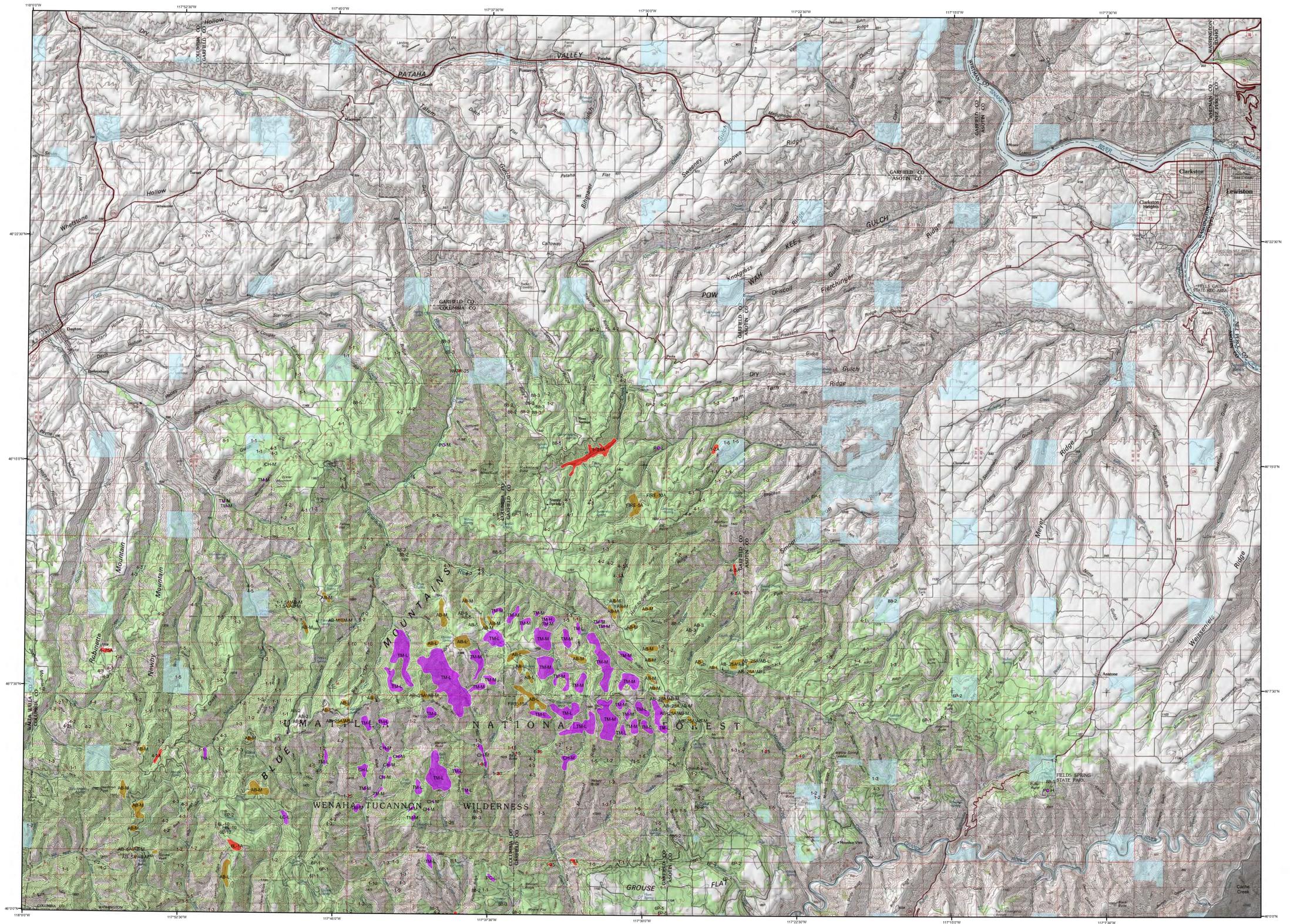


2012 Aerial Insect and Disease Survey

USGS 100K Quad: CLARKSTON - A146117; 8F



Mortality Agents			Other Damaging Agents		
Code	Damaging Agent	Primary Host	Code	Damaging Agent	Primary Host
1	Douglas fir beetle	Douglas fir	AB	Balsam woolly adelgid	True fir, Douglas fir, spruce
2	Spruce beetle	Douglas fir	AM	Leaf discoloration	Maple
3	Fire engraver	Spruce	BR	Bitter rot	Fireweed
4	Western balsam bark beetle	True fir	CC	Cystipora canker	True fir
5B	Mountain pine beetle	Subalpine pine	DH	Dying hemlock	Hemlock
5L	Mountain pine beetle	Whitebark pine	FIRE	Fire	All species
5M	Mountain pine beetle	Lodgepole pine	HDD	Heartwood decline	Heartwoods
5P	Mountain pine beetle	Ponderosa pine	HDD	Heartwood decline	Aspen
5W	Mountain pine beetle	Ponderosa pine	HDD	Heartwood decline	Aspen
6	Western white pine	Ponderosa pine	NFN	Areas not flown - non host	Pacific madrone
7	Western white pine	Ponderosa pine	NFN	Areas not flown - host	Poplar
8	Western white pine	Ponderosa pine	PMD	Pacific madrone decline	All species
9	Western white pine	Ponderosa pine	RD	Red belt	All species
BEAR	Bear damage	Silver fir, true fir	SLD	Slide	All species
FL	Fire	Douglas fir, ponderosa pine	WNTR	Winter damage	All species
FL	Fire	Douglas fir			
WD	Water damage	Canifer			
WATER	Water damage	All species			

Defoliators	
Code	Primary Host
BS	Western spruce budworm
CH	Larch casebearer/typhlocyba
LC	Western hemlock looper
LS	Black pine/leaf scale
PB	Pine budworm
PC	Pine needle cast
PN	Pine needle sheathminer
RC	Needle cast
SA	Sawfly
SH	Sawfly
SK	Sawfly
SL	Sawfly
SNC	Needle cast
TC	Terrestrial canker
UNKD	Unknown defoliating agent

USGS 100K Quad: CLARKSTON - A146117; 8F
 2012 Aerial Insect and Disease Survey
 Map Scale: 1:100,000
 Date: 08 January 2013

Legend

- Defoliating Agents
- Mortality Agents
- Other Damage
- WadNR Managed Lands
- Areas Not Flown
- 2012 Large Fires

Source: Northwest Interagency Coordination Center

The cause of damage is described by a symbol above and is followed by: number of trees affected; number of trees (example: SA1 or INTENSITY OF DAMAGE (L- Light, M- Moderate, H- Heavy).

The TOPOI maps used as background maps are seamless, scanned images of United States Geological Survey (USGS) paper topographic maps. For more information on this map, visit them online at: http://gto.arcgis.com/maps/USA_Topo_Maps

A data dictionary, digital copies of this map and Arctis insect and disease data are available at: www.fs.usda.gov/gto/r6/fhp/ads

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, the Washington Department of Natural Resources 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. Separate 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), Washington Department of Natural Resources (WONR) and Oregon Department of Forestry (ODF) strive to maintain an accurate Aerial Detection Survey (ADS) Database, but due to the conditions under which the data are collected FHP, WONR 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/> quality assurance sheet. Maps and data may be updated without notice. Please cite: "USDA Forest Service, Forest Health Protection, Washington Department of Natural Resources, Resource Protection Division, and Oregon Department of Forestry, Forest Health Management" as the source of this data.