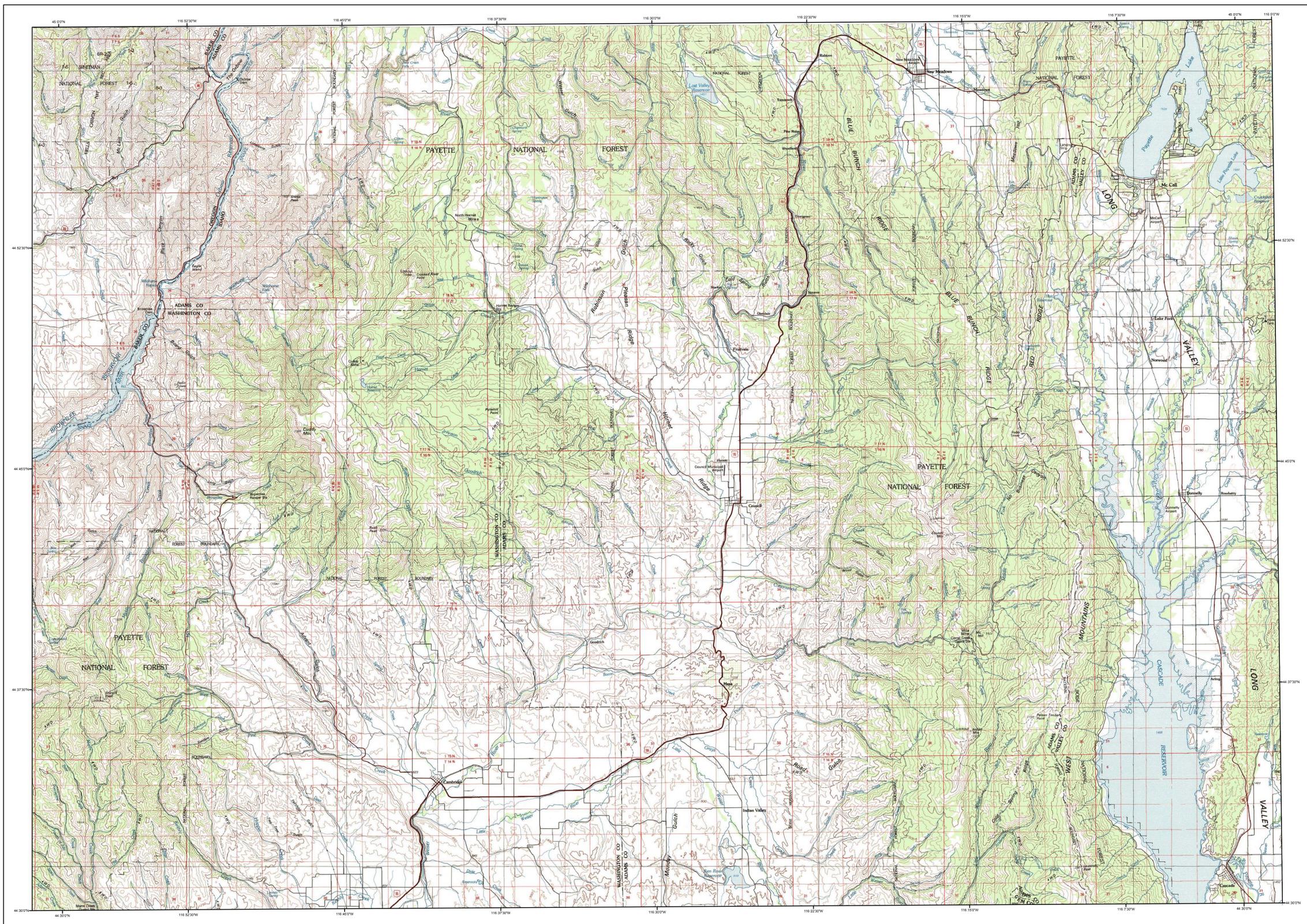


2009 Aerial Insect and Disease Survey

USGS 100K Quad: McCall - E144116; 9I



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	Modor budworm	3	Spruce beetle
BP	Sugar pine tortrix	4	Fir engraver
BS	Western spruce budworm	5	Western balsam bark beetle
BY	Bryum's diploleptodes	6B	Mountain pine beetle
CH	Larch	6C	Mountain pine beetle
HL	Western hemlock looper	6L	Mountain pine beetle
LG	Green striped forest looper	6M	Mountain pine beetle
LL	Larch looper	6S	Mountain pine beetle
LS	Black pine needle scale	6W	Western white pine
MD	Douglas fir budmoth	7	Ponderosa pine
ML	Larch budmoth	8	Western larch
MN	Douglas fir needle midge	8B	Western larch
MS	Spruce budmoth	8C	Spruce
ND	Needle miner	BEAR	Bear damage
NJ	Needle miner	JEFF	Jeffrey pine
NK	Needle miner	KALB	Kalbfleiter pine
NL	Needle miner	LOG	Lodgepole pine
NM	Needle miner	CONF	Conifer
NP	Needle miner	POD	Ponderosa pine
NS	Needle miner	SUG	Sugar pine
NT	Needle miner	WEST	Western white pine
NW	Needle miner	WHT	White pine
CL	Western oak looper	POD	Ponderosa pine
PB	Pine butterfly	AM	Aspen
PC	Pine needle cast	HEM	Hemlock
PH	Phantom hemlock looper	CC	Cyathoporus canker
PM	Pandora moth	DY	Dying hemlock
PN	Pine needle scale	FILE	Fire
PS	Pine needle scale	GP	Gouy patch midge
RC	Needle cast	HAL	Hail
S	Slide mine	HD	Hardwood decline
SA	Sawfly	NFN	Areas not from non host
SD	Sawfly	NH	No damage detected
SF	Sawfly	OUT	Out of range
SH	Sawfly	PND	Pacific madrone decline
SK	Sawfly	POP	Poplar
SL	Sawfly	RB	Red belt
SM	Sawfly	RIP	Riparian
SN	Sawfly	SLO	Slender
SW	Sawfly	UN	Unknown
SP	Sawfly	WDR	Water damage
TA	Tent caterpillar, aspen	WIND	Windthrow
TC	Tent caterpillar, other	WTR	Winter damage
TD	Tent caterpillar, Douglas fir		
TS	Tent caterpillar, aspen		

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2009 Aerial Insect and Disease Detection Survey
Mapscale: 1:100,000
Date: January 25, 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

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

DIRECT ALL INQUIRIES TO:

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USDA Forest Service, Region 6
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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/avon/qual/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 this data in maps and publications.