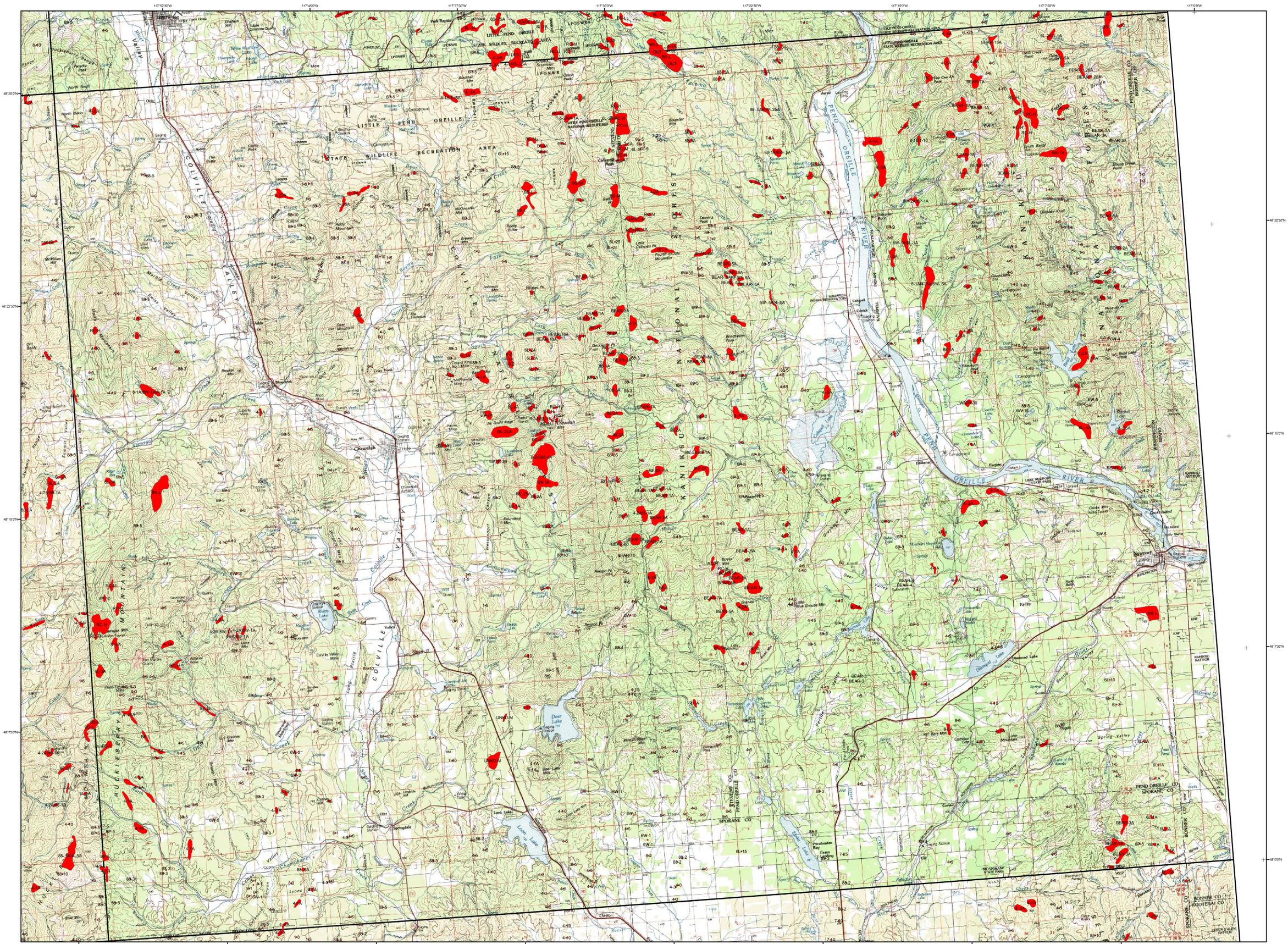


Draft 2008 Aerial Insect and Disease Survey ****Draft**** USGS 100K Quad: Chewelah 48117-A1



Legend (For all Possible Agents)

