Dakota Prairie Grasslands

Initial Position on the Scientific Review Team Report

June 20, 2005

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Acronyms Used

AMP	Allotment Management Plan
AOI	Annual Operating Instructions
AUM	Animal Unit Month
CRNG	Cedar River National Grassland
DPG	Dakota Prairie Grasslands
FEIS	Final Environmental Impact Statement
FQI	Floristic Quality Index
FS	United States Department of Agriculture Forest Service United States Forest Service, Forest Service
GRNG	Grand River National Grassland
LMNG	Little Missouri National Grassland
LRMP	Land and Resource Management Plan, Grasslands Plan Dakota Prairie Grasslands Plan Dakota Prairie Grasslands Land and Resource Management Plan
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NRCS	United States Department of Agriculture Natural Resources Conservation Service Natural Resources Conservation Service
PFC	Proper Functioning Condition
SNG	Sheyenne National Grassland
SRT	Scientific Review Team
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VOR	Visual Obstruction Reading
WPFO	Western Prairie Fringed Orchid

Introduction

Where we started

On July 31, 2002, Regional Forester Brad Powell signed the Record of Decision for the Dakota Prairie Grasslands (DPG) Final Environmental Impact Statement (FEIS) and Land and Resource Management Plan (Grasslands Plan). During the public comment periods for the Environmental Impact Statement, concerns were expressed that 1) the grazing portion of the Grasslands Plan could not be implemented, and 2) that if implemented, the Grasslands Plan would result in much higher reductions in livestock numbers than was predicted by the Forest Service.

In order to address these concerns, Mr. Powell committed to paneling an independent group of scientists to review the parts of the Grasslands Plan related to livestock grazing. Mr. Powell delayed making a decision on the livestock portion of the Grasslands Plan until the independent group of scientists completed its review.

The resulting Scientific Review Team (SRT) consisted of eight members. Team members were selected based on recommendations of the North Dakota governor's office, conservation and industry groups, state and federal natural resource agencies, and county representatives.

SRT members conducted 14 meetings between February of 2003 and May of 2005. During these meetings, the DPG presented details on 69 Allotment Management Plans (AMPs). These were grouped in eight study areas. Presentations were supplemented with field trips to these study areas. Representatives of the grazing associations and conservation groups also gave presentations to the SRT.

It should be emphasized that 58 of the AMPs presented to the SRT were "mock-ups" to demonstrate how the Grasslands Plan would be applied to on-the-ground situations. These had not been through any part of the National Environmental Policy Act (NEPA) process.

Eleven AMPs for the Cedar River National Grassland were actual AMPs that had gone through the NEPA process. The Cedar River Grazing Association had requested these revised AMPs to proceed, as allowed for in the Record of Decision, page 8.

Based on these AMPs, the SRT was asked to address two questions:

1) Can the Grasslands Plan be implemented?

2) Are grazing levels in the sample AMPs similar to those projected in the FEIS?

At the request of the Dakota Prairie Grasslands, the SRT also provided input on the following two questions:

1) Was the baseline data used to develop the sample AMPs adequate?

2) Were the analysis methods used to develop the sample AMPs appropriate?

At a public meeting on May 20, 2005, the SRT released "Report of the Scientific Review Team: Dakota Prairie Grasslands". Dakota Prairie Grasslands Supervisor Dave Pieper agreed to brief the public on June 20, 2005 regarding the DPG's initial response to the SRT's findings.

The SRT members, Dr. Rod Heitschmidt, Dr. Harvey Peterson, Dr. Douglas Johnson, Jeff Printz, Dr. Don Kirby, Dr. Kevin Sedivec, Kent Luttschwager and Karen Smith are to be commended for their work on this process and report. Their individual backgrounds and specialties are summarized in the on-line report at http://www.fs.fed.us/r1/dakotaprairie. The Grasslands Plan, FEIS, Record of Decision and related documents can also be found on-line at http://www.fs.fed.us/ngp/plan/feis.htm.

Where we are

Forest Service employees are still reviewing the SRT Report. The SRT has provided us with useful information, critiques and background information to review and consider.

There are four basic ways the Forest Service can work with the SRT recommendations: 1) change or reinforce local policy, protocols and agreements, 2) change or reinforce monitoring practices at the Grasslands Plan or the project level, 3) change the Grasslands Plan, or 4) change or reinforce analysis techniques and practices for on-the-ground implementation projects.

