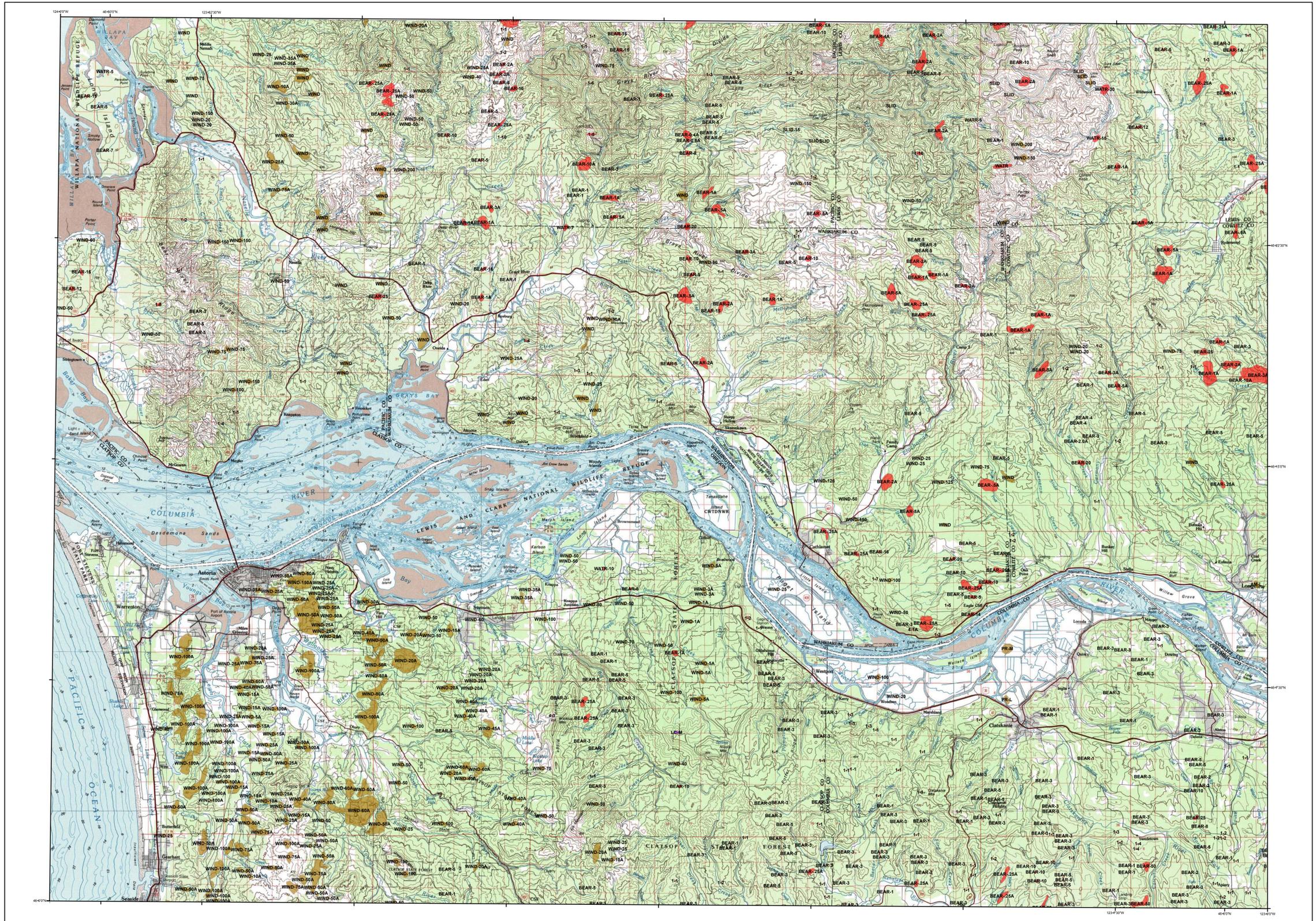


2008 Aerial Insect and Disease Survey

USGS 100K Quad: Astoria - A146123; 2F



Defoliators		Mortality Agents	
Code	Damaging Agent	Code	Damaging Agent
AS	Spruce aphid	1	Douglas-fir beetle
BB	Western blackheaded budworm	2	Douglas-fir engraver
BS	Western spruce budworm	3	Spruce beetle
BY	Sugar pine tortrix	4	Fir engraver
CH	Larch	5	Western balsam bark beetle
HL	Western hemlock looper	6	Mountain pine beetle
LG	Green striped forest looper	6A	Mountain pine beetle
LL	Larch looper	6B	Mountain pine beetle
LS	Black pine needle scale	6C	Mountain pine beetle
ML	Larch budmoth	6D	Mountain pine beetle
ND	Douglas-fir budmoth	6E	Mountain pine beetle
NL	Larch budmoth	6F	Mountain pine beetle
NT	Douglas-fir needle midge	6G	Mountain pine beetle
OL	Spruce budmoth	6H	Mountain pine beetle
OS	Needle miner	6I	Mountain pine beetle
PL	Needle miner	6J	Mountain pine beetle
PM	Needle miner	6K	Mountain pine beetle
PN	Needle miner	6L	Mountain pine beetle
PS	Needle miner	6M	Mountain pine beetle
PT	Needle miner	6N	Mountain pine beetle
PU	Needle miner	6O	Mountain pine beetle
PV	Needle miner	6P	Mountain pine beetle
PW	Needle miner	6Q	Mountain pine beetle
PX	Needle miner	6R	Mountain pine beetle
PY	Needle miner	6S	Mountain pine beetle
PZ	Needle miner	6T	Mountain pine beetle
QA	Needle miner	6U	Mountain pine beetle
QB	Needle miner	6V	Mountain pine beetle
QC	Needle miner	6W	Mountain pine beetle
QD	Needle miner	6X	Mountain pine beetle
QE	Needle miner	6Y	Mountain pine beetle
QF	Needle miner	6Z	Mountain pine beetle
QG	Needle miner	7	Lik sap
QH	Needle miner	8	Western pine beetle
QI	Needle miner	9	Western pine beetle
QJ	Needle miner	10	Western pine beetle
QK	Needle miner	11	Western pine beetle
QL	Needle miner	12	Western pine beetle
QM	Needle miner	13	Western pine beetle
QN	Needle miner	14	Western pine beetle
QO	Needle miner	15	Western pine beetle
QP	Needle miner	16	Western pine beetle
QQ	Needle miner	17	Western pine beetle
QR	Needle miner	18	Western pine beetle
QS	Needle miner	19	Western pine beetle
QT	Needle miner	20	Western pine beetle
QU	Needle miner	21	Western pine beetle
QV	Needle miner	22	Western pine beetle
QW	Needle miner	23	Western pine beetle
QX	Needle miner	24	Western pine beetle
QY	Needle miner	25	Western pine beetle
QZ	Needle miner	26	Western pine beetle
RA	Needle miner	27	Western pine beetle
RB	Needle miner	28	Western pine beetle
RC	Needle miner	29	Western pine beetle
RD	Needle miner	30	Western pine beetle
RE	Needle miner	31	Western pine beetle
RF	Needle miner	32	Western pine beetle
RG	Needle miner	33	Western pine beetle
RH	Needle miner	34	Western pine beetle
RI	Needle miner	35	Western pine beetle
RJ	Needle miner	36	Western pine beetle
RK	Needle miner	37	Western pine beetle
RL	Needle miner	38	Western pine beetle
RM	Needle miner	39	Western pine beetle
RN	Needle miner	40	Western pine beetle
RO	Needle miner	41	Western pine beetle
