

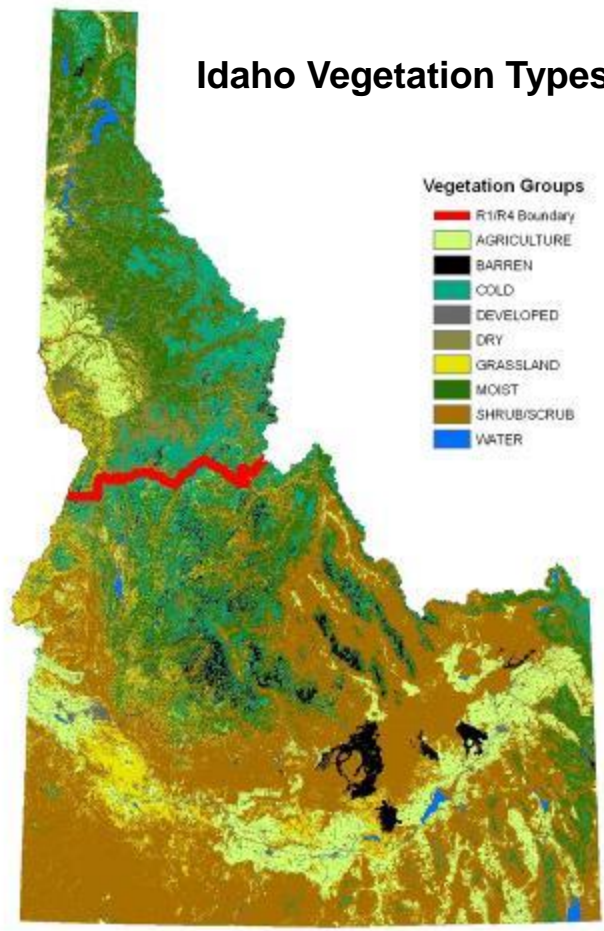


Forest Health Highlights

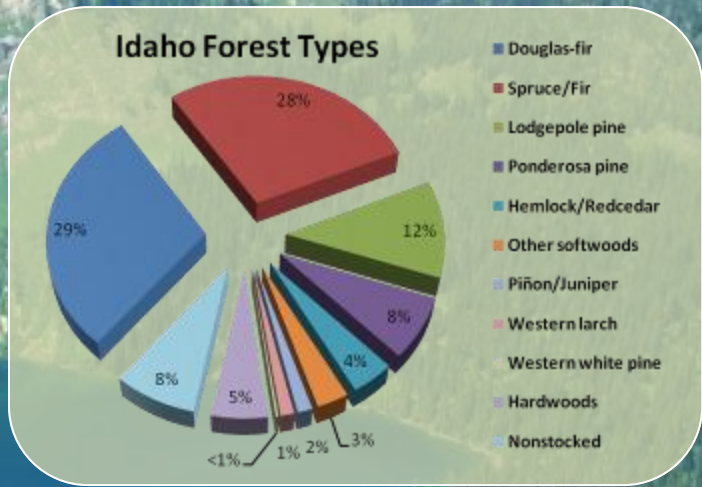
Idaho's Forest Resources

Idaho has over 21 million acres of forest land, from the Canadian border in the north, to the Great Basin in the south. Elevations range from less than 1,000 feet along the Clearwater River valley to over 11,000 feet in the Sawtooth Range of southern Idaho. The mixed conifer forests in the Panhandle area can be moist forest types that include tree species found on the Pacific Coast such as western hemlock, Pacific yew, and western redcedar. Southern Idaho forests are generally drier, and ponderosa pine and Douglas-fir are most common. Lodgepole pine, Engelmann spruce, whitebark pine and subalpine fir occur at higher elevations throughout the state.

Idaho Vegetation Types



Idaho Forest Types



A Diverse State

The Salmon River Valley generally divides the moister mixed conifer forests of the Panhandle region from the drier forests of southern Idaho. Much of southern Idaho is rangeland and dry, juniper-dominated forests typical of the Great Basin can be found here. The highest mountain peaks also occur in southern Idaho. Most of the commercial forest land is found in the north, and Douglas-fir, grand fir, western larch and western redcedar are valuable timber species. Engelmann spruce, subalpine fir and whitebark pine occur at the highest elevations in both north and south.

