



Forest Inventory Program Highlights

South Dakota Department of Agriculture
Division of Resource Conservation & Forestry
sdda.sd.gov (605)773-3623

The Forest Inventory & Analysis (FIA) Program supports the South Dakota Forest Action Plan by providing critical data about the type, extent, and condition of the state's forests. The inventory includes all ownerships—private, local government, state, and federal—but recognizes and stratifies by ownership. It provides a record of the impacts of biotic and abiotic threats. The FIA Program addresses all three national themes in the State's Forest Action Plan—Conserve Rural Forests, Protect Forests from Harm, Enhance Public Benefits from Trees and Forests—outlined by USDA Forest Service State & Private Forestry National Priorities and Objectives.

Activities outlined in this document support the following strategies in the South Dakota Forest Action Plan:

- Intensify inventory and analysis sampling of the prairie portion of South Dakota to gather more information about upland, bottomland, windbreak, community forests and other non-forest land with trees.
- Continue street tree inventories of communities using geospatially based data retrieval system.
- Identify locations of riparian and bottomland forests and areas that could support these forest types.
- Promote development of new techniques to inventory forest land.

Forest Inventory Analysis Program Overview

The Forest Inventory Analysis (FIA) Program is the nation's forest census. A national program administered by the USDA Forest Service, FIA consists of three components: an inventory of the nation's forests; a national woodland owner survey; and a timber product output study.

The FIA program has permanent sample plots established on forest lands of all ownerships throughout the country. The plots in South Dakota are inventoried every seven years to record changes in extent, ownership, growth, mortality, removals, and regeneration. FIA collects, analyzes, and reports information on the status and trends of America's forests. This information can be used to evaluate wildlife habitat conditions, timber availability, assess the sustainability of ecosystem management practices, and support planning and decision-making activities undertaken by public and private enterprises.

The FIA program combines this information with related data on insects, diseases and

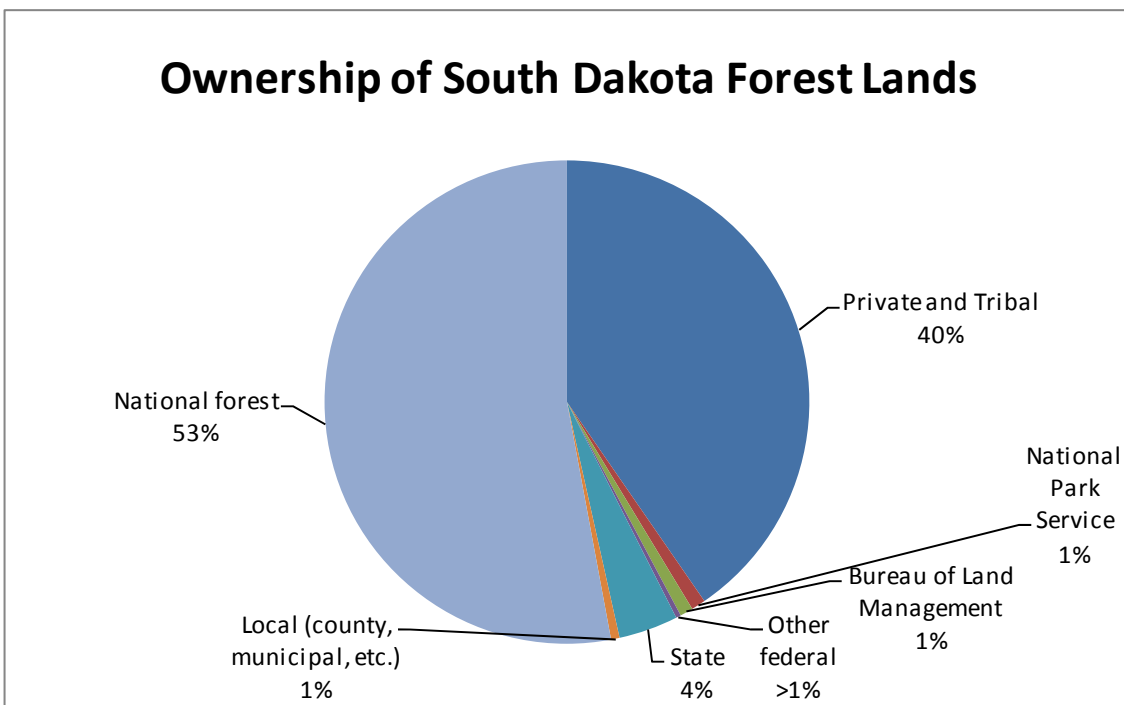
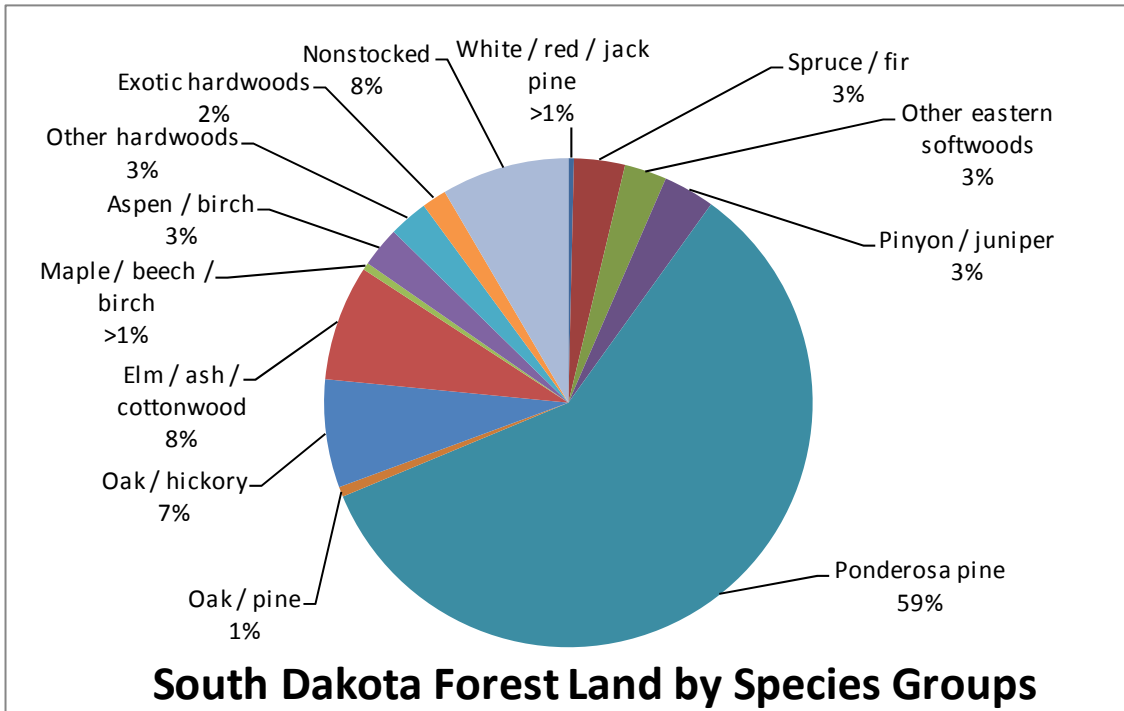
other types of forest stressors. This is done to assess the health condition and potential future risks to forests. The program also projects what the forests may look like in 10 to 50 years under various scenarios. This information is essential for evaluating whether current forest management practices are sustainable and whether current policies will allow future generations to benefit from America's forests.

