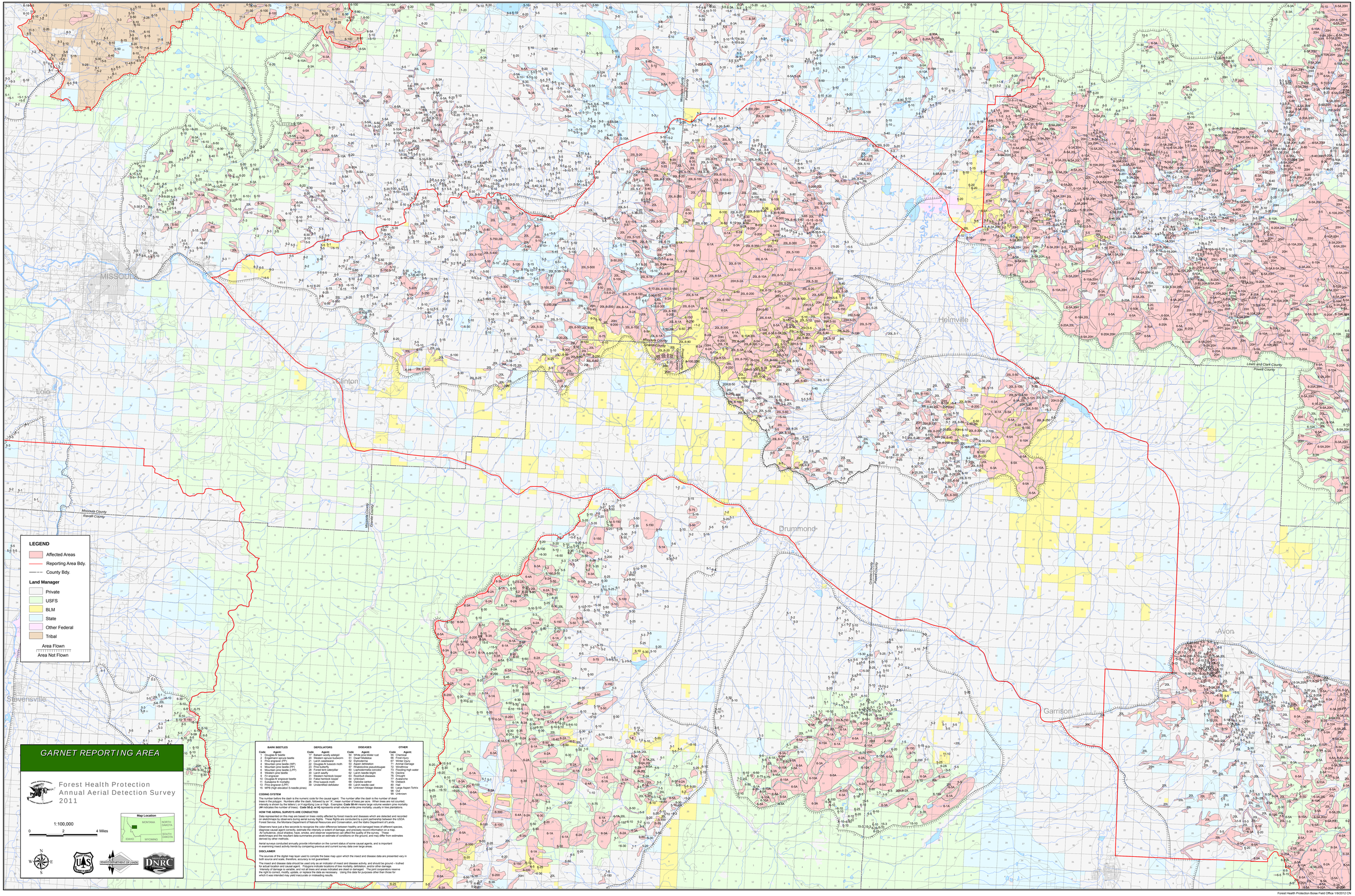

BARK BEETLES

Code	Agent
1	Douglas-fir beetle
2	Western pine beetle
3	Pine engraver (PP)
4	Mountain pine beetle (WP)
5	Mountain pine beetle (PP)
6	Mountain pine beetle (LPP)
7	Western balsam bark beetle
8	Fir engraver beetle
10	Douglas-fir engraver beetle
11	Sculptured fir mortality
13	Pine engraver (LPP)
15	MPB (high elevation 5-needle pines)

DEFOLIATORS

Code	Agent
17	Balsam woolly adelgid
20	Douglas-fir tussock moth
21	Larch casebearer
22	Douglas-fir tussock moth
23	Pine butterfly
28	Forest tent caterpillar
29	Western spruce budworm
31	Western hemlock looper
33	False hemlock looper
36	Pine tussock moth
39	Unidentified defoliator

DISEASES

Code	Agent
50	White pine blister rust
51	Douglas-fir dwarf mistletoe
52	Elytrodermia
53	Aspen defoliation
57	Rhabdocline pseudotsugae
60	Laphodermella concolor
61	Lodgepole needle cast
63	Root/butt diseases
64	Unknown
68	Diplodia canker
69	Larch needle cast
84	Unknown foliage disease

OTHER

Code	Agent
55	Chemical
56	Fire damage
67	Winter injury
71	Animal Damage
72	Windthrow
73	Flooding high water
74	Frost heave
76	Drought
77	Avalanche
79	Dieback
80	Hail
81	Large Aspen Tortrix
98	Out
99	Unknown

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, numbers after the dash are the number of acres affected, followed by a "H" if high. Examples: **Code 50-H** means large volume western pine mortality (**H**ighest), **Code 50-2**, or **-10**, 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 during aerial sketch mapping surveys conducted from fixed wing aircraft in daylight 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 factors affect the data. Aerial sketch mapping 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 before any management decisions are made. The information depicted on this map is based on the best estimate of the 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.

Forest Health Protection Boise Field Office 1/9/2012 CN