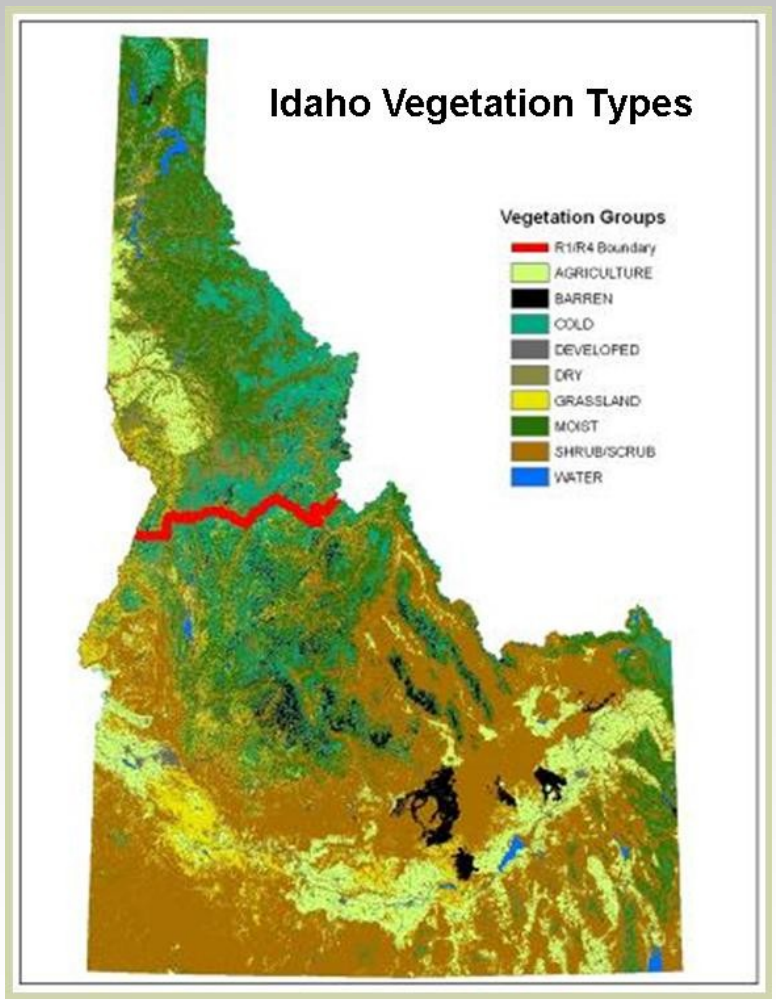
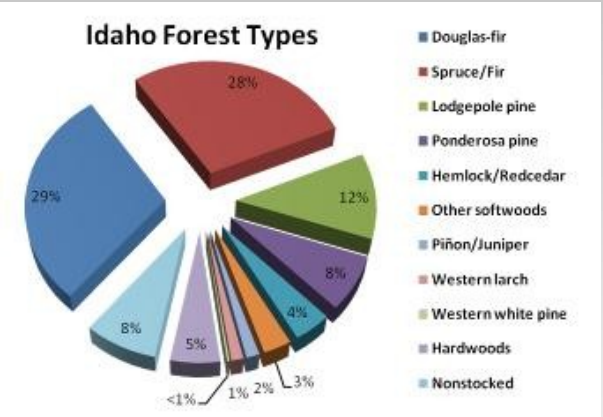
Idaho's Forest Resources

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.





A Diverse State

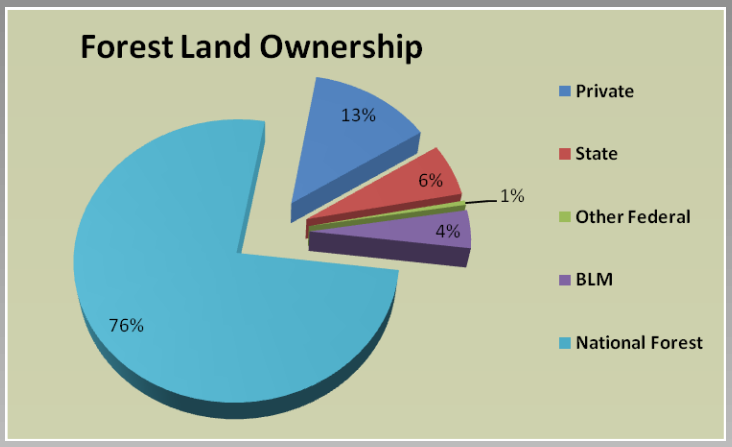
The Salmon River Valley generally divides the moister mixed conifer forests of the Panhandle region from the drier forests of southern Idaho. Much of southern Idaho is rangeland with scattered juniper-dominated woodlands typical of the Great Basin. The highest mountain peaks also occur in southern Idaho. 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.

