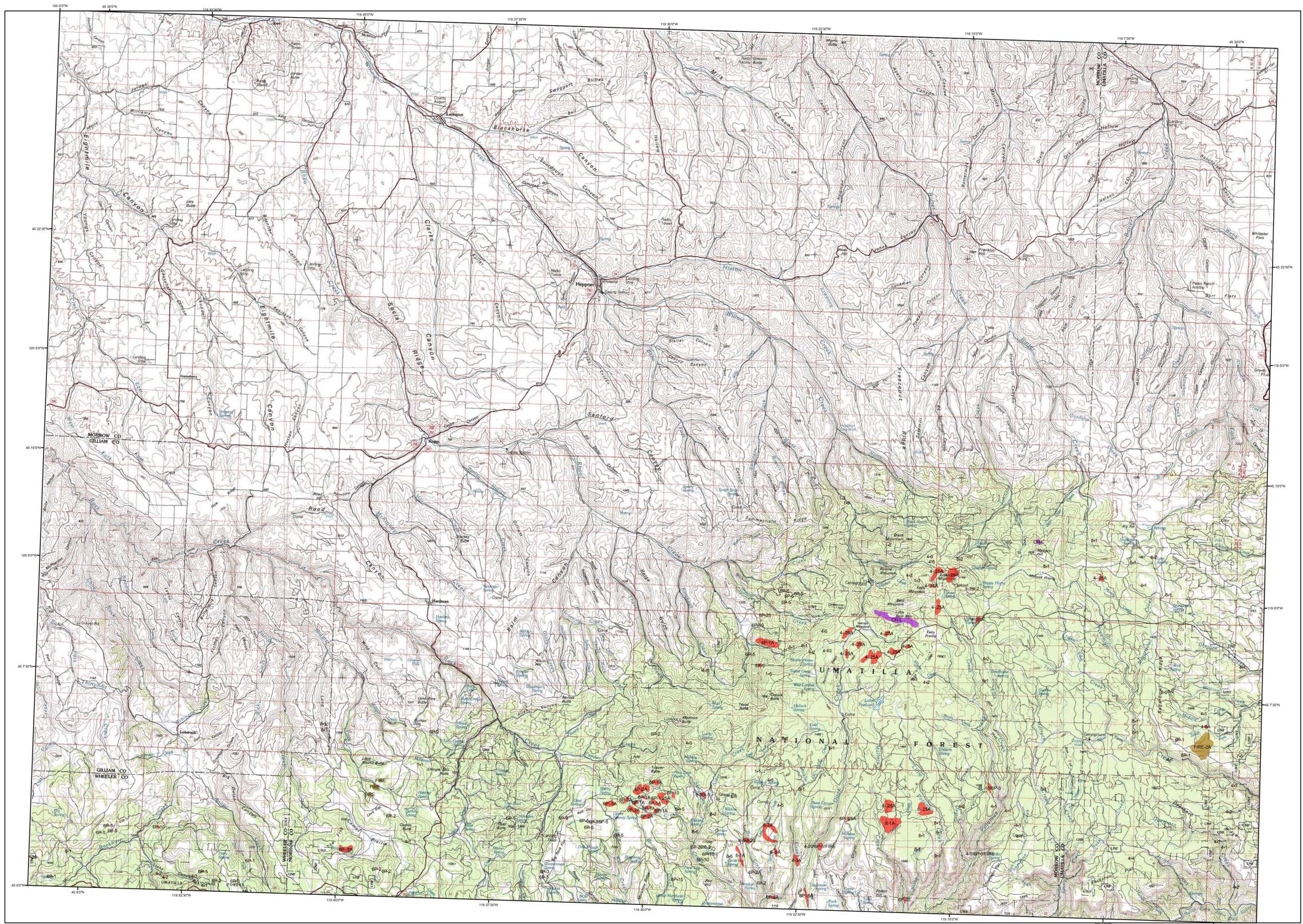


2009 Aerial Insect and Disease Survey

USGS 100K Quad: Heppner - A145119; 6H



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	Modic budworm	3	Spruce beetle
BP	Sugar pine tortrix	4	Fire engraver
BS	Western spruce budworm	5	Western balsam bark beetle
BY	Bryum's light/Lophodermella	6B	Mountain pine beetle
CH	Larch	6C	Jeffrey pine
HL	Western hemlock looper	6L	Mountain pine beetle
LG	Green striped forest looper	6M	Mountain pine beetle
LL	Larch looper	6N	Mountain pine beetle
LS	Black pine needle scale	6P	Mountain pine beetle
MD	Douglas-fir budmoth	6Q	Mountain pine beetle
ML	Larch budmoth	6R	Mountain pine beetle
MN	Douglas-fir needle midge	6S	Mountain pine beetle
MS	Spruce budmoth	6T	Mountain pine beetle
ND	Needle miner	6U	Mountain pine beetle
NJ	Needle miner	6V	Mountain pine beetle
NK	Needle miner	6W	Mountain pine beetle
NL	Needle miner	6X	Mountain pine beetle
NP	Needle miner	6Y	Mountain pine beetle
NS	Needle miner	6Z	Mountain pine beetle
NT	Needle miner	7	Western pine beetle
NW	Needle miner	8	Western pine beetle
OL	Western oak looper	9	Western pine beetle
OB	Pine butterfly	10	Western pine beetle
OC	Pine needle cast	11	Western pine beetle
PH	Phantom hemlock looper	12	Western pine beetle
PM	Pandora moth	13	Western pine beetle
PN	Pine needles/health miner	14	Western pine beetle
PS	Pine needle scale	15	Western pine beetle
PC	Needle cast	16	Western pine beetle
SA	Spider mite	17	Western pine beetle
SD	Sawfly	18	Western pine beetle
SE	Sawfly	19	Western pine beetle
SH	Sawfly	20	Western pine beetle
SL	Sawfly	21	Western pine beetle
SM	Sawfly	22	Western pine beetle
SN	Sawfly	23	Western pine beetle
SO	Sawfly	24	Western pine beetle
SP	Sawfly	25	Western pine beetle
TA	Tent caterpillar, alder	26	Western pine beetle
TC	Tent caterpillar, other	27	Western pine beetle
TM	Douglas-fir tussock moth	28	Western pine beetle
TS	Tent caterpillar, aspen	29	Western pine beetle

USGS 100K Quad: Heppner - A145119; 6H
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.ngm.com

A data dictionary, digital copies of this map and ArcGIS insect and disease data are available at: www.fs.fed.us/r6/mr/fcd/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.

DIRECT ALL INQUIRIES TO:

Oregon Department of Forestry
Forest Health Management
2600 State Street
Salem, Oregon 97310

-- OR --

USDA Forest Service, Region 6
Natural Resources
Forest Health Protection
PO Box 3623
Portland, Oregon 97208

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/accuracy.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 the data in maps and publications.