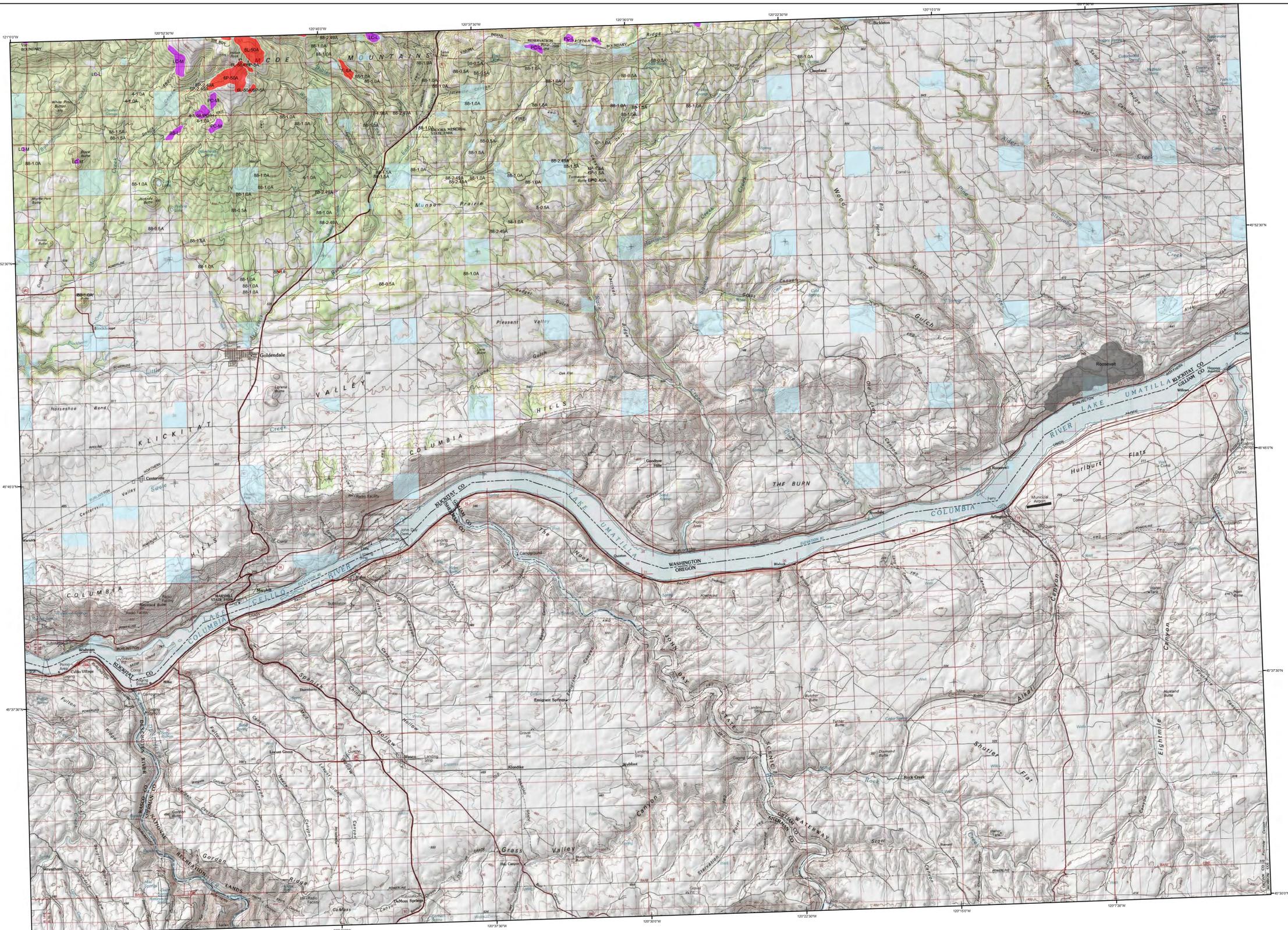


2012 Aerial Insect and Disease Survey

USGS 100K Quad: GOLDENDALE - E145120; 5G



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	BR	Bitter rot	Fireweed
4	Fire engraver	True fir	CC	Cystipora canker	True fir
5	Western balsam hawk beetle	Subalpine fir	DH	Dying hemlock	Hemlock
6B	Mountain pine beetle	Whitebark pine	FIRE	Fire	All species
6L	Mountain pine beetle	Lodgepole pine	HDD	Hardwood decline	Hardwoods
6P	Mountain pine beetle	Ponderosa pine	HDO	Hardwood decline	Aspen
6S	Mountain pine beetle	Sage pine	NFN	Areas not flown - non host	Pacific madrone
6W	Mountain pine beetle	Wentworth pine	NFH	Areas not flown - host	Poplar
7	Sp. app.	Ponderosa, lodgepole pines	PMD	Pacific madrone decline	Poplar
8	Western pine beetle	Ponderosa pine	PIE	Pine needle injury	All species
9	Western pine beetle	Pine-nut pine	RD	Red belt	Slab
10	Shiner fir beetle	Douglas fir, true fir	SID	Shade	All species
BEAR	Bear damage	Douglas fir, ponderosa pine	WIND	Windthrow	Wet damage
FL	Flathead woodpecker	Pine	WNTD	Wet damage	All species
WD	Root disease	Canifer			
WATR	Water Damage	All species			

Defoliators	
Code	Primary Host
BS	Western spruce budworm
CH	Larch casebearer/typhlocyba
LC	Western hemlock looper
LS	Black pine/needle 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: GOLDENDALE - E145120; 5G
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: SA) or intensity of damage (L- Light, M- Moderate, H- Heavy).

The TOPO 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 ArcGIS insect and disease data are available at: www.fs.usda.gov/gto/r6/fhp/ads

Vicinity Map

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.

Washington State Department of Natural Resources

Oregon Department of Forestry

US Forest Service

DISCLAIMER

Forest Health Protection (FHP), Washington Department of Natural Resources (WDNR) 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, WDNR 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/assess/qualityassurance.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.

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