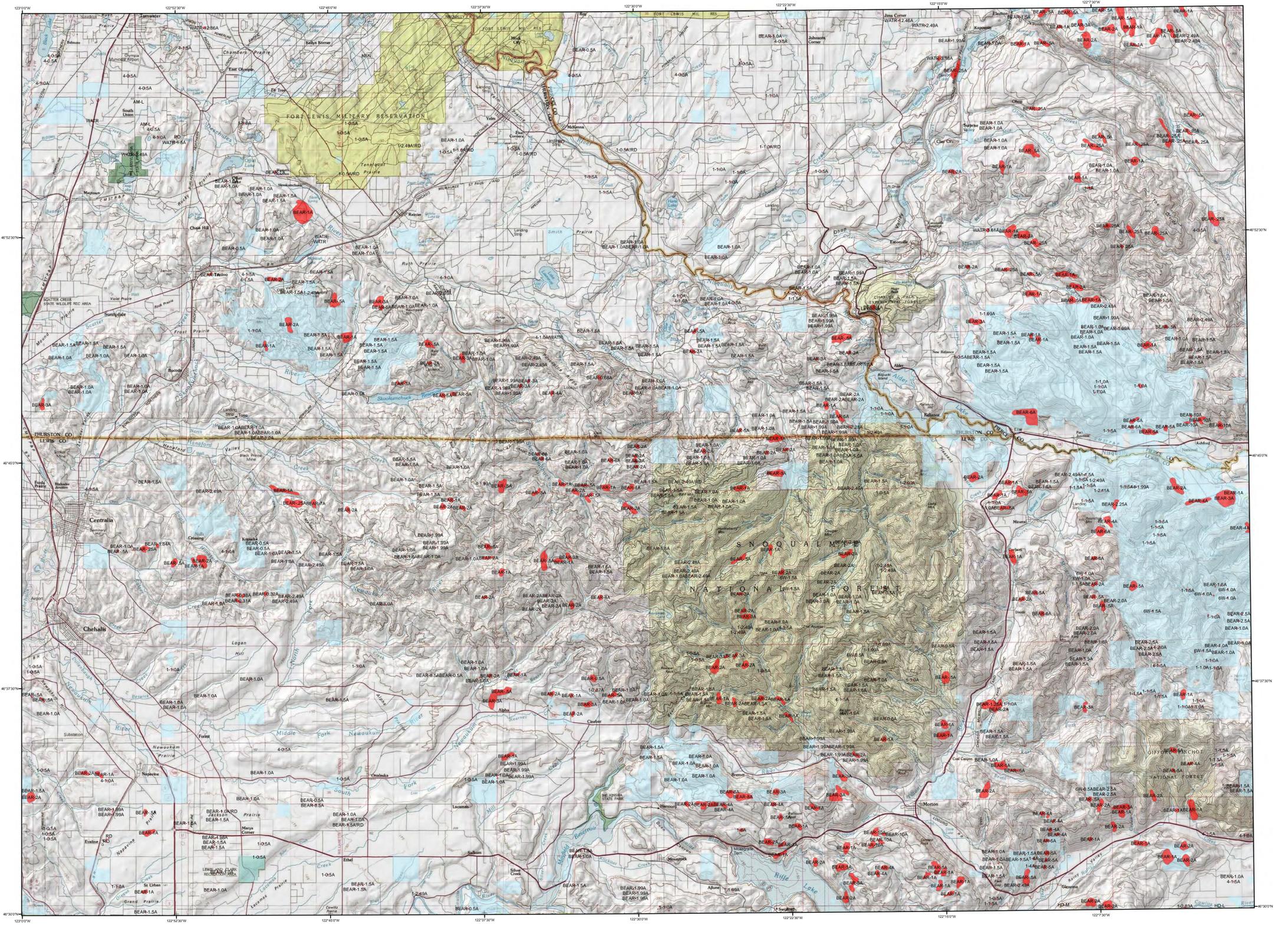


2011 Aerial Insect and Disease Survey

USGS 100K Quad: CENTRALIA - E146122; 3E



Mortality Agents		
Code	Damaging Agent	Primary Host
1	Douglas fir beetle	Douglas fir
2	Douglas fir engraver	Douglas fir
3	Spotted bark beetle	Spotted bark beetle
4	Pine engraver	True fir
5	Western balsam bark beetle	Sub-alpine fir
6B	Mountain pine beetle	Whitebark pine
6L	Mountain pine beetle	Lodgepole pine
6P	Mountain pine beetle	Sugar pine
6W	Mountain pine beetle	Western white pine
7	White bark beetle	Ponderosa pine
8	Western pine beetle	Ponderosa pine
9	Western pine beetle	Pine
10	Western pine beetle	Western white pine
11	Western pine beetle	Whitebark pine
12	Western pine beetle	Sub-alpine fir
13	Western pine beetle	True fir
14	Western pine beetle	Whitebark pine
15	Western pine beetle	Sub-alpine fir
16	Western pine beetle	True fir
17	Western pine beetle	Whitebark pine
18	Western pine beetle	Sub-alpine fir
19	Western pine beetle	True fir
20	Western pine beetle	Whitebark pine
21	Western pine beetle	Sub-alpine fir
22	Western pine beetle	True fir
23	Western pine beetle	Whitebark pine
24	Western pine beetle	Sub-alpine fir
25	Western pine beetle	True fir
26	Western pine beetle	Whitebark pine
27	Western pine beetle	Sub-alpine fir
28	Western pine beetle	True fir
29	Western pine beetle	Whitebark pine
30	Western pine beetle	Sub-alpine fir
31	Western pine beetle	True fir
32	Western pine beetle	Whitebark pine
33	Western pine beetle	Sub-alpine fir
34	Western pine beetle	True fir
35	Western pine beetle	Whitebark pine
36	Western pine beetle	Sub-alpine fir
37	Western pine beetle	True fir
38	Western pine beetle	Whitebark pine
39	Western pine beetle	Sub-alpine fir
40	Western pine beetle	True fir
41	Western pine beetle	Whitebark pine
42	Western pine beetle	Sub-alpine fir
43	Western pine beetle	True fir
44	Western pine beetle	Whitebark pine
45	Western pine beetle	Sub-alpine fir
46	Western pine beetle	True fir
47	Western pine beetle	Whitebark pine
48	Western pine beetle	Sub-alpine fir
49	Western pine beetle	True fir
50	Western pine beetle	Whitebark pine
51	Western pine beetle	Sub-alpine fir
52	Western pine beetle	True fir
53	Western pine beetle	Whitebark pine
54	Western pine beetle	Sub-alpine fir
55	Western pine beetle	True fir
56	Western pine beetle	Whitebark pine
57	Western pine beetle	Sub-alpine fir
58	Western pine beetle	True fir
59	Western pine beetle	Whitebark pine
60	Western pine beetle	Sub-alpine fir
61	Western pine beetle	True fir