South Dakota is part of the 24 state Northern Research Station (NRS) forest inventory area. The NRS is one of four research stations in the country.

The South Dakota Department of Agriculture's Resource Conservation and Forestry Division (RC&F) has been implementing the inventory in South Dakota since 2001. RC&F collects this data through contracting, and forwards it to the Forest Service for analysis. In addition, RC&F collects data for the periodic Timber Product Output Study once every five years.

Native Forests

The Forest Inventory Analysis Program (FIA) in South Dakota provides a wealth of information about our state's forest lands. As indicated in the charts below ponderosa pine is the most abundant species in the state, followed by ash, with oak being the third most abundant species. Most of the forest land is in National Forests while 40 percent are on private and tribal lands. One use of this data is to predict the impact of invasive species such as emerald ash borer. The abundance of ash in our native forests, coupled with windbreaks and community forests suggest EAB will have a huge impact on forests in the state.



Great Plains Inventory Results

The states of Kansas, Nebraska, North Dakota and South Dakota joined together in 2007 to form the Great Plains Initiative (GPI) Inventory Project to develop and implement a uniform inventory process that would be applicable in areas not covered by the traditional FIA conducted by the US Forest Service. The GPI project utilized FIA standards and techniques to cover non-forest woodlands, windbreaks, and community forest areas.

