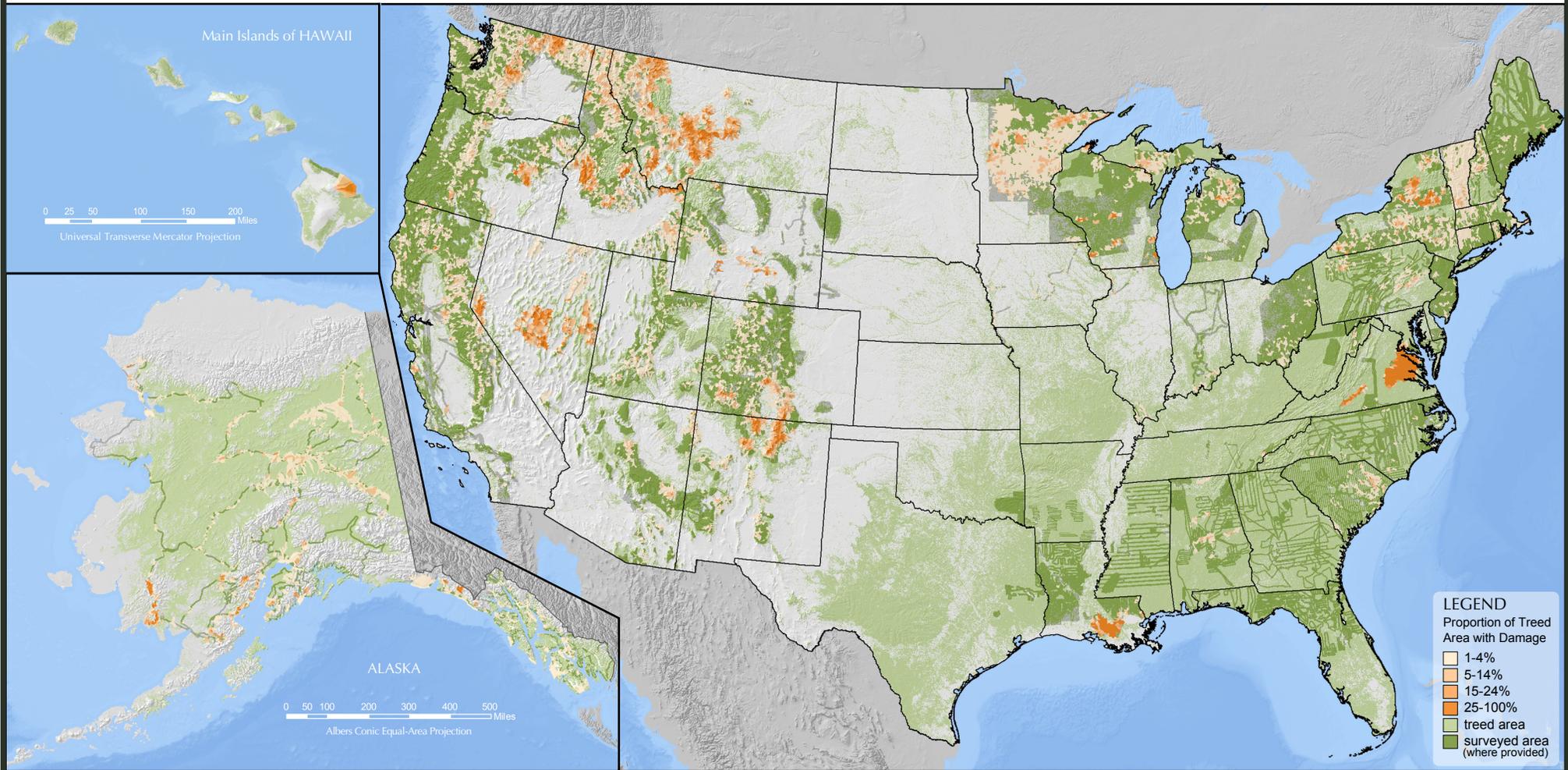




# FOREST HEALTH PROTECTION

## 2012 Damage\* Detection Survey by Subwatersheds (6th Level HUCs)

Approximate Footprint Acres with Other Tree Damage: 11 million\*\*



\*Damage types include defoliation, discoloration, dieback, topkill, branch breakage, main stem broken/uprooted and branch flagging.

\*\*Acres are summarized from current year's observations only and are not cumulative. The "footprint" total represents the affected area on the ground with no multiple counting of acres affected by multiple mortality agents. July 2013

# 2012 Forest Health Damage Detection Surveys – Acres with Other\* Damage

## Detection and Aerial Survey Overview

Aerial detection surveys are an efficient and economical method of collecting and reporting data on forest insects, diseases, and other disturbances. Aerial sketchmapping is the primary data-collection method: data are collected by aerial observers from the Forest Service and other cooperating state and federal agencies. Areas of damage are captured as polygons on hardcopy 1:100,000 scale maps or through a Digital Aerial Sketchmapping System (D-ASM). The D-ASM uses a moving map display, GPS tracking, and touch screen technology to create a digital version of the data on-the-fly in the aircraft. Regardless of the method, it is important to note that sketchmapping is a valuable but subjective endeavor with inherent spatial and attribute inaccuracies.

Polygons are coded to identify the damage agent, damage type, and other attributes. In large areas where damage is widely scattered, other attributes may be used to capture the pattern of damage. In all cases, damage may be continuous or discontinuous; therefore, acres are reported as acres "with" damage.

\*Damage types include defoliation, discoloration, dieback, topkill, branch breakage, main stem broken/uprooted and branch flagging.

### Resources:

A Guide to Conducting Aerial Sketchmapping Surveys. McConnell, T.J., Johnson, E.W., and Burns, B., USDA Forest Service Publication, FHTET 00-01, March 2000.

Digital Aerial Sketchmapping. Schrader-Patton, C., USDA Forest Service Remote Sensing Application Center publication, RSAC-LSP-3400-RPT2, May 2002.

Aerial Survey Geographic Information System Handbook, November 2005, and Forest Health Monitoring Aerial Survey Standards, October 1999, online at: [http://www.fs.fed.us/foresthealth/technology/ads\\_standards.shtml](http://www.fs.fed.us/foresthealth/technology/ads_standards.shtml).

## Summary for 2012:

Footprint acres with other\* tree damage: 11,000,000

*Note: Acres are summarized from current year's observations only and are not cumulative. The "footprint" total represents the affected area on the ground with no multiple counting of acres affected by multiple agents.*

Top 5 agents: Percent of footprint acres with damage

- Spruce budworm (W&E) 33%
- Fall cankerworm 24%
- Forest tent caterpillars 8%
- Drought 5%
- Pinyon needle scale 4%

Acres with other damage were reported in 40 states. Virginia reported the most with 2.8 Million acres.

The total cost of aerial survey is approx. \$5 million annually, or roughly \$.01 per acre surveyed.

