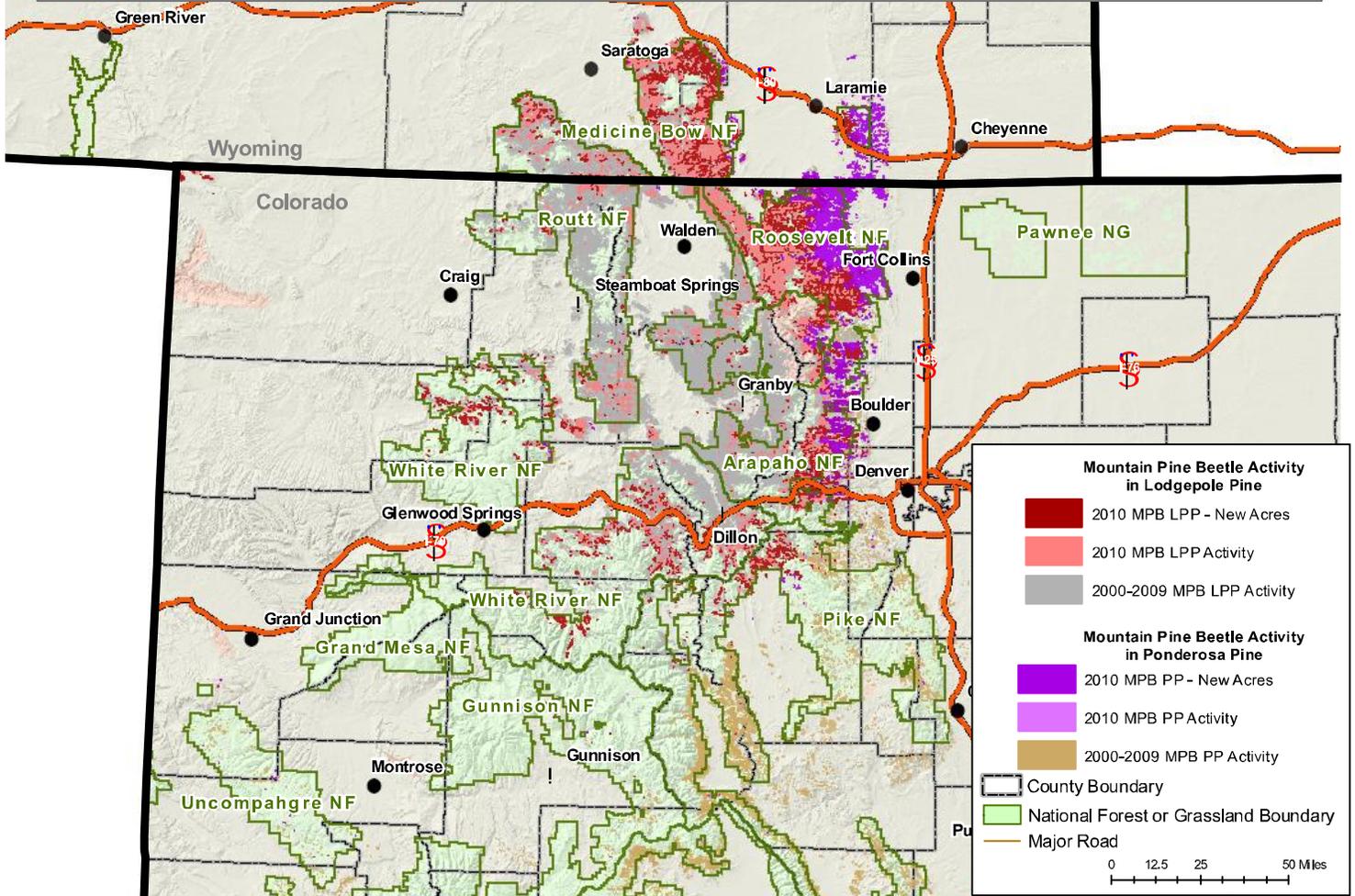


2010 Mountain Pine Beetle Activity in Colorado & Southern Wyoming



Due to the nature of aerial surveys, the data on this map will 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 casual 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.

