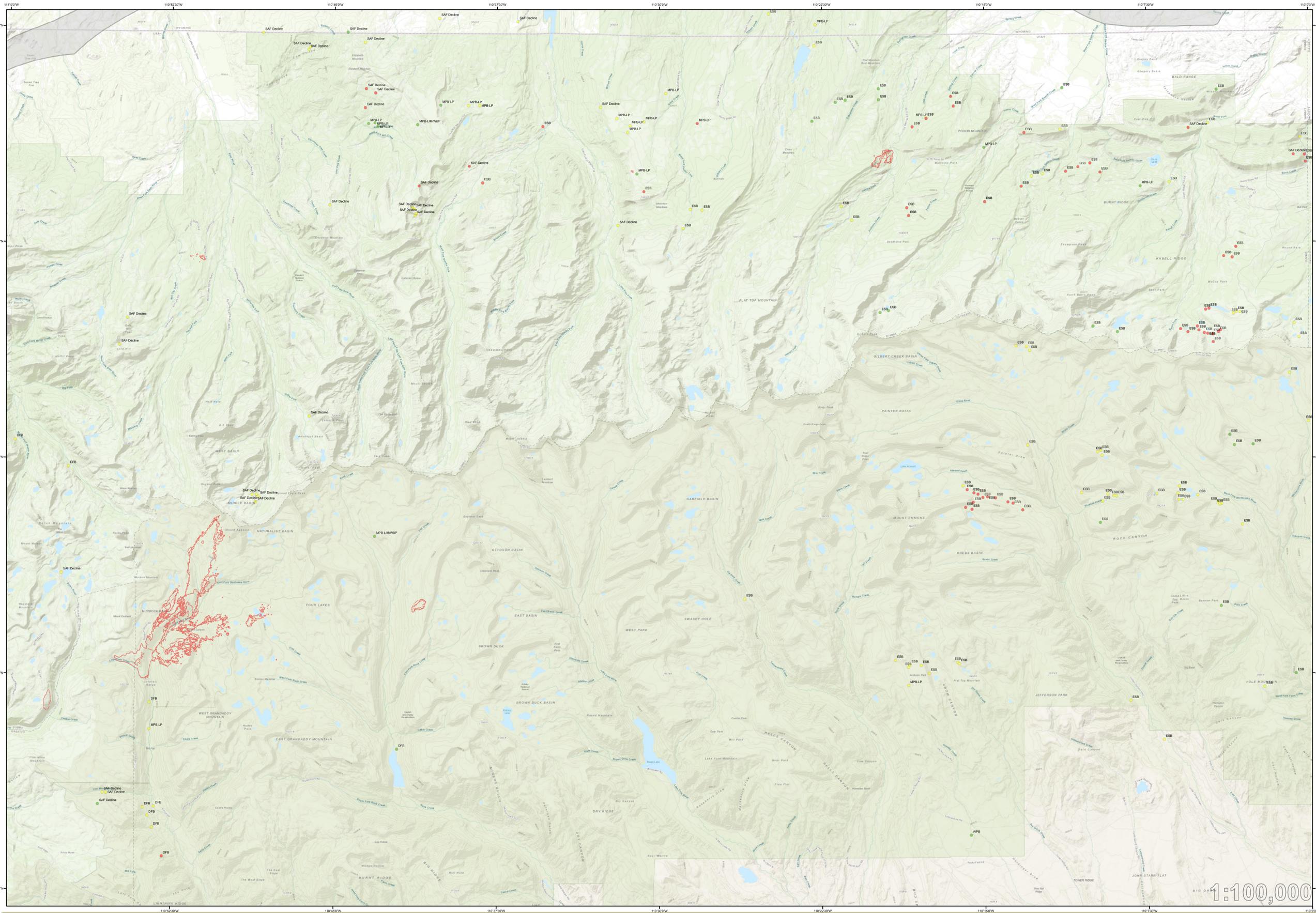


# 2019 Aerial Insect and Disease Survey Kings Peak, Utah



### Legend

**Damage Points**  
Number of Trees

- 1 - 5
- 6 - 30
- > 30

**Damage Polygons**  
Percent Affected

- Light (1-10%)
- Moderate (11-50%)
- Severe (>50%)
- Not flown
- Fire Perimeters (2016 - 2018)

**CODING SYSTEM**  
Codes have two parts: the first represents the causal agent and the second represents the host. If needed, the two-part code is followed by an 'M' or 'H' to indicate severity of the activity. Data is color coded to represent the intensity of activity as seen in the legend.

