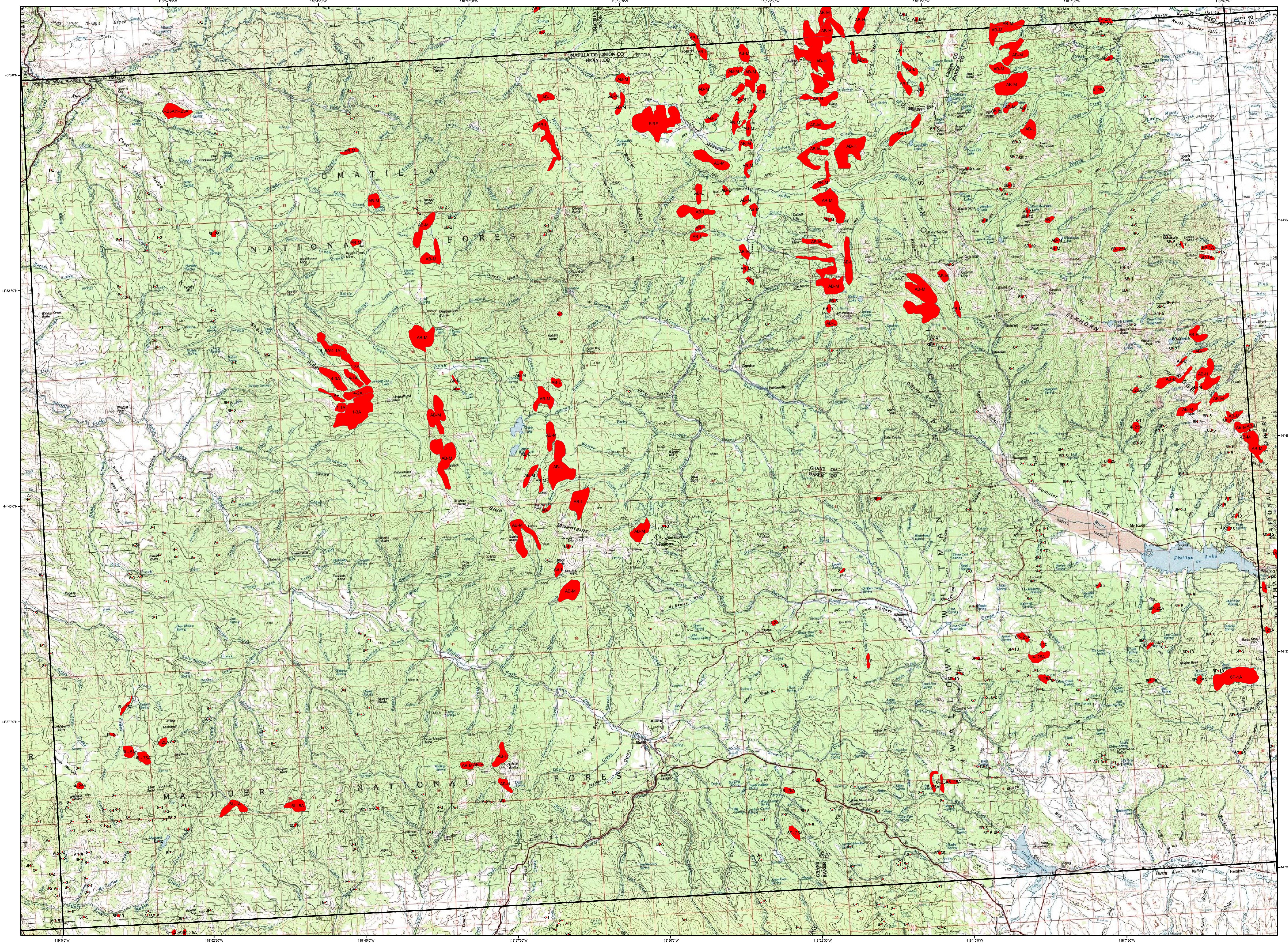


****Draft** 2008 Aerial Insect and Disease Survey **Draft****
USGS 100K Quad: Bates 44118-E1



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
BS	Western spruce budworm	Western spruce, true fir
CH	Brynia's blight/Lophodermella	Pseudotsuga
HL	Western hemlock looper	Western hemlock
LG	Green stain beetle	Douglas-fir, Western hemlock
LL	Larch looper	Western larch
LS	Scaly bark scale	Douglas-fir
MD	Douglas-fir budworm	Douglas-fir
ML	Larch needle scale	Western larch
MN	Douglas-fir needle midge	Douglas-fir
MS	Sugarcane borer	Sugarcane
ND	Needle moth	Douglas-fir
NK	Needle miner	Jeffrey pine
NL	Needle miner	Kodiak pine
NM	Needle miner	Fir
NT	Needle miner	Conifer
WT	Needle miner	Western white pine
DL	Western tent caterpillar	Oak
PB	Pine butterfly	Ponderosa pine
PC	Phantom hemlock looper	Hemlock, Douglas-fir
PH	Phantom hemlock looper	Ponderosa pine
PN	Pine needle health mine	Ponderosa, Jeffrey pines
RC	Needle cast	Port Orford cedar
SA	Sawfly	Conifer
SD	Sawfly	Douglas-fir
SF	Sawfly	True fir
SK	Sawfly	Kodiak pine
SM	Sawfly	Aspens
SNC	Sawfly	Ponderosa pine
SW	Sawfly	Jeffrey pine
TA	Tent caterpillar, alder	Western larch
TC	Tent caterpillar, cottonwood	True fir, Douglas-fir
TS	Tent caterpillar, aspen	Aspens

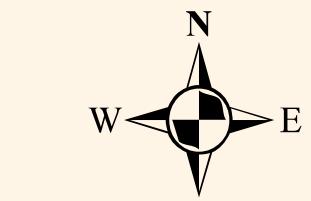
Coding Convention:

The cause of damage is described by a code example: BS=western spruce budworm)
 The code is followed by a modifier. A modifier can be either: intensity of damage (L=light, M=moderate, H=heavy), or number of trees killed (example: 4-20 = 20 trees killed by Douglas-fir beetle); or number of trees/acre killed (example: 4-4A = 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.

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Area Not Flown



****Draft****
USGS 100K Quad: Bates 44118-E1
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 not clear 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.