Code	Damaging Agent	Primary Host
AS	Spruce aphid	Sitka spruce
BS	Western backheaded budworm	Hemlock, spruce, true fir
BSM	Moose budworm	Hemlock, spruce, true fir
BP	Spruce pine beetle	Lodgepole, ponderosa pines
BY	Byrrhus light/ophodermella	Ponderosa spruce
CL	Western hemlock looper	Western hemlock
LD	Green striped forest looper	Western hemlock
LL	Larch looper	Western larch
MD	Black pine needle scale	Lodgepole pine
ML	Douglas fir bark beetle	Douglas fir
MS	Larch looper	Western larch
MS	Spruce budworm	Douglas fir
NU	Needle miner	Jeffrey pine
NK	Needle miner	Knapweed pine
NL	Needle miner	Lodgepole pine
NM	Needle miner	Port Orford cedar
NP	Needle miner	Ponderosa pine
NS	Needle miner	Sugar pine
NW	Needle miner	Western white pine
NI	Western larch looper	Western larch
PI	Pine needle cast	Ponderosa pine
PH	Phantom hemlock looper	Hemlock, Douglas fir
PN	Pine needle-needle miner	Ponderosa, Jeffrey pines
PS	Needle cast	Pines
RC	Spruce mistle	Western larch
SA	Sawfly	True fir
SD	Sawfly	Douglas fir
SH	Sawfly	Hemlock
SK	Sawfly	Hemlock, Douglas pine
SU	Sawfly	Aspen
SN	Swiss needle cast	Lodgepole pine
SP	Sawfly	Ponderosa pine
TA	Tent caterpillar, alder	Western larch
TC	Tent caterpillar, other	Aspen
TM	Douglas fir bark beetle	True fir, Douglas fir
TS	Tent caterpillar, sphen	Aspen

Mortality Agents

Code	Damaging Agent	Primary Host
1	Douglas fir beetle	Douglas fir
2	Douglas fir engraver	Douglas fir
3	Spruce beetle	Spruce
4	White bark beetle	White bark
5	Mountain pine beetle	Mountain pine
6	Mountain pine beetle	Mountain pine
6K	Mountain pine beetle	Mountain pine
6L	Mountain pine beetle	Mountain pine
6M	Mountain pine beetle	Mountain pine
6N	Mountain pine beetle	Mountain pine
6O	Mountain pine beetle	Mountain pine
6P	Mountain pine beetle	Mountain pine
6Q	Mountain pine beetle	Mountain pine
6R	Mountain pine beetle	Mountain pine
6S	Mountain pine beetle	Mountain pine
6T	Mountain pine beetle	Mountain pine
6U	Mountain pine beetle	Mountain pine
6V	Mountain pine beetle	Mountain pine
6W	Mountain pine beetle	Mountain pine
6X	Mountain pine beetle	Mountain pine
6Y	Mountain pine beetle	Mountain pine
6Z	Mountain pine beetle	Mountain pine
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Other Damaging Agents

Code	Damaging Agent	Primary Host
AB	Balsam woolly adelgid	True fir
AC	Colony spruce gall adelgid	Spruce, Douglas fir
AD	Leaf discoloration	Maple
AE	Bitter rot	True needle pines
AF	Black rot	True needle pines
AG	Dying hemlock	Hemlock
AH	Fire	Ponderosa pine
AI	Gouy pitch midge	All species
AJ	Hardwood decline	Hardwoods
AK	Area not flown	
AL	No damage detected	
AM	Pacific yew needle decline	Pacific yew
AN	Leaf fall in poplars	All species
AO	Red bark	All species
AP	Unknown mortality	All species
AQ	Water damage	All species
AR	Windthrow	All species
AS	Winter Damage	All species

****Draft****
USGS 100K Quad: Chewelah 48117-A1
Aerial Insect and Disease Survey
Mapscale: 1:100,000
Friday, September 12, 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

For More Information and Inquiries:

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information@odf.state.or.us

USDA Forest Service:
<http://www.fs.fed.us/r6/nr/inf/as/kspengel@fs.fed.us>

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 the map for purposes other than those for which it was intended may yield inaccurate or misleading results.