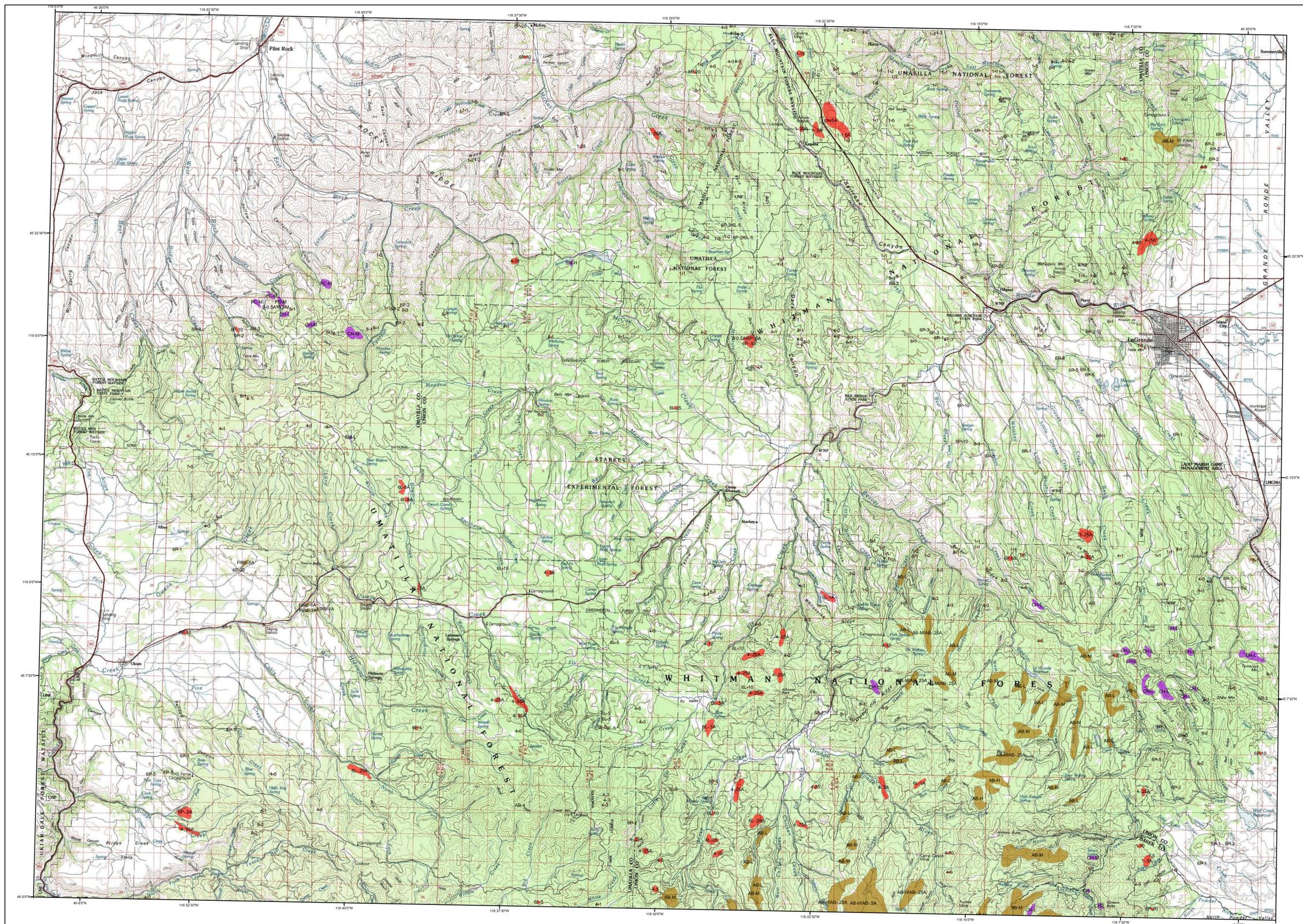


2009 Aerial Insect and Disease Survey

USGS 100K Quad: LaGrande - A145118; 7H



Defoliators		Mortality Agents	
Code	Damaging Agent	Code	Damaging Agent
AS	Spruce aphid	1	Douglas-fir beetle
BB	Western blackheaded budworm	2	Douglas-fir engraver
BM	Mobio budworm	3	Spruce beetle
BP	Sugar pine tortrix	4	Fir engraver
BS	Western spruce budworm	5	Western balsam bark beetle
BY	Bynum's brightlophodermella	6B	Mountain pine beetle
CH	Larch	6C	Jeffrey pine
HL	Western hemlock looper	6L	Mountain pine beetle
LG	Green striped forest looper	6P	Ponderosa pine beetle
LL	Larch looper	6S	Mountain pine beetle
LS	Black pine needle scale	6W	Western white pine
MD	Douglas-fir budmoth	7	Ponderosa, lodgepole pines
ML	Larch budmoth	8	Western pine beetle
MN	Douglas-fir needle midge	8B	Western pine beetle
MS	Spruce budmoth	8C	Silver fir beetle
ND	Needle miner	8D	Conifer
NJ	Needle miner	8E	Flatheaded wood borer
NK	Needle miner	8F	Black stain root disease
NL	Needle miner	8G	Port Orford cedar root disease
NP	Needle miner	8H	Root disease
NS	Needle miner	8I	Water damage
NT	Needle miner		
NW	Needle miner		
CL	Western oak looper	CAE	Damaging Agent
PC	Pine needle cast	AC	Balsam woolly aegidid
PH	Phantom hemlock looper	AM	Leaf discoloration
PI	Pine needle scale	BR	Blister rust
PN	Pine needle/health miner	CC	Cypress canker
PS	Pine needle scale	CC	Dying hemlock
RC	Needle cast	GP	Gouty pitch midge
SA	Sawfly	HAH	Hardwood decline
SB	Sawfly	HFN	Areas not flown - non host
SC	Sawfly	OUT	No damage detected
SD	Sawfly	PAD	Pacific madrone decline
SE	Sawfly	PR	Leaf rust in pines
SH	Sawfly	RS	Red leaf blight
SI	Sawfly	SLD	Silva
SM	Sawfly	UNM	Unknown mortality
SNC	Swiss needle cast	WDR	Water damage
SP	Sawfly	WNT	Wind throw
TA	Tent caterpillar, alder	WTR	Water damage
TC	Tent caterpillar, other		
TD	Douglas-fir bark moth		
TS	Tent caterpillar, aspen		

USGS 100K Quad: LaGrande - A145118; 7H
2009 Aerial Insect and Disease Detection Survey
Mapscale: 1:100,000
Date: January 27, 2010

Legend

- Defoliating Agents
- Mortality Agents
- Other Damage

The map base was created with TOPO! (Copyright 2001, National Geographic), available online at: 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/fid/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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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/education/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.