The Forest Service will continue to seek public involvement and collaboration regardless of which way is pursued. We will continue to work with partners, other agencies, grazing associations and permittees, and other interested publics in implementing the Grasslands Plan, implementing projects, and refining needed policies and processes in managing the national grasslands.

We will continue to strengthen our commitment to communicate, consult, and cooperate with the grazing associations operating on the DPG.

Where we are going

Our first focus will be examining the recommendations and seeing how this new information fits with the existing analysis in the Northern Great Plains FEIS and Grasslands Plan. Based on this Forest Service review, any additional analysis or

documentation needed for the Grasslands Plan will be completed prior to issuing a Record of Decision for the grazing portion.

In the future, SRT recommendations, Forest Service monitoring, and other monitoring will continue to be studied. If a need to change, modify, add or delete provisions in the Grasslands Plan is noted, amendments to the Grasslands Plan will be considered.

The rest of this document summarizes our initial responses to the SRT recommendations.

Initial Positions

Section 1 - Baseline Data

SRT Issue I - 1: *Data utilized to estimate livestock carrying capacities, varying wildlife habitat traits, etc. (i.e., Little Missouri National Grasslands rangeland assessment, also referred to as, Dragon data) lacks the required level of resolution needed to develop, implement, and monitor individual pasture AMPs.*

SRT Recommendation I - 1*: The NRCS has completed Order 2 (five acre accuracy for dissimilar soils) soil surveys for all portions of the DPGs. Therefore, the SRT recommends using these maps and associated ecological site information in the development, implementation, monitoring, and refinement of pasture or allotment-level management plans.*

Initial Position Statement

The DPG used the Little Missouri National Grassland Rangeland Assessment (USDA, 2002) when preparing sample Allotment Management Plans (AMPs) for study groups 1-6 (study groups 7 and 8 were on the Cedar River and Sheyenne national grasslands). This landscape level assessment was based, in part, on analysis of existing and potential vegetation maps.

The Little Missouri National Grasslands Rangeland Assessment potential vegetation maps used “habitat types” as the basic vegetative mapping unit. Habitat types are delineated based on soils, topography and other attributes. Habitat types identify the vegetation a particular unit of land can support, regardless of current vegetation.

Existing vegetation was mapped using Satellite Image Cover classification, aerial photographs, and on-the-ground sampling. Habitat types are commonly used as basic vegetative mapping units on the more than 190,000,000 acres managed by the Forest Service, nationwide.

The SRT recommends the DPG use potential vegetation maps developed by the NRCS. The NRCS ecological sites are delineated based on soils, topography and potential natural vegetation. Existing vegetation is measured by on-the-ground sampling.

Although the two classification and mapping techniques share many concepts, they are not completely interchangeable. Both the SRT and DPG agree AMP development will require soil and vegetation data gathered at the site-specific level (i.e. grazing allotment). DPG specialists are presently collecting such information. These specialists are using NRCS soil survey and range site/ecological site information, where available, along with the Little Missouri National Grasslands Rangeland Assessment.

We will work with the NRCS to incorporate the ecological site methodology and our existing habitat type mapping, to refine production values for each vegetation type, so that carrying capacities are as accurate as possible for each allotment.

We recognize the role the "art" of range management plays in the number of livestock an individual can successfully run on an allotment. We will work with grazing associations and individual members to incorporate the principles of livestock grazing, including timing (frequency and intensity), rest (plant recovery and recruitment), season of use, etc., to best utilize the forage base of the ecological site.

We will continue to utilize the best available data (regardless of whether it is based on habitat types or ecological sites) as a starting point for actual on-the-ground data collection and interpretation. It should be noted that national, interagency efforts are underway to standardize vegetative monitoring. The DPG will adopt those protocols when they are available.

SRT Issue I - 2: *Disregarding potential contribution of "uncapable" sites (i.e., those lands producing < 300 lbs/ac of herbage annually) inappropriately reduces per unit land area herbage production estimates particularly when large proportions of the landscape are deemed uncapable.*

SRT Recommendation I - 2: *AMPs herbage production estimates should be estimates for all sites. If adjustments in livestock carrying capacities are necessary because of unsuitable terrain (i.e., unsuitable sites), adjustments should be made directly (i.e., no allowable forage) rather than indirectly (i.e., no herbage produced).*

Initial Position Statement

Before developing an AMP, it must first be determined what that allotment's grazing capacity is. This involves determining how much forage an area can produce, as well as how much forage can be removed.

