Utah Forest Health Highlights
2014

Forest Resources

Utah forests are as diverse as the landscape itself. Visitors from around the world, together with Utah locals, enjoy Utah's renowned forests that span from Canyonlands to the alpine zone. While Utah is only 29% forested, these forests have high scenic, recreation, wildlife and other forest use values that make forest health very important. In Utah's dry climate, healthy forests protect and enhance water quality and quantity for a growing population.

Figure 1 presents a summary of forest cover, or forest type, on all land ownerships using the latest annualized Forest Inventory and Analysis surveys from 2002 to 2011. Over 15.1* million acres of forests are administered by federal, state, and local agencies. Another 3 million acres are privately owned. Detailed information on Utah's forest vegetation is available from the Interior West FIA http://www.fs.fed.us/rm/ogden/publications/utah.shtml

** acres of forest type decreased slightly from the 2006 forest health highlight report because FIA annual reports were based on 10% forest cover rather than 5% forest cover used previously.*

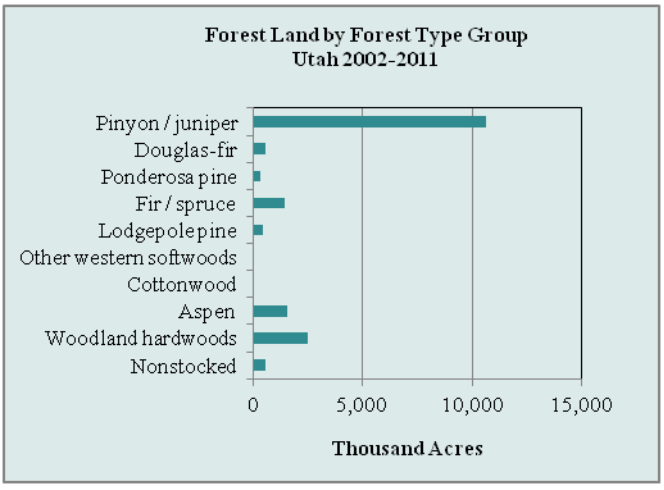

Figure 1

Components of Change

Several factors have contributed to the decline in forest health including historic logging, grazing patterns, fire exclusion, and invasive weeds. Drought conditions can detrimentally affect forest health causing significant changes in vegetative conditions, particularly if combined with these other human-caused practices. Forest conditions throughout much of Utah are composed of dense stands that are relatively uniform in age. As species or age class composition changes due to large-scale insect outbreaks, large amounts of woody debris accumulate. Some of these alterations, over time, may increase fire hazard conditions. Many lower elevation forested landscapes are infested with invasive cheatgrass, and are now susceptible to more severe wildfire. Although abundant spruce mortality occurs in many fir / spruce high elevation sites, stand replacing wildfire intervals are much more infrequent than lower elevation sites and often driven by suitable fire weather. Fire activity in 2014 included 914 fires that burned 26,148 acres. Of the 914 fires only 18 fires burned more than 100 acres the largest of which burned 5,000 acres. In all, a fairly mild fire season, resulting from monsoonal precipitation.

Farm Hill Fire 2014

Approximately 2.2 million acres of Utah's forests were rated moderate to highly susceptible to bark beetle attack in 1997. Over the past 15 years, many of the acres rated susceptible have been affected by bark beetle.

Figure 2 shows average annual net growth from 2002 through 2011. The total of all live trees on forested

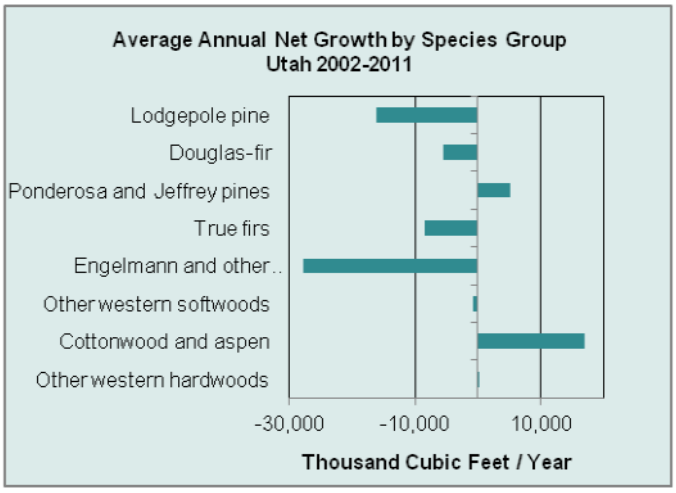

Figure 2

lands has averaged -4,556 thousand cubic feet per year, which suggests that there has been more mortality on average than growth. Figure 3 includes tree mortality, which has averaged 23,341 thousand cubic feet per year. Net growth and growth loss estimates are based on the most recent 10 years of FIA inventory. However, it is not a complete representation of the state, and numbers will change as additional annual surveys are completed.

