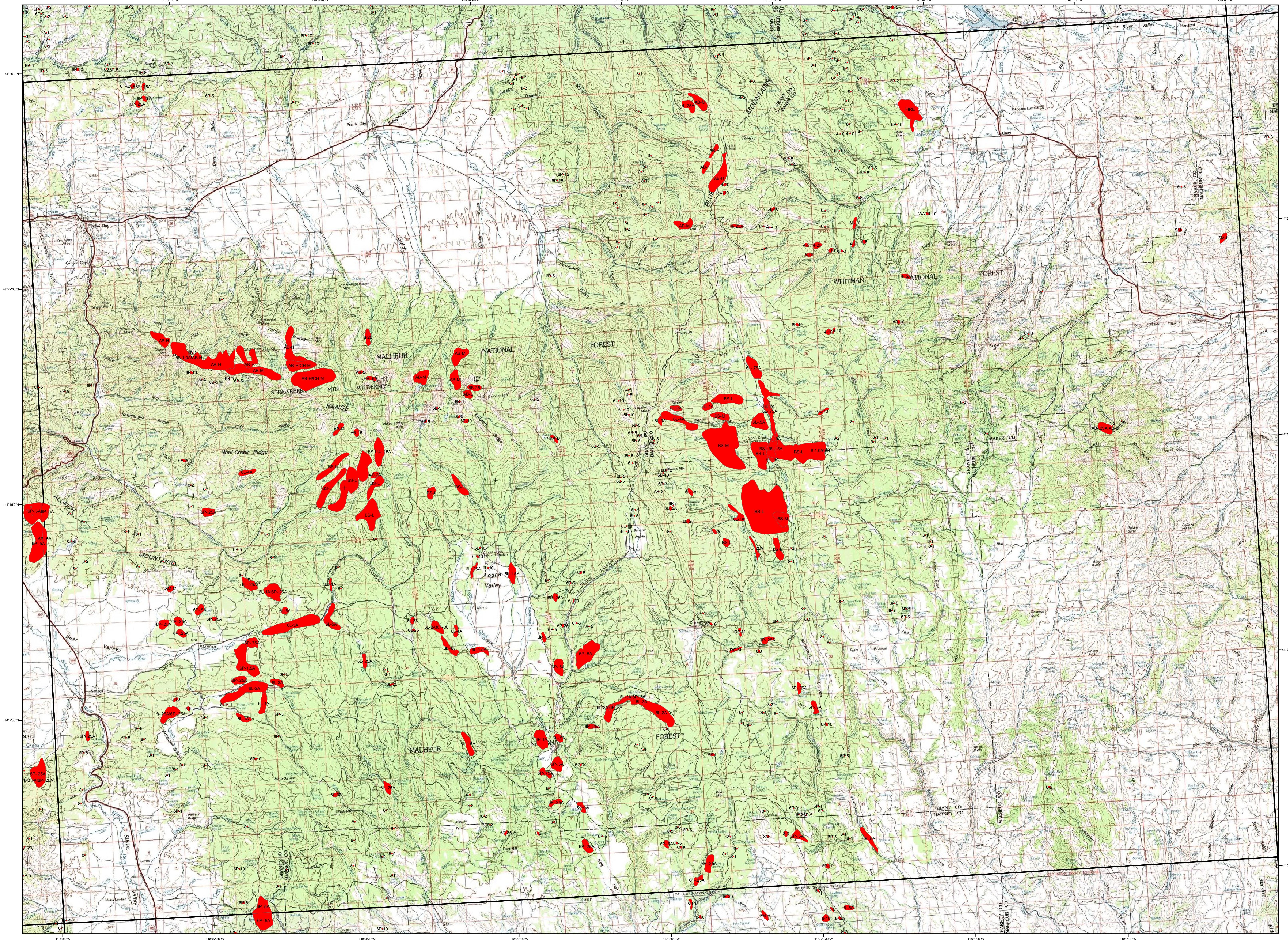


Draft 2008 Aerial Insect and Disease Survey **Draft** USGS 100K Quad: John Day 44118-A1



Legend (for all Possible Agents)

Defoliating Agents

Mortality Agents

Other Damaging Agents

Code	Damaging Agent	Primary Host
AS	Spruce bud	Silky spruce
BB	Western hemlock budworm	Hemlock, spruce, true fir
BR	Balsam woolly adelgid	Hemlock, Douglas-fir
BS	Balsam woolly adelgid	Ponderosa pine, true fir
CH	Balsam woolly adelgid	Western white pine
CS	Balsam woolly adelgid	Jeffrey pine, white fir
CL	Balsam woolly adelgid	Port Orford cedar
CHL	Balsam woolly adelgid	Western hemlock
HL	Balsam woolly adelgid	Western white pine
LG	Green stain needle scale	Conifer
LL	Larch borer	Larch
LS	Larch borer	Ponderosa pine
MD	Douglas-fir budworm	Douglas-fir
MU	Larch borer	Western larch
MN	Douglas-fir needle midge	Douglas-fir
MS	Spruce budworm	Spruce
ND	Hemlock borer	Jeffrey pine
NK	Needle miner	Douglas-fir
NR	Needle miner	Knobcone pine
NM	Needle miner	Fir
NT	Needle miner	Pine
NS	Needle miner	Port Orford cedar
WT	Needle miner	Douglas-fir
SL	Western hemlock borer	Douglas-fir
SP	Pine butterfly	Ponderosa pine
PC	Pine processionary	Port Orford cedar
PH	Phantom hemlock looper	Hemlock, Douglas-fir
PW	Phantom hemlock looper	Ponderosa pine
PN	Pine needle sheath mine	Jeffrey pine
PS	Pine needle sheath mine	Ponderosa pine, Jeffrey pine
RC	Needle cast	Port Orford cedar
SC	Spruce budworm	Conifer
SF	Sawfly	Douglas-fir
SFJ	Sawfly	Jeffrey pine
SX	Sawfly	Knobcone pine
SM	Sawfly	Ponderosa pine
SNC	Sawfly	Alder
SW	Sawfly	Ponderosa pine
TW	Tent caterpillar, alder	Western larch
TC	Tent caterpillar, aspen	Alder
TS	Tent caterpillar, aspen	Douglas-fir