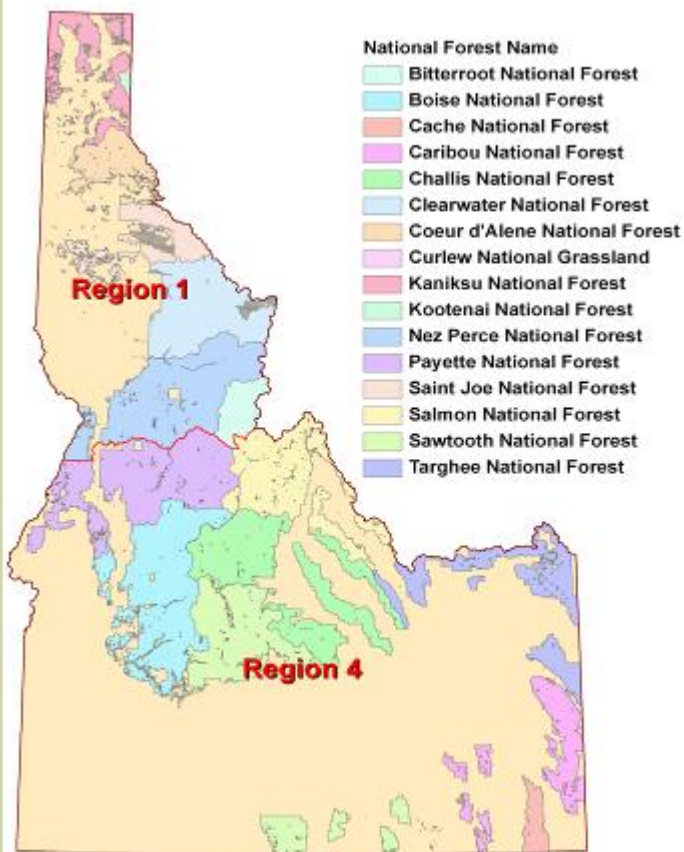
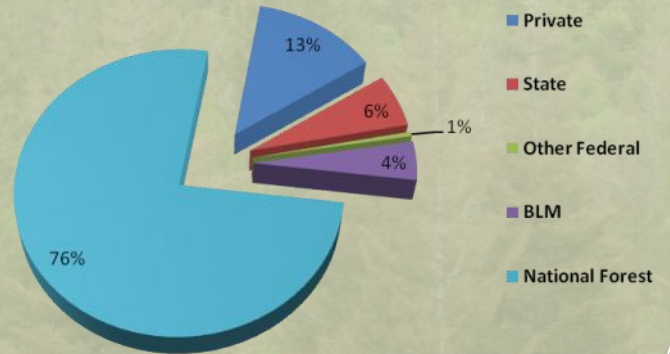
The Importance of Idaho's Forests

Idaho's forests are diverse. From piñon-juniper woodlands near the Nevada border to the alpine forests of the Sawtooth range, these forests are important for many reasons. Forests are home to wildlife, provide watersheds for drinking water, and protect streams that are habitat for many species of fish, including salmon and steelhead. Forests are also important for recreation, and Idaho has over 4.5 million acres of wilderness. Idaho's forests are renewable, and are an important resource for the forest products industry. Maintaining healthy forests is crucial to protect all the things that they provide.

Forest Ownership in Idaho

The majority of forest land in Idaho is owned by the Federal government (> 16 million acres), and of this, most is administered by the U.S. Forest Service. The state of Idaho owns just under 1.3 million acres, and private landowners own an additional 2.8 million acres. The various owners often have different management objectives.

Forest Land Ownership



Idaho's National Forests

Idaho's National Forests lie within two administrative regions. The Northern Region (Region 1) is located north of the Salmon River and is comprised of the Idaho Panhandle, Clearwater, Nez Perce and Bitterroot National Forests. The Intermountain Region (Region 4) is in southern Idaho and includes the Boise, Payette, Sawtooth, Salmon, Challis, Targhee and Caribou National Forests.

