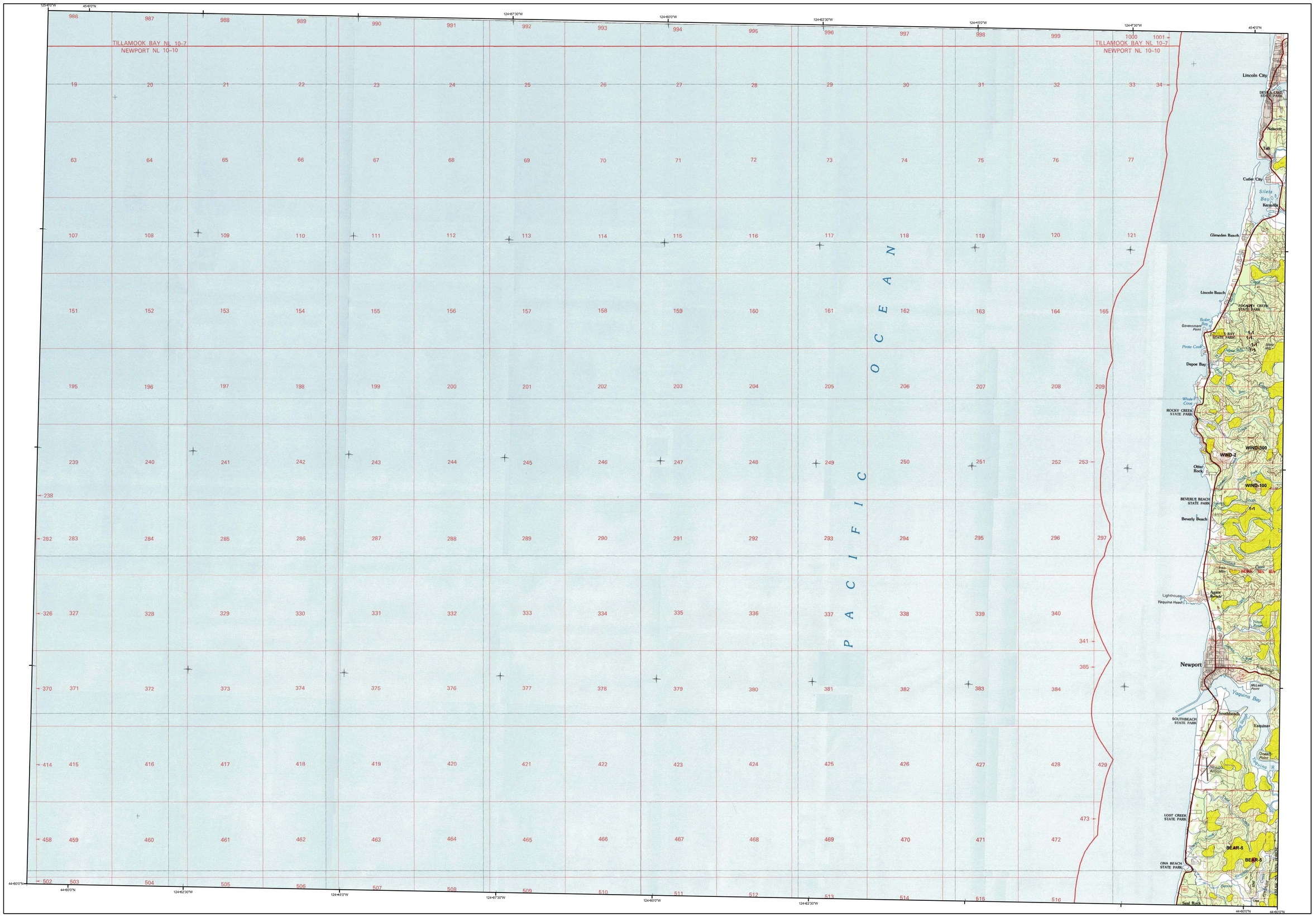
2007 Aerial Insect and Disease Survey
USGS 100K Quad: Newport - E144124; 1I



