Interagency (BLM, NRCS, FS) Ecological Site Manual

Why are we writing this?

What are some of the major changes it contains?

Mike "Sherm" Karl, BLM National Science & Technology Center, Denver, CO

Who Is Involved in Writing It?

- BLM—Mike "Sherm" Karl, Inventory & Monitoring Specialist, National Science & Technology Center, Denver
- FS—Jeff DiBenedetto, Ecologist, Custer National Forest, Billings MT
- NRCS—Dan Caudle, retired Rangeland Management Specialist, Central National Technology Support Center, Ft. Worth, TX

Who are the Agency Leaders?

- BLM—Bob Bolton, Range Management Program Lead, Washington Office; Rob Roudabush, Division Chief Rangeland Resources, Washington Office
- FS—Wayne Padgett, Vegetation Ecologist, National Forest System, Washington Office
- NRCS—Dennis Thompson, National Range and Grazing Lands Ecologist, Washington DC

What Got us Going on This?

- 1) Direction from Congress in "Department of the Interior and Related Agencies Appropriations Act of 2002"
- 2) Interagency Memorandum of Understanding (MOU)

Language in "Department of the Interior and Related Agencies Appropriations Act of 2002"

- Congress expects "the Secretaries to prepare, within 9 months of enactment, a coordinated 10-year plan and budget identifying the cost of completing standardized soil surveys and ecological classification on all rangeland for use at local management levels."

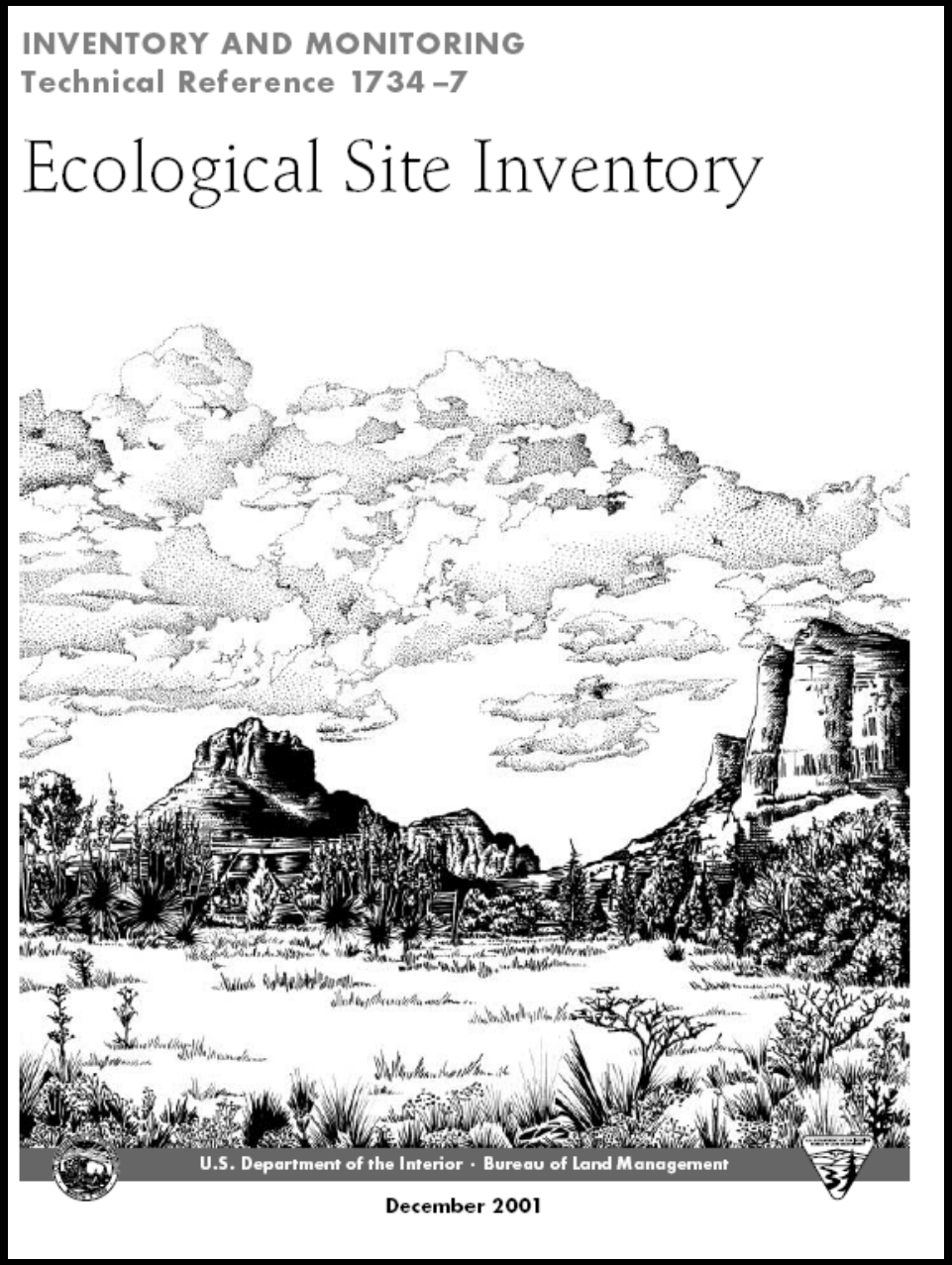
Interagency Memorandum of Understanding (MOU)—Signed Spring 2005