Idaho's Forest Industry

Idaho has a productive forest industry, with 2011 revenues of wood and paper products totaling approximately \$1.8 billion dollars. Approximately 10,300 people were directly employed in the forest products industry in 2011. Most of Idaho's commercial forestland and larger production facilities are located north of the Salmon River. Forest products from Idaho's forests are sold throughout the world. [Link to Idaho Forest Products Commission.](#)



Aerial Detection Survey Results

Bark Beetles

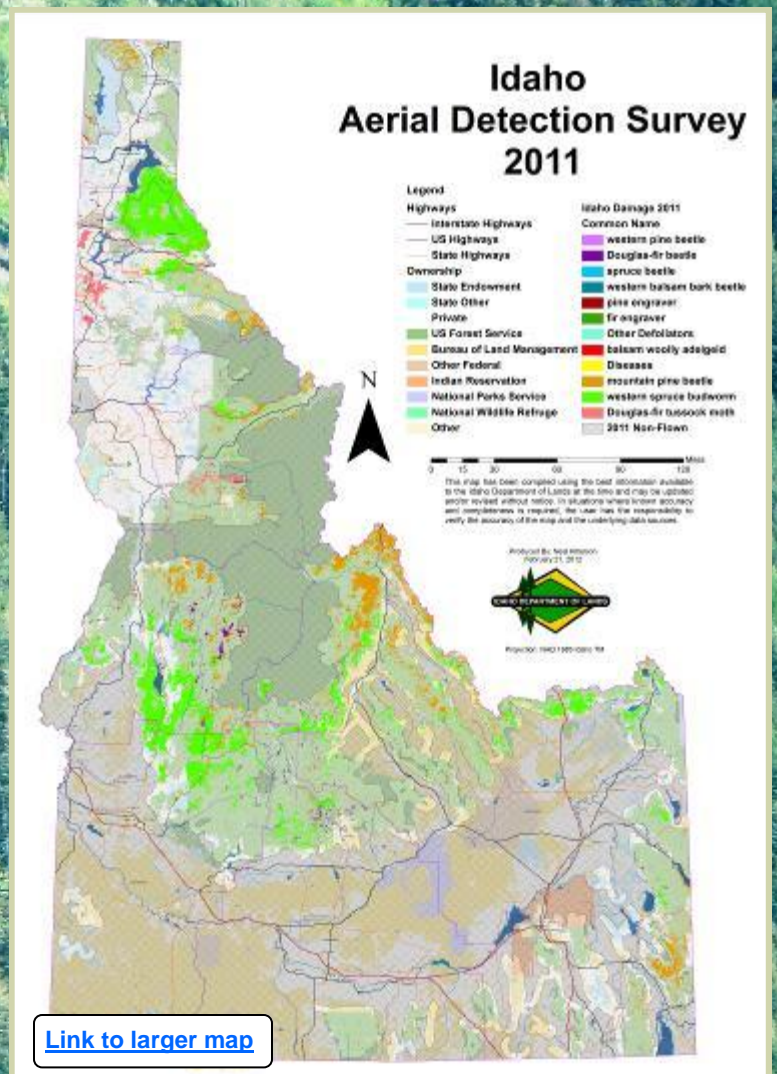
Mountain pine beetle caused mortality on almost 800 thousand acres in Idaho in 2011, around a million fewer acres than in 2010. Most of the mortality was in lodgepole pine, but significant amounts of whitebark and limber pine (over 62,000 ac.) were affected in US Forest Service Region 4. Throughout Idaho lodgepole pine stands are of an age and size that make them very susceptible to attack. Douglas fir beetle caused mortality on over 80,000 acres in 2011 compared to about half that (~40,000ac) in 2010. Other bark beetle species such as the fir engraver, western pine beetle and pine engraver continue to cause mortality statewide at levels similar to last year.

Defoliators

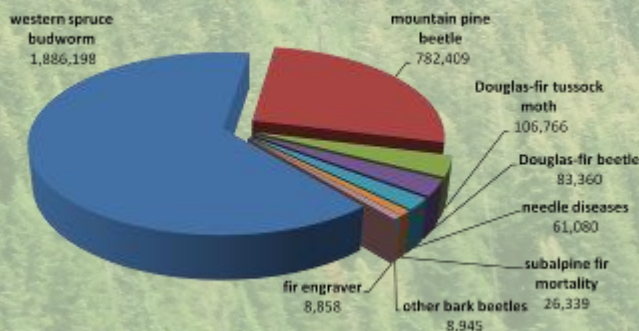
Western spruce budworm is a major defoliator of Douglas-fir and grand fir and affected acres more than doubled from approximately 840,000 acres in 2010 to just over 1.8 million acres in 2011. Much of the infestation is in the Coeur d'Alene and St. Joe National Forests in northern Idaho and the Boise, Payette and Salmon-Challis NF's in southern Idaho. Douglas-fir tussock moth is a serious defoliator which has periodic multi-year outbreaks in the Inland Northwest. It was in its second year of defoliation in Benewah and Kootenai Counties in 2011. Over 106,000 acres of defoliation was observed in northern Idaho in 2011.

