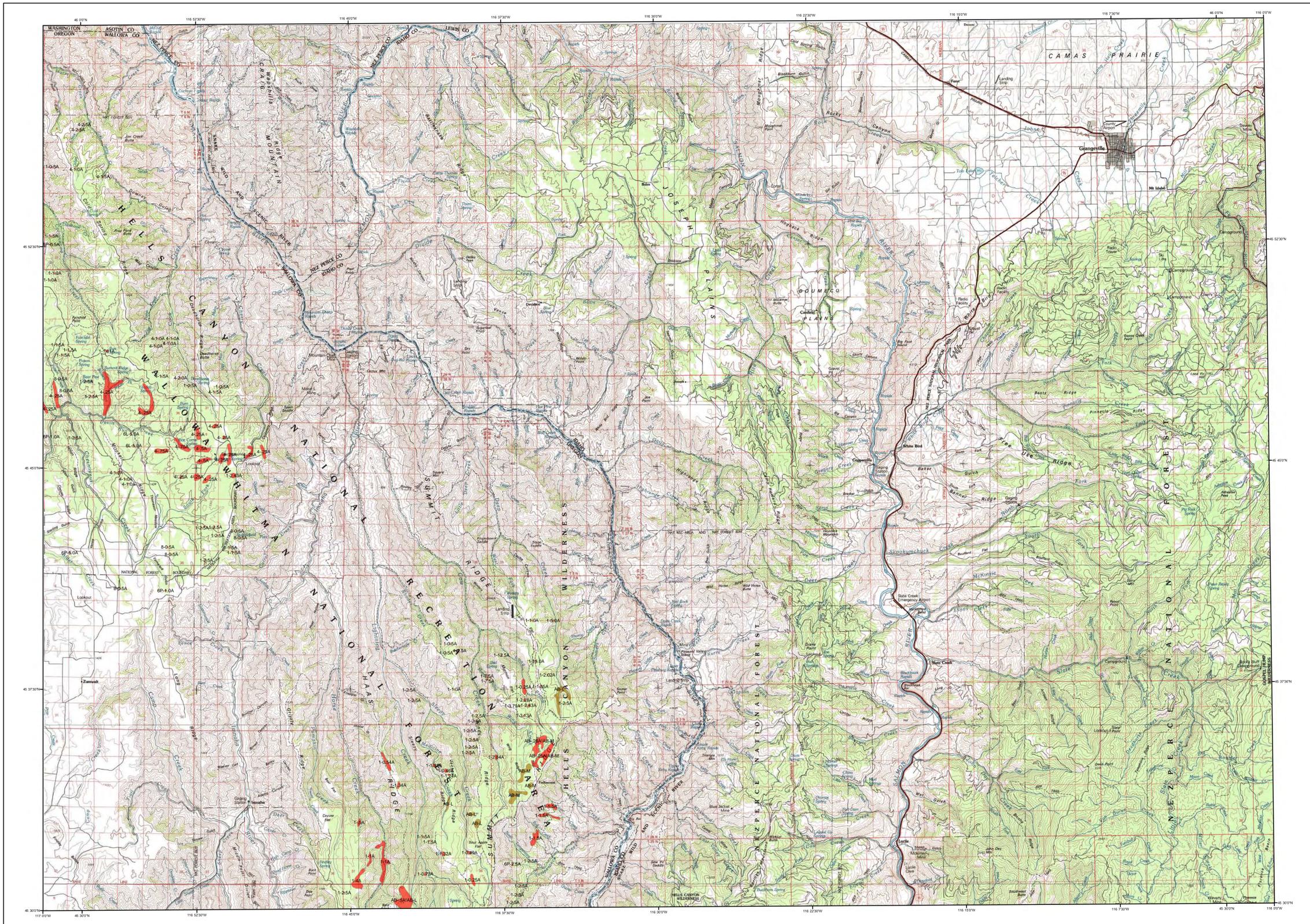


# 2010 Aerial Insect and Disease Survey

## USGS 100K Quad: Grangeville - E145116; 9G



Defoliators		Mortality Agents	
Code	Damaging Agent	Code	Damaging Agent
AS	Sp. face aphid	1	Douglas-fir beetle
BB	Western blackhead fly	2	Douglas-fir engraver
BM	M. loc. budworm	3	Spruce beetle
BP	Sugar pine tortrix	4	Fir engraver
BS	Western spruce budworm	5	Western balsam bark beetle
BF	Bynum's light-phloem beetle	6A	Mountain pine beetle
CH	Larch casebearer	6B	Jeffrey pine
HL	Western hemlock looper	6C	Mountain pine beetle
LC	Green striped forest looper	6D	Lodgepole pine
LL	Larch looper	6E	Mountain pine beetle
LD	Douglas-fir bud moth	6F	Mountain pine beetle
ML	Larch bud moth	6G	Sugar pine
MN	Douglas-fir needle midge	6H	Mountain pine beetle
ND	Spruce bud moth	6I	Western white pine
NS	Needle miner	6J	Ponderosa pine
NK	Needle miner	6K	Pole-sit spruce
NL	Needle miner	6L	Silver fir
NM	Needle miner	6M	Western white pine
NP	Needle miner	6N	Ponderosa pine
NT	Needle miner	6O	Western white pine
NW	Needle miner	6P	Ponderosa pine
OB	Western oak looper	6Q	Western white pine
PC	Pine needle cast	6R	Ponderosa pine
PH	Phantom hemlock looper	6S	Western white pine
PM	Pandora moth	6T	Ponderosa pine
PN	Pine needle scale	6U	Western white pine
PS	Pine needle scale	6V	Ponderosa pine
RC	Needle cast	6W	Western white pine
SD	Sawfly	6X	Ponderosa pine
SA	Sawfly	6Y	Western white pine
SB	Sawfly	6Z	Ponderosa pine
SC	Sawfly	7	Western white pine
SE	Sawfly	8	Ponderosa pine
SH	Sawfly	9	Western white pine
SL	Sawfly	10	Ponderosa pine
SM	Sawfly	11	Western white pine
SN	Sawfly	12	Ponderosa pine
SO	Sawfly	13	Western white pine
SP	Sawfly	14	Ponderosa pine
SW	Sawfly	15	Western white pine
