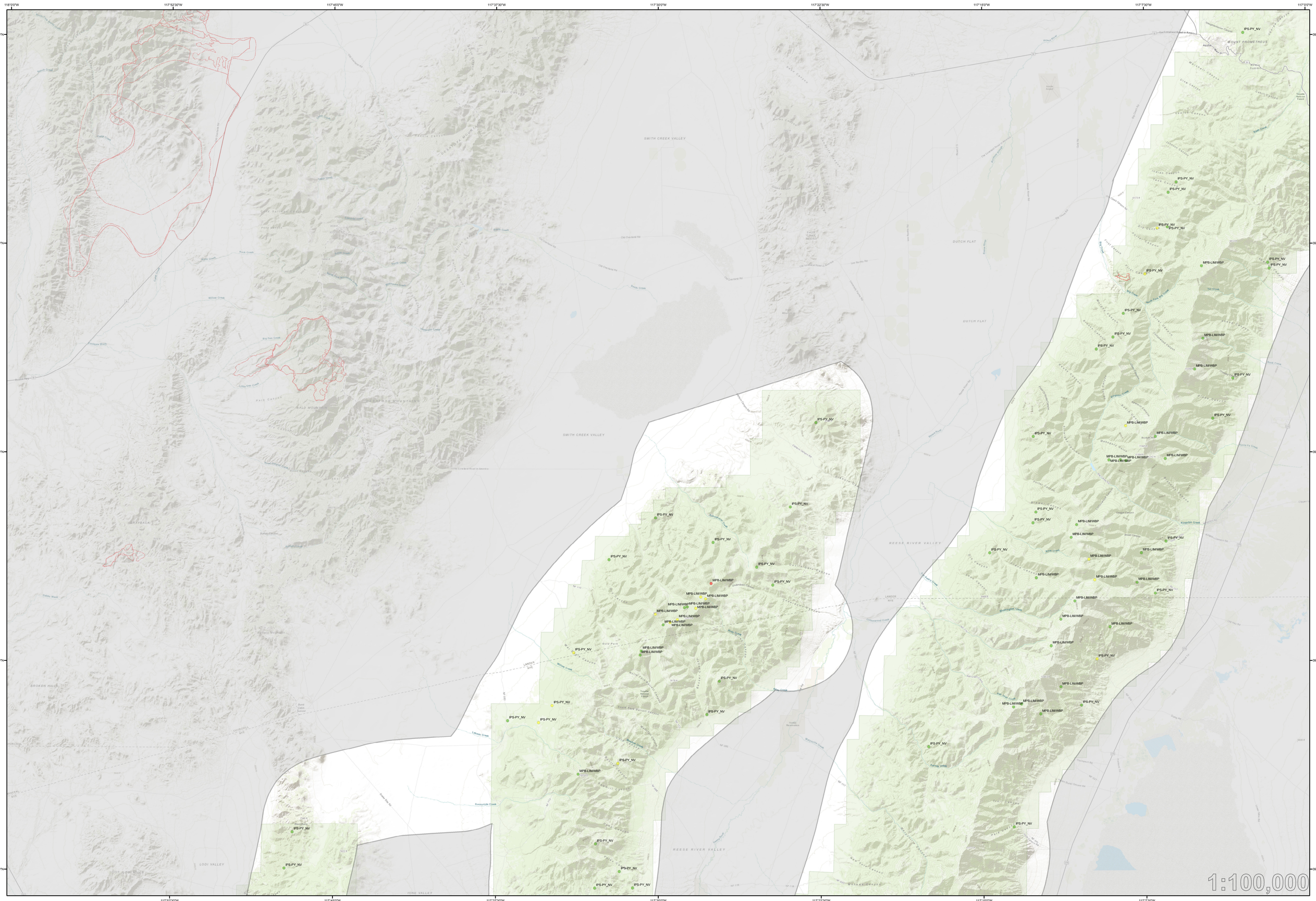
# 2019 Aerial Insect and Disease Survey
# Smith Creek Valley, Nevada




## 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/SAF-H** represents western spruce budworm infestation in subalpine fir/Douglas-fir mix with >75% of leaves defoliated.

| Causal Agent Codes | |
|---|---|
| **Abiotic** | |
| **ASP Defol** | Aspen Defoliation |
| **ASP Dieback** | Aspen Dieback |
| **ASP Mort** | Aspen Mortality |
| **Avalnch** | Avalanche |
| **Drght** | Drought |
| **Flood** | Flooding-high water |
| **Lnd Sld** | Land Slide |
| **Bark Beetles** | |
| **DFB** | Douglas-fir beetle |
| **ESB** | Engelmann Spruce beetle |
| **FEB** | Fir engraver beetle |
| **IPS** | Pine engraver beetle |
| **Jeffrey PB** | Jeffrey Pine Beetle |
| **MPB** | Mountain pine beetle |
| **RndHd PB** | Roundheaded Pine Beetle |
| **WPB** | Western pine beetle |
| **Defoliators** | |
| **BWA** | Balsam woolly adelgid |
| **DFTM** | Douglas-fir Tussock Moth |
| **FCW** | Fall Cankerworm |
| **FTC** | Forest Tent Caterpillar |
| **Marssonina** | Marssonina |
| **Satin_Moth** | Satin Moth |
| **WSB** | Western Spruce Budworm |
| **WTentCat** | Western Tent Caterpillar |
| **Disease** | |
| **Blck Pleaf** | Black Pinleaf |
| **Lophо** | Lophodermella needle cast (LPP) |
| **Scl** | Scale |
| **SAF Decl** | Sub Alpine Fir Decline |
| **WPBR** | White pine blister rust |

| Host Codes | |
|---|---|
| **ASP** | Aspen |
| **COT** | Cottonwood |
| **DF** | Douglas-fir |
| **GF** | Grand fir |
| **HWD** | Hardwood |
| **Jeffrey P** | Jeffrey pine |
| **JUN** | Juniper |
| **LIM/WBP** | Limber pine / Whitebark pine |
| **LP** | Lodgepole pine |
| **OAK** | Oak |
| **PP** | Ponderosa pine |
| **PY** | Pinyon |
| **RF** | Red fir |
| **SAF** | Subalpine fir |
| **WF** | Western larch |
| **WIL** | Willow |
| **Miscellaneous** | |
| **Defol** | Defoliation |
| **M** | Defoliation - Moderate ( 50-75% of leaves defoliated) |
| **H** | Defoliation - Heavy ( > 75% of leaves defoliated) |
| **Disc** | Discoloation |
| **Flag** | Flagging |
| **NV** | Nevada |
| **Rust** | Rust |
| **TpK** | Top kill |
| **UT** | Utah |

## Region 4 - Location Map
## USGS 100K Quad
***USGS 100K TOPO!: 39117-A1***
***Smith Creek Valley, Nevada***

**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 11S**
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## DIRECT ALL INQUIRIES TO:


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### 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.