Forest Management and Forest Stand Improvement

FS-SD-123

Introduction

A well-managed forest land provides habitat for wildlife, enhances environmental quality, and reduces risk of wildfire and disease. Forest Stand Improvement (FSI) is the process in which land is managed to promote a healthier forest community. This is done though the manipulation of species composition, stand structure, and number of trees by cutting or killing selected trees and understory vegetation.

Why Forest Management?

Forests are constantly changing. To get the most out of your property and meet your goals, some type of regular management will be necessary. Forest management is providing landowners with the care they need for their forest to remain healthy and provide the benefits they desire. Forest management considers all parts of the forest community: soil, water, plants, animals, and air, as well as the trees. The goal of forest management is a healthy, sustainable forest that accommodates any number of uses.

What are the Benefits of Forest Stand Improvement?

FSI is aimed at reducing competing vegetation that hinders development and health of preferred tree and/or understory species, by removing less desirable trees to concentrate subsequent growth on the most desirable trees and plants. Through FSI, landowners can restore a forest stand to a healthier state, restoring ecological function, increasing economic value, and improving aesthetics. Numerous results can be accomplished through FSI, including:

- Improve and sustain forest health and productivity.
- Increase resistance to disease and insect outbreaks.
- Decrease the risk of wildfires.
- Improve water quality and increase carbon sequestration.
- Improve habitats for wildlife and native plant species.
- Initiate forest stand regeneration.
- Improve grazing.
- Improve recreational opportunities.

Forest Management Plans

Before FSI is applied, a Forest Management Plan (FMP) is drafted by an approved forester or natural resource professional. The FMP is a site-specific plan based on Natural Resources Conservation Service Resource Concerns, landowner's objectives, and professional expertise to achieve long-term forest management goals. The FMP will provide detailed information about species composition, potential harmful pests, other ecosystem components of the property and surrounding landscape, and related opportunities and limitations. Providing the plan for the

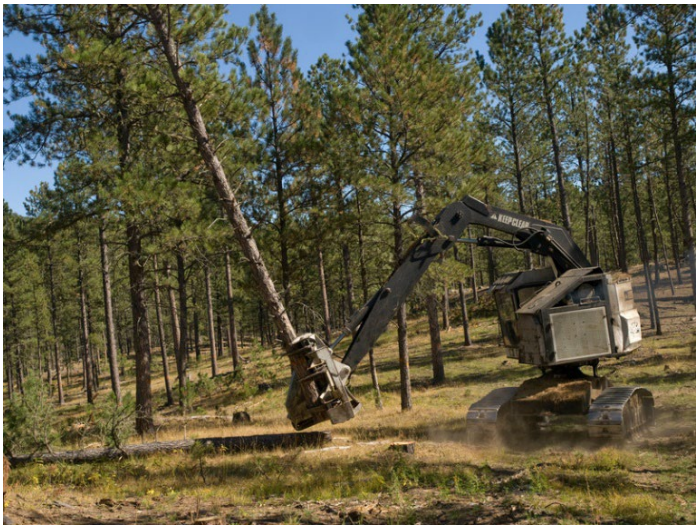
management to be completed though the application of FSI.

Management Options

Several techniques can be used to enhance the overall health and production of a forest. The management options for landowners will depend on the existing forest conditions and the desired future conditions that were identified in the FMP. These will determine the size, amount, and spatial distribution of trees being removed.

These attributes are combined and documented as a silvicultural prescription written by a forester or natural recourses professional. The prescription differs from the FMP because it can cover a smaller area of the property, such as a single field or stand of trees. There may be multiple prescriptions that are often different from one another in one FMP. These prescriptions will provide guidance to implementation of your forestry practices.

FSI may be accomplished commercially through a timber sale, or it may be noncommercial depending on the size, quality, and/or quantity of trees that need to be removed and the market for forest products. Each method can be used independently or can be integrated with others to create the desired outcome.



The byproducts of FSI treatments can be used as alternative energy sources or sold for timber and firewood. Some of these practices require permits, so it is important to contact a forester or natural resource professional for proper guidance.

Common Associated Practices

FSI (666) is commonly applied with practices such as Woody Residue Treatment (384), Brush Management (314), Firebreak (394), Fuel Break (383), Herbaceous Weed Treatment (315), Forest Trails and Landings (655), Access Road (560), Tree-Shrub Pruning (660), Upland Wildlife Habitat Management (645), Early Successional Habitat Development-Management (647), and Restoration of Rare and Declining Natural Communities (643).

Landowners of forested land may be eligible for FMP preparation and for financial assistance for FSI implementation through the NRCS Environmental Quality Incentives Program (EQIP) and also through local and state level programs.

For further information, contact your local NRCS field office. https://www.nrcs.usda.gov/contact/find-a-service-center

Where to Find More Information

- General Information on NRCS Forestry Programs *https://www.nrcs.usda.gov/conservation-basics/conservation-by-state/ south-dakota/south-dakota-forestry*
- Information on NRCS EQIP Program *https://www.nrcs.usda.gov/programs-initiatives/eqip-environmental-quality-incentives/south-dakota/ south-dakota- environmental*
- NRCS Conservation Practice Standard: Forest Stand Improvement *https://efotg.sc.egov.usda.gov/#/state/SD/ documents/section=4&folder=-97*
- South Dakota Department of Agriculture & Natural Resources *https://danr.sd.gov/Conservation/Forestry/default.aspx*

South Dakota
Natural Resources Conservation Service
sd.nrcs.usda.gov/