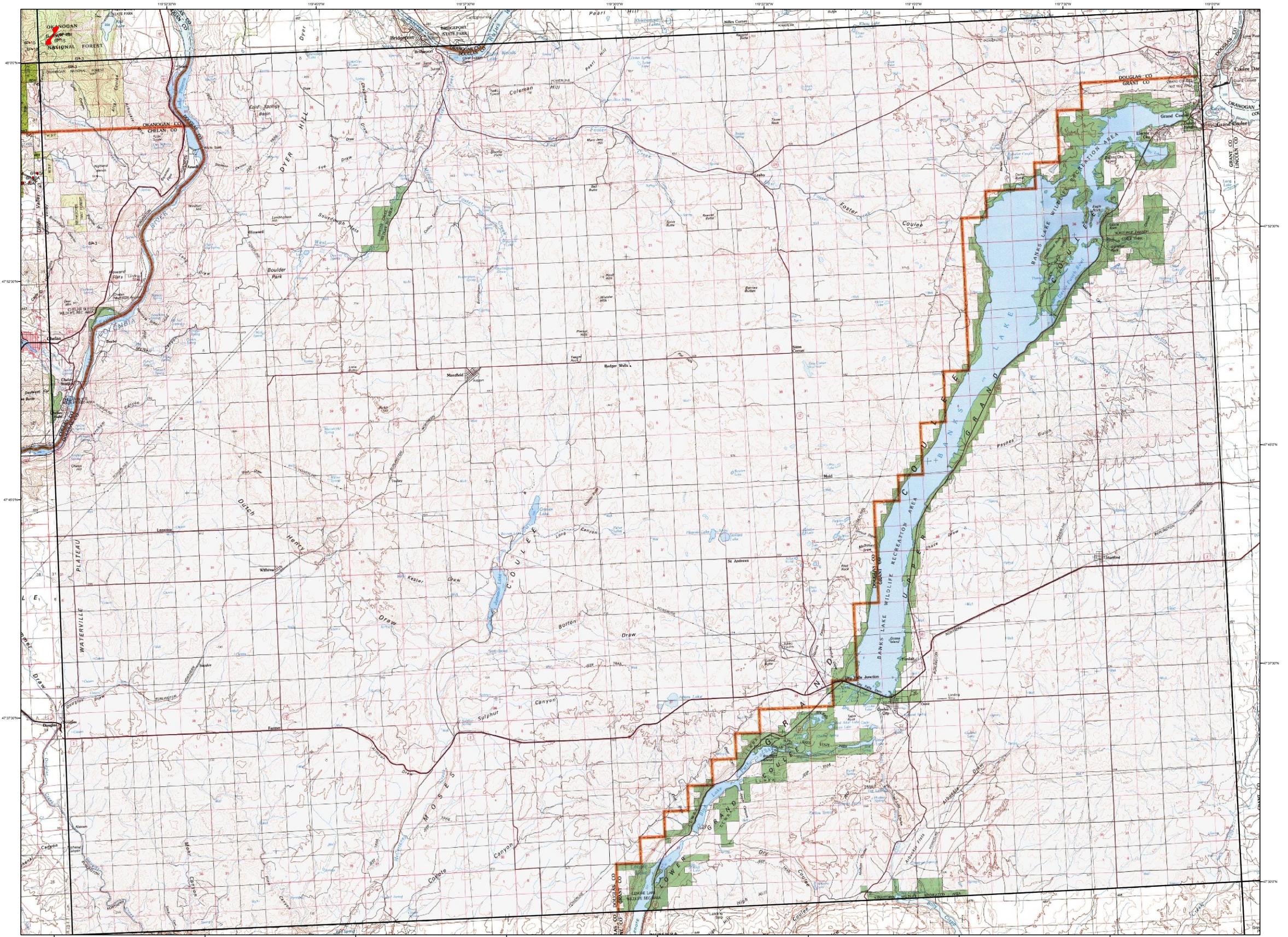


Draft 2008 Aerial Insect and Disease Survey ****Draft**** USGS 100K Quad: Banks Lake 47119-E1



Legend (For all Possible Agents)

