



# **INTERAGENCY ECOLOGICAL SITE APPLICATIONS WORKSHOP**

## **Agenda**

August 23-25, 2011

Shortgrass Steppe Research and Interpretation Center (SGS-RIC), Nunn, Colorado  
and High Plains Grasslands Research Station (HPGRS), Cheyenne, Wyoming

### *Workshop Objectives:*

- 1) Enhance foundational knowledge, skills and understanding of Ecological Site Descriptions, state-and-transition models and interpretations
- 2) Determine ecological sites and ecological states through field site visits
- 3) Showcase utility of Ecological Site Descriptions for conservation planning, assessment and monitoring in forest ecotones as well as semiarid rangelands
- 4) Provide framework for understanding and participating in the move from first to second generation ESDs

Agenda (continued)

## **Tuesday, August 23 - Workshop Day 1**

**Location: Shortgrass Steppe Research and Interpretation Center, Nunn, CO**

6:30am Transport of persons from Days Inn hotel (Wellington, CO) to Shortgrass Steppe Research and Interpretation Center

7:00am Breakfast

### **Session 1 - 8:00am - 12:00pm**

#### *Session 1 Objectives:*

- 1) Showcase relevance of Ecological Site Descriptions for cohesive and uniform land management across ownership/administrative boundaries
- 2) Increase knowledge, skills and understanding of Ecological Site Descriptions, state-and-transition models and interpretations
- 3) Provide initial framework for moving from first to second generation Ecological Site Descriptions

8:00am Welcome- Objectives of the workshop, format, context, logistics  
*Justin Derner, Research Leader, Rangeland Resources Research Unit*

8:20am Introductions of attendees

8:40am Keynote Presentation on Great Plains Rangeland Ecosystems  
*Dr. Bill Lauenroth, Department of Botany, University of Wyoming*

9:40am Break (bottled water available)

10:10am Update on Interagency Ecological Site Handbook  
*Dennis Thompson, NRCS*

10:30am Ecological Site Descriptions: An overview of basic concepts, background and applications of Ecological Sites  
*Brandon Bestelmeyer, ARS, Research Ecologist, Jornada Experimental Range*

11:00am Moving from first to second generation Ecological Site Descriptions: What changes in structure and content of ESDs may mean for users  
*Rick Peterson, NRCS, State Rangeland Management Specialist, Wyoming*

11:40am Afternoon Field Visit Overview

12:00pm Lunch by Weld County Cattlewomen

Agenda (continued)

## Session 2 - 1:00pm - 5:00pm

### *Session 2 Objectives:*

- 1) Demonstrate principles of Ecological Site Inventory in the field for shortgrass steppe
- 2) Identify techniques for determining ecological site and ecological state(s), and determine influence of different management practices through collection of field data

1:00pm Transport persons from Shortgrass Research and Interpretation Center to field sites

1:15pm Field site visit to a Loamy Plains Ecological Site (bottled water available)  
*Led by Rachel Murph, NRCS CO State Rangeland Management Specialist*

The objective of this field visit is to demonstrate applications of Ecological Site Description interpretation section, specifically interpreting and information from structured experiments about influence of different management practices (heavy grazing, removal of grazing, prescribed fire, prairie dogs?) in making management recommendations

- Which ecological site is this?
  - Regional and landscape filters, hard copy maps, SoilWeb tool, soil pit
- What ecological state is this site in?
- How to determine state (shrub grass ratios, grass species composition)
  - Interpretations and linkages among state functions, ecological processes and land management decisions.

5:00pm Transport persons to Slayton pasture for dinner by Weld County Cattlewomen  
*Cream Can Cookout with cowboy poetry by Dick Hart (retired ARS)*

Evening Transport persons back to Days Inn hotel (Wellington, CO) and Shortgrass steppe Research and Interpretation Center

Agenda (continued)

## **Wednesday, August 24 - Workshop Day 2**

**Location: All day in Field, meet at SGS-RIC, Nunn, CO**

6:30am Transport of persons from Days Inn (Wellington, CO) to Shortgrass Steppe Research and Interpretation Center

7:00am Breakfast

### **Session 3 - 8:00am - 12:00pm**

#### *Session 3 Objectives:*

- 1) Demonstrate principles of the application of Ecological Site Descriptions and influence of climate change to conservation planning and assessment in the field for northern mixed grass prairie
- 2) Showcase effects of projected climate change on plant communities and impacts on interpreting state-and-transition models

8:00am Transport persons from Shortgrass Steppe Research and Interpretation Center to High Plains Grasslands Research Station (bottled water available)