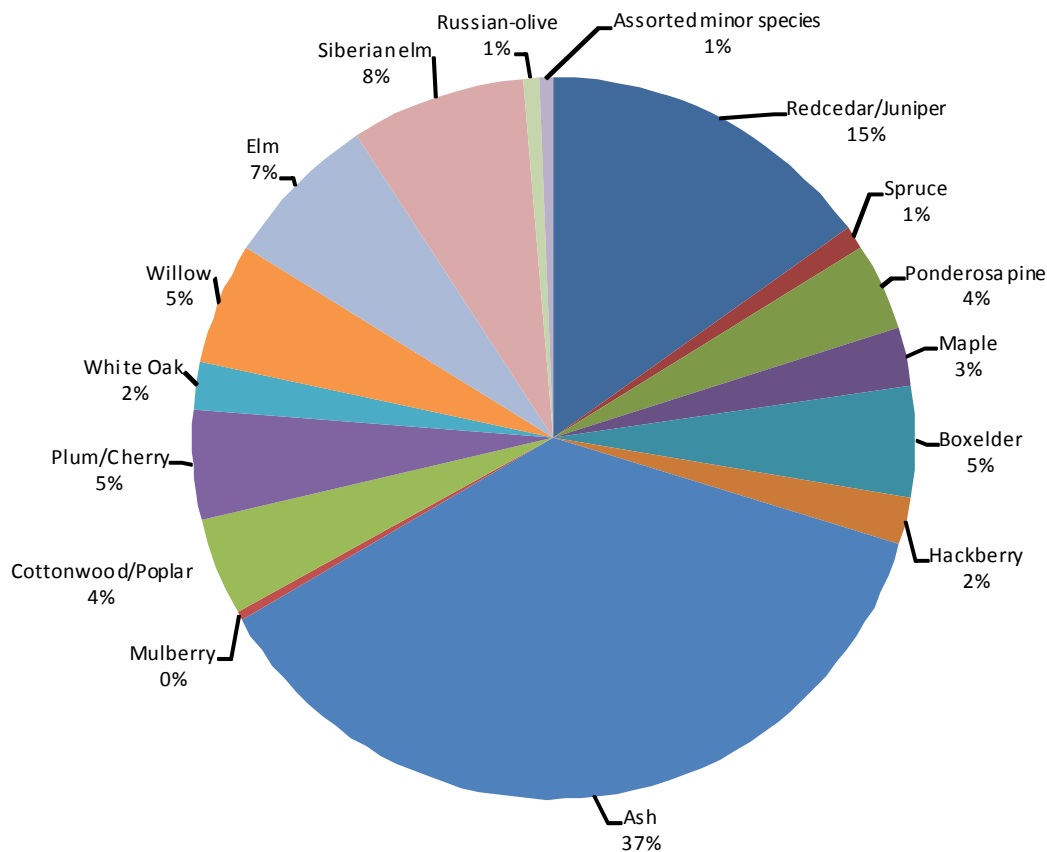
Windbreaks

- 435,558 acres of windbreaks in South Dakota
- Consists of livestock protection, field windbreak, farmstead windbreak, rural home sites, wildlife tree plantings, living snow fences, abandoned farmsteads
- 91% private and 9% public ownership
- 40% ash composition

Woodlands

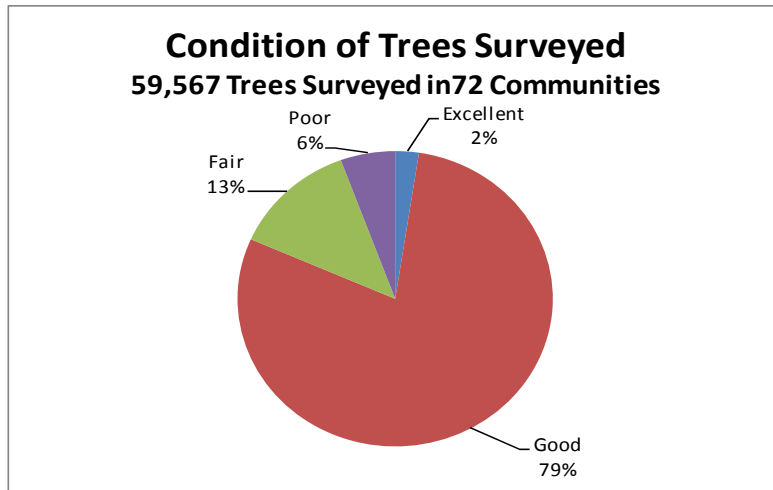
- 424,419 acres of woodlands in South Dakota
- Consist of natural riparian woodlands, urban-residential woodlands, isolated tree resources, narrow wooded strips
- 97% private and 3% public ownership
- 22% ash composition

Distribution of Trees/Acre by Species All Windbreaks and Woodlands



Community Forest Inventory and Analysis

RC&F conducted community forest resource surveys in 72 communities during the summers of 2012-2014. The species and condition of trees were recorded and the threat of emerald ash borer to each community was assessed. A total of 59,567 trees were assessed.



Emerald Ash Borer Threat

Emerald Ash Borer (EAB) has **not** been detected in South Dakota but has been found in Central Iowa and the Twin Cities area. It is an exotic invasive insect pest that has caused extensive ash mortality in 25 US states and two Canadian provinces since its detection in 2002. All ash species native to North America are susceptible to attack and the majority die within seven years of initial attack. Once killed by EAB, ash trees quickly dry out and become hazards.



- 19,687 (33%) of the total trees inventoried in community forests were native ash
- Total removal costs (over 7 years) would be \$33.1 million in the 72 communities
- Estimated replacement costs for these trees would be \$72.1 million

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