

Ecological Sites: Understanding the Landscape

Fact Sheet

Overview

As you look across a pasture, watershed, or any landscape, it's easy to recognize that some parts of the landscape differ from other parts in the kinds and amount of vegetation. To understand this variation across the landscape, NRCS classifies forest land and rangeland into units called *ecological sites*. These site delineations are utilized as the basic subdivision for inventory and analysis of landscapes.

Any land inventory, analysis of that inventory, and resulting management decisions require the knowledge of these individual sites and their interrelationships to one another on the landscape.

Description

An ecological site is defined as a distinctive kind of land with specific physical characteristics that differ from other kinds of land in its ability to produce a distinctive kind and amount of vegetation (USDA 1997).

Ecological site descriptions provide information to:

- Assess condition of current resources.
- Assess management opportunities.
- Predict the outcome of management decisions.

Importance

Today, land managers are challenged with synthesizing an overwhelming amount of scientific information, including soils, hydrology, ecology, management, and other resource information. Ecological site descriptions provide information describing the interactions among soils, vegetation, and land management.

Features

The information comprising an ecological site description is presented in four major categories:

- **Site Characteristics** – Identifies the site and describes the physiographic, climate, soil, and water features associated with the site.
- **Plant Communities** – Describes the ecological dynamics and the common plant communities comprising the various vegetation states. The disturbances that cause a shift from one state to another are described.
- **Site Interpretations** – Interpretive information pertinent to the use and management of the site.
- **Supporting Information** – Provides sources of information and data utilized in developing the site description and the relationship of the site to other sites.

Vegetation Dynamics

A state and transition model is utilized to describe the dynamics of vegetation and management interactions associated with each ecological site.

A state and transition model (*Figure 1*) identifies the different vegetation states that may exist on a site, describes the disturbances that cause vegetation change, and restoration activities needed to restore plant communities.

To provide a visual representation of plant communities, one or more photos for each plant community are contained in the ecological site description (*Figure 2*).

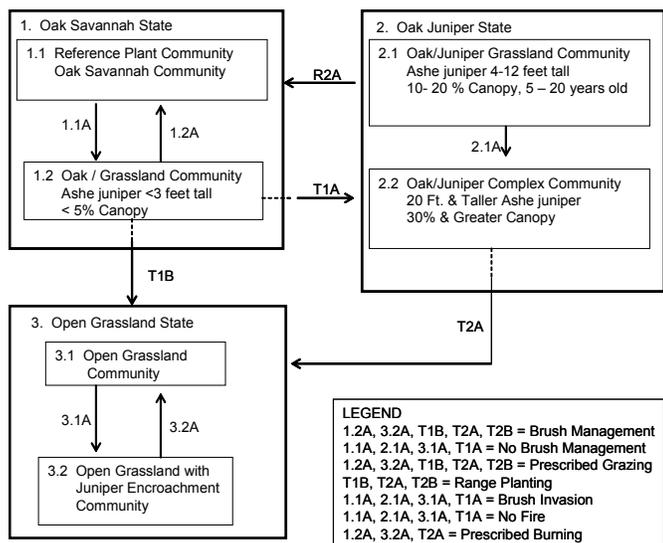


Figure 1. Example state and transition diagram for Deep Redland ecological site description in Eastern Edwards Plateau Major Land Resource Area.

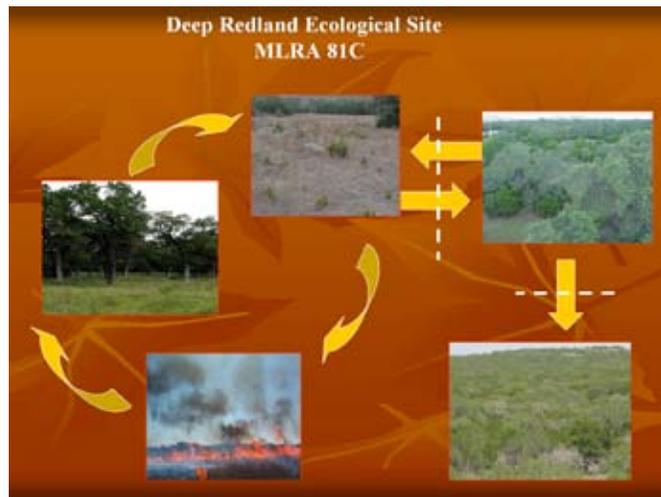


Figure 2. Pictorial depiction of the different disturbances that can occur within communities of the Deep Redland ecological site.

For More Information

Individual ecological site information is available at:

Ecological Site Information System – <http://esis.sc.egov.usda.gov>

Web Soil Survey – <http://websoilsurvey.nrcs.usda.gov>

Contact

For additional information, contact Homer Sanchez, rangeland management specialist, Grazing Lands Technology Development Team, Central National Technology Support Center, at 817-509-3227 or e-mail at Homer.Sanchez@ftw.usda.gov.

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