

SECTION II

II - D. SOIL INTERPRETATIONS

3. Forest Land

INTRODUCTION

Forest land interpretations are important to good forest land and woodland management. Landowners and managers can utilize them in planning, installing, and maintaining forest land or woodland management systems. The management of the trees begins with an understanding of the soil(s) on which they grow or are to be grown. Some soils are suitable for growing wood crops; others barely support tree cover. Different tree species may vary in production on the same soil.

Forestry interpretations and productivity data are found in the National Soil Information System (NASIS) and are supported at the state and national levels. The National Soil Information System is the repository for this data set. These interpretations and data are available through the NRCS Soil Data Mart (SDM) and NRCS Web Soil Survey (WSS). Criteria for forestry interpretations are contained in the USDA-NRCS National Forestry Manual.

<http://soils.usda.gov/technical/nfmanual/>

This subsection contains the following:

Forest Land Productivity Defined – The Forest Land Productivity Table, found in the Soil Data Mart and Web Soil Survey presents information about the management and productivity of soils for producing wood crops. The information is presented by soil map unit in the soil survey area.

Forest Soil Interpretations – The forest land interpretations for various soils located within a soil survey area are explained here.

SECTION II

II - D. SOIL INTERPRETATIONS

3. Forest Land

FOREST LAND PRODUCTIVITY DEFINED

The Forest Land Productivity Table, found in the Soil Data Mart and Web Soil Survey presents information about the management and productivity of soils for producing wood crops. The information is presented by soil map unit in the soil survey area. Information on potential productivity includes common trees, site index, volume of wood fiber, and trees to manage.

Potential Productivity

Potential productivity is based on the site index of an indicator species. An indicator species is the species that is common in the area and is generally most productive on the soil. Potential productivity is normally expressed in terms of cubic feet of wood per acre per year of the indicator species.

Common Trees

These are the trees that generally occur on the soil regardless of economic importance.

Site Index

A measure of the quality of a site based upon the height of dominant trees at a specified age.

Volume of wood fiber

The annual production of each identified species expressed in cubic feet per acre per year.

Trees to Manage

A list of one or more adapted species for producing wood crops on the soil.

SECTION II

II - D. SOIL INTERPRETATIONS

3. Forest Land

FOREST SOIL INTERPRETATIONS

Forest land management concerns that are covered by available interpretations include the probability of seedling survival, site preparation, suitability of planting, erosion hazard, potential for damage to soil by fire, haul road and log landing suitability, harvest equipment operability, and soil rutting hazard.

Within the Soil Data Mart, forest land interpretations for California soil survey areas are contained in the following reports: “Damage by Fire and Seedling Mortality on Forestland”, “Forestland Planting and Harvesting”, “Forestland Site Preparation”, “Haul Roads, Log Landing, and Soil Rutting on Forestland”, and “Hazard of Erosion and Suitability for Roads on Forestland”.

Within the Web Soil Survey, soil maps and tables for forest land interpretations are found under the “Suitabilities and Limitations for Use” tab, under the section “Land Management”.

Management Concerns

Potential for Seedling Mortality

The probability of death of naturally occurring or viable, properly planted seedlings, as influenced by soil type or topographic conditions. A rating of slight indicates that the expected mortality is less than 25 percent; moderate is 25 to 50 percent mortality; and severe is more than 50 percent mortality.

Mechanical Site Preparation (Surface)

The suitability of using surface altering soil tillage equipment to prepare a site for tree planting.

Mechanical Site Preparation (Deep)

The suitability of using deep soil tillage equipment to prepare a site for tree planting.

Hand Planting Suitability

The expected difficulty in the hand planting of tree and shrub seedlings.

Mechanical Planting Suitability

The expected difficulty in the planting of tree and shrub seedlings using a mechanical planter.

SECTION II

II - D. SOIL INTERPRETATIONS

3. Forest Land

Potential Erosion Hazard (Road/Trail)

The hazard or risk of soil loss from unsurfaced roads/trails.

Potential Erosion Hazard (Off-Road/Off-Trail)

Ratings indicate the hazard or risk of soil loss from off-road and off-trail areas after disturbance activities that expose the surface.

Potential Damage to Soil by Fire

The potential hazard of damage to soil nutrient, physical, and biotic characteristics from fire.

Construction Limitations for Haul Roads/Log Landings

Ratings (Slight, Moderate, Severe) that reflect limitations for constructing haul roads and log landings.

Log Landing Suitability

The suitability of the soil at the forest site to serve as a log landing.

Road Suitability (Natural Surface)

Suitability for using the natural surface of the soil component for roads by trucks for the transport of logs and other wood products from the site.

Harvest Equipment Operability

The suitability for operating harvesting equipment such as rubber-tired skidders.

Soil Rutting Hazard

Ratings indicate the hazard or risk of ruts in the uppermost soil surface layers by operation of forest equipment. Soil displacement and puddling (soil deformation and compaction) may occur simultaneously with rutting.