United States Department of Agriculture

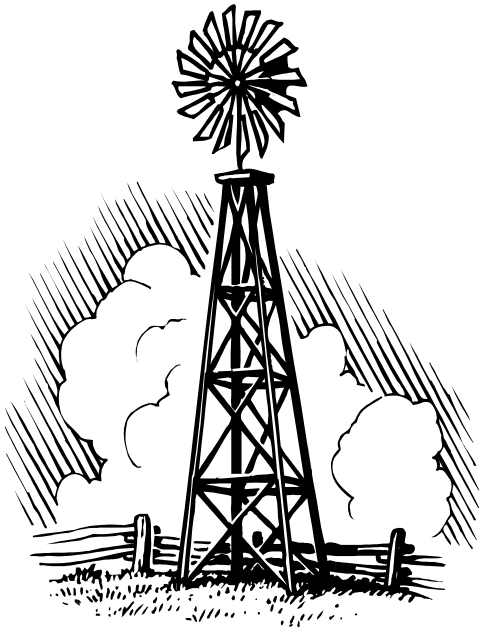
Forest Service

Rocky Mountain Region

Cimarron and Comanche National Grasslands Land Management Plan

Monitoring Questions and Performance Measures for Public Comment

June 19, 2006



Cimarron and Comanche National Grasslands Land Management Plan

Monitoring Questions and Performance Measures

The table below lists the monitoring questions and associated performance measures that pertain to the Cimarron and Comanche National Grasslands Draft Land Management Plan (Draft Plan). They are proposed for incorporation into the final Plan.

The monitoring questions refer to desired conditions that are described in the Part 1: Vision of the Draft Plan[1]. Our progress toward reaching or maintaining desired conditions will be gauged by using the performance measures (indicators) to answer the monitoring questions.

For example, the desired conditions for paleontological resources are described in the Draft Plan 1.3.4.d:

> The past, present, and future of paleontological resources' role in ecosystem management, including social and cultural values in an environmental context, would continue to be recognized. Consideration of paleontological resources in ecosystem management would continue. Prominent paleontological resources would continue to contribute to scientific research, education, and recreational opportunities. Opportunities for public involvement in paleontological resource management would continue to be available through field and lab-based volunteer projects. Opportunities for recreational collection of non-significant fossil materials would continue to be provided. Access to paleontological resources would continue to be provided to the public through interpreted sites, lectures, museum displays, exhibitions, and guided field trips. Existing management partnerships with museums, universities and avocational groups would continue, and new collaborative working relationships would be pursued.
>
> All collected fossil specimens would continue to be stored in publicly accessible, accredited curational facilities. Known significant fossil localities would continue to be incorporated into a program of cyclical survey and salvage, and recorded in a corporate database. Historical data for fossil resources collected before establishing a responsible paleontological program would be gathered, and made digital and current. Detailed stratigraphy for fossiliferous geologic units would continue to be recorded to enhance contextual data of fossil specimens.

[1] Monitoring questions may refer to any of the five Plan components. The five major Plan components are: desired conditions, objectives, guidelines, suitable uses, and special areas.

The number of known significant fossil localities would be increased. Theft and vandalism of paleontological resources would occur only rarely. Significant paleontological resources would continue to be protected or mitigated from disturbance to conserve scientific, educational, interpretive, and legacy values.

To find out how we're progressing toward the key aspect(s) of the desired conditions described for the paleontological resources, we'll ask the monitoring question: "What is the trend in significant paleontological sites that have been monitored or conserved?" To answer that question (that is, to monitor progress), we'll look at (performance measures) the number of sites monitored or conserved annually.

Share your comments and suggestions

We welcome your comments and suggestions on the monitoring questions and performance measures listed in the following table. In particular, we would like to know if you think the monitoring questions are designed at the appropriate spatial and temporal scale to answer the question, and, if not, or what ought to be changed. We would also like to know if you think we have considered the key aspects of desired conditions as the basis for the monitoring questions, and what additional aspects of desired conditions described in the Draft Plan we should address.

You can find the desired conditions in Part 1: Vision of the draft Plan, which you can viewing online or download (and view or print) from out Grasslands Revision Web site at:
www.fs.fed.us/r2/psicc/projects/forest_revision/gr_rev.shtml

or by requesting a hard copy or CD of the Draft Plan from the Grasslands Revision Team.

Option 1. Share your comments in this document, by fax, or by e-mail

You can include your responses directly on the following table, in the column labeled "Comments and suggestions," either electronically (save this file to your computer first!) or in hard copy (print this document). If you add pages for continuing comments, please make sure to tell us which item you're referring to.