Forest Health Aerial Survey Highlights for 2010

Bark Beetle Epidemic – 400,000 new acres

The aerial survey results revealed that nearly a half-million new acres were infested in 2010; these are acres that had not previously been affected by the mountain pine beetle epidemic. The total number of acres impacted by the entire mountain pine beetle outbreak since 1996 in Colorado and southern Wyoming is now 4 million acres.

The **bark beetle infestation** grew by **400,000 acres in Colorado and southern Wyoming in 2010**. The bark beetle continues to spread north and east and is now moving rapidly along the Front Range and into ponderosa pine trees. The highest levels of **mortality** are in the **SnowyRange in southern Wyoming**.

Pockets of beetle activity detected in 2009 in low-elevation **ponderosa pine stands** along the Front Range and into southern Wyoming **expanded dramatically in 2010**.

Mountain pine beetle activity continues at epidemic levels on the Black Hills National Forest and adjacent lands in South Dakota and in northeast Wyoming, nearly doubling in size from 23,000 acres in 2009 to 44,000 acres in 2010. Northwest Wyoming is also experiencing an increase in the bark beetle epidemic.

Spruce Beetle Outbreaks – 150,000 new acres

Spruce beetles are most active in southern Colorado and Wyoming where a number of significant wind events caused thousands of acres of fallen trees, making them susceptible to infestation.

In **2010, 150,000 new acres** of spruce mortality were detected in Colorado and southern Wyoming, which is **double that of 2009**.

The largest outbreak is spreading from the Weminuche Wilderness on the San Juan and Rio Grande National Forests and adjacent lands.

Notable infestations are also growing on other National Forests in Colorado, including the Pike and San Isabel; the Gunnison, Grand Mesa and Uncompahgre; and the Routt.

Spruce beetles typically live in old spruce forests where scattered, windthrown trees provide habitat for low-level resident populations. Once beetle populations reach epidemic levels, spruce beetles may attack and kill spruce trees as small as five inches in diameter. The current epidemic in southern Colorado started in 2002 and is believed to be due to a combination of factors, including large areas of dense, old spruce trees, a prolonged drought and warm winters.

Five-Needle Pine Trees – bark beetle and white pine blister rust

A large number of **high-elevation five-needle pine trees** including white bark, limber and bristlecone have been killed by mountain pine beetles within the epidemic area for a total of about 233,000 acres. These trees provide unique and important habitat for wildlife, including a critical food source.

Younger surviving **trees and future regenerating five-needle pines** are at great risk from a non-native disease called **white pine blister rust** that is spreading throughout the region. A small percentage of our white bark and limber pines appear to have genetic resistance to this disease, so we are working quickly to prevent attacks from bark beetles while we collect their seeds. Preserving genetic diversity within stands offers the best chance for retaining this unique ecosystem into the future.

Western Spruce Budworm

Some good news comes from the **decline of Western Spruce Budworm** activity in southern Colorado. This insect is a defoliator that feeds on the new needles of white fir and Douglas-fir trees. Our aerial survey results noted a significant decline in acres affected, which indicates that the populations are declining. A total of 216,000 acres were detected in the 2010 survey, which is a decrease of more than 150,000 acres from 2009.

Aspen Dieback or Sudden Aspen Decline

The Aspen dieback and mortality **situation has stabilized**. All indications are that this condition peaked in 2008 and expanded very little over the past year. Our scientists believe that dieback and mortality of large groves of aspen trees were mostly triggered by a long-term drought around 2002.

In some groves, our scientists are seeing regeneration where moisture recovery has been high.

References and online press kit available at:

A complete survey result is included in the [2010 Forest Health Aerial Press Kit](#)