When determining the amount of forage available, the Forest Service considers which lands are capable or uncapable of supporting grazing on an annual basis. In part, the National Forest Management Act (NFMA) regulations (36 Code of Federal Regulations 219.3) define capable as "(t)he potential of an area of land to produce resources, good and services, and allow resource uses under an assumed set of management

practices….(c)apability depends upon current conditions and site conditions such as climate, slope, landform, soils and geology…"

Appendix B of the FEIS details how this was estimated for the Grasslands Plan. Lands with slopes greater than 40 percent, areas dominated by rock, bare ground, roads, railroads and water, as well as those with the potential to produce less than 200 pounds of forage were considered uncapable. The SRT recommends areas producing less than 200 pounds of vegetation be included in calculations of an allotment's forage production capability.

The concept of classifying capable versus uncapable areas has historically been Forest Service policy, is widely accepted, and of considerable use to land managers. By definition, we have determined no forage is available from uncapable lands because they will not physically support grazing on an annual basis. As we develop AMPs, we will recognize that some incidental use occurs on uncapable land. We will display existing forage production on both capable and uncapable areas, as well as the level of allowable forage removal (which may be zero percent on uncapable areas).

It should be stressed decisions on revising permitted numbers will be based on an assessment of whether or not the on-the-ground conditions are meeting or moving toward meeting the Grasslands Plan goals and objectives, not the capable or uncapable acres alone. Also see Initial Position StatementV-2.

SRT Issue I - 3: *There is, at present, a lack of information to define "Biologically Capable" acres to meet structure goals.*

SRT Recommendation I - 3*: The SRT recommends studying and revising the definition of "Biologically Capable" to accurately reflect the capability of the soils and plant communities to meet structure goals for the gallinaceous*[1] *Management Indicator Species.*

Initial Position Statement

The Grasslands Plan calls for diversifying vegetative structure. Specifically, there are objectives and guidelines to have approximately 10-20 percent low vegetative structure, 50-70 percent moderate structure, and 20-30 percent high structure (actual objectives vary by Geographic Area). These objectives are to be applied across all herbaceous communities.

[1] Gallinaceous is of or relating to an order of (Galliformes) of heavy-bodied largely terrestrial birds including the pheasants, turkeys, grouse, and the common domestic fowl. The DPG has three such Management Indicator Species – the sharp-tailed grouse, the greater prairie-chicken, and the greater sage-grouse.

We have interpreted these objectives and associated guidelines to apply only to sites "biologically capable" of producing high structure vegetation. The SRT is supportive of this concept, but questions the definition of biologically capable as any site capable of producing at least 800 lbs of herbaceous material/acre. This is not the definition used by the DPG.

Throughout the SRT review process we defined biologically capable as any site classified as one of the following habitat types: western wheatgrass/green needlegrass, western wheatgrass/needle-and-thread grass, needle-and-thread/sedge, silver sage/western wheatgrass, big sage/western wheatgrass or western snowberry. Sites dominated by crested wheatgrass were also considered biologically capable.

These habitat types, as well as crested wheatgrass sites, are generally capable of producing 1100 lbs of herbaceous material/acre, and most are capable of producing 1400 lbs or more. The exception is the western snowberry habitat type (which is rarely found on the DPG). Although the western snowberry habitat type produces relatively little herbaceous cover, it is nevertheless capable of producing high structure vegetation.

Over the last several years, monitoring shows the above habitat types (and crested wheatgrass sites) are all capable of producing high structure vegetation, and therefore are a reasonable definition of biologically capable. Based on the SRT's input, we will continue to monitor and evaluate this relationship as we update AMPs.

SRT Issue I - 4*: The Floristic Quality Index (FQI) is not the proper tool for determining seral stage of rangeland/grassland plant communities.*

SRT Recommendation I - 4*: The SRT recommends the FS discard the FQI for determining seral stages and adopt a system such as the NRCS similarity index for seral state determinations.*

Initial Position Statement

The Floristic Quality Assessment (or Index) is a method that uses vegetation information to assess the ecological quality of a site (Northern Great Plains Floristic Quality Assessment Panel 2001). It is based on the concept that plant species display varying degrees of tolerance to disturbance. This concept is termed "species conservatism" and plant species are assigned coefficient values. These values are compared between areas or sites.

The system has been used to determine the similarity of existing vegetation on a site to the potential vegetation of a site. However, it was not used to determine seral stage of grassland communities in the Grasslands Plan, sample AMPs, nor is it proposed for use in future AMPs.