All responses must be received no later than July 7, 2006.

Grasslands Revision Team
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Fax: 719-553-1440

E-mail: r2_psicc_grassrevision@fs.fed.us

Option 2. Share your comments in person

You can also share your comments--or ask about any of the monitoring questions and performance measures--during one of our up-coming public meetings.

1. Elkhart, KS: June 27, City Hall, 433 Morton St. 6:30 – 9:00 p.m.
2. Springfield, CO: June 28, City Hall Resource Center, 1260 Main St. 6:00 – 9:00 p.m.
3. La Junta, CO: July 6, Otero Jr. College, Student Center Conference Room, 2001 San Juan Ave. 6:00 – 9:00 p.m.
4. Pueblo, CO: July 13, Pueblo Hotel & Conference Center, 4001 N. Elizabeth St., 6:00 – 9:00 p.m.

The schedule and venues are posted on Grasslands Revision Web page at: www.fs.fed.us/r2/psicc/projects/forest_revision/gr_rev.shtml. You can also contact Barb Masinton, Grasslands Revision Team Leader, at 719-553-1475.

Thank you for helping develop our monitoring program for the Grasslands Plan!

Cimarron and Comanche National Grasslands Monitoring Questions and Performance Measures

Quest-ion #	Plan part and section	Monitoring Question(s)	Performance Measure	Comments and suggestions
1	1.3.5.	**Special Areas - Bent Canyon Bluffs:** What is the trend in plant species composition in this special area, and how does that trend differ from other areas of the Timpas Unit with comparable soils and topography?	Trend in communities dominated by native perennials in Bent Canyon Bluffs compared to other comparable areas of the Timpas Unit.	
2	1.3.5.	**Special Areas - Picket Wire Canyonlands:** What is the trend in distribution of native perennial grass communities and native shrub communities in the canyon bottomland?	Proportion of canyon bottomland dominated by native perennial grass and shrub communities.	
3	1.3.2.a.	**All Ecosystems**: What is the trend in distribution and abundance of black-tailed prairie dog colonies?	Number of acres of occupied habitat based on GPS mapping.	
4	1.3.2.a	**All Ecosystems**: What is the trend in the number of known sites for each species-of-concern plant (Colorado primrose, wheel	Trend in numbers of known sites. Sites are defined using NatureServe's definition.	

Quest-ion #	Plan part and section	Monitoring Question(s)	Performance Measure	Comments and suggestions
		milkweed, Raven Ridge false goldenweed, sandhill goosefoot, Andean prairie clover, and Colorado frasera)?	Trend in number of known sites of wheel milkweed and Colorado frasera at OU Creek Special Area.	
5	1.3.2.c.	**Aquatic Systems:** What is the trend in the relative abundance of native fishes in perennial streams?	Trend in relative abundance of native fishes in perennial streams.	
6	1.3.2.c.	**Aquatic Systems:** What is the trend in the condition of seeps and springs on the Grasslands?	a. Trend in number of seeps and springs occupied by Plains leopard frogs (on the Comanche). b. Trend in condition of hydrophytic vegetation.	
7	1.3.2.c.	**Riparian and Aquatic**: What is the trend in the proportion of the riparian ecosystem dominated by tamarisk on the Grasslands?	Number of acres of riparian habitat that are dominated by tamarisk.	

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8	1.3.2.c.	**Riparian**: What is the trend in distribution of native plant communities along the Cimarron River corridor, Purgatoire River corridor, Timpas Creek, and Sand Canyon?	a. Number of acres of cottonwood/willow communities. b. Size-class distribution of cottonwood/willow stands. c. Proportion of these riparian corridors dominated by native herbaceous plant communities	
9	1.3.2.b.	**Canyonland**: What is the trend in distribution and size classes of juniper stands on the mesa tops and footslopes of canyons?	a. Number of acres of juniper stands on mesa tops and canyon footslopes. b. Size and/or age class distribution of juniper stands on mesa tops and canyon footslopes	

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10	1.3.2.d.	**Sandsage Prairie:** What is the trend in plant community composition in the sandsage prairie?	a. Proportion of ecosystem with communities dominated by native, perennial tall-structure bunchgrasses. b. Trend in abundance (percentage of cover) of sand sagebrush. c. Proportion of ecosystem with communities dominated by annual forbs. d. Proportion of ecosystem in monocultures of sideoats grama.	
11	1.3.2.d.	**Sandsage Prairie:** What is the trend in vegetation structure in sandsage prairie?	Proportion of ecosystem with vegetation structure that is short (0-4 in robel) compared to that which is medium (5-11 in, robel) vs tall ($\geq$12 in, robel).	
12	1.3.2.d.	**Sandsage Prairie:** What is the trend in distribution and abundance of lesser prairie-chicken?	Spring surveys of leks and listening points.	

