

Forest Health

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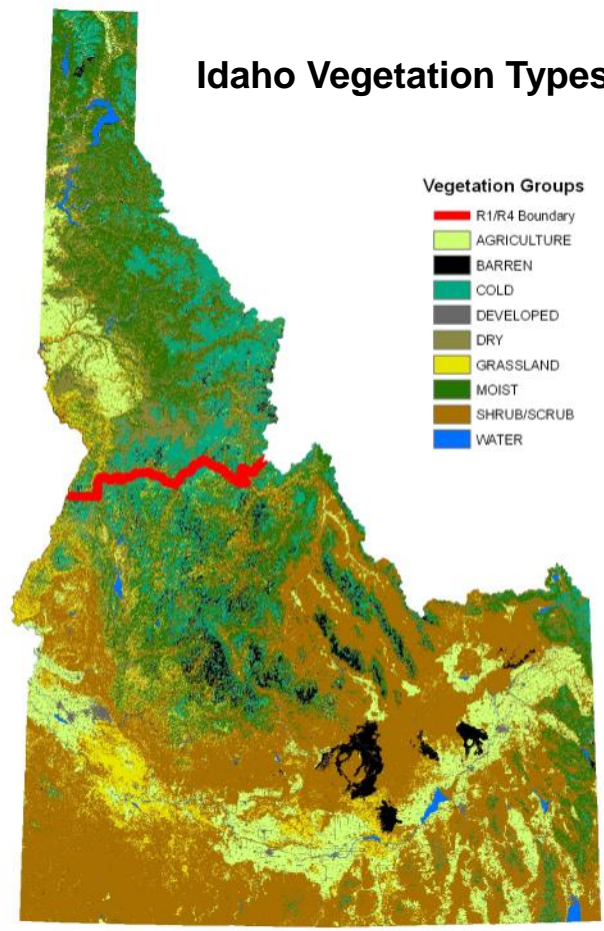
Highlights



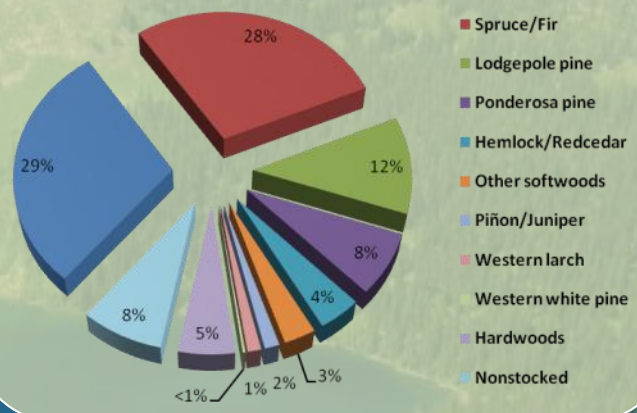
Idaho's Forest Resources

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, and species found on the Pacific Coast such as western hemlock, Pacific yew, and western redcedar can be found there. Southern Idaho forests are generally drier, and ponderosa pine and Douglas-fir are most common. At higher elevations throughout the state, lodgepole pine, Engelmann spruce, and subalpine fir occur.

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. 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.

At the highest elevations in both north and south, Engelmann spruce, subalpine fir and whitebark pine occur.