- "The purpose of this MOU is to establish a Federal Interagency Team that will be responsible for developing a standardized method to be utilized by the BLM, FS, and NRCS to define, delineate, and describe terrestrial ecological sites. The team will cooperatively develop an ecological site manual to document this standardized method."

This Version 1 of this Ecological Site Manual is
for Rangelands Only
JUN 26 2002

Interagency Ecological Site Manual Does NOT FOCUS On the Similarity Index & Seral Status Estimation

The Interagency Ecological Site Manual will cause needed amendments to be made to BLM's Technical Reference "Ecological Site Inventory" . . . A future task for Sherm et al.


INVENTORY AND MONITORING
Technical Reference 1734–7

Ecological Site Inventory

U.S. Department of the Interior · Bureau of Land Management

December 2001

Definition of Ecological Site

"An ecological site, as defined for rangeland, is a functional edaphic unit—a distinctive kind of land with specific soil and physical characteristics that differs from other kinds of land in its ability to produce distinctive kinds and amounts of vegetation, <u>and in its ability to respond similarly to management actions and natural disturbances</u>."

Historic Climax Plant Community or Potential Natural Community

Replaced with

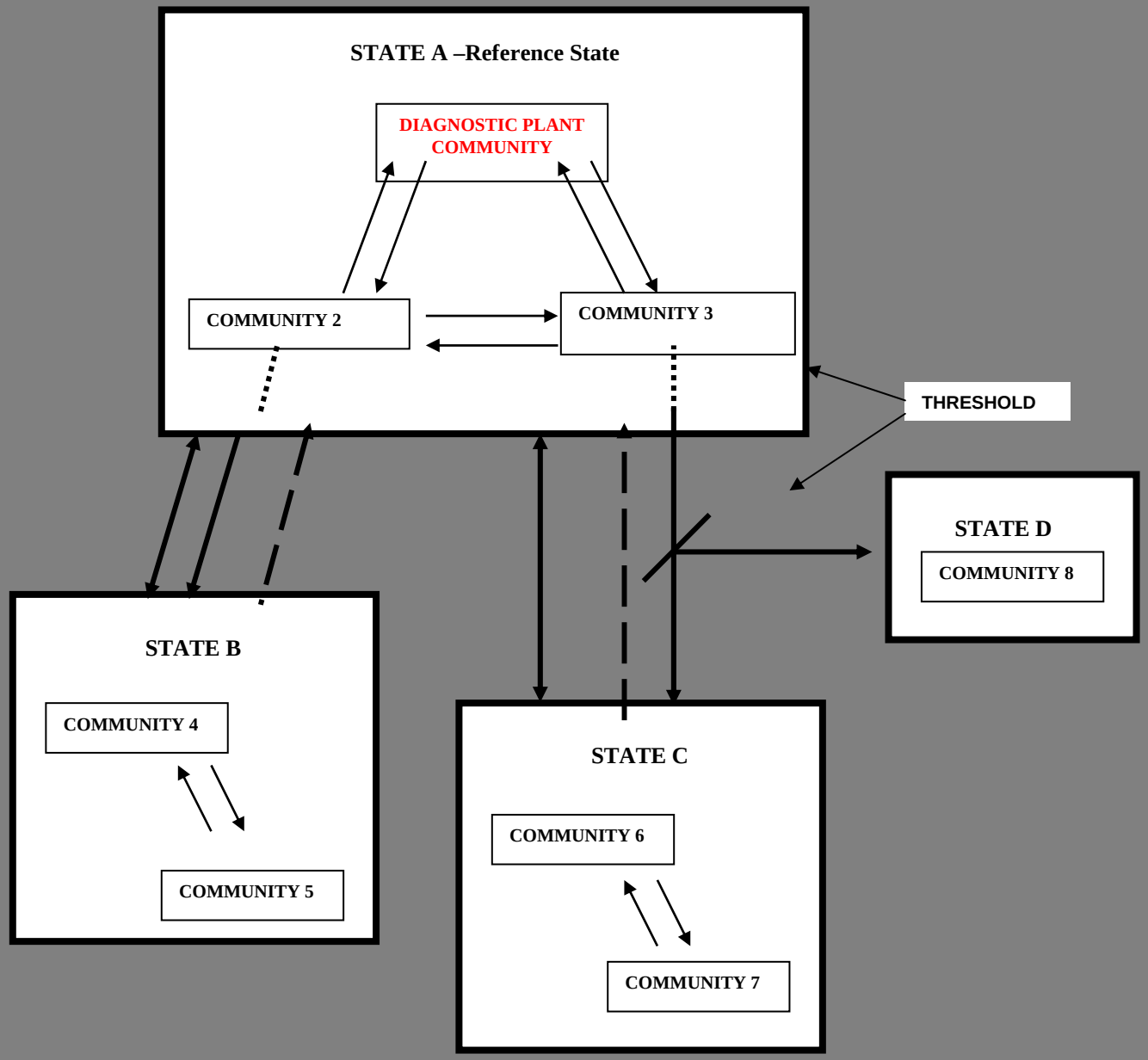
"Diagnostic Plant Community"

