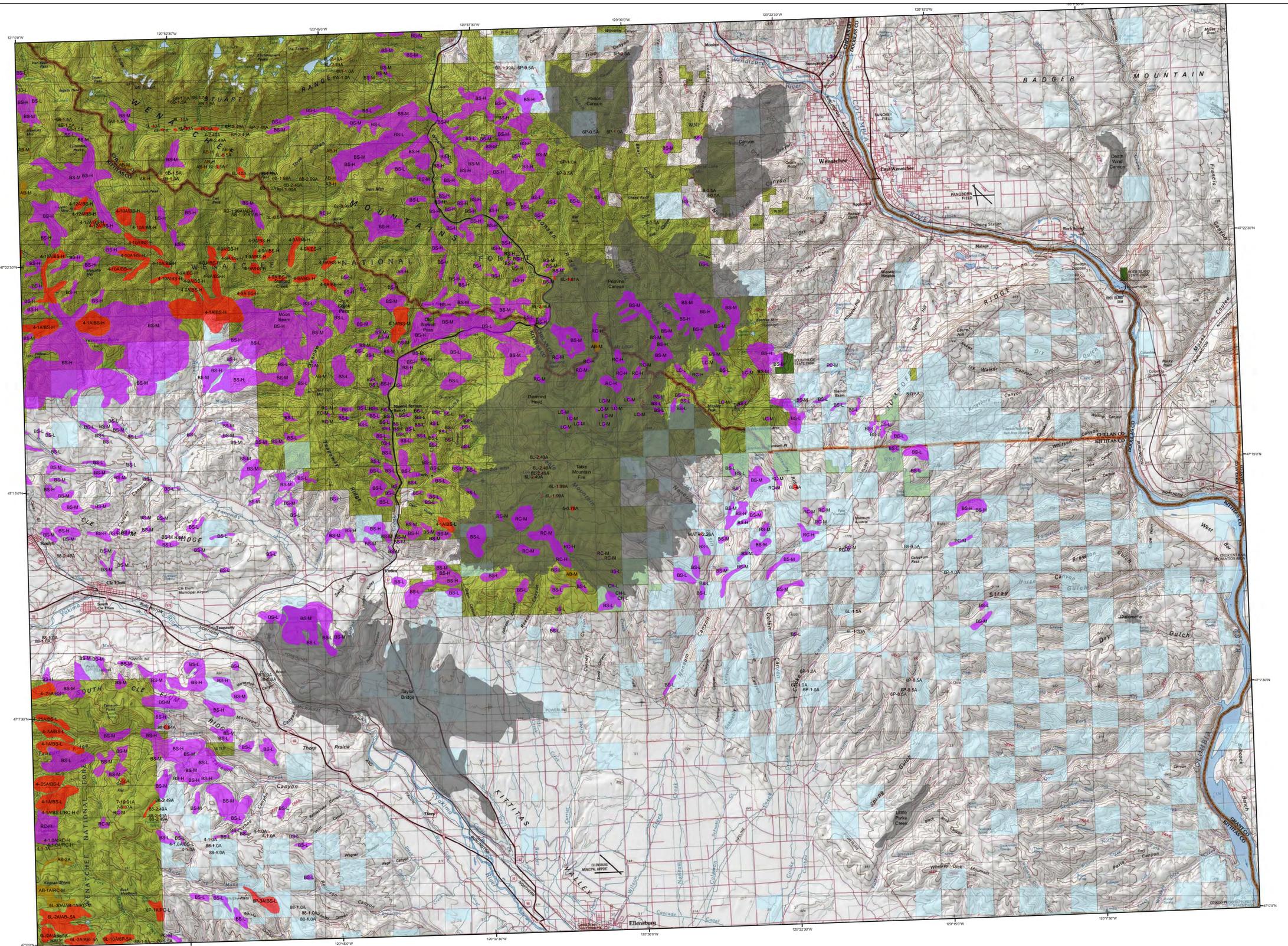


2012 Aerial Insect and Disease Survey

USGS 100K Quad: WENATCHEE - A147120; 5D



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
2	Douglas fir engraver	Douglas fir	AM	Leaf discoloration	Maple
3	Spruce beetle	Spruce	BN	Bitter rot	Flamethorn
4	Fir engraver	Douglas fir	CC	Cystipora canker	True fir
5	Western balsam bark beetle	Western larch	CD	Dying hemlock	Hemlock
6B	Mountain pine beetle	Whitebark pine	FIRE	Fire	All species
6L	Mountain pine beetle	Lodgepole pine	HDD	Hardwood decline	Hemlock
6P	Mountain pine beetle	Ponderosa pine	HDD	Hardwood decline	Aspen
6W	Mountain pine beetle	Western white pine	NFN	Aspen not flown - non host	Oak
7	Iron pine beetle	Pseudotsuga, lodgepole pines	NFN	Aspen not flown - host	Pacific madrone
8	Western pine beetle	Ponderosa pine	PNF	Pacific madrone decline	Poplars
9	Western pine beetle	Pine-sitka ponderosa pine	PNF	Lamb tail in poplars	All species
10	Red pine beetle	Silver fir, true fir	RD	Red tail	All species
BEAR	Bear damage	Douglas fir, ponderosa pine	SLD	Shade	All species
FL	Flamethorn	Pine	WIND	Windthrow	All species
WD	Water damage	Carrier	WTR	Water damage	All species
WTR	Water damage	All species			

Defoliators		
Code	Damaging Agent	Primary Host
BS	Western spruce budworm	True fir, Douglas fir, spruce
CH	Larch casebearer/needleminer	Western larch
LC	Western hemlock looper	Western hemlock
LL	Needle cast	Lodgepole pine
LS	Black pine/leaf scale	Ponderosa pine
PE	Pine needle scale	Ponderosa pine
PC	Pine needle cast	Ponderosa pine
PN	Pine needle sheathminer	Ponderosa pine
NC	Needle cast	Western larch
SA	Sawfly	Carline
SP	Sawfly	True fir
SK	Sawfly	Knobcone pine
SL	Sawfly	Lodgepole pine
SM	Sawfly	Aspen
SNC	Swain needle cast	Douglas fir
TA	Tent caterpillar	Aspen
TC	Tent caterpillar	Hemlock
TM	Douglas fir tussock moth	True fir, Douglas fir
UWID	Unknown defoliating agent	All species

USGS 100K Quad: WENATCHEE - A147120; 5D
2012 Aerial Insect and Disease Survey
Map Scale: 1:100,000
Date: 11 December 2012

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 are seamless, scanned images of United States Geological Survey (USGS) paper topographic maps. For more information on this map, visit us online at http://gto.arcgis.com/maps/usa/Topo_Maps

A data dictionary, digital copies of this map and Aerial 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. 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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 Olympia, WA 98504-7037

-- OR --

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 State and Private Forestry
 Forest Health Protection
 PO Box 3623
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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) Dataset, 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.shtml. 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.