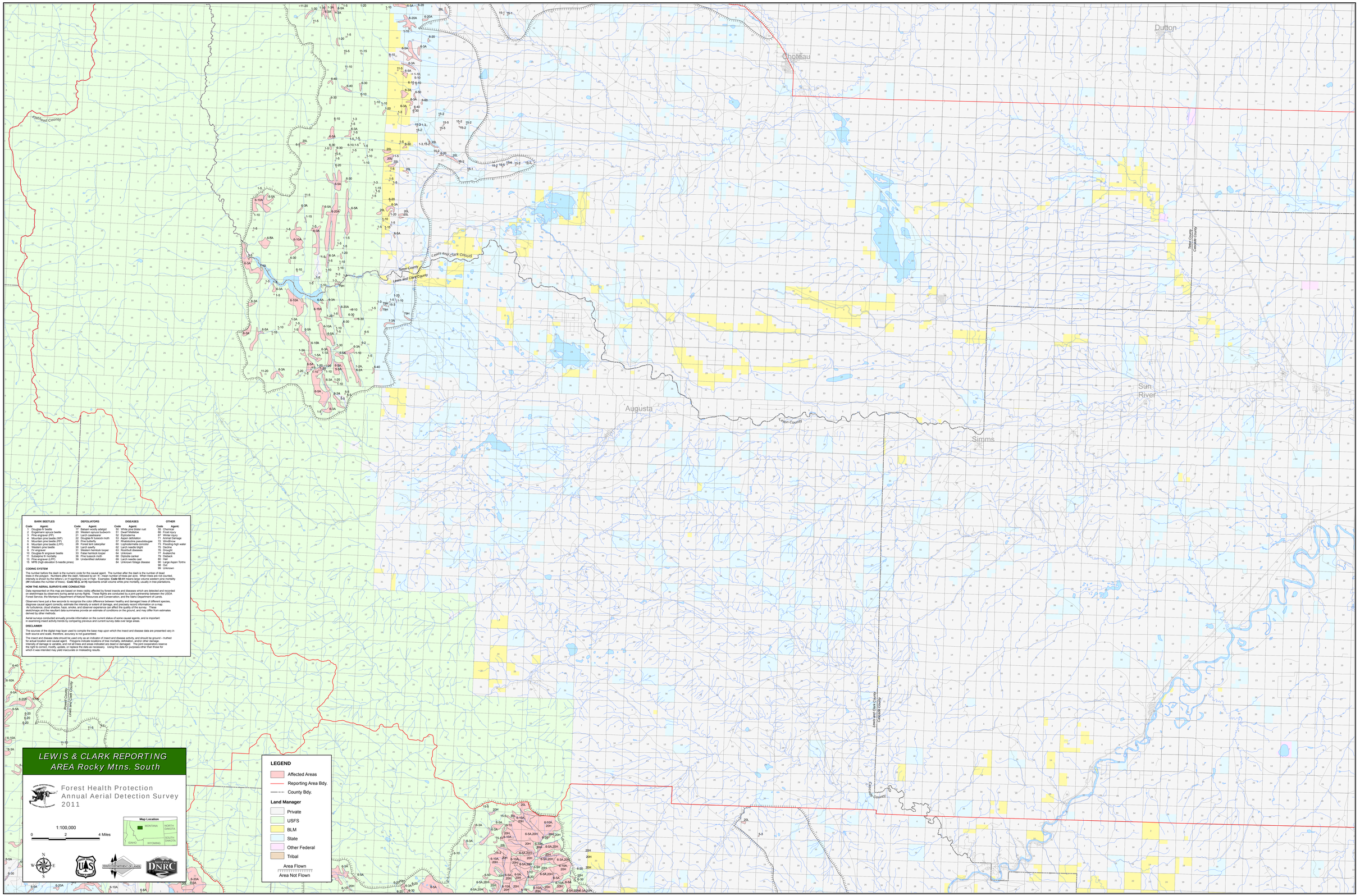

BARK BEETLES

Code	Agent:
1	Douglas-fir beetle
2	Western pine beetle
3	Pine engraver (PR)
4	Mountain pine beetle (WP)
5	Ponderosa pine beetle (PP)
6	Mountain pine beetle (LPP)
8	Western pine beetle
9	Fir engraver
10	Douglas-fir engraver beetle
12	Spruce beetle (Engelm)
13	Pine engraver (LPP)
15	MPB (high elevation 5-needle pines)

DEFOLIATORS

Code	Agent:
17	Balsam woolly adelgid
18	Douglas-fir tussock moth
21	Larch casebearer
22	Douglas-fir tussock moth
23	Spruce budworm
28	Forest tent caterpillar
30	Larch sawfly
31	Western hemlock looper
33	False hemlock looper
37	Douglas-fir beetle
39	Unidentified defoliator

DISEASES

Code	Agent:
50	White pine blister rust
51	Fir broom rust
52	Dyotemma
53	Aspen defoliation
59	Ponderosa pine dwarfmistletoe
60	Lophodermella concolor
62	Larch needle blight
63	Rootbuff diseases
64	Unknown
67	Larch needle cast
69	Larch needle cast
84	Unknown foliage disease

OTHER

Code	Agent:
55	Chemical
66	Fire injury
67	Winter injury
71	Animal Damage
72	Weather
73	Flooding-high water
75	Decline
76	Drought
77	Avalanche
78	Hail-wind
80	Hail
90	Large Aspen Tortrix
98	Dust
99	Unknown

CODING SYSTEM

Where applicable, the dash is the numeric code for the causal agent. The number after the dash is the number of affected 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-H** means large volume western pine mortality (**H**H indicates the number of trees). **Code 50-L** or **H**5 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 limitations mean that current 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 – trutned 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.

Forest Health Protection Boise Field Office 1/5/2012 TJ