

# HUMBOLDT-TOIYABE NATIONAL FOREST

Ely Ranger District

2011 Aerial Insect and Disease Detection Survey

1:168,395



### INSECT & DISEASE ACTIVITY

BARK BEETLES		Mortality		DEFOLIATORS	
Species	Symbol	1-4	5-14	Scale	Light Heavy
Mountain Pine Beetle (MPB)	Red X	1-4	5-14	Scale	Light Heavy
Lambert pine	Red Triangle	1-4	5-14	Scale	Light Heavy
Ponderosa pine	Red Circle	1-4	5-14	Scale	Light Heavy
Fir Engraver Beetle (FEB)	Blue X	1-4	5-14	Scale	Light Heavy
True fir	Blue Triangle	1-4	5-14	Scale	Light Heavy
Pinyon pine	Blue Circle	1-4	5-14	Scale	Light Heavy
Spruce Beetle (SB)	Green X	1-4	5-14	Scale	Light Heavy
True spruce	Green Triangle	1-4	5-14	Scale	Light Heavy

  

MORTALITY & DISEASE		Stand decline	
Agent	Symbol	Light	Heavy
Dieback	Light Brown	Light	Heavy
Aspen	Dark Brown	Light	Heavy

  

### ADDITIONAL SYMBOLS AND DAMAGE AGENTS

Symbol	Description	Symbol	Description
Orange outline	Survey Area	Blue wavy lines	Sawfly
Green outline	Boundary	Blue wavy lines	Pinyon
Red outline	Area	Blue wavy lines	Damage Light <50%
Blue outline	Area	Blue wavy lines	Damage Heavy >50%

  

### DUAL CODES:

Code	Color	Description
MPB-Lm / DFB	Pink	Mountain Pine Beetle - Lambert Pine / Dieback
MPB-Lm, PP / DFB	Light Purple	Mountain Pine Beetle - Lambert Pine, Pinyon / Dieback
MPB-Lm / FEB	Light Blue	Mountain Pine Beetle - Lambert Pine / Fir Engraver Beetle
MPB-Lm, PP	Light Green	Mountain Pine Beetle - Lambert Pine, Pinyon
MPB-Lm, PP / SB	Light Yellow	Mountain Pine Beetle - Lambert Pine, Pinyon / Spruce Beetle

**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 (faded 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.

**\*\*\*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.

The background map image is used to provide a visual point of reference. It was created using software by National Geographic - Nevada - Seamless USGS Topographic Maps on CD-ROM (TOPOI Pro for ArcGIS).

