Rim Fire. See Figure 3.
- Only small amounts of mortality were observed on the Tahoe Basin M.U. and the Kings Canyon N.P., most of which was lodgepole mortality in the Tahoe Basin and red fir mortality on the Kings Canyon.
- Other damage observed included aspen defoliation and dieback, as well as some possible pinyon scale activity on the north end of the White Mountains.

Figure 1. Flown area and mapped tree mortality and damage.

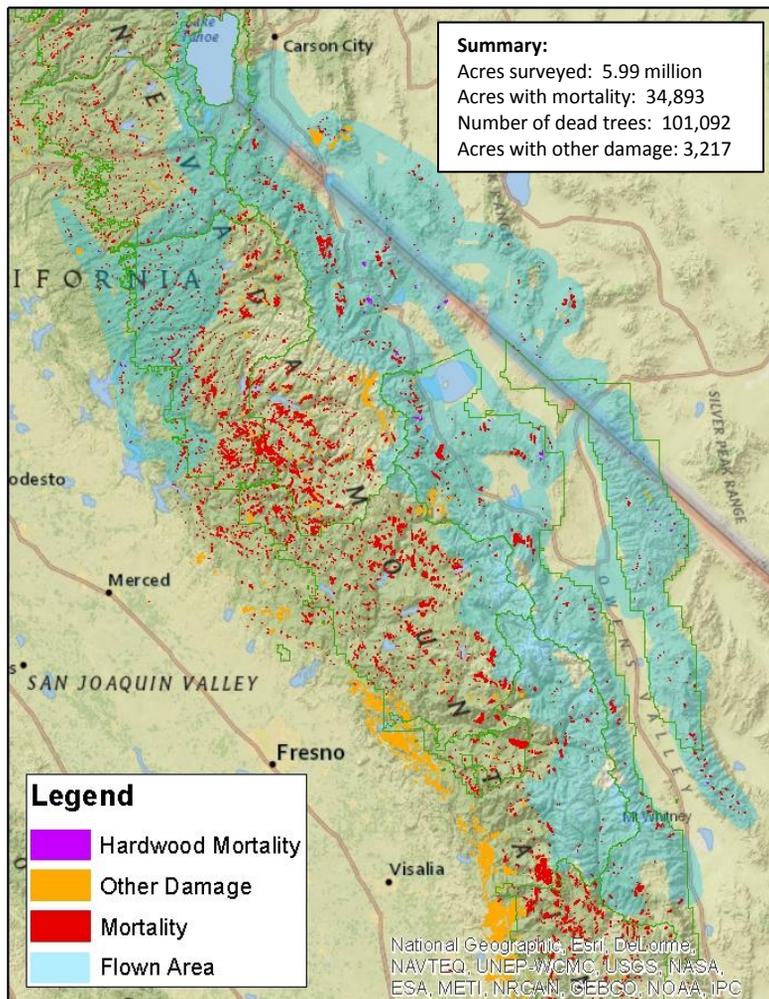


Figure 2. Older dead trees with some recent mortality from mountain pine beetle near June Mountain on the Inyo National Forest.



Figure 3. Western edge of the Rim Fire.

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 Oct 22, 2013.

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