Coding Convention:

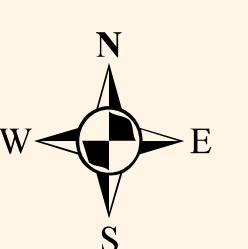
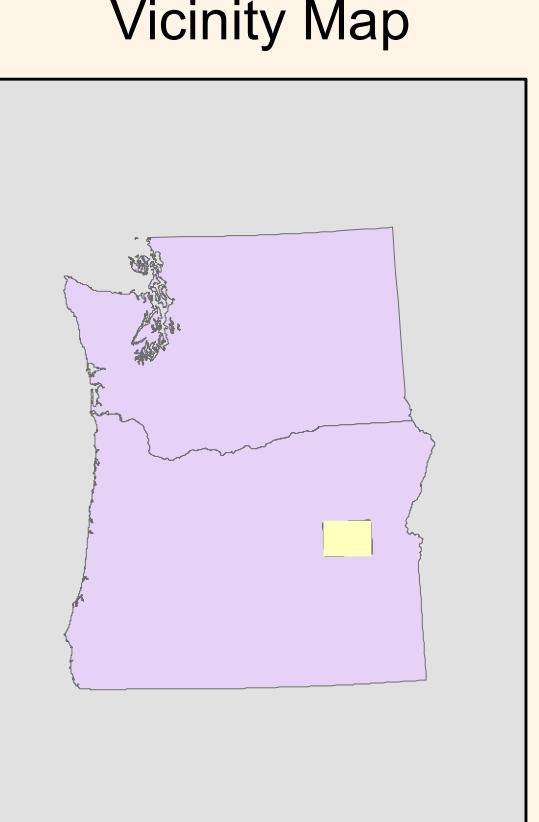
The cause of damage is described by a code example: **BS**=western spruce budworm
and is followed by a modifier. A modifier can be either: intensity of damage (**L**=light),
M=moderate, **H**=heavy); or number of trees/acre killed (example: **L**=20 = 20 trees/acre killed
by Douglas-fir engraver); or number of trees/acre killed (example: **M**=4 = 4 trees/acre killed
by fir engraver). There can be up to three damaging agent-modifier combinations
recorded for each polygon. Each agent-modifier combination is separated by a "**+**"
(example: **BS-M1-204-4A**). The color of the polygon is dictated by the first agent recorded.

Area Not Flown

Draft USGS 100K Quad: John Day 44118-A1 Aerial Insect and Disease Survey Mapscale: 1:100,000

Tuesday, September 16, 2008

Vicinity Map



How the Aerial Surveys Are Conducted

Data represented on this map are based on trees visibly affected by forest insects and diseases detected and recorded during aerial survey flights conducted by the USDA Forest Service and the Washington Department of Natural Resources. Observers have just a few seconds to recognize the color difference between healthy and damaged trees of different species, diagnose causal agents correctly, estimate intensity, delineate the extent of damage, and precisely record this information on a georeferenced, digital map. Air turbulence, cloud shadows, distance from aircraft, haze, smoke and observer experience can all affect the quality of the survey. These data summaries provide an estimate of conditions on the ground and may differ from estimates derived by other methods.

The aerial survey provides information on the current status for many causal agents, and is important when examining insect activity trends by comparing historical and current survey data over large areas.

Overview surveys are a 'snap shot' in time and therefore may not be timed to accurately capture the true extent or severity of a particular disturbance activity. Specially designed surveys with modified flight patterns and timing may be conducted to more accurately delineate the extent and severity of a particular disturbance agent. Special surveys, such as Swiss needle cast surveys, are conducted when resources are available to address situations of sufficient economic, political or environmental importance.



WASHINGTON STATE DEPARTMENT OF
Natural Resources
Doug Sutherland - Commissioner of Public Lands

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DISCLAIMER:
The insect and disease data presented should only be used as an indicator of insect and disease activity, and should be ground-checked for precise location, extent, severity and causal agent.
Color-coded polygons show locations where trees were recently killed or defoliated. Intensity of damage is variable and not all trees within coded polygons are dead or defoliated.
The cooperators reserve the right to correct, update, modify or replace GIS products without notice. Using this map for purposes other than those for which it was intended may yield inaccurate or misleading results.