Definition of Diagnostic Plant Community

The historic plant community (as near as can be determined) that existed within the natural range of variability, was best adapted to the unique combination of factors associated with the ecological site, and was in dynamic equilibrium with the historic abiotic, biotic, and climatic factors on the ecological site at the time of European immigration and settlement.

Why "Diagnostic Plant Community"?

1. Wanted to removed "climax" terminology because climax infers linear succession which is not always operating on rangelands. Climax terminology in Historic Climax Plant Community also infers that only one plant community characterizes the reference condition of ecological site.
2. See next slide.


STATE A –Reference State
DIAGNOSTIC PLANT COMMUNITY
COMMUNITY 2
COMMUNITY 3
THRESHOLD
STATE D
COMMUNITY 8
STATE B
COMMUNITY 4
COMMUNITY 5
STATE C
COMMUNITY 6
COMMUNITY 7

Why "Diagnostic Plant Community"? (cont.)

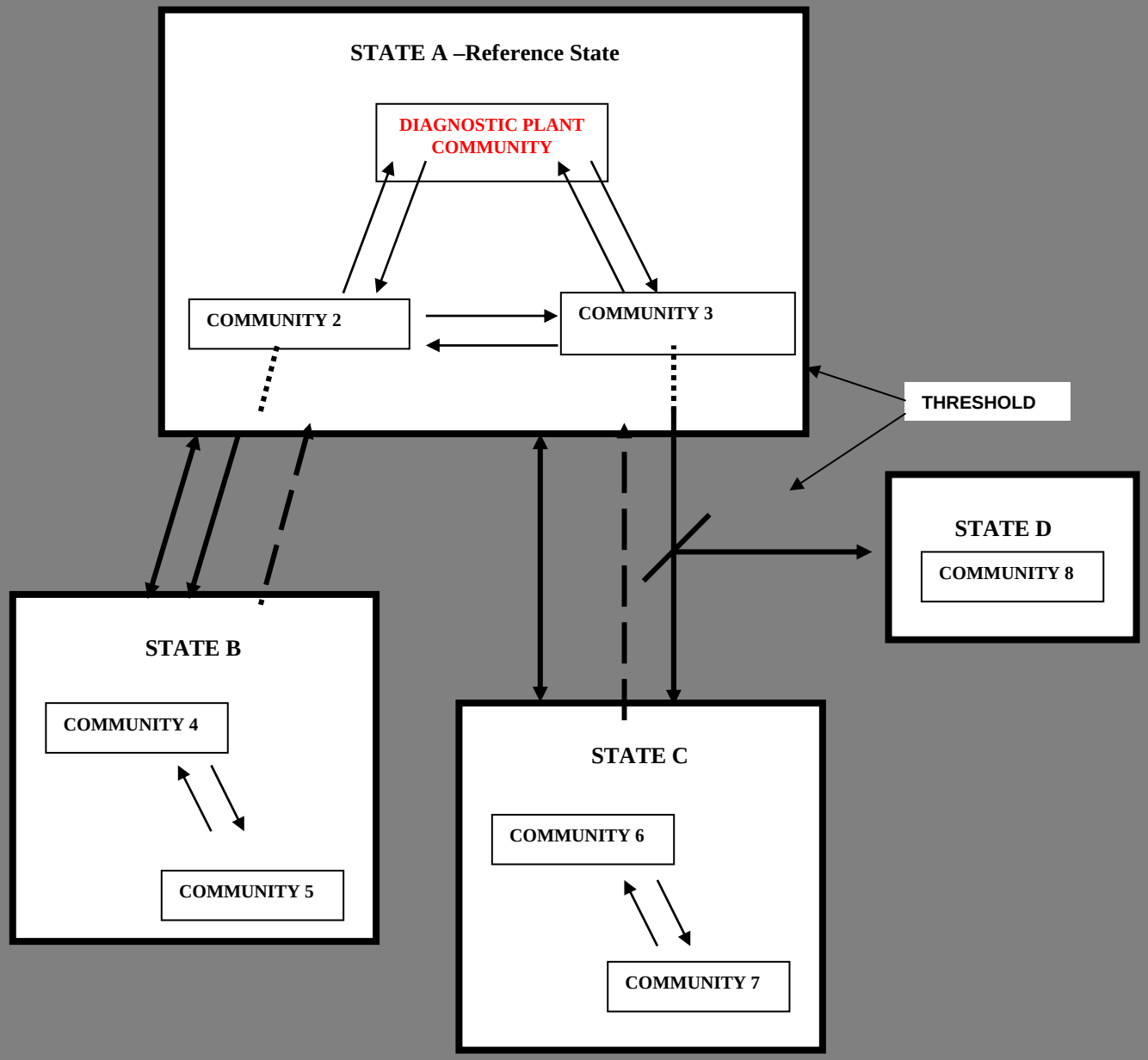
3. The word "diagnostic" is defined in Merriam-Webster's Dictionary as: "serving to distinguish or identify". That definition is why we selected the term diagnostic plant community over historic climax plant community or potential natural community, because the main reason for identifying the diagnostic plant community was its use to distinguish or identify (classify) an ecological site.

Classification and Differentiation of Ecological Sites

2 types of classification:

--classification and differentiation (differentiation of distinct ecological sites) of ecological sites based on abiotic and biotic factors associated with diagnostic plant community