Examples:  
MPB-LPP represents mountain pine beetle in Lodgepole pine.  
WSB-DF/SF-AH represents western spruce budworm infestation in subalpine fir/Douglas-fir mix with >75% of leaves defoliated.

Causal Agent Codes		Host Codes	
ASP Defol	Aspen Defoliation	ASP	Aspen
ASP Diebck	Aspen Dieback	COT	Cottonwood
ASP Mort	Aspen Mortality	DF	Douglas-fir
Avnch	Avalanche	GF	Grand fir
Drght	Drought	HW	Hardwood
Flood	Flooding-high water	JEFF	Jeffrey pine
Lnd Slid	Land Slide	JUN	Juniper
		LIM/WBP	Limber pine / Whitebark pine
		LP	Lodgepole pine
<b>Bark Beetles</b>		QAK	Quak
DFB	Douglas-fir beetle	PP	Ponderosa pine
ESB	Engelmann Spruce beetle	PY	Pinon
FEB	Fir engraver beetle	RF	Red fir
IPS	Pine engraver beetle	SAF	Subalpine fir
JEFF	Jeffrey Pine Beetle	WF	Western larch
MPB	Mountain pine beetle	WIL	Willow
RndHd PB	Roundhead Pine Beetle		
WBP	Western spruce beetle		
<b>Defoliators</b>		<b>Miscellaneous</b>	
BWA	Balsam woolly adelgid	Defol	Defoliation
DFTM	Douglas-fir Tussock Moth	M	Defoliation - Moderate (50-75% of leaves defoliated)
FCW	Fall Cankerworm	H	Defoliation - Heavy (>75% of leaves defoliated)
FTC	Forest Tent Caterpillar	Disc	Discoloration
Manosina	Manosina	Flag	Flagging
Satin_Moth	Satin Moth	INV	Nevada
WSB	Western Spruce Budworm	Rust	Rust
WtentCat	Western Tent Caterpillar	TK	Top kill
		UT	Utah
<b>Disease</b>			
Blk Pleaf	Black Pineleaf		
Lopho	Lophodermella needle cast (LPP)		
Sd	Scale		
SAF Decl	Sub Alpine Fir Decline		
WPSB	White pine blister rust		

### Region 4 - Location Map

USGS 100K Quad  
USGS 100K TOPOI: 40110-E1  
Kings Peak, Utah

**Legend**

- Counties
- Flown areas
- R4 Boundary

### HOW THE AERIAL SURVEYS ARE CONDUCTED

Data represented on this map are based on trees visibly affected by forest insects, diseases and abiotic factors that are detected and recorded by observers during aerial survey flights. These flights are conducted by a joint partnership between the USDA Forest Service and state cooperators.

Observers have just a few seconds to recognize characteristic signatures of healthy and damaged trees of different species, correctly diagnose damage causal agents, estimate the intensity or extent of damage, and precisely record information on a digital sketch mapping platform. 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.

Annual aerial surveys provide important information on the current status of detected causal agents and can be used to determine trends in damage levels over time by comparing previous and current survey data over large areas.

**Map Created: 2/5/2020**  
**Projection: UTM NAD83 Zone 12T**  
**Author: R1/R4 FHP GIS, USDA Forest Service**

### DIRECT ALL INQUIRIES TO:

**USDA FOREST SERVICE REGION 1**  
State and Private Forestry  
Forest Health Protection  
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Missoula, MT 59804

**USDA FOREST SERVICE REGION 4**  
State and Private Forestry  
Forest Health Protection  
1249 S. Vinnell Way, Suite 200  
Boise, ID 83709

**DISCLAIMER**

The digital map layer 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.