Nevada Forest Health Highlights
2008

The Forest Resource

Nevada is unique in its forested component among the western states. The state is characterized by some 300 forested mountain "islands" separated by wide non-forested basins. Eighty-six percent of the state is non-forest and about 83 % of the land is federally owned. Though the area of forest land is relatively small, the value of this resource is immeasurable in terms of commodities, recreational uses, and aesthetic properties. Healthy wildland and urban forests provide multiple benefits for Nevada's diverse population. Although little of Nevada's 11.1* million acres of forestland produces commercial timber, it does provide other wood products, watershed protection, wildlife habitat and recreation opportunities. Together with the urban forests in the state's communities, Nevada's forests are a critical resource in this sparsely forested state.

The majority of the forested lands are publicly owned (98%), with 212,500 acres of forest land in private ownership. From a statewide perspective, the majority (81%) of Nevada's forests are composed of pinyon and/or juniper species (Figure 1). Other forest types are restricted to the higher elevations in the state's 314 mountain ranges. Detailed information is available from the Interior West FIA.

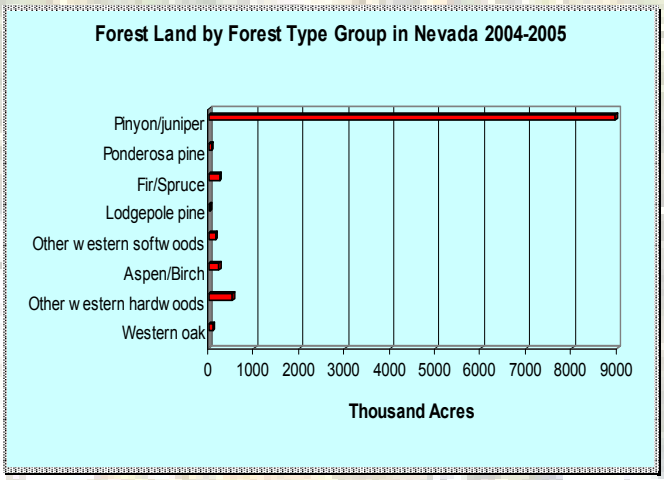


Figure 1. Forest Land by Forest Type.

Components of Change

Nevada's forests are host to several common pests which plague Western forests. Widespread stress to the trees - brought on by drought conditions - weaken individual trees creating favorable conditions for the pests. ***Wildfire*** is a major change component for Nevada's forest and rangelands. As displayed in Figure 2, 2008 saw over a ten-fold **decrease** in the amount of area burned in wildfire with nearly 71,930 acres consumed compared to 900,000 acres in 2007. Average annual net growth of all live trees on forested lands for 2004-2005 has averaged 394 thousand cubic feet per year (Figure 3). The average annual mortality during that same time period was 7,224 thousand cubic feet per year (Figure 4).

* acres of forest type slightly decreased from the 2006 forest health highlight report due to FIA basing annual reports on 10% forest cover rather than 5% forest cover used in prior years. No new FIA plots have been completed from 2006 through 2008.

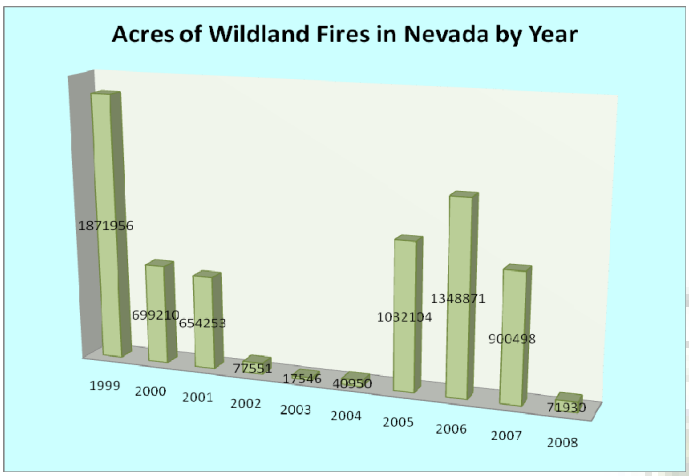


Figure 2. Acres of Wildland Fires in Nevada by Year.

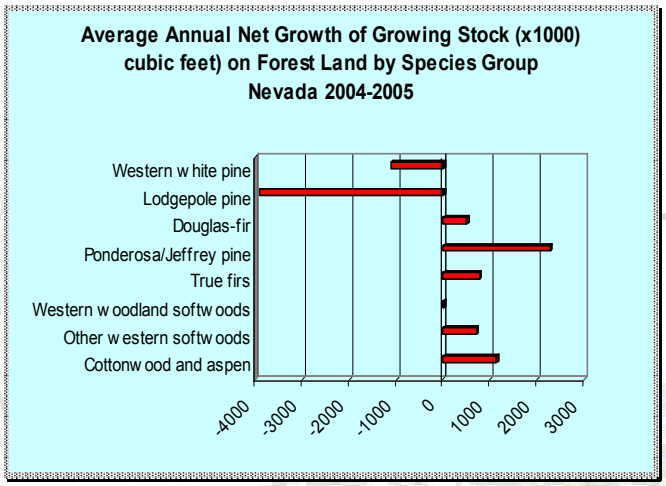


Figure 3. Average Annual Net Growth of Growing Stock.