--classification of other plant communities and their associated soil properties in the reference and non-reference states in state-and-transition diagrams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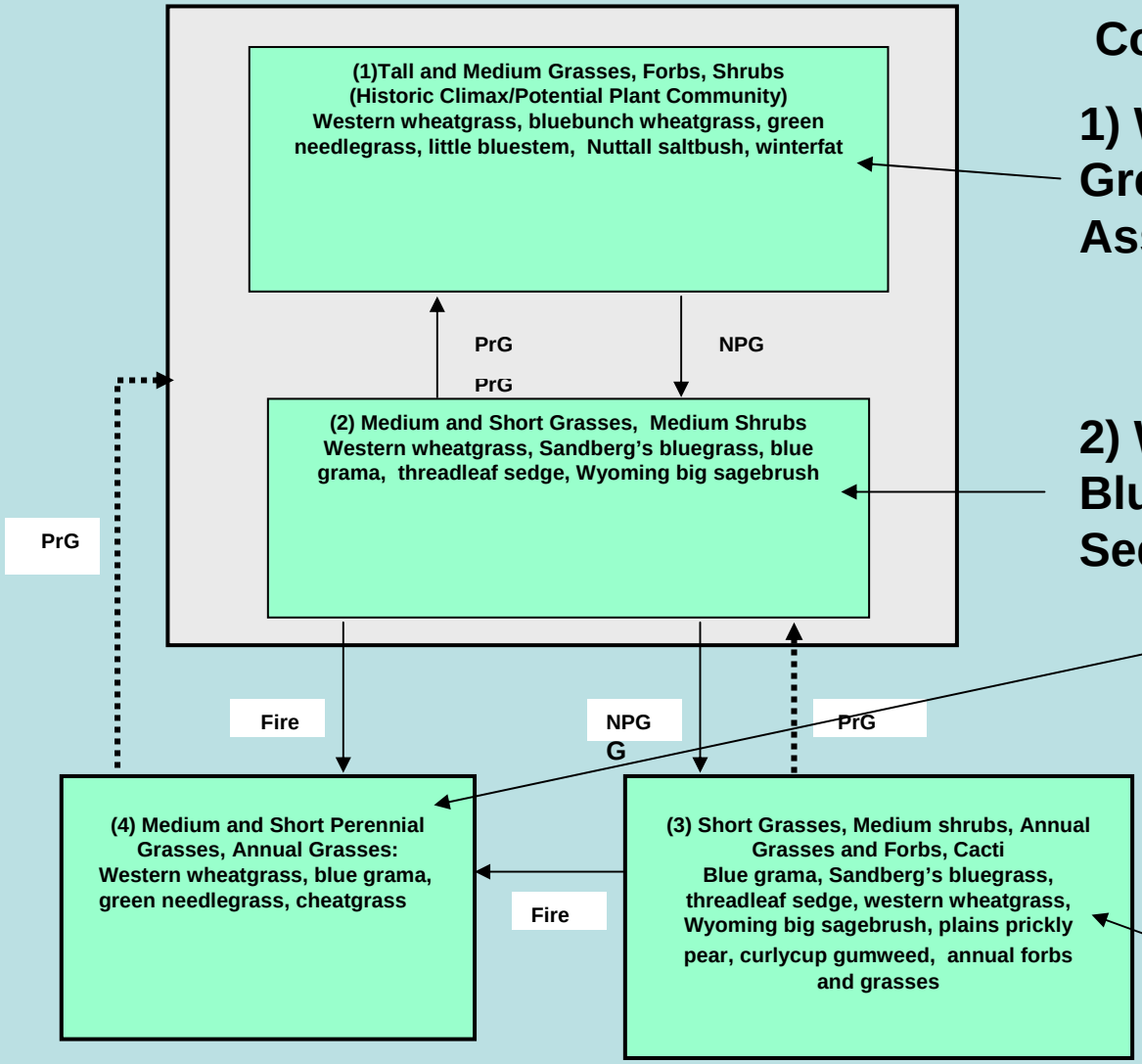
Vegetation Data we Collect to Classify Plant Communities must be Useable to Name Plant Communities According to National Vegetation Classification Standard (NVCS)

Plant Communities and Transitional Pathways (diagram) for a Clayey Slope 10 to 14 inch precip zone ecological site in eastern Montana