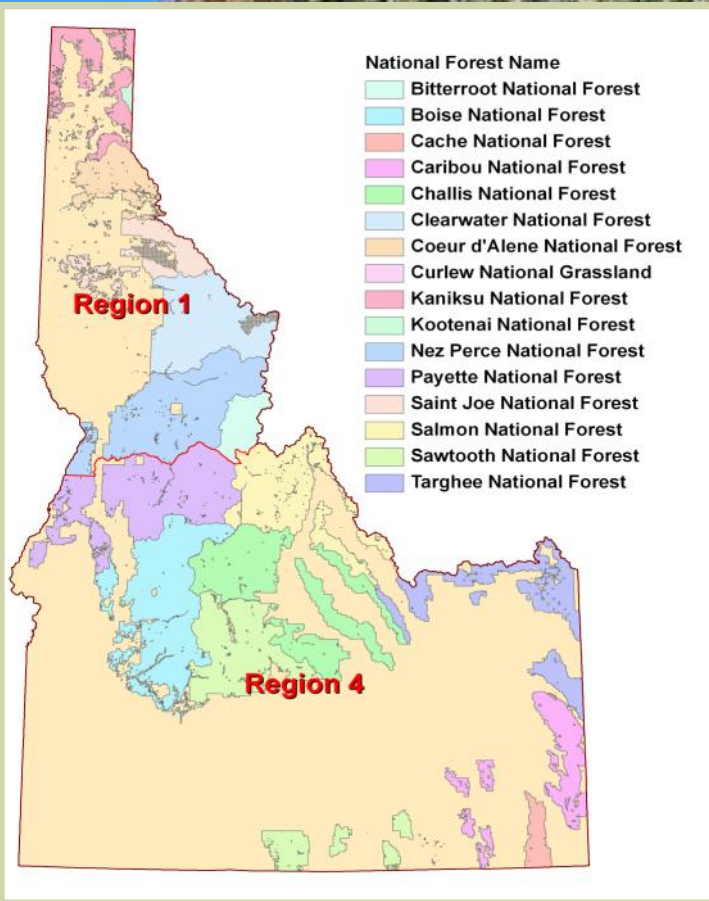
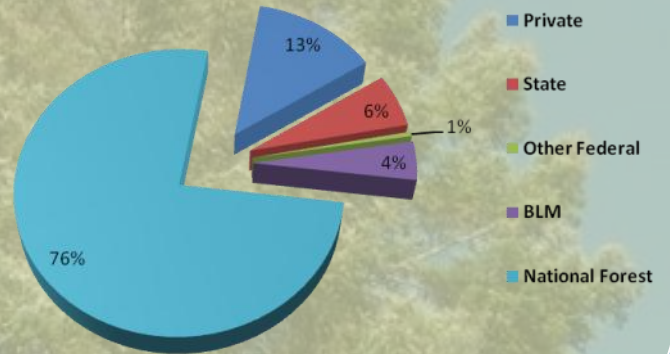
The Importance of Idaho's Forests

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 are divided between two administrative regions. The Northern Region (Region 1) is located north of the Salmon River and is comprised of the Idaho Panhandle, Clearwater, and Nez Perce 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 2010 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 2010. 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 over 1.9 million acres in Idaho in 2010, staying relatively static compared to 2009. Most of the mortality was in lodgepole pine, but significant amounts of whitebark and limber pine (over 221,000 ac.) were affected in US Forest Service Region 4. Lodgepole pine stands are of an age and size that make them very susceptible to attack. Fir engraver killed grand fir trees on 36,000 acres in 2010, compared to over 118,000 acres in 2009. This bark beetle is confined largely to the moister forests of northern Idaho. Other bark beetle species such as the Douglas-fir beetle, western pine beetle and pine engraver continue to cause mortality statewide at levels similar to last year.

