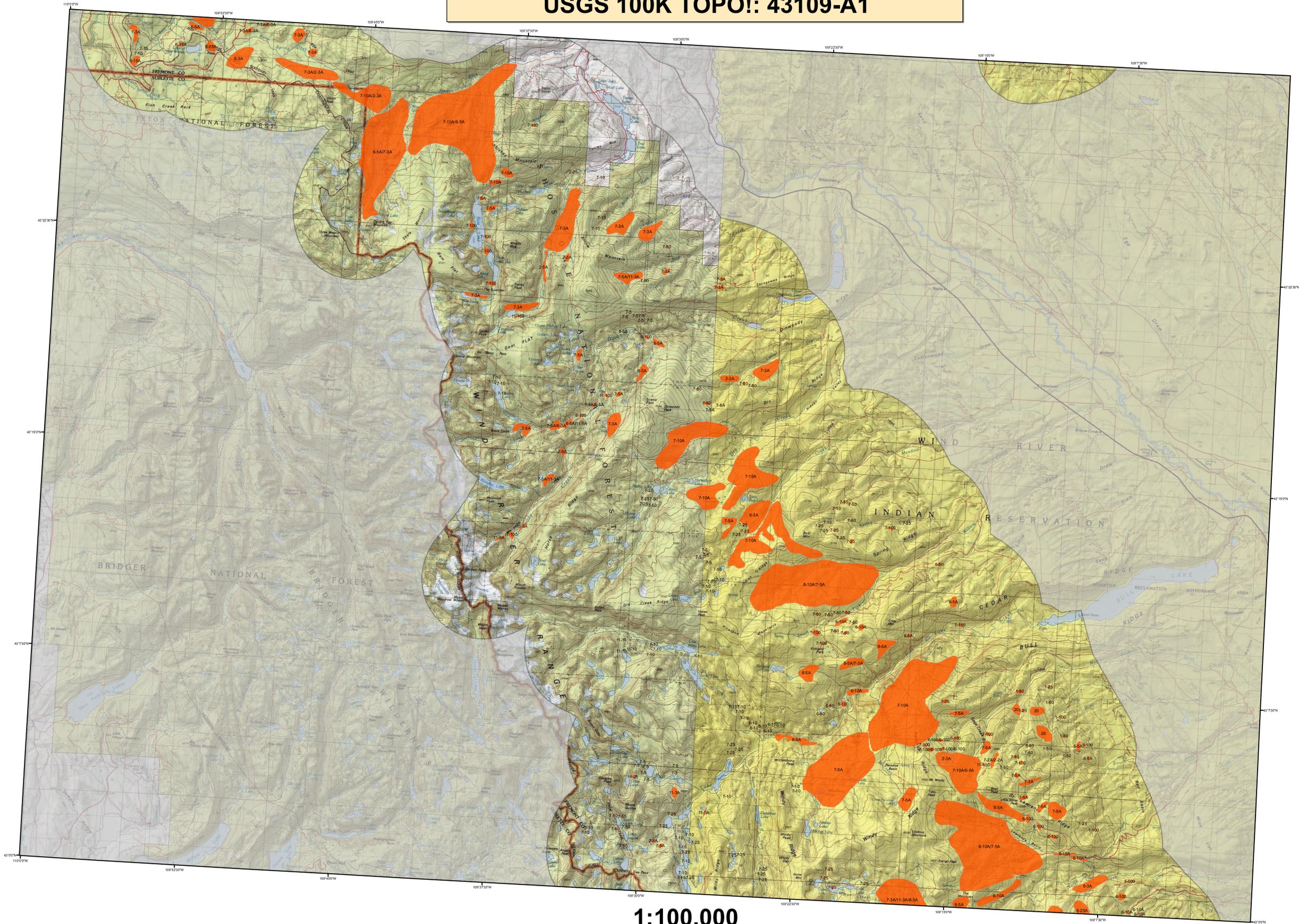


2011 Aerial Insect and Disease Survey Gannett Peak, Wyoming USGS 100K TOPO!: 43109-A1

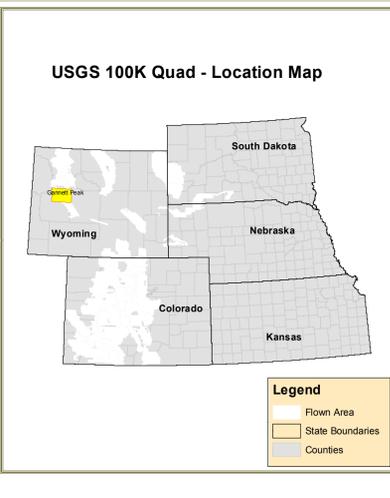


1:100,000

Legend

Use of the Number System
Example: 5-25 = The first number before the dash is the causal agent code. The number after the dash is the number of dead "faded" trees in the polygon or point. When recent dead trees are not counted, an intensity code of L=light, M=moderate, and H=high may be used after the causal agent code. Periodically trees per acre estimates are used after the causal agent code instead of number of dead "faded" trees (or an intensity code). For example: 5-12A = The first number before the dash is the causal agent code. The number after the dash is an estimation of the number of dead "faded" trees in the polygon per acre. In this case it would be an estimation that, on the average, one tree per every two acres would be a dead "faded" tree. In another example: 5-3A = that on the average, an estimated three trees per acre are dead "faded" trees. A "T" is used as a separator when a point polygon has more than one causal agent code.

Code	Causal Agent	Primary Host	Code	Causal Agent	Primary Host
1	Douglas fir beetle	Douglas fir	49	Atypical	Cottonwood/Poplar
2	Engelmann spruce beetle	Engelmann spruce	50	White pine blister rust	Softwoods
3	Blue spruce tip	Blue spruce	51	Dwarf mistletoe	Softwoods
4	Mountain pine beetle	Ponderosa pine	52	Elytromera	All Tree Species
5	Mountain pine beetle	Lodgepole pine	53	Includes #65, #66 & #68	All Tree Species
6	Western pine beetle	Ponderosa pine	54	Air pollution	All Tree Species
7	Fire engraver	White fir	55	Chemical damage	All Tree Species
8	Fire engraver	Douglas fir	56	Lophodermium pinastri	Softwoods
9	Douglas fir engraver beetle	Subalpine fir	57	Rhododendron pseudotsugae	Softwoods
10	Western balsam bark beetle	Softwoods	58	Lophodermium arcutum	Softwoods
11	Western balsam bark beetle	Softwoods	59	Lecanora acicola	Softwoods