NVCS-compatible Plant Community Names

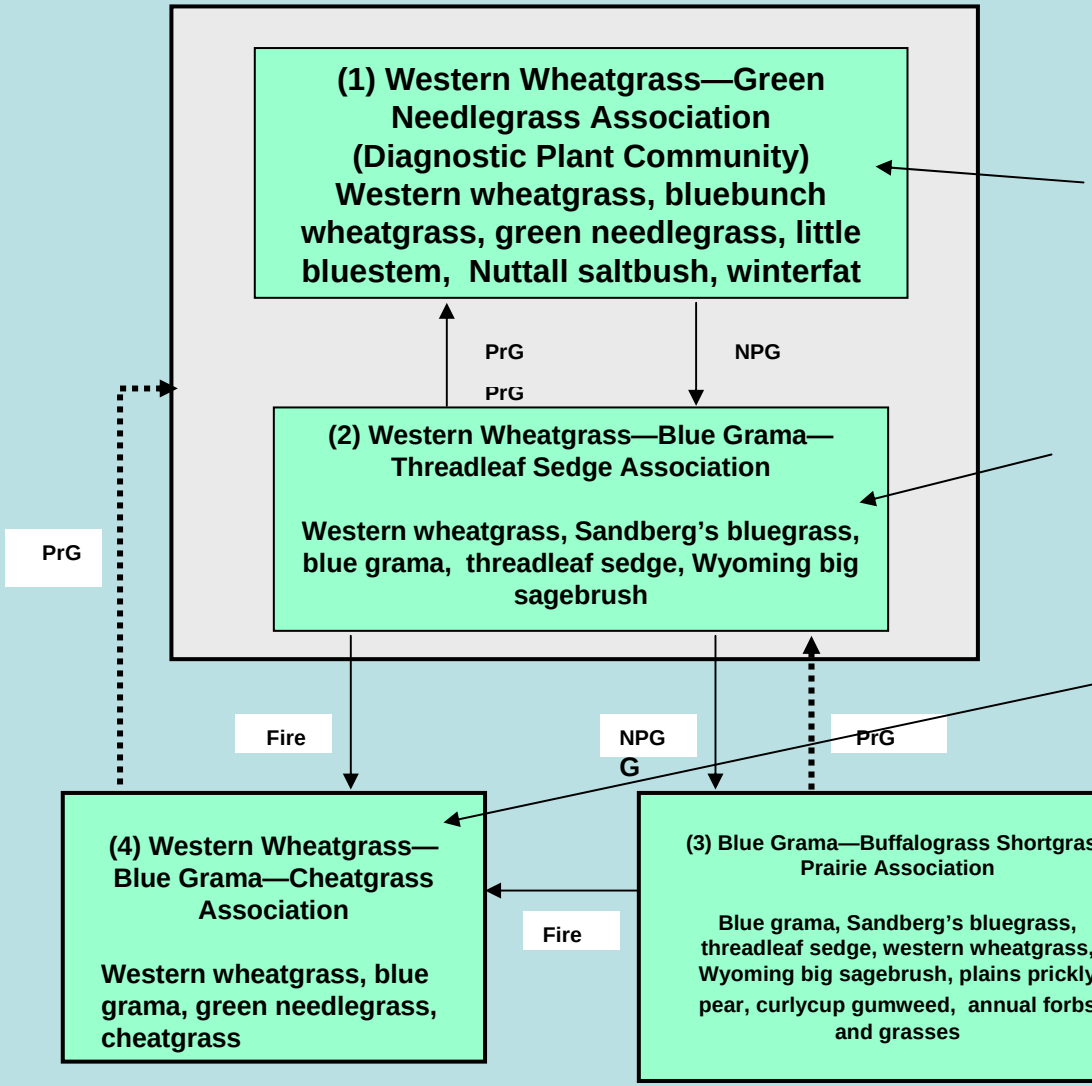
1) Western Wheatgrass—Green Needlegrass Association

2) Western Wheatgrass—Blue Grama—Threadleaf Sedge Association

4) Western Wheatgrass—Blue Grama—Cheatgrass Association

3) Blue Grama—Buffalograss Shortgrass Prairie Association

Plant Communities Named According to NVCS and Example Wildlife Species Showing Affinities to each Plant Community



Wildlife Species Showing Affinity to Each Plant Community

Pronghorn Antelope

Ferruginous Hawk

Fence Lizard

Pronghorn Antelope

White-Tailed Jackrabbit

Western Meadowlark

Pronghorn Antelope

Song Sparrow

Black-Tailed Prairie Dog

Horned Lark

Western Plains Rattlesnake

Interagency Points of Tension during Development of Manual

- Forest Service does not subscribe as whole-heartedly to state-and-transition diagrams as a major portion of ecological site descriptions as much as NRCS and BLM do

Interagency Points of Tension during Development of Manual (cont.)

- NRCS had difficulty understanding BLM and FS need for land use planning needs that are larger in spatial extent than ecological site. E.g. multiple spatial scale wildlife habitat assessments for land use planning

Interagency Points of Tension during Development of Manual (cont.)

- NRCS (to greater extent) and BLM (to lesser extent) had difficulty understanding FS's Terrestrial Ecological Unit Inventory process . . . which incorporates a multiple spatial scale hierarchy of ecological units for multi-scale planning, with ecological types as components of the ecological units at several of the scales.

Interagency Points of Tension during Development of Manual (cont.)

- Agencies don't "lay their cards on the table" at exactly the same times.
- Agencies can come into an interagency process thinking that they'll just "tweek" what they already have.
- Patience . . . Patience . . . Patience

Where are We At Now?

- Oversight Agency folks have "pulled" policy material out of technical document to create a draft Manual.
- Each Agency has conducted a review of technical document and draft Manual which ended mid-May.
- Oversight Agency folks trying to create improved draft Manual by end of June, 2007, with goal for final Manual by end of Fiscal Year 2007.