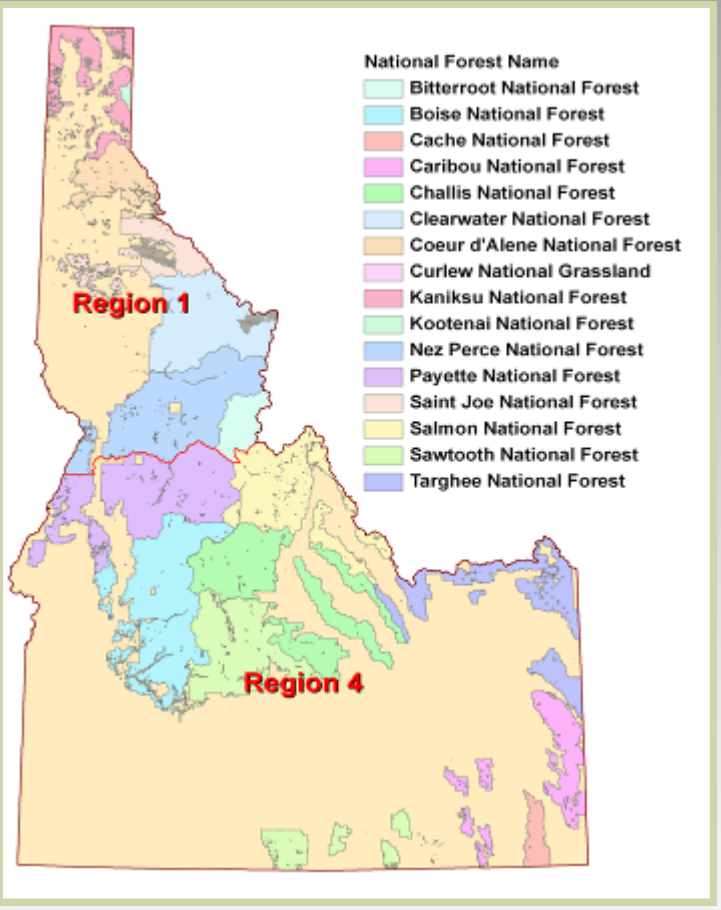
The Importance of Idaho's Forests

Idaho's 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.





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 2014 revenues of wood and paper products totaling over $2.6 billion. An estimated 11,740 people were directly employed in the forest products industry in 2014, and an additional 10,370 people are employed in associated occupations. 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

