



# South Dakota Forest Action Plan

2020 Revision

# **SOUTH DAKOTA FOREST ACTION PLAN**

## **2020 REVISION**

*Prepared by*

Marcus Warnke & Anne Juetten

South Dakota Department of Agriculture  
Resource Conservation & Forestry Division  
3305 West South Street  
Rapid City, SD 57702-8160

523 East Capitol Avenue  
Pierre, SD 57501-3182

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### **LEADERSHIP**

William K. Smith, Resource Conservation & Forestry Division Director  
Gregory J. Josten, South Dakota State Forester  
Jay Esperance, Wildland Fire Division Director/Chief

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*Cover Photo:* Box Elder Creek near Nemo, South Dakota (SDDA, RCF 2019)

## EXECUTIVE SUMMARY

This is the second edition of the South Dakota Forest Action Plan (FAP). It is intended to be a guide to the scope and condition of South Dakota's forests across all ownerships. The plan will provide 10-year direction to the South Dakota Department of Agriculture, Division of Resource Conservation and Forestry (RCF) as it works to conserve, protect, improve, and develop the natural resources of South Dakota for its citizens.

The FAP also satisfies the requirements for a statewide assessment of forest resource conditions and statewide forest resource strategies as defined in the Cooperative Forestry Assistance Act of 1978 ([16 U.S.C. 2101a\(a\)](#)) as a condition for qualifying for US Forest Service (USFS) State and Private Forestry Program funding.

The FAP is divided into sections which reflect federal requirements. Section I is the assessment of forest resources. Section II identifies priority areas where we will focus our work. The priority areas were last updated in 2017 and are designed to be updated as needed. Section III is the Assessment of Need for the USFS Forest Legacy Program. Section IV includes the goals, objectives and strategies that will guide RCF activities for the next 10 years.

Like the 2010 South Dakota Statewide Assessment of Forest Resources, this assessment stratifies the state's forests by type: coniferous, bottomland hardwood, upland hardwood, windbreaks, and community forests. Attributes such as extent, location, species composition, age and size class distribution, ownership, and threats are discussed.

The most significant threat facing South Dakota's forests is emerald ash borer (EAB). Ash is one of the few trees species that is native to the whole state. It is also one of the most common trees in the state making up a third of the tree canopy in communities, 40 percent of windbreak species, 22 percent of non-forest woodlands, and is the fifth most common tree in our state's forest lands. The native ash has no resistance to EAB. The insect is expected to kill all the ash trees in the state.

The two most significant threats to conifer forests are catastrophic wildfire and mountain pine beetle (MPB). The forest recently experienced a twenty-year MPB epidemic (1996-2016) that affected 450,000 acres of Black Hills ponderosa pine killing millions of trees. Another epidemic isn't expected for another 15 to 20 years. However, preparation for the next epidemic through forest management must begin now. The potential for catastrophic fire and insect epidemics is exacerbated by too many trees. At this writing, there is a backlog of over 200,000 acres of overstocked pine forest in need of non-commercial thinning. Overstocking suppresses tree growth, increases fuel hazard, and limits forb and grass production. At current costs, an investment of at least \$60 million is needed to eliminate this backlog. Increased use of prescribed fire is a partial solution, but the best long-term solution

is to develop a viable market to utilize small diameter trees and logging residues which could significantly reduce or eliminate the cost of thinning.

Fragmentation of private forest lands continues to create challenges to forest management by expanding the Wildland Urban Interface (WUI) and increasing the number of owners needed to organize effective management activities. More owners and ownerships increase the amount of time and cost to implement projects at scale.

Past surveys have shown the windbreak resource in the state is aging, with 61 to 71 percent in need of renovation. Up to 40 percent of the species composition in aging windbreaks is green ash. In 2020, the trees outside of forests image-based inventory (TOFii) project was completed. This project mapped every windbreak and narrow wooded strip in the state. At this writing, we are waiting for analysis of the data by the USFS Northern Research Station. The data, coupled with on-the-ground sampling, will give us a better understanding of windbreak condition across the state, will elevate windbreak renovation as a natural resource concern, help us compete for funds to complete windbreak renovation, and help us with identifying and mapping wooded riparian areas.