For the sample AMPs, methods to determine seral stage of grasslands differed between units, based on available data. For the Little Missouri National Grassland, the existing mapped vegetation (known as dominance type groups) was classified into seral stage categories based on similarity of the species composition of the dominance type groups to "reference" vegetation described in the Little Missouri National Grassland habitat classification (Jensen et al. 1992).

For the Cedar River National Grassland, seral stage was simply estimated across the allotments by the Forest Service. In addition, the existing vegetation on a small sample of sites was compared to "reference" vegetation.

For the Sheyenne National Grassland, the mapped existing vegetation polygons were compared to "reference" vegetation described in local vegetation classifications (primarily Hansen 1996) and the mapped polygons were placed into seral stage categories based on professional judgment of the range management specialists and botanist.

At this time, NRCS similarity indices are not available for all vegetation types. Therefore, the DPG will use the Forest Service seral stage classification method developed by Dr. Dan Uresk (see Uresk 1990; and Benkobi and Uresk 1996) which identifies seral stages of existing vegetation. The method utilizes a Forest Service approved protocol to collect cover-frequency data of key indicator species, which is used to place existing vegetation into seral stage categories.

Section II - Visual Obstruction Reading (VOR)

SRT Issue II - 1: *Field methodology is neither well defined nor standardized.*

SRT Recommendation II - 1: *Standardized protocols should be adopted and training provided for consistency among years and observers using the Robel pole method.*

Initial Position Statement

Visual Obstruction Readings (VOR) are used to assess the amount and distribution of vegetative structure remaining after each grazing season. These readings are taken using a modified Robel pole.

In the past, we have used these data to answer various management questions, such as: "how much high structure vegetation is there on the Medora Ranger District?" or "do side hills provide a disproportionate amount of high structure vegetation?" Field methods have changed over the years in order to address different management questions. Methods have also differed due to observer variability.

In the future, our monitoring efforts will be focused to address the question: "are we meeting Grasslands Plan objectives for low, moderate, and high vegetative structure?" The protocols needed to answer this question have been developed and standardized in recent years with peer review. These protocols have been incorporated into the DPG's

"Monitoring Handbook", which will be finalized in December 2005. That handbook, and associated field training, will be provided to all field observers collecting VOR data in the future.

SRT Issue II - 2: *Current summarization of the Robel pole data is incomplete and to a large extent, inappropriate.*

SRT Recommendation II - 2: *Robel pole data should be summarized by frequencies of readings rather than by averaging readings.*

Initial Position Statement

We collect VOR data along a 0.25 mile-long transect. Four readings are taken at 20 stations along each transect. The resulting 80 measurements are averaged, and the transect is classified as "low" vegetative structure (when the transect average is less than 1.5 inches), "moderate" vegetative structure (when the transect average is 1.5-3.49 inches), or "high" vegetative structure (when the transect average is 3.5 inches or more). This approach is useful for identifying and monitoring relatively large (e.g. 100 acres or more), homogenous patches of vegetation.

The approach is appropriate considering the scale of our management, where our decisions are of the following type: "should we graze this 1,000 acre pasture early or late?" The vegetative patch characteristics measured by our current approach are likely important to nesting prairie grouse hens as they decide where to nest. Because of these factors, several grouse researchers use VOR transect averages (e.g. Kohn et al. 1982, Reece et al. 2001). Note throughout this document that the collective term prairie grouse refers to all three species on the Dakota Prairie Grasslands: sharp-tailed grouse, greater sage-grouse, and greater prairie-chicken.

The SRT recommends that instead of reporting transect averages, we summarize the VOR data as station averages. Under this approach, a single VOR transect would yield 20 averages. The advantage of using station averages is that it would display intra-patch variability. The vegetative clump characteristics measured by this approach are likely very important to nesting prairie grouse hens as they select a specific nest site. Interpreting station averages would require different definitions of low, moderate, and high structure. In the SRT's example, high structure would be better defined as a station average of 5.5" or more. Because reporting VOR data as a transect average and as a station average both have utility, we will provide the data to the public in both formats in the future. We will then explain each method's advantages and disadvantages and the biological and administrative significance of the data.

SRT Issue II - 3: *The impacts of pre- and post-management activities and season of year on the presumed relationship between Robel pole readings and desired vegetation structure at a future point of time appear to be discounted.*

SRT Recommendation II - 3: *Associations between fall