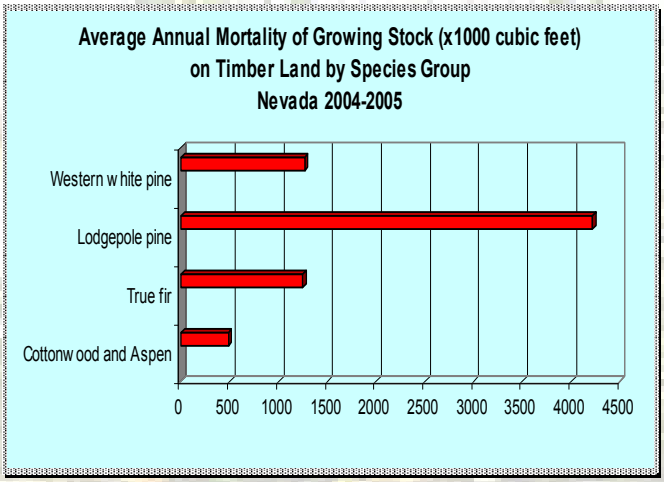


Figure 4. Average Annual Mortality of Growing Stock.

Forest Health Issues

In 2008, most estimates of mortality caused by insect outbreaks (acres affected and number of trees killed) remained the same or increased significantly from 2007 levels mostly attributed to drought conditions. **Mountain pine beetle** (MPB) mortality in high elevation white pines over doubled throughout Nevada from nearly 10,000 trees in 2007 to over 22,000 trees in 2008. **Mountain mahogany defoliation tripled due to drought affects** and was evident on more than 34,134 acres in 2008 throughout Nevada.

Pinyon ips, increased six fold over 2007 figures in 2008 with approximately 3,022 acres being affectd. **Aspen decline** remained about the same as 2008 at 11,453 acres compared to the 12,025 acres observed from the air in 2007. In 2008, **Jeffery pine beetle**-caused tree mortality increased over 200% from 2007, affecting 312 trees on 441 acres in Nevada.

Figure 5, summarizes the main insect and disease agents causing damage to Nevada's forests based on observations from the air in 2008. These numbers are underestimates for the year because of limited aerial observations in some parts of the state. Comparisons with other year's data can not be done directly because of this limitation.

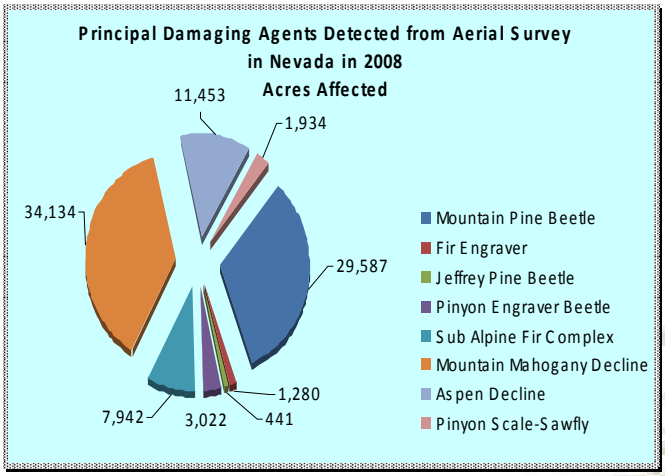
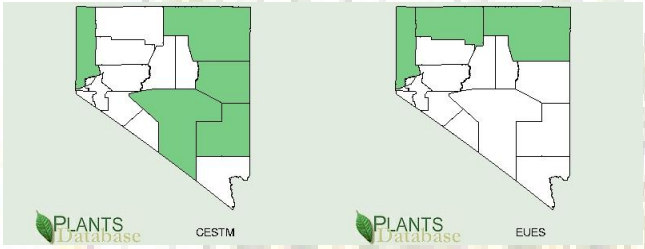


Figure 5. Pincipal Damaging Agents Dectected from Aerial Survey in Nevada.

Sampling for Sudden Oak Death from 2004 – 2008 in forest environments were negative of *Phytophthora ramorum*. This result documented the freedom of SOD pathogen in both southern and northern Nevada forestry during the 5-year survey. However, in the urban forestry environment, a bleeding canker disease, symptomatically similar to sudden oak death, was found on maple trees and other tree species. *Phytophthora cactorum* and *P. citricola* were found to be associated with infected trees, and they are believed to be the primary cause of bleeding canker and the death of maple trees in northern Nevada.

Non-native invasive plants continue to be major issues in the forests and rangelands of Nevada. The annual economic impact of invasive plants on public lands in Nevada through reduced wildlife-related recreation is estimated to range from $5 to 17 million. Distribution of several of the more significant non-native invasive plants are illustrated in figures 6 and 7.



Spotted Knapweed Leafy Spurge

Figure 6.

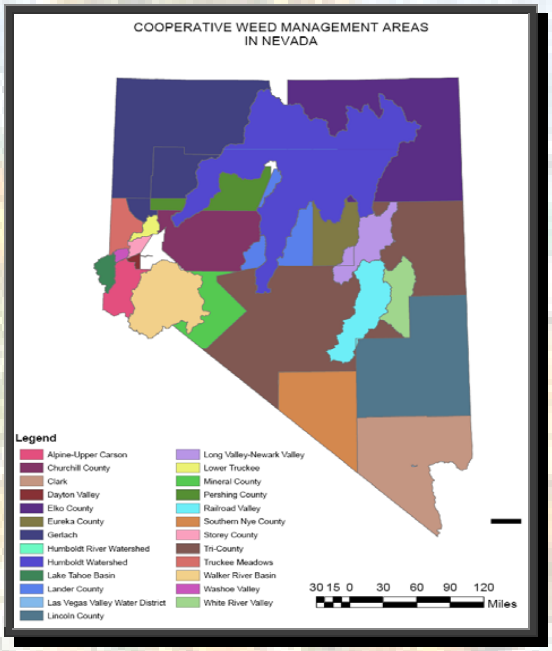
Yellow starthistle Saltcedar

Figure 7.

Source: [NRCS Plants Database]

Nevada has 31 cooperative weed management areas established and nine weed districts.

Figure 8. Cooperative Weed Management Areas in Nevada



For More Information:

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