EAB is the biggest threat to face community forests since Dutch elm disease decimated American elm trees across the state in the latter half of the 20<sup>th</sup> century. All communities will be faced with significant financial burdens as they remove the ash trees from along their streets and parks. There is a heightened interest in the insect, its damage, and community tree resources since EAB was found in Sioux Falls in 2018. RCF will continue to offer street tree inventories or ash tree identification, planning assistance, quarantines, biocontrol, and education to help communities deal with the problem.

There is a lack of natural regeneration in our upland and bottomland forests, in part due to invasive species. Buckthorn, Eastern redcedar, Rocky Mountain juniper, and Russian olive are taking over the understory of many native forest lands and preventing regeneration of desirable tree species. There is also an ash component to these forests that will be lost to EAB.

There were no changes made to the Forest Legacy Program Assessment of Need. South Dakota state agencies do not have the authority to hold conservation easements, so the only opportunities for this program in the state are fee simple purchases. RCF cannot own land so Forest Legacy tracts are purchased in partnership with South Dakota Department of Game Fish and Parks (GFP). Applications to obtain grant funds for two new properties are currently in development.

Along with challenges come opportunities. The strategies developed in this plan are broad in scope to address the many challenges facing our state's forests and trees outside of forests. Over the plan's 10-year life it is important that we have strategies developed to address threats when opportunities arise. The response of

RCF will often be dictated by the severity of the threat and the availability of funding to address the threat.

Partnerships will be important to successfully implementing this FAP. RCF is a small agency which does not own forest land. Consequently, all the work we do is accomplished through partnerships with other federal, state, tribal, and local government agencies, non-governmental organizations, private businesses, and private landowners. The success of this FAP will depend, in large part, on our ability to work with traditional partners and cultivate new partnerships as we work to protect, improve, and develop South Dakota's forest resources.

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<b>ACRONYM</b>	<b>ACRONYM_MEANING</b>
<b>ADS</b>	Aerial Detection Survey
<b>ATFS</b>	American Tree Farm System
<b>BLM</b>	Bureau of Land Management
<b>BMP</b>	Best Management Practices
<b>CD</b>	Conservation Districts
<b>CRP</b>	Conservation Reserve Program
<b>CSP</b>	Conservation Stewardship Program
<b>CWFS</b>	Council of Western State Foresters
<b>DOA</b>	United States Department of Agriculture
<b>DOI</b>	United States Department of the Interior
<b>DU</b>	Ducks Unlimited
<b>EQIP</b>	Environmental Quality Incentive Program
<b>FHM</b>	Forest Health Monitoring
<b>FHP</b>	Forest Health Protection
<b>FLP</b>	Forest Legacy Program
<b>FSP</b>	Forest Stewardship Program
<b>GNA</b>	Good Neighbor Authority
<b>ISA</b>	International Society of Arboriculture
<b>NACD</b>	National Association of Conservation Districts
<b>NASF</b>	National Association of State Foresters
<b>NRCS</b>	Natural Resources Conservation Service
<b>NWTF</b>	The National Wild Turkey Federation
<b>PF</b>	Pheasants Forever
<b>RCF</b>	Resource Conservation & Forestry
<b>REMF</b>	Rocky Mountain Elk Foundation
<b>RF</b>	Rural Forestry
<b>SAF</b>	Society of American Foresters
<b>SAFR</b>	South Dakota Statewide Assessment of Forest Resources
<b>SFI</b>	Sustainable Forestry Initiative
<b>SMART</b>	Stewardship Mapping and Reporting Tool
<b>SDACD</b>	South Dakota Association of Conservation Districts
<b>SDDA</b>	South Dakota Department of Agriculture
<b>SDFAP</b>	South Dakota Forest Action Plan
<b>SPA</b>	Supplemental Project Agreement
<b>S&amp;PF</b>	State and Private Forestry
<b>TELE</b>	Tools for Engaging Landowners Effectively
<b>TNC</b>	The Nature Conservancy
<b>TOFI</b>	Trees Outside of Forests
<b>TSI</b>	Timber Stand Improvement
<b>TU</b>	Trout Unlimited
<b>UAV</b>	Unmanned Aerial Vehicle (Drone)
<b>USFS</b>	United States Forest Service

<b>USFWS</b>	United States Fish and Wildlife Service
<b>UCF</b>	Urban & Community Forestry
<b>WFS</b>	South Dakota Wildland Fire Suppression
<b>WGA</b>	Western Governors Association
<b>WHIP</b>	Wildlife Habitat Incentive Program
<b>WUI</b>	Wildland Urban Interface

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