

# UINTA-WASATCH-CACHE NATIONAL FOREST

Heber, Pleasant Grove, and Spanish Fork  
Ranger Districts

2013 Aerial Insect and Disease Detection Survey



## INSECT & DISEASE ACTIVITY

### BARK BEETLES

Species	Mortality
Mountain Pine Beetle (MPB)	1-4 5-14 15+ Trees
Lodgepole pine	● ● ●
Limber pine	× × ×
Douglas-fir Beetle (DFB)	● ● ●
Fir Engrafter Beetle (FEB)	● ● ●
Spruce Beetle (SB)	● ● ●
ips confusus	● ● ●
Western Pine Beetle (WPB)	● ● ●
Douglas-fir	○ ○ ○
True fir	○ ○ ○
Spruce spp	○ ○ ○
Pinon pine	○ ○ ○
Ponderosa pine	○ ○ ○

### MORTALITY & DISEASE

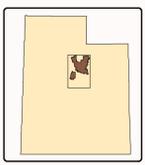
Species	Mortality
Subalpine Fir Mortality (SAF)	● ● ●
Subalpine fir	○ ○ ○
Decline -Aspen, Oak	Light High Decline Light < 50% Heavy > 50%
Drought -Oak	Light Heavy Light < 50% Heavy > 50%

### DEFOLIATORS

Species	Mortality
Wstn False Hemlock Looper	Light Heavy Light < 50% defoliated Heavy > 50% defoliated
White fir	Light Heavy Light < 50% defoliated Heavy > 50% defoliated
Unknown Defoliation -Aspen, Oak	Light Heavy Light < 50% defoliated Heavy > 50% defoliated

### ADDITIONAL SYMBOLS AND DAMAGE AGENTS

Survey Boundary	Area	# -Trees affected	#A -Trees/Acre affected	Aspen -Asp	Douglas-fir -DF	Larch -L	Limber pine -Lm	Lodgepole pine -LP	Ponderosa pine -P	Spruce -S	Subalpine fir -SAF	Whitebark pine -WBP
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DUAL CODES:

**\*\*\*Disclaimer\*\*\***  
Insect and disease data should be used only as an indicator of insect and disease activity, and should be ground-truthed for actual location and causal agent. Polygons indicate locations of tree mortality, defoliation, and/or other damage. Intensity of damage is variable, and not all trees and areas indicated are dead or damaged. The joint cooperators reserve the right to correct, modify, update, or replace the data as necessary. Using this data for purposes other than those for which it was intended may yield inaccurate or misleading results.

**Aerial Insect & Disease Detection Surveys**  
Aerial insect and disease detection surveys are conducted annually to detect and monitor annual, visible, vegetation damage primarily caused by insects. Aerial detection surveys are intended to detect new activity, to monitor the trend of ongoing activity, to provide general location information, and to subjectively rate levels of defoliation. These flights are conducted in a joint partnership between the USDA Forest Service, Idaho Department of Lands, and The Nevada Division of Forestry.

Data represented on this map are based on trees visibly affected by forest insects, as detected by aerial observers. Most bark beetle-killed trees are not typically symptomatic (taded foliage that is yellow, orange, or brown) until nearly a year following beetle attack. Therefore, the numbers of trees killed by bark beetles, as indicated on this map, are a reflection of last year's mortality. The numbers do not reflect the current year's beetle population or number of currently attacked trees. Observers have just a few seconds to recognize, identify, and document observed activity. Air turbulence, cloud shadow, haze, smoke, and observer experience can all affect the quality of the survey.