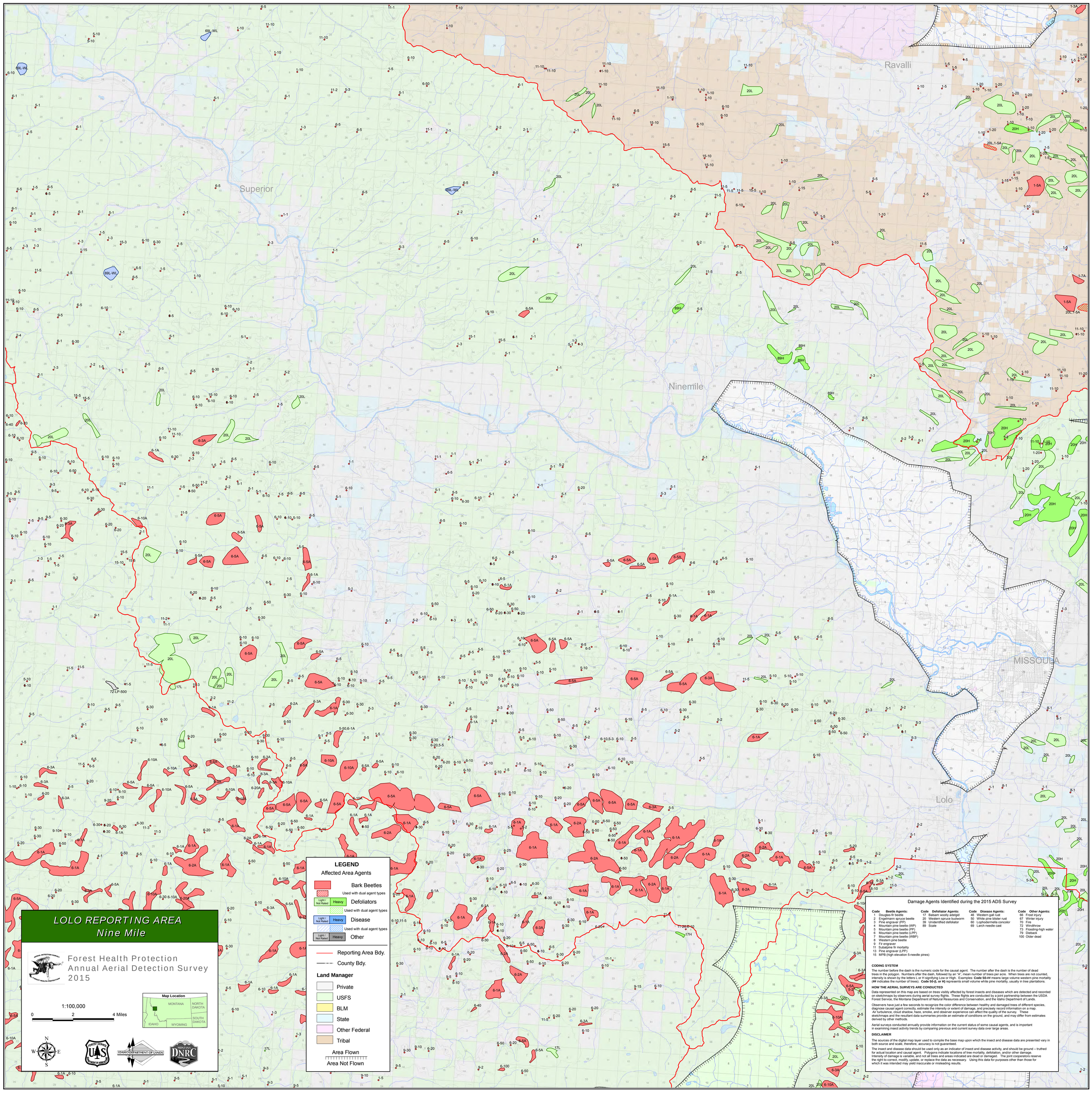
Superior
Ravalli
Ninemile
MISSOULA
Lolo
LOLO REPORTING AREA
Nine Mile
Forest Health Protection
Annual Aerial Detection Survey
2015
1:100,000
0
2
4 Miles
Map Location
MONTANA
NORTH DAKOTA
SOUTH DAKOTA
IDAHO
WYOMING
N
W
E
S
IDAHO DEPARTMENT OF LANDS
MONTANA DNRC
LEGEND
Affected Area Agents
Bark Beetles
Used with dual agent types
Light / Not Rated
Heavy
Defoliators
Used with dual agent types
Light / Not Rated
Heavy
Disease
Used with dual agent types
Light / Not Rated
Heavy
Other
Reporting Area Bdy.
County Bdy.
Land Manager
Private
USFS
BLM
State
Other Federal
Tribal
Area Flown
Area Not Flown
Damage Agents Identified during the 2015 ADS Survey
Code Beetle Agents:
1 Douglas-fir beetle
2 Engelmann spruce beetle
3 Pine engraver (PP)
4 Mountain pine beetle (WP)
5 Mountain pine beetle (PP)
6 Mountain pine beetle (LPP)
7 Mountain pine beetle (WBP)
8 Western pine beetle
9 Fir engraver
11 Subalpine fir mortality
13 Pine engraver (LPP)
15 MPB (high elevation 5-needle pines)
Code Defoliator Agents:
17 Balsam woolly adelgid
20 Western spruce budworm
39 Unidentified defoliator
89 Scale
Code Disease Agents:
46 Western gall rust
50 White pine blister rust
60 Lophodermella concolor
69 Larch needle cast
Code Other Agents:
66 Frost injury
67 Winter injury
70 Fire
72 Windthrow
73 Flooding-high water
79 Dieback
100 Older dead
CODING SYSTEM
The number before the dash is the numeric code for the causal agent. The number after the dash is the number of dead trees in the polygon. Numbers after the dash, followed by an "A", mean number of trees per acre. When trees are not counted, intensity is shown by the letters L or H signifying Low or High. Examples: Code 50-## means large volume western pine mortality (## indicates the number of trees). Code 50-(L or H) represents small volume white pine mortality, usually in tree plantations.
HOW THE AERIAL SURVEYS ARE CONDUCTED
Data represented on this map are based on trees visibly affected by forest insects and diseases which are detected and recorded on sketchmaps by observers during aerial survey flights. These flights are conducted by a joint partnership between the USDA Forest Service, the Montana Department of Natural Resources and Conservation, and the Idaho Department of Lands.
Observers have just a few seconds to recognize the color difference between healthy and damaged trees of different species, diagnose causal agent correctly, estimate the intensity or extent of damage, and precisely record information on a map. Air turbulence, cloud shadow, haze, smoke, and observer experience can affect the quality of the survey. These sketchmaps and the resultant data summaries provide an estimate of conditions on the ground, and may differ from estimates derived by other methods.
Aerial surveys conducted annually provide information on the current status of some causal agents, and is important in examining insect activity trends by comparing previous and current survey data over large areas.
DISCLAIMER
The sources of the digital map layer used to compile the base map upon which the insect and disease data are presented vary in both source and scale, therefore, accuracy is not guaranteed.
The insect and disease data should be used only as an indicator of insect and disease activity, and should be ground – truthed for actual location and causal agent. Polygons indicate locations of tree mortality, defoliation, and/or other damage. Intensity of damage is variable, and not all trees and areas indicated are dead or damaged. The joint cooperators reserve the right to correct, modify, update, or replace the data as necessary. Using this data for purposes other than those for which it was intended may yield inaccurate or misleading results.