9:00am Field site visit to a Loamy Ecological Site (bottled water available)  
*Led by Rick Peterson, NRCS WY State Rangeland Management Specialist*

#### *Field Visit Objectives:*

- 1) Showcase relevant research findings related to ecosystem change associated with increased atmospheric carbon dioxide and higher temperatures (Presentation by Drs. Jack Morgan, Plant Physiologist, and Dana Blumenthal, Weed Ecologist, on the Prairie Heating and CO<sub>2</sub> Enrichment (PHACE) experiment)
- 2) Discuss assumptions about climate in current ESDs and how information on climate change impacts can be incorporated into new and revised ESDs

- Which ecological site is this?
  - Regional and landscape filters, hard copy maps, SoilWeb tool, soil pit
- What ecological state is this site in?
  - How to determine state (shrub grass ratios, grass species composition)
  - Interpretations and linkages among state functions, ecological processes and land management decisions.

11:15am Transport persons to the Bunkhouse Grille

12:00pm Lunch at Bunkhouse Grille

Agenda (continued)

#### **Session 4 - 1:30pm - 5:00pm**

##### *Session 4 Objectives:*

- 1) Demonstrate principles of Ecological Site Descriptions in the field for forested ecotone (transition from northern mixed grass prairie to higher elevation forest)
- 2) Observe Forest Service project for Ecological Site Descriptions

1:30pm Transport persons from Bunkhouse Grill to sites on the Medicine Bow National Forest (bottled water available)

1:45pm Field site visit to Forest Service project for Ecological Site Descriptions  
*Led by Anthony Perlinski and Ginger Paige, University of Wyoming, and Bob Mountain, Rangeland Specialist, Region 2, Forest Service*

The following field efforts will be conducted to demonstrate principles of Ecological Site Descriptions in forested ecotones

- Which ecological site is this?
  - Regional and landscape filters, hard copy maps, SoilWeb tool, soil pit
- What ecological state is this site in?
  - How to determine state (shrub grass ratios, grass species composition)
  - Interpretations and linkages among state functions, ecological processes and land management decisions.

5:00pm Transport persons to Bit-O-WYO for dinner

Evening Transport persons back to Days Inn (Wellington, CO) and Shortgrass Steppe Research and Interpretation Center

Agenda (continued)

### **Thursday, August 25 - Workshop Day 3**

**Location: Shortgrass Steppe Research and Interpretation Center, Nunn, CO**

6:30am Transport of persons from Days Inn (Wellington, CO) to Shortgrass Steppe Research and Interpretation Center

7:00am Breakfast (also facilitators meet to discuss breakout sessions)

#### **Session 5 - 8:00am - 12:00pm**

##### *Session 5 Objectives:*

- 1) Use breakout sessions to prioritize key problems/questions associated with Ecological Site Descriptions
- 2) Summarize what we learned from field visits
- 3) Identify key emergent remaining issues for moving from first to second generation Ecological Site Descriptions

8:00am Breakout sessions for Ecological Site Descriptions (30 min for each question)

- 1) Problems/questions about site concepts (biophysical)

*Facilitator: Rachel Murph*

- 2) Problems/questions about state and transition models

*Facilitator: Emily Kachergis*

- 3) Problems/questions about interpretations

*Facilitator: Jessica Crowder*

9:30am Break (bottled water available)

10:00am Breakout session reports

11:00am Identify key emergent remaining issues

*Joel Brown and Brandon Bestelmeyer*

##### *Possible topics:*

- 1) Lack of systematic participatory basis for development of and testing ESDs
- 2) Information in ESDs may be viewed as inaccurate (temporal and spatial scales for land managers may not be concurrent with scientists and policy makers)
- 3) Lack of specificity related to protocols, ecological processes and spatial data
- 4) Information in ESDs may not be available in a form that is useful for end users

12:00pm Lunch by Weld County Cattlewomen

Agenda (continued)

**Session 6 - 1:00pm - 4:00pm**

*Session 6 Objective:* Showcase landscape influences on interrelationships among ecological sites

1:00pm Transport persons from Shortgrass Research and Interpretation Center to field site

1:15pm Field site visit to a pasture with multiple ecological sites (bottled water available)  
Here, the initial steps will be undertaken to provide a landscape context for managing lands with multiple ecological sites.

- Spatial interactions among sites and states in a landscape, but Ecological Site Descriptions were designed for site-scale decisions, not the landscape context
- Discussion about linkages of spatial and non-spatial data and integration of these for users
- Access and use of multiple data sources, and how users access this information in different databases and platforms

4:00pm Transport persons back to Days Inn (Wellington, CO) and Shortgrass Steppe Research and Interpretation Center