62	Western pine beetle	Whitebark pine
63	Western pine beetle	Sub-alpine fir
64	Western pine beetle	True fir
65	Western pine beetle	Whitebark pine
66	Western pine beetle	Sub-alpine fir
67	Western pine beetle	True fir
68	Western pine beetle	Whitebark pine
69	Western pine beetle	Sub-alpine fir
70	Western pine beetle	True fir
71	Western pine beetle	Whitebark pine
72	Western pine beetle	Sub-alpine fir
73	Western pine beetle	True fir
74	Western pine beetle	Whitebark pine
75	Western pine beetle	Sub-alpine fir
76	Western pine beetle	True fir
77	Western pine beetle	Whitebark pine
78	Western pine beetle	Sub-alpine fir
79	Western pine beetle	True fir
80	Western pine beetle	Whitebark pine
81	Western pine beetle	Sub-alpine fir
82	Western pine beetle	True fir
83	Western pine beetle	Whitebark pine
84	Western pine beetle	Sub-alpine fir
85	Western pine beetle	True fir
86	Western pine beetle	Whitebark pine
87	Western pine beetle	Sub-alpine fir
88	Western pine beetle	True fir
89	Western pine beetle	Whitebark pine
90	Western pine beetle	Sub-alpine fir
91	Western pine beetle	True fir
92	Western pine beetle	Whitebark pine
93	Western pine beetle	Sub-alpine fir
94	Western pine beetle	True fir
95	Western pine beetle	Whitebark pine
96	Western pine beetle	Sub-alpine fir
97	Western pine beetle	True fir
98	Western pine beetle	Whitebark pine
99	Western pine beetle	Sub-alpine fir
100	Western pine beetle	True fir

USGS 100K Quad: CENTRALIA - E146122; 3E
2011 Aerial Insect and Disease Survey
 Map Scale: 1:100,000
 Date: 13 December 2011

Legend

	Defoliating Agents		Areas Not Flown
	Mortality Agents		2011 Large Fires
	Other Damage		
	WadNR Managed Lands		

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: 5A) or intensity of damage (L - Light, M - Moderate, H - Heavy).

The TOPOL 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/arcgis/rest/services/USA_Topographic

A data dictionary, digital copies of this map and Arctis 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 agent. 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. Separate 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
 Resource Protection Division
 Forest Health
 1111 Washington St. SE
 MS 47037
 Olympia, WA 98504-7037

-- 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 (WDRN) 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, WDRN 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/operations/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.