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13	1.3.2.e.	**Shortgrass Prairie:** What is the trend in plant community composition in the shortgrass prairie?	a. Proportion of ecosystem in monocultures of sideoats grama or galleta. b. Proportion of ecosystem with communities dominated by native sod-forming grasses. c. Proportion of ecosystem with communities dominated by native bunchgrasses. d. Proportion of ecosystem with a mosaic of bare ground and vegetation where bare patches occur at a 1/100 - 1/10 ha scale.	

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14	1.3.2.e.	**Shortgrass Prairie:** What is the trend in vegetation structure in shortgrass prairie?	a. Proportion of ecosystem with vegetation structure that is short (0-2 in robel; 0-4 in veg height) vs medium (2-4 in robel; 4-8 in height) vs tall (>4 in robel, >8 in height). b. Proportion of transects that contain both short and tall structure within subplots	
15	1.3.2.e.	**Shortgrass Prairie:** What is the trend in distribution and abundance of mountain plover in shortgrass prairie?	a. Number of nesting birds on recently burned areas. b. Number of prairie dog colonies that are occupied by mountain plover based on established sample sites.	
16	1.3.2.e.	**Shortgrass Prairie:** What is the trend in distribution and abundance of long-billed curlew in the shortgrass prairie?	Number of occupied sections based on established sample sites.	

Quest-ion #	Plan part and section	Monitoring Question(s)	Performance Measure	Comments and suggestions
17	1.3.4.a.	**Heritage Resources:** What is the trend in the number of heritage resources protected and monitored?	a. Number of sites monitored and protected; number of collections maintained. b. Number of sites monitored, protected, and collections maintained for Santa Fe Trail, Picture Canyon, and Vogel Canyon special areas.	
18	1.3.2.b. 1.3.2.d. 1.3.2.e.	**Fire Management:** To what extent is prescribed fire design (size, placement on the landscape, fuel type, seasonality) and implementation (timing, duration, intensity) maintaining or moving vegetative conditions (composition and structure) towards desired condition? To what extent do wildfires contribute towards maintaining or moving vegetative conditions (composition and structure) towards desired conditions?	a. Differences in vegetative trends in each ecosystem with varying design and implementation of prescribed fire. b. Changes in vegetative composition in each of the ecosystems where prescribed fire design and implementation have been modified. c. Scale, size (acres/ha) and spatial distribution of wildfires within each ecosystem.	

Quest-ion #	Plan part and section	Monitoring Question(s)	Performance Measure	Comments and suggestions
19	1.3.3.	**Livestock Grazing**: To what extent are livestock grazing practices (AUMs, rotation schedules, AOIs) maintaining or moving vegetative conditions (composition and structure) toward desired conditions?	a. Differences in vegetative trends in allotments with varying intensity and timing of grazing. b. Changes in vegetative composition in allotments where grazing timing/intensity has been modified.	
20	1.3.4.c.	**Minerals:** Are mineral exploration, development, and production operations being designed with best management practices?	Number of abandoned mineral sites and associated access roads rehabilitated to desired condition	
21	1.3.4.d.	**Paleontological Resources**: What is the trend in significant paleontological sites that have been monitored or conserved?	Number of sites monitored or conserved annually.	

Quest-ion #	Plan part and section	Monitoring Question(s)	Performance Measure	Comments and suggestions
22	1.3.3.	**Recreation and Tourism** What is the trend in the intensity of visitor use?	a. Number of vehicles, measured by traffic counters accessing developed recreation sites and trailheads. b. Revenue collected under Federal Lands Recreation Enhancement Act (FLREA) authority used as proxy data for visitor use. c. Number of recreation special use permits issued.	
23	1.3.3.	**Goods and Services**: What is the trend in the flow of goods and services to the local communities and how does this compare to a rolling five-year average?	Mineral royalty revenues, grazing fees utilized by associations, Recreation Fee Retention (Rec Fees maintained at unit generating such funds – (FLREA), special use fees.	
24	1.3.1.	**Land Administration:** What is the trend in land ownership complexity?	Net boundary length reduction as a result of exchanges (excluding donations and acquisitions).	