12	Unidentified bark beetle	Lodgepole pine	60	Lophodermium concolor	Softwoods
13	Pine engraver	Lodgepole pine	61	Dothistroma pini	Softwoods
14	Pine engraver	Ponderosa pine	62	Needle cast (Hypodemastix)	Softwoods
15	Ponderosa pine needle miner	Ponderosa pine	63	Root rot	All Tree Species
16	Lodgepole pine needle miner	Jack pine	64	Unidentified disease	Softwoods
17	Jack pine budworm	Douglas fir	65	Winter damage light	Cottonwood/Poplar
18	Spruce budworm, light defol.	Douglas fir	66	Winter damage medium	All Tree Species
19	Spruce budworm, medium defol.	Douglas fir	67	Winter damage heavy	All Tree Species
20	Spruce budworm, heavy defol.	Douglas fir	68	Dipodia	Softwoods
21	Douglas fir bark beetle	Douglas fir	69	Pinon bark stain	All Tree Species
22	Pine looper	Ponderosa pine	70	Fire	All Tree Species
23	Pine butterfly	Ponderosa pine	71	Porcupine	Softwoods
24	Pine looper	Ponderosa pine	72	Windthrow	All Tree Species
25	Tent caterpillar	Hardwoods	73	High water damage	All Tree Species
26	Leaf beetles	Hardwoods	74	Aspen decline	All Tree Species
27	Aspen defoliation	Quaking aspen	75	Aspen decline-multiple agents	All Tree Species
28	Oak leaf roller	Hardwoods	76	Pinon pine mortality	Common Pinon
29	Pine needle-shaft miner	Ponderosa pine	77	Juniper mortality (unknown agents)	Juniper
30	Pine sawflies	Ponderosa pine	78	Cambial oak	Cambial Oak
31	Pine bark moth	Ponderosa pine	79	Liner mortality (unknown agents)	All Tree Species
32	Carionworms	Hardwoods	80	Hill damage	Unknown
33	Unidentified defolator	All Tree Species	81	Unknown polygon	Common Pinon
34	Cottonwood Decline/Mortality	Cottonwood	100	Unid. dead cottonwood	Lodgepole Pine
35	Retrosession anemum (Fomes anemus)	Softwoods	101	road salt lip	Lodgepole Pine
36	Amelaria setyae (Amelaria melles)	Softwoods	102	pinon mistletoe	Ponderosa Pine
37	Thromopsis	All Tree Species	103	dipodia blight	Ponderosa Pine
38	Cystospora	Unknown	104	drought killed narrow leaf cottonwood	Narrowleaf Cottonwood
39	Western gall rust	Unknown			
40	Dendroica rust	Unknown			