TA	Tent caterpillar, alder	16	Ponderosa pine
TC	Tent caterpillar, other	17	Western white pine
TD	Tent caterpillar, aspen	18	Ponderosa pine

USGS 100K Quad: Grangeville - E145116; 9G  
 2010 Aerial Insect and Disease Detection Survey  
 Mapscale: 1:100,000  
 Date: December 20, 2010

### Legend

- Defoliating Agents
- Mortality Agents
- Other Damage

The map base was created with TOPOI (Copyright 2001, National Geographic); available online at: [www.ngmapstore.com](http://www.ngmapstore.com)

A data dictionary, digital copies of this map and ArcGIS insect and disease data are available at: [www.fs.fed.us/r6/nr/rid/data.shtml](http://www.fs.fed.us/r6/nr/rid/data.shtml)

### 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 Oregon Department of Forestry. 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.

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-- OR --

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DISCLAIMER: Forest Health Protection (FHP) and Oregon Department of Forestry (ODF) strive to maintain an accurate Aerial Detection Survey (ADS) Dataset, but due to the conditions under which the data are collected, FHP and ODF shall not be held responsible for missing or inaccurate data. ADS are not intended to replace more specific information. An accuracy assessment has not been done for this dataset; however, ground checks are completed in accordance with local and national guidelines. <http://www.fs.fed.us/foresthealth/ads/qualityassurance.shtml>. Maps and data may be updated without notice. Please cite USDA Forest Service, Forest Health Protection and Oregon Department of Forestry, Forest Health Management as the source of this data in maps and publications.