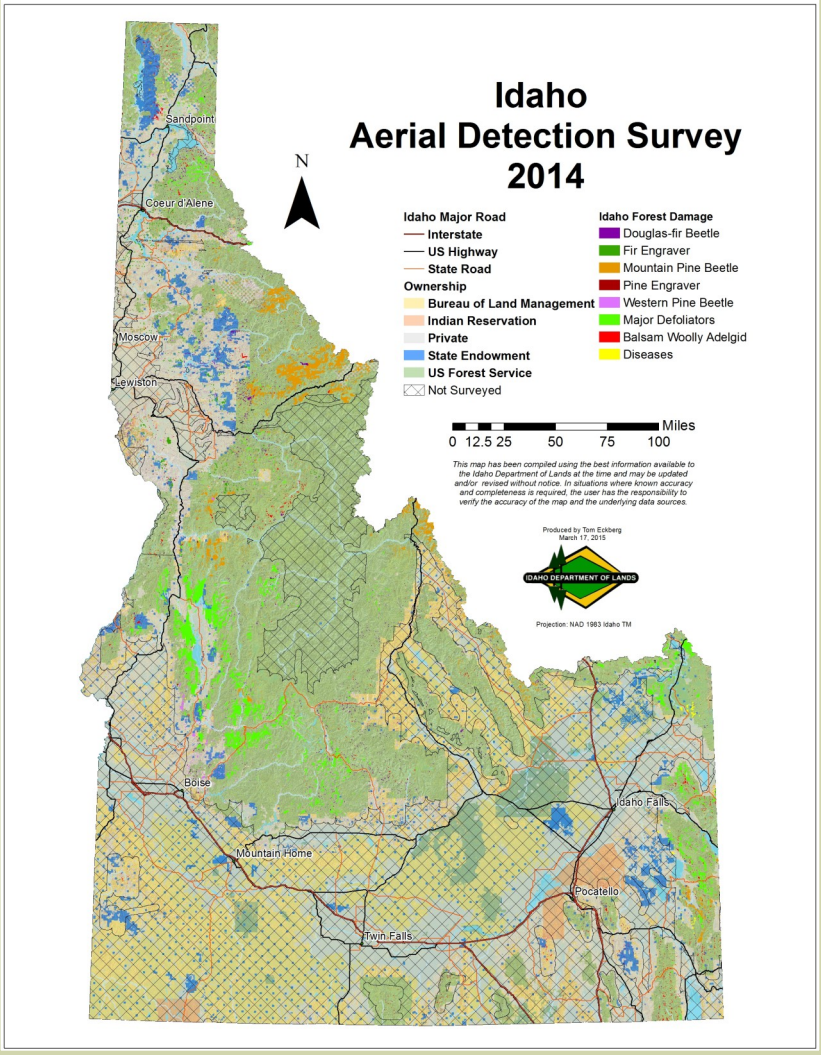
In 2014, mountain pine beetle caused mortality decreased slightly to 295,000 acres. Most of the mortality was in lodgepole pine, but approximately 6,600 acres of ponderosa pine were affected in 2014, an increase from the 2,000 acres in 2013. Throughout Idaho, lodgepole pine stands are of an age and size that make them very susceptible to attack. Douglas-fir beetle caused mortality on over 19,000 acres in 2014 compared to approximately 37,000 acres in 2013. 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 in Idaho. Approximately 529,000 acres were affected in 2014 compared to over 367,000 acres in 2013. Most of the defoliation is in southern Idaho. No Douglas-fir tussock moth defoliation was observed in Idaho in 2014, nor is any expected for at least the next 5 years.

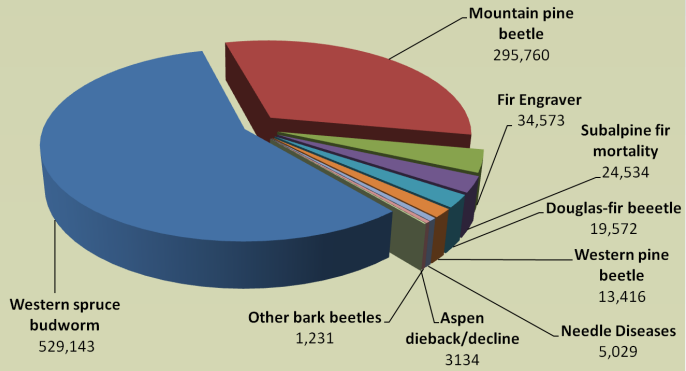
Other Agents

Drier spring weather in 2014 contributed to a large decrease in needle diseases on conifers. Approximately 5,000 acres was affected, compared to over 16,000 acres in 2013. Mortality of subalpine fir, attributed to balsam woolly adelgid, western balsam bark beetle and possible root disease remained similar to 2013 at approximately 24,000 acres.



[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
Needle Disease	> 5,000
Subalpine fir Mortality	> 24,000
Aspen Decline/ mortality	> 3,000

Notes on Aerial Detection Surveys

A total of 25.4 million acres were surveyed in Idaho in 2014, compared to 26.0 million acres in 2013. It is important to remember that trees attacked by bark beetles do not usually change color until the following year, so mortality observed in 2014 actually represents trees that were attacked in 2013.

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, grand fir, and subalpine fir in northern Idaho. Dwarf mistletoes infect over 2.5 million acres of forest statewide. These parasites are especially 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, affecting millions of trees, though an acreage estimate would be difficult to determine.