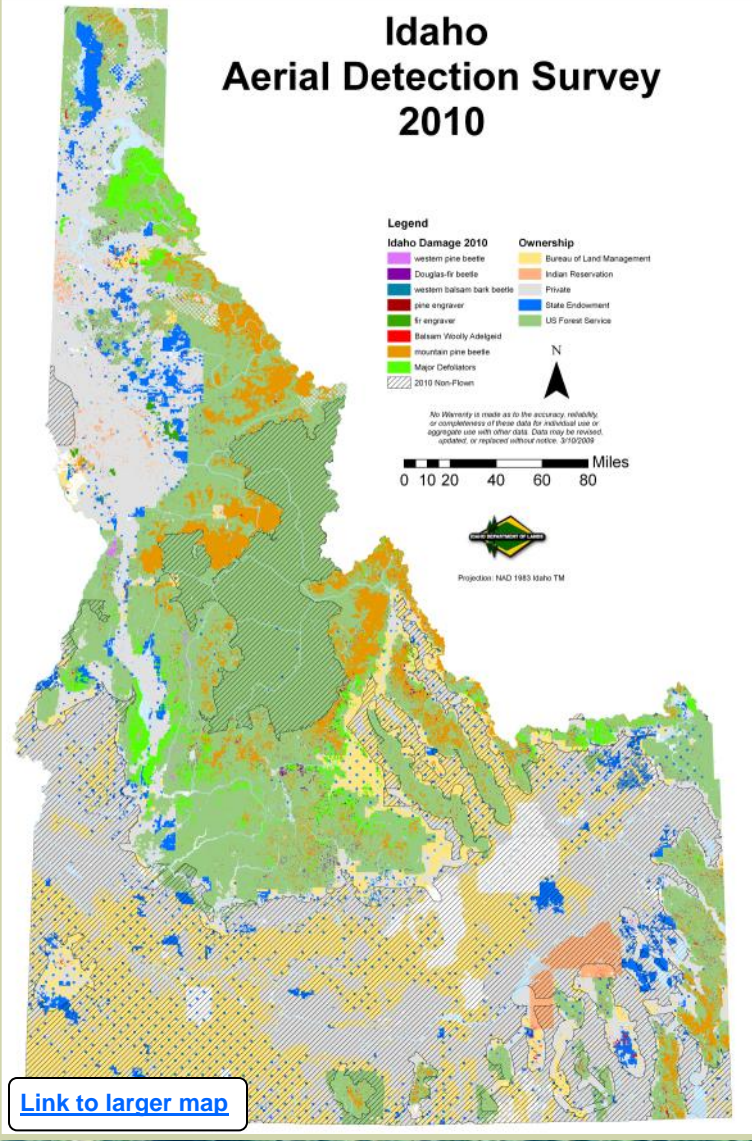
Defoliators

Western spruce budworm is a major defoliator of Douglas-fir and grand fir and affected acres decreased slightly from approximately 980,000 in 2009 to just under 840,000 acres in 2010. Much of the infestation is in the Coeur d'Alene NF 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 outbreaks in the Inland Northwest. There are currently over 8,500 acres of defoliation in northern Idaho.

Other Agents

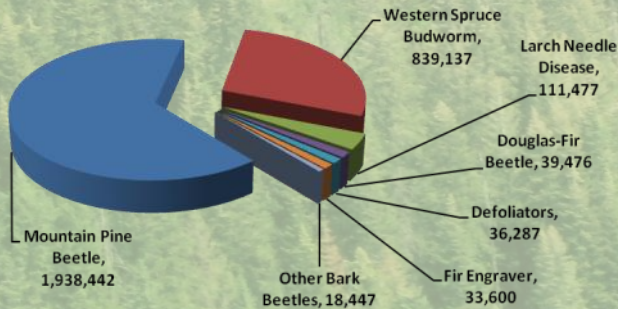
Aspen decline is a poorly understood complex of biotic and abiotic factors, which affected over 14,000 acres of aspen in southern Idaho. The cool, wet spring of 2010 contributed to a large increase in needle disease on western larch, with damage visible on over 100,000 acres throughout its range. Mortality of subalpine fir, attributed to balsam woolly adelgid, western balsam bark beetle and possible root disease was detected on over 16,000 acres.

Idaho Aerial Detection Survey 2010



[Link to larger map](#)

Principal Damaging Agents (Acres)



Principal Damaging Diseases /Declines

Damage Agent	Acres
Root Disease	Est. > 8,000,000
Dwarf Mistletoe	Est. 2,500,000
Larch Needle Disease	111,477
Subalpine fir Mortality	16,246
Aspen Decline	14,773

Notes on Aerial Detection Surveys

A total of 26.7 million acres were surveyed in Idaho in 2010, compared to 30.5 million acres in 2009. It is important to remember that trees attacked by bark beetles do not usually change color until the following year, and mortality observed in 2010 actually represents trees that were attacked in 2009.

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 north 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, 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 in 2010 remain similar to 2009 in both northern and southern Idaho. This defoliator attacks mostly Douglas-fir and grand fir, and can increase susceptibility to bark beetle attack. [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 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 8,500 acres of forest in northern Idaho. The last outbreak occurred from 2000-2002. Defoliation is expected to increase in 2011. [Link to 2010 IDL report](#)



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 2010. One male European gypsy moth was captured in Meridian in the southeastern part of the state. In 2009, one male moths was captured in Rexburg, in the southeastern part of the state. [Link to IDL 2010 Gypsy Moth Report](#)

Fire Activity in Idaho, 2010

Total acreage burned in Idaho in 2010 was 642,997 acres, compared to 22,681 acres in 2009. However, the large majority of this acreage was on rangeland in southern ID. Very little of Idaho's forest land burned in 2010, which was probably due to the long, wet spring that occurred in many areas. [Link to IDL Fire Bureau 2010 Year End Report](#)

For More Information:

Forest Health Protection

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AND

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