RP	Needle miner	42	Western pine beetle
RQ	Needle miner	43	Western pine beetle
RR	Needle miner	44	Western pine beetle
RS	Needle miner	45	Western pine beetle
RT	Needle miner	46	Western pine beetle
RU	Needle miner	47	Western pine beetle
RV	Needle miner	48	Western pine beetle
RW	Needle miner	49	Western pine beetle
RX	Needle miner	50	Western pine beetle
RY	Needle miner	51	Western pine beetle
RZ	Needle miner	52	Western pine beetle
SA	Needle miner	53	Western pine beetle
SB	Needle miner	54	Western pine beetle
SC	Needle miner	55	Western pine beetle
SD	Needle miner	56	Western pine beetle
SE	Needle miner	57	Western pine beetle
SF	Needle miner	58	Western pine beetle
SG	Needle miner	59	Western pine beetle
SH	Needle miner	60	Western pine beetle
SI	Needle miner	61	Western pine beetle
SJ	Needle miner	62	Western pine beetle
SK	Needle miner	63	Western pine beetle
SL	Needle miner	64	Western pine beetle
SM	Needle miner	65	Western pine beetle
SN	Needle miner	66	Western pine beetle
SO	Needle miner	67	Western pine beetle
SP	Needle miner	68	Western pine beetle
SQ	Needle miner	69	Western pine beetle
SR	Needle miner	70	Western pine beetle
SS	Needle miner	71	Western pine beetle
ST	Needle miner	72	Western pine beetle
SV	Needle miner	73	Western pine beetle
SW	Needle miner	74	Western pine beetle
SX	Needle miner	75	Western pine beetle
SY	Needle miner	76	Western pine beetle
SZ	Needle miner	77	Western pine beetle
TA	Needle miner	78	Western pine beetle
TB	Needle miner	79	Western pine beetle
TC	Needle miner	80	Western pine beetle
TD	Needle miner	81	Western pine beetle
TE	Needle miner	82	Western pine beetle
TF	Needle miner	83	Western pine beetle
TF	Needle miner	84	Western pine beetle
TF	Needle miner	85	Western pine beetle
TF	Needle miner	86	Western pine beetle
TF	Needle miner	87	Western pine beetle
TF	Needle miner	88	Western pine beetle
TF	Needle miner	89	Western pine beetle
TF	Needle miner	90	Western pine beetle
TF	Needle miner	91	Western pine beetle
TF	Needle miner	92	Western pine beetle
TF	Needle miner	93	Western pine beetle
TF	Needle miner	94	Western pine beetle
TF	Needle miner	95	Western pine beetle
TF	Needle miner	96	Western pine beetle
TF	Needle miner	97	Western pine beetle
TF	Needle miner	98	Western pine beetle
TF	Needle miner	99	Western pine beetle
TF	Needle miner	100	Western pine beetle

USGS 100K Quad: Astoria - A146123; 2F
2008 Aerial Insect and Disease Detection Survey
Mapscale: 1:100,000
Date: November 10, 2008

Legend

- Defoliating Agents
- Mortality Agents
- Other Damage

The map base was created with TOPOI (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/rid/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, 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:

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

OR --

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****
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.