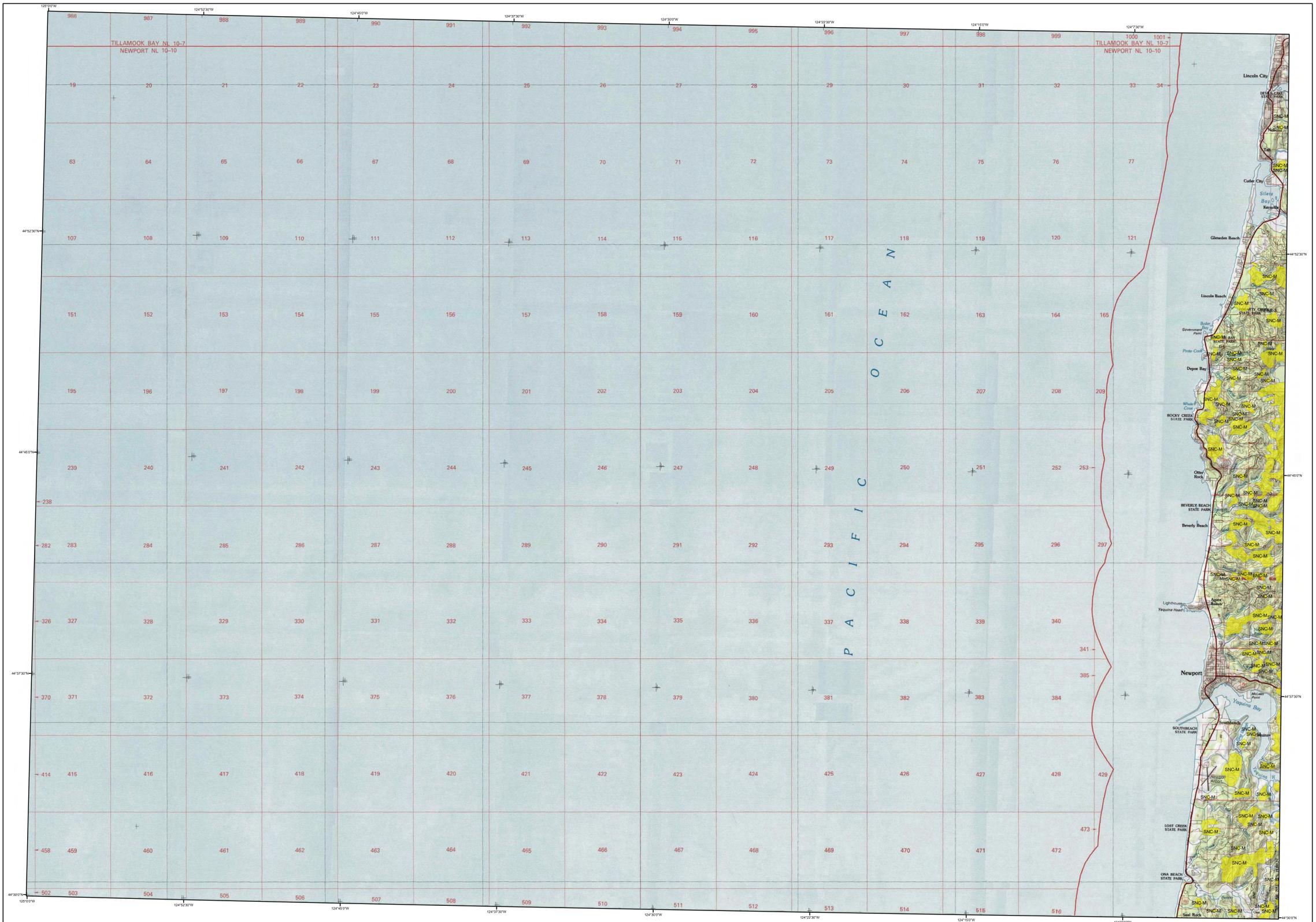


# 2011 Aerial Insect and Disease Survey

## USGS 100K Quad: NEWPORT - E144124; 1I



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	AC	Cooley spruce gall adelgid	Spruce, Douglas fir
3	Spotted lanternfly	Spruce	AM	Leaf discoloration	Maple
4	Pir engraver	True fir	AN	White-pine sawfly	White-pine
5	Western balsam bark beetle	Sitka spruce	AR	Bitter rot	True fir
6B	Mountain pine beetle	Whitebark pine	BR	Chrysomelid canker	True fir
6L	Mountain pine beetle	Lodgepole pine	CC	Dying hemlock	Hemlock
6M	Mountain pine beetle	Ponderosa pine	CC	Dying hemlock	Hemlock
6S	Mountain pine beetle	Sitka spruce	DI	Dying hemlock	Hemlock
6W	Mountain pine beetle	Western white pine	DI	Dying hemlock	Hemlock
7	Sitka spruce	Ponderosa pine	DI	Dying hemlock	Hemlock
8	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9A	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9B	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9C	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9D	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9E	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9F	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9G	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9H	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9I	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9J	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9K	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9L	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9M	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9N	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9O	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9P	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9Q	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9R	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9S	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9T	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9U	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9V	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9W	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9X	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9Y	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
9Z	Western pine beetle	Pine	DI	Dying hemlock	Hemlock
10	Black stain root disease	Black stain root disease	DI	Dying hemlock	Hemlock
11	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
12	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
13	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
14	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
15	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
16	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
17	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
18	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
19	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
20	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
21	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
22	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
23	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
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26	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
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30	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
31	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
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39	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
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52	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
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63	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
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74	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
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85	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
86	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
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89	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
90	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
91	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
92	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
93	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
94	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
95	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
96	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
97	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
98	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
99	Pine needle cast	Pine	DI	Dying hemlock	Hemlock
100	Pine needle cast	Pine	DI	Dying hemlock	Hemlock

**USGS 100K Quad: NEWPORT - E144124; 1I**  
**2011 Aerial Insect and Disease Survey**  
**Map Scale: 1:100,000**  
**Date: 13 December 2011**

### Legend

- Defoliating Agents
- Mortality Agents
- Other Damage
- 2011 Special Swiss Needle Cast Survey
- Areas Not Flown
- 2011 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 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](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](http://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:**

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

-- OR --

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

**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/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.