HUMBOLDT-TOIYABE NATIONAL FOREST

Ely Ranger District

2009 Aerial Insect and Disease Detection Survey

1:168,395

0 1.5 3 6 9 12 Miles

N

INSECT & DISEASE ACTIVITY

BARK BEETLES

		Mortality 1-4	5-14	15+ Trees
Mountain Pine Beetle	Bristlecone pine	✱	●	20
	Limber pine	△	▲ xLm	20
Fir Engraver Beetle	True fir	✱ F	● F	20F
Ips Confusus	Pinyon pine	✱	●	20
Western Pine Beetle	Ponderosa pine	✱	●	20
Spruce Beetle	Spruce sp	✱	●	20

DEFOLIATORS

Scale -Pinyon: Light, Heavy

Sawfly -Pinyon: Light, Heavy

Damage: Light <50%; Heavy >50%

Forest Tent Caterpillar -Pinyon: Light, Heavy

MORTALITY & DISEASE

Decline -Aspen: Light, Heavy, Not Rated

Stand decline: Light <50%; Heavy >50%

ADDITIONAL SYMBOLS AND DAMAGE AGENTS

Survey -Boundary -Area

Drought -MM: Low, High

Stand discoloration: Low <50%; High >50%

\# -Trees affected

#A -Trees/Acre affected

DFB -Douglas-fir beetle
FEB -Fir engraver beetle
MPB -Mountain pine beetle
SB -Spruce beetle

Aspen -Asp
Bristlecone pine -B
Douglas-fir -DF
Larch -L
Limber pine -Lm
Lodgepole pine -LP
Mtn Mahogany -MMH
Pinyon pine -Py
Ponderosa pine -P
Spruce -S
Subalpine fir -SAF
Whitebark pine -WB

Dual Codes:

MPB -B / MPB -Lm
WPB / MPB -Lm
WPB / FEB
Ips -Pinyon / FEB
MPB -Lm / FEB
MPB -Lm / SB
MPB -Lm / Drought Lt -MMH
Ips -Py / Sawfly Hvy -Py
Ips -Py / Scale Hvy -Py
Sawfly Hvy -Py / Scale Hvy -Py
Ips -Py / (Sawfly/Scale) Hvy -Py

*****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" "TOPO! Pro for ArcGIS"

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 oberserver experience can all affect the quality of the survey.

Forest Health Protection-Boise Field Office 01/25/2010