Key Forest Insect 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. Overall the acreage of pines killed has decreased over the last several years. In 2014, the acreage of lodgepole pine damaged was over 278,000 acres compared to more than 283,000 acres in 2013. In some areas, the decrease is due to host depletion. Mountain pine beetle is causing mortality in ponderosa pine in the Salmon River valley within the Lemhi and Idaho Counties. The acreage of impacted ponderosa pine increased somewhat to approximately 6,600 acres. In 2013, just over 2,000 acres of mortality was mapped. Link to USFS publication:

The Douglas-fir tussock moth is a defoliating insect that periodically infests Douglas-fir and true firs in Idaho. Outbreaks occur approximately once per decade, and the most damaging infestations have occurred in northern Idaho. The most recent outbreak occurred from 2010 to 2012, with defoliation peaking at approximately 100,000 acres in 2011. Historically, outbreaks have lasted 1-4 years, and then natural controls bring the populations down to undetectable levels. The Douglas-fir tussock moth will probably begin to defoliate forested areas in northern Idaho within the next 5-7 years. Link to USFS brochure.

Western spruce budworm infested acres increased in 2014 to approximately 529,000 acres, compared to over 367,000 acres in 2013. In 2011 the total was over 1.8 million acres. Late spring freezes in 2012 and 2013 may have contributed to this earlier decline. Link to USFS publication:

Gypsy moth survey. Over 3,700 pheromone traps were deployed in Idaho in 2014, with no moths caught. One European gypsy moth was captured near Kingston, in Shoshone County in 2013. A second delimit survey is planned in this area in 2015. Link to IDL 2014 Gypsy Moth Report

Key Forest Disease Issues in Idaho

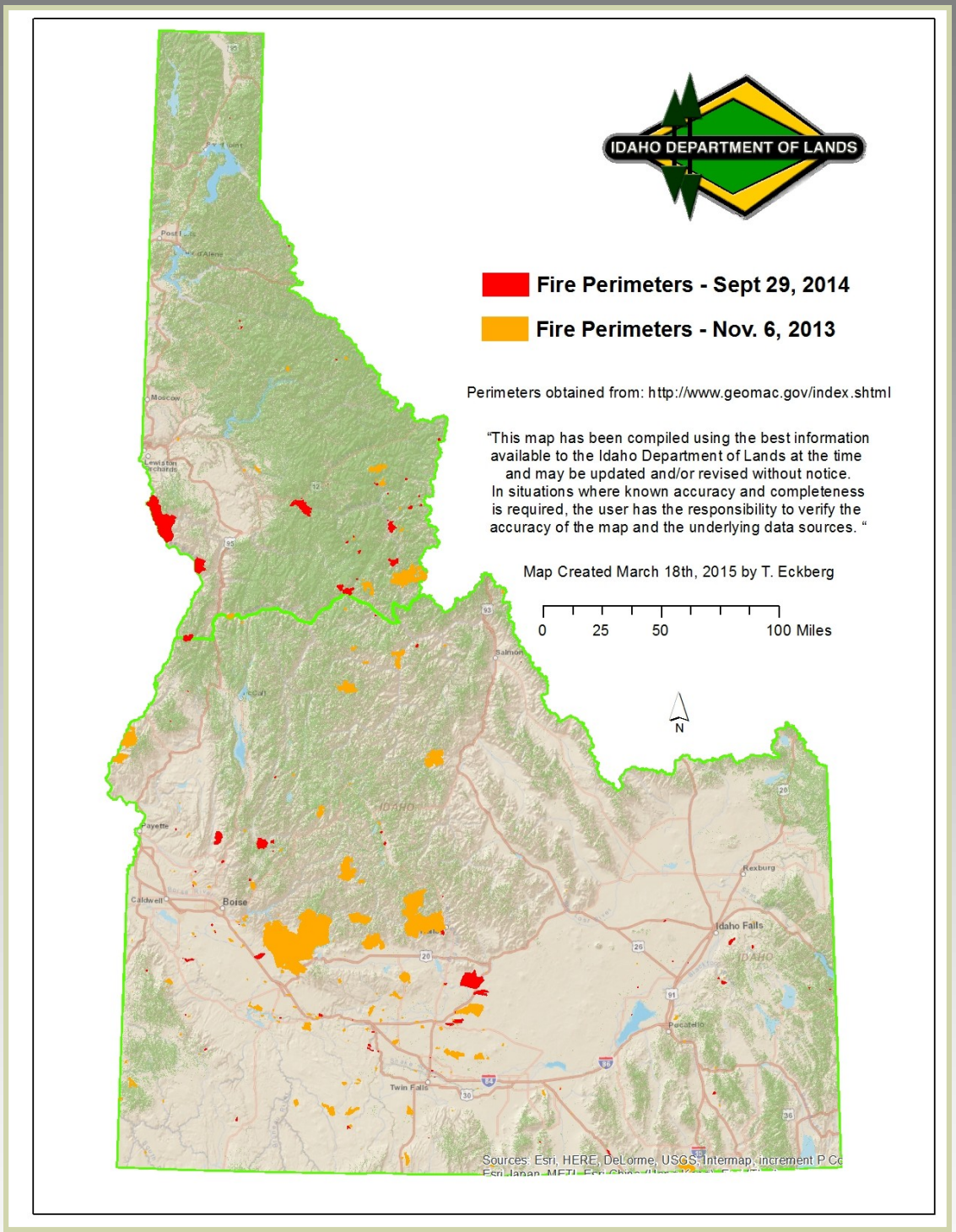
Root diseases north of the Salmon River kill millions of trees every year. Douglas-fir and grand fir are particularly susceptible. Root diseases are more prevalent than aerial detection survey data indicate, and are very common in northern Idaho. Root diseases can be managed through silviculture by encouraging tolerant species. While all conifer species are susceptible to root diseases (especially at a young age), pines, western larch and western redcedar are more tolerant, especially after the trees reach 20-25 years of age. *Photo (R) by J. Schwandt USFS*. Link to additional information:

White pine blister rust is an introduced disease that kills 5-needled pines (western white, whitebark and limber) throughout western North America. Western white pine (WWP) was the dominant tree species in much of northern Idaho. Due to rust, fire suppression and past management practices, western white pine in now a minor component of many of these same forests. Idaho's forest type that was dominated by western white pine is now reduced to 5% of its historic levels. The Idaho Department of Lands aggressively plants rust resistant WWP in stands where it was historically present. Western white pine is fast growing, drought tolerant, and is not highly susceptible to root diseases. *Photo (R) by J. Schwandt* Link to USFS publication:

Dwarf mistletoes infect many species of conifers in Idaho. Most damage is on western larch, Douglas-fir, ponderosa and lodgepole pines. These parasitic plants reduce growth and over time can kill trees. Dwarf mistletoes are fairly host specific, and can be managed through silviculture by removing heavily infected trees and by converting stands to nonhosts. Link to USFS publication:

Foliar Diseases can infect many species of conifers in Idaho, but damage is most noticeable on western larch and lodgepole pine. While the appearance can be dramatic, the effect on trees is usually minor. Cool, wet spring weather during needle development is favorable for disease development. Approximately 900 acres of needle diseases were mapped in 2014, compared to 2013, when over 16,000 acres were mapped. Drier spring weather in 2014 is responsible for this decline. Link to IDL Forester Forum:

2014 Fire Season



Fire Activity in Idaho, 2014

The total acreage burned in Idaho in 2014 was over 189,000 acres, compared to more than 740,000 acres in 2013. Most of these acres were located in USFS Region 1, north of the Salmon River. The Big Cougar, Johnson Bar and High Range fires were the largest fires in this region. The Whiskey Complex and Preacher fires were the two largest fires in USFS Region 4. Burned acreage on lands within the Idaho Department of Lands Protection Area (IDL, Clearwater-Potlatch Timber Protective Association, and Southern Idaho Timber Protective Association) was almost 7 times higher than the 32 year average.

Link to IDL Fire Bureau 2014 Report

For More Information

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USDA Forest Service
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Coeur d'Alene, ID 83814
(208) 765-7342
AND
Boise Field Office
USDA Forest Service
1249 S. Vinnell Way, Suite 200
Boise, ID 83709
(208) 373-4227

Interior West Forest Inventory & Analysis
USDA Forest Service
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Ogden, UT 84401
(801) 625-5388

Idaho Department of Lands
3284 W. Industrial Loop
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