How Aerial Surveys Are Conducted

Data represented on this map are based on aerial observations manually recorded onto a map. This procedure is considered both an art form and a form of scientific data collection, and is highly subjective. An observer only has 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 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.

Aerial surveys provide information on the current status for many causal agents, and are 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. Aerial surveys can be thought of as the first stage in a multi-stage sampling design. Other remote sensing approaches, including aerial photography, electro-optical sensors, and specially designed aerial surveys with modified flight patterns, can be used to more accurately delineate the extent and severity of a particular disturbance agent. The preceding methods are often more costly than overview surveys, and are generally reserved to address situations of sufficient environmental, economic, or political importance.

Map Created December 1 2011
Projection: UTM NAD83 Zone 13
Author: J. Ross, USDA Forest Service

A data dictionary and digital copies of this map and the insect and disease data are available at: <http://www.fs.fed.us/r2/resources/fhm/aerialsurveys/>

DIRECT ALL INQUIRIES TO:

Wyoming State Forestry Division
 1100 West 22nd Street
 Cheyenne, Wyoming 82002

USDA Forest Service, Region 2
 Renewable Resources
 Forest Health Management
 PO Box 25127
 Lakewood, Colorado 80225

DISCLAIMER

Forest Health Protection (FHP) and its partners strive to maintain an accurate Aerial Detection Survey (ADS) Dataset, but due to the conditions under which the data are collected, FHP and its partners shall not be held responsible for missing or inaccurate data. ADS are not intended to replace more specific information. An accuracy assessment has not been done for this dataset; however, ground checks are completed in accordance with local and national guidelines <http://www.fs.fed.us/foresthealth/avation/qualityassurance.shtml>. Maps and data may be updated without notice. Please cite "USDA Forest Service, Forest Health Protection and its partners" as the source of this data in maps and publications.

Due to the nature of aerial surveys, the data on this map only provide rough estimates of location, intensity and the resulting trend information for agents detectable from the air. Many of the most destructive diseases are not represented on this map because these agents are not detectable from aerial surveys. The data presented on this map should only be used as a partial indicator of insect and disease activity, and should be validated on the ground for actual location and causal agent. Shaded areas show locations where tree mortality or defoliation were apparent from the air. Intensity of damage is variable and not all trees in shaded areas are dead or defoliated.

The insect and disease data represented on this map are available digitally from the USDA Forest Service, Region Two Forest Health Management group. The cooperators reserve the right to correct, update, modify or replace GIS products. Using this map for purposes other than those for which it was intended may yield inaccurate or misleading results.