Defoliating Agents			Mortality Agents			Other Damaging Agents		
Code	Damaging Agent	Primary Host	Code	Damaging Agent	Primary Host	Code	Damaging Agent	Primary Host
AS	Spruce aphid	Sitka spruce	1	Douglas fir beetle	Douglas fir	AB	Balsam woolly adelgid	True fir
BS	Western backheaded budworm	Hardwood, spruce, true fir	2	Douglas fir engraver	Douglas fir	AC	Colony spruce gall adelgid	Sitka spruce, Douglas fir
BU	Moose budworm	White fir	3	Spruce beetle	Spruce	AD	Leaf discoloration	Maple
BS	Spruce pine budworm	Lodgepole, ponderosa pines	4	Fraser spruce sawyer	Fraser spruce	AE	Bitter rot	True needle pines
BY	Byrrh's light/Opodermella	Ponderosa pine	5	Mountain pine beetle	Whitebark pine	AH	Dying hemlock	Hemlock
CA	Western spruce sawyer	True fir, Douglas fir, spruce	6A	Mountain pine beetle	Jeffrey pine	AI	Fire scar	All species
CH	Western hemlock looper	Western hemlock	6B	Mountain pine beetle	Koobiocore pine	AP	Gouty pitch midge	Ponderosa pine
CL	Green striped forest looper	Douglas fir, Western hemlock	6C	Mountain pine beetle	Lodgepole pine	AR	Hardwood decline	All species
LL	Larch looper	Western larch	6D	Mountain pine beetle	Ponderosa pine	AS	Arise not flown	Hardwoods
LD	Black pine needle scale	Douglas fir	6E	Mountain pine beetle	Sugar pine	AT	No damage detected	
MD	Larch budmoth	Douglas fir	6F	Mountain pine beetle	Western white pine	AW	Pacific madrone decline	Pacific madrone
ML	Larch needle midge	Western larch	6G	Mountain pine beetle	Ponderosa, lodgepole pines	AX	Leaf fall in poplars	All species
MS	Spruce budworm	Douglas fir	6H	Mountain pine beetle	Pole-situated ponderosa pine	BA	Red bark	All species
NU	Needle miner	Jeffrey pine	6I	Mountain pine beetle	Shaw-Fur tree fir	BC	UNKD	Unknown defoliation
NK	Needle miner	Koobiocore pine	6J	Mountain pine beetle	Conifer	BD	UNKD	Unknown mortality
NL	Needle miner	Lodgepole pine	6K	Mountain pine beetle	Douglas fir, ponderosa pine	BE	Water damage	All Species
NI	Needle miner	Conifer	6L	Mountain pine beetle	Pond/Octad cedar	BF	Windthrow	All Species
NS	Needle miner	Ponderosa pine	6M	Mountain pine beetle	Conifer	BN	Winter Damage	All Species
NT	Needle miner	Sugar pine	6N	Mountain pine beetle	All species			
NV	Needle miner	True fir						
NW	Western larch looper	Western white pine						
PA	Phantom hemlock looper	Hemlock, Douglas fir						
PB	Phantom hemlock looper	Ponderosa pine						
PC	Phantom hemlock looper	Hemlock, Douglas fir						
PD	Phantom hemlock looper	Ponderosa, Jeffrey pines						
PE	Phantom hemlock looper	Ponderosa, Jeffrey pines						
PF	Phantom hemlock looper	Pines						
PG	Phantom hemlock looper	Western larch						
PH	Phantom hemlock looper	Conifer						
PI	Phantom hemlock looper	Douglas fir						
PJ	Phantom hemlock looper	Lodgepole pine						
PK	Phantom hemlock looper	Jeffrey pine						
PL	Phantom hemlock looper	Koobiocore pine						
PM	Phantom hemlock looper	Lodgepole pine						
PN	Phantom hemlock looper	Ponderosa pine						
PO	Phantom hemlock looper	Western white pine						
PP	Phantom hemlock looper	Shaw-Fur tree fir						
PQ	Phantom hemlock looper	Conifer						
PR	Phantom hemlock looper	Douglas fir, ponderosa pine						
PS	Phantom hemlock looper	Pond/Octad cedar						
PT	Phantom hemlock looper	Conifer						
PV	Phantom hemlock looper	All species						
PW	Phantom hemlock looper							
PX	Phantom hemlock looper							
PY	Phantom hemlock looper							
PZ	Phantom hemlock looper							
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****Draft****
USGS 100K Quad: Banks Lake 47119-E1
Aerial Insect and Disease Survey
Mapscale: 1:100,000
Monday, September 15, 2008



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.



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

For More Information and Inquiries:

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http://www.dnr.wa.gov/hdocs/rp/forhealth/forest_health@wadnr.gov

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information@odf.state.or.us

USDA Forest Service:
<http://www.fs.fed.us/r6/nr/fid/as/kspengel@fs.fed.us>

*****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 the map for purposes other than those for which it was intended may yield inaccurate or misleading results.

Coding Convention:
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-M1+2014-4A**). The color of the polygon is dictated by the first agent recorded.
Map base data created with TOPOI, Copyright 2001, National Geographic, All rights Reserved.