Other Agents

Aspen decline is a poorly understood complex of biotic and abiotic factors, which affected over 2,000 acres of aspen in southern Idaho. Another cool, wet spring in 2011 contributed to a large amount of needle disease being recorded, with damage visible on over 60,000 acres throughout its range. Mortality of subalpine fir, attributed to balsam woolly adelgid, western balsam bark beetle and possible root disease was detected on over 26,000 acres.



Principal Damaging Agents (Acres)



Principal Damaging Diseases /Declines

Damage Agent	Acres
Root Disease	Est. > 8,000,000
Dwarf Mistletoe	Est. > 2,500,000
Needle Disease	61,080
Subalpine fir Mortality	26,339
Aspen Decline	2,359

Notes on Aerial Detection Surveys

A total of 24.2 million acres were surveyed in Idaho in 2011, compared to 26.7 million acres in 2010. It is important to remember that trees attacked by bark beetles do not usually change color until the following year so mortality observed in 2011 actually represents trees that were attacked in 2010.

Idaho's forests are also significantly impacted by diseases, but not all diseases are easily detected from the air. With the exception of foliar diseases, **most forest diseases are not well represented by aerial detection surveys.** Root diseases are very common in northern Idaho, affecting over 8 million acres, with most mortality occurring in Douglas-fir and grand fir. Root diseases are less common in the drier forests of southern Idaho. Dwarf mistletoes infect over 2.5 million acres of forest statewide. These parasites are common on many conifer species, but are probably most damaging on western larch, Douglas-fir, lodgepole pine and ponderosa pine. White pine blister rust is widespread throughout the range of western white pine, whitebark and limber pines, and infects millions of trees, though an acreage estimate would be difficult to determine.

Key Forest Health Issues in Idaho



Mountain pine beetle continues to kill susceptible lodgepole, whitebark, and limber pines across the state. Many stands are of a susceptible size, age and density that are favorable for bark beetle attack. [Link to USFS publication:](#)

Root diseases north of the Salmon River kill millions of trees every year. Douglas-fir and grand fir are particularly susceptible. *Photo (R) by J. Schwandt USFS.* [Link to additional information:](#)



Western spruce budworm infested acres increased by over 1 million acres in 2011. Defoliation of Douglas-fir and true firs statewide is over 1.8 million acres. Repeated defoliation can increase susceptibility to bark beetles. [Link to USFS publication:](#)

White pine blister rust is an introduced disease that kills 5-needled pines (western white, whitebark and limber). Idaho's forest type dominated by western white pine been reduced to 5% of its historic levels. *Photos by J. Schwandt* [Link to USFS publication:](#)



Douglas-fir tussock moth caused defoliation on over 100,000 acres of forest in northern Idaho in 2011. Defoliation was observed in the Nez Perce NF for the first time since 1974. Defoliation is likely to increase in some areas in 2012. [Link to USFS brochure.](#)

Dwarf mistletoes infect many species of conifers in Idaho. Most damage is on western larch, Douglas-fir, ponderosa and lodgepole pines. *Photo (L) by J. Schwandt, USFS* [Link to USFS publication:](#)



Gypsy Moth Survey

Over 4,000 pheromone traps were deployed in Idaho in 2011. No (0) gypsy moths were caught in Idaho in 2011, for the first time since 2006. In 2010, one male moth was captured in Meridian, in the southwestern part of the state. [Link to IDL 2011 Gypsy Moth Report](#)

Fire Activity in Idaho, 2011

Total acreage burned in Idaho in 2011 was 384,103 acres, compared to 642,997 acres in 2010. Many of these acres were rangeland in southern Idaho. Another cool, wet spring statewide delayed the start of Idaho's fire season. The cool dry weather that occurred from June through September prevented thunderstorms, resulting in fewer lightning-caused fires. [IDL Fire Bureau 2011 Report](#)

For More Information:

Forest Health Protection

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