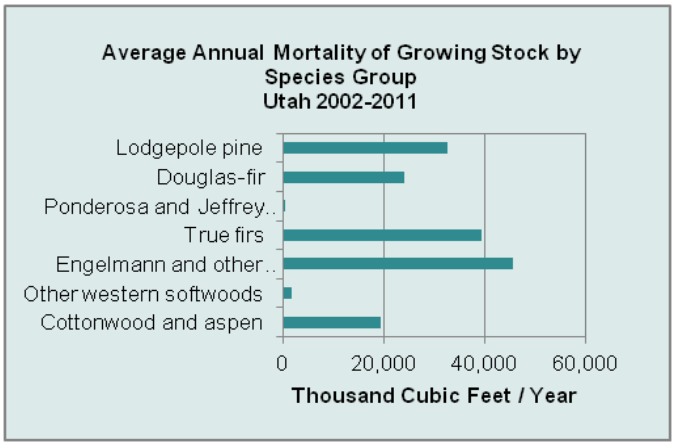

Figure 3

Forest Health Issues

Hundreds of Utah communities are at risk to catastrophic bark beetle induced mortality. Mortality trends are described in terms of acres affected, however, not all trees on these acres are dead. Thus, an estimate of the number of trees killed is also provided. Not all forested lands are surveyed, and not all the same acres are surveyed every year. In 2014, insect and disease-caused tree mortality generally increased from 2013. Mountain pine beetle induced mortality in all pine has declined significantly from 2013, however, heavy mortality is still occurring statewide. Western spruce budworm defoliation increased slightly in 2014. Douglas-fir beetle induced mortality increased by 73%. Spruce beetle induced mortality increased by 35%, the number of spruce trees killed in 2013 was 412,662; in 2014 the number killed was 555,435 a significant increase from 2013. Fir engraver induced mortality (primarily in white fir) increased dramatically, 761 trees were killed in 2013, while 34,303 trees killed in 2014. Compared to 2013, subalpine fir tree mortality increased significantly in 2014 by 300%. Figure 4 summarizes 2014 aerial survey data for bark beetle induced tree mortality in Utah's forests.

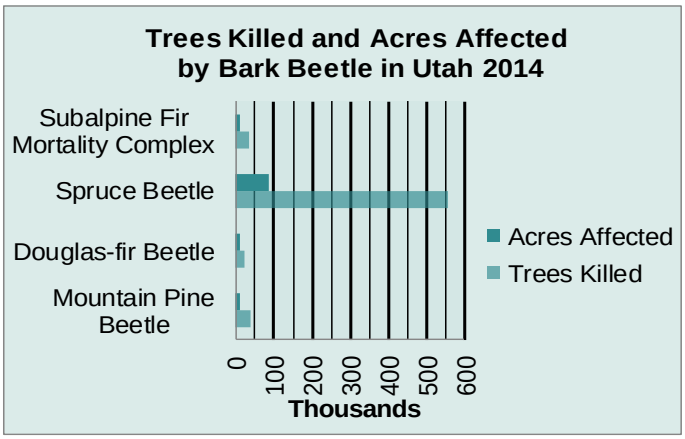

Figure 4

Increasing aspen decline has been mapped since 2003. Damage peaked in 2007 at 126,000 acres affected. However, Utah is still experiencing significant aspen decline with approximately 20,310 acres affected in 2014, which is up from 16,187 acres affected in 2013 This decline is largely caused by continuing drought, a complex of canker diseases, insect borers, and defoliators play a role in some areas.

Spruce beetle induced mortality 2014

Gypsy moth is a non-native insect defoliator that, if established, would alter our hardwood forest landscapes adversely affecting our high-value watersheds. Utah continues an aggressive monitoring program throughout Utah to catch potential infestations before they become established. No gypsy moth has been detected in Utah since 2008.

Noxious weeds are a continuing problem for all Western states. They have the ability to aggressively colonize disturbed habitats thus displacing native plant species and altering ecosystems. Several state and federal agencies have the responsibility for monitoring and controlling noxious weeds. As of 2013, approximately 338 species of exotic aquatic and terrestrial plants infest lands in the State of Utah. Utah currently has declared 27 of these species as noxious weeds. However, more recent discussion suggests that the number of noxious weeds declared in Utah may change significantly in the very near future.

The exact acreage of lands infested by noxious weeds is unknown; however, every county in Utah is infested by at least ten noxious weed species.

Musk Thistle

Soldier Summit in fall

For More Information:				
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