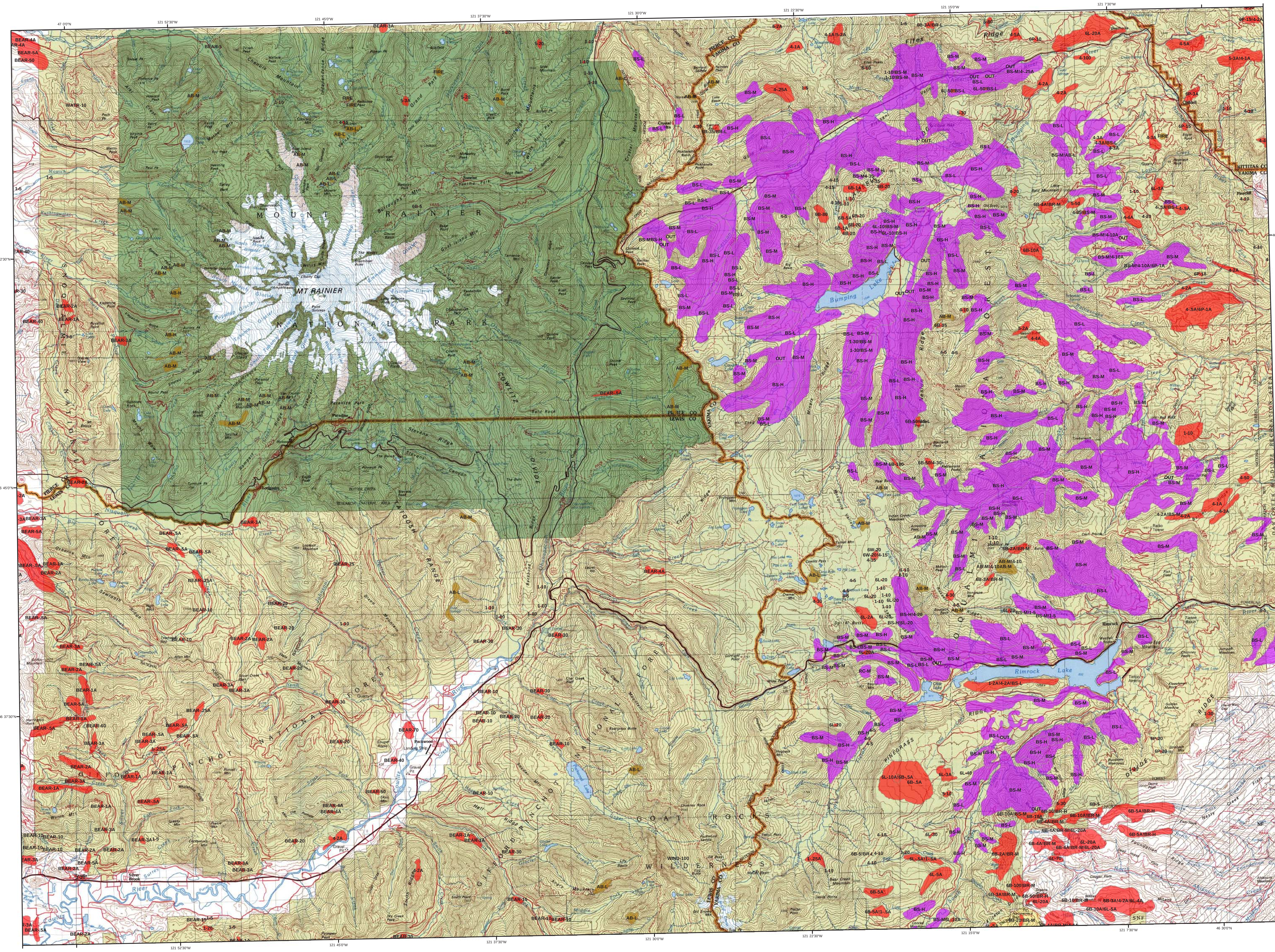
2003 Aerial Insect and Disease Survey
Mt. Rainier - Quad 4E



Legend

Defoliating Agents*

Code; Agent; Primary Host(s)

BS; western spruce budworm; Abies species, spruce, Douglas-fir
RC; larch needle cast; western and subalpine larch

Other Damaging Agents*

Code; Agent; Primary Host(s)

BR; white pine blister rust; five needle pines
FIRE; fire; all species
AB; balsam woolly adelgid; Pacific silver and subalpine firs

Areas Not Flown

***The cause of damage is described by a code (example: BS=western spruce budworm) and is followed by a modifier. A modifier can be either: intensity of damage (L=light, M=moderate, H=heavy); or number of trees killed (example 1-20 = 20 trees killed by Douglas-fir beetle); or number of trees/acre killed (example: 4-4A = 4 trees/acre killed by fir engraver). There can be up to three damaging agent-modifier combinations recorded for each polygon. Each agent-modifier combination is separated by a "!" (example: BS-M!1-20!4-4A). The color of the polygon is dictated by the first agent recorded.**

N E S W

Mortality Agents*

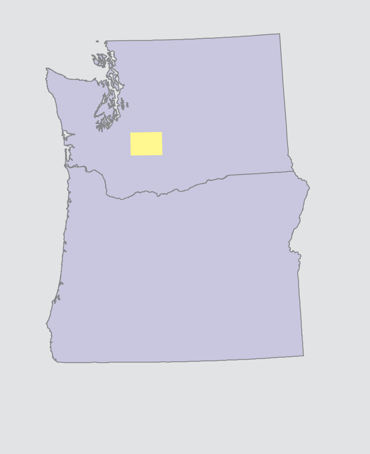
Code; Agent; Primary Host(s)

1; Douglas-fir beetle; Douglas-fir
4; fir engraver; true firs
5 ; western balsam bark beetle; sub-alpine fir, true firs
6B; mountain pine beetle; whitebark pine
6L; mountain pine beetle; lodgepole pine
6P; mountain pine beetle; ponderosa pine
6W; mountain pine beetle; western white pine
8; western pine beetle; ponderosa pine
88 ; western pine beetle; pole-sized ponderosa pine
BEAR; bear; conifer species
WIND; blowdown/wind damage; all species
WATR; water damage; all species

Map base data is from the National Geographic TOPO! series for Oregon and Washington.

USGS 100K Quad - Mt. Rainier; 4E
2003 Aerial Insect and Disease Detection Survey
Mapscale: 1:100,000
Date: November 17, 2003

Vicinity Map



A data dictionary and digital copies of this map and the insect and disease data are available at: www.fs.fed.us/r6/nr/fid/as/

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 Washington Department of Natural Resources. 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:

WASHINGTON STATE DEPARTMENT OF Natural Resources
Doug Sutherland - Commissioner of Public Lands

Washington State Department of
Natural Resources
Resource Protection
Forest Health
1111 Washington St. SE
Olympia, WA 98504

-- OR --

FOREST SERVICE U S DEPARTMENT OF AGRICULTURE

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.