



ECOLOGICAL SITE DESCRIPTIONS: A FOUNDATION FOR RESOURCE MANAGEMENT DECISIONS

By Everet Bainter

Abstract—Ecological site descriptions (ESDs) are replacing the range site descriptions that have been used in Wyoming in the past. The intent is to provide landowners and managers with better tools to make informed decisions. ESDs use the existing range site descriptions and build on them to provide additional information. In particular, they describe various vegetative states that can occur within the site. They also describe the pathways between these vegetative states that cause shifts in the kind and/or amount of vegetation.

INTRODUCTION

Existing Range Site Descriptions are being revised as Ecological Site Descriptions (ESDs) due to increased demands on rangeland resources and a better understanding of range ecology. These revisions are being made by the United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS).

BACKGROUND ON ECOLOGICAL SITE DESCRIPTIONS

In the 1950s, the Soil Conservation Service (SCS), now known as the NRCS, began developing Range Site Descriptions for all the native rangeland sites in the United States. These descriptions have served as valuable tools for land managers conducting range surveys and assessing rangeland condition. It allowed them to compare the current plant composition, production, and cover to the site's potential.

Range professionals are now combining years of on-the-ground experience with the latest technology to more fully describe natural plant communities. These new Ecological Site Descriptions (ESDs) will help ranchers, land managers, wildlife managers, and others more effectively manage rangeland resources.

Range Site Descriptions are being refined. The major change is to replace the value-laden terms of Excellent, Good, Fair, and Poor with a State and Transition Model that diagrams and describes the plant communities that commonly occur on a site. It will also describe what combination of natural events and management strategies will cause one plant community to change to a different plant community.

For example, a particular site might support a plant community dominated by cool and warm-season, medium-height grasses under a certain set of conditions. Changes in management might change this plant community into any of several other potential plant communities. A shrub might dominate one of these plant communities, while short sod-forming grasses and noxious weeds might dominate another. Each potential community has distinctly different values for livestock, wildlife, hydrology, and biodiversity, etc.

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The State and Transition Model will show land managers where they are, where they can go, and how they can get there. It will help in more accurately estimating livestock and wildlife carrying capacities. The model will describe how to avoid thresholds that, if crossed, will mean lost time and money to reverse the change. Ecological Site Descriptions will also contain valuable information related to wildlife habitat, watershed management, recreation, and other uses. This national NRCS initiative is underway and Wyoming has a seven-year action plan to complete ESDs in 12 major land resource areas. NRCS technical specialists from across the state are soliciting input from other partners (agencies and producers) to verify and more fully describe ecological sites. While the Ecological Site Descriptions are to be completed in a seven-year period, they will no doubt be continually modified over the years as knowledge and technology increases.

The main objective is to write ESDs that will enable professionals to provide better advice and assistance that will help ranchers and land managers make more informed decisions.

REFERENCES

USDA Natural Resources Conservation Service. 1997. National Range and Pasture Handbook.

