

HUMBOLDT-TOIYABE NATIONAL FOREST

Carson Ranger District

2011 Aerial Insect and Disease Detection Survey



1:126,720



*****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 an approximate visual point of reference for the survey data. It was created using software by National Geographic.
 *TOPO! Pro for ArcGIS®
 *Nevada -Seamless USGS Topographic Maps on CD-ROM"

INSECT & DISEASE ACTIVITY

BARK BEETLES

		Mortality		
		1-4	5-14	15+ Trees
Mountain Pine Beetle (MPB)	Lodgepole pine	★	●	○ 20
	5-needle pines	✕	■	□ 20
Jeffrey Pine Beetle (JPB)	Jeffrey pine	★	■	□ 20
Fir Engraver Beetle (FEB)	True fir	★	●	○ 20

MORTALITY & DISEASE

Dieback	Light	Heavy	Stand dieback	Fire -JP
-Aspen	Light	Heavy	Light <50%	
			Heavy >50%	

ADDITIONAL SYMBOLS AND DAMAGE AGENTS

Survey	-Boundary	-Area	# -Trees affected	#A -Trees/Acre affected
Aspen	-Asp	Ponderosa pine	-PP	
Douglas-fir	-DF	Spruce	-S	
Jeffrey pine	-JP	Subalpine fir	-SAF	
Larch	-L	Wstrn White pine	-WWP	
Lodgepole pine	-LPP	Whitebark pine	-WBP	
Mixed Conifer	-MC			

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.

Forest Health Protection-Bowie Field Office 01/05/2012

DESOLATION

WILDERNESS