Definitions

Mortality Agents

Code	Damaging Agent	Primary Host
1	Douglas-fir beetle	Douglas-fir
2	Douglas-fir engraver	Douglas-fir
3	Spruce beetle	Spruce
4	Fir engraver	True fir
5	Western balsam bark beetle	Sub-alpine fir
6B	Mountain pine beetle	Whitebark pine
6J	Mountain pine beetle	Jeffrey pine
6K	Mountain pine beetle	Knobcone pine
6L	Mountain pine beetle	Lodgepole pine
6P	Mountain pine beetle	Ponderosa pine
6S	Mountain pine beetle	Sugar pine
6W	Mountain pine beetle	Western white pine
7	Ips spp.	Ponderosa, lodgepole pines
8	Western pine beetle	Ponderosa pine
88	Western pine beetle	Pole-sized ponderosa pine
9	Silver fir beetle	Silver fir, true fir
BEAR	Bear damage	Conifer
F	Flatheaded wood borer	Douglas-fir
LW	Black stain root disease	Douglas-fir, ponderosa pine
PL	Port Orford cedar root disease	Port Orford cedar
RD	Root disease	Conifer
WATR	Water damage	All species

Other Damaging Agents

Code	Damaging Agent	Primary Host
AB	Balsam woolly adelgid	True fir
AC	Cooley spruce gall adelgid	Spruce, Douglas-fir
AM	Leaf discoloration	Maple
BR	Blister rust	Five-needle pines
CC	Cystospora canker	True fir
DH	Dying hemlock	Hemlock
FIRE	Fire	All species
GP	Gouty pitch midge	Ponderosa pine
HAIL	Hail	All species
HD	Hardwood decline	Hardwoods
NF	Areas not flown	
OUT	No damage detected	
PMD	Pacific madrone decline	Pacific madrone
PR	Leaf rust in poplars	Poplars
RB	Red belt	All species
SLID	Slide	All Species
UNKD	Unknown defoliation	
UNKM	Unknown mortality	
WATR	Water damage	All Species
WIND	Wind-throw	All Species
WNTR	Winter Damage	All Species

Damaging Agent	Primary Host
Spruce aphid	Sitka spruce
Blackheaded budworm	Hemlock, spruce, true fir
Modoc budworm	White fir
Sugar pine tortrix	Lodgepole, ponderosa pines
Western spruce budworm	True fir, Douglas fir, spruce
Western blight/Lophodermella	Ponderosa pine
Larch	Western larch
Western hemlock looper	Western hemlock
Obscure striped forest looper	Douglas-fir, Western hemlock
Larch looper	Western larch
Ponderosa pine needle scale	Ponderosa pine
Douglas-fir budmoth	Douglas fir
Larch budmoth	Western larch
Douglas-fir needle midge	Douglas fir
Spruce budmoth	Spruce
Needle miner	Douglas fir
Needle miner	Jeffrey pine
Needle miner	Knobcone pine
Needle miner	Lodgepole pine
Needle miner	Conifer
Needle miner	Ponderosa pine
Needle miner	Sugar pine
Needle miner	True fir
Needle miner	Western white pine
Western oak looper	Oaks
Pine Butterfly	Ponderosa pine
Pine needle cast	Ponderosa pine
Western hemlock looper	Hemlock, Douglas fir
Pandora moth	Ponderosa, Jeffrey pines
Needlesheath miner	Ponderosa, Jeffrey pines
Pine needle scale	Pines
Needle cast	Western larch
Spider mite	Conifer
	Conifer
Sawfly	Douglas fir
Sawfly	True fir
Sawfly	Hemlock
Sawfly	Knobcone pine
Sawfly	Lodgepole pine
Satin moth	Aspen
Douglas-fir needle cast	Douglas fir
Sawfly	Ponderosa pine
Sawfly	Western larch
Caterpillar, alder	Alder
Caterpillar, other	Hardwoods
Douglas-fir tussock moth	True fir, Douglas fir
Caterpillar, aspen	Aspen

The cause of damage is described by a symbol above and is followed by: number of trees affected; number of trees/acre (example: 5A); or intensity of damage (L- Light, M- Moderate, H- Heavy).

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2007 Aerial Insect and Disease Detection Survey
Mapscale: 1:100,000
Date: November 23, 2007

Legend

2007 Special Swiss Needle Cast Survey
More information about this special survey and the related data is located under 'Maps and Data' at: http://www.odf.state.or.us/pcf/fh/

Defoliating Agents

Mortality Agents

Other Damage

N W E S

Vicinity Map

The map base was created with TOPO! (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/nr/fid/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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Forest Health Management
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Salem, Oregon 97310

-- OR --

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

*****DISCLAIMER*****
The insect and disease data presented should only be used as an indicator of insect and disease activity, and should be ground-checked for precise location, extent, severity and causal agent.

Color coded polygons show locations where trees were recently killed or defoliated. Intensity of damage is variable and not all trees within coded polygons are dead or defoliated.

The cooperators reserve the right to correct, update, modify or replace GIS products without notice. Using this map for purposes other than those for which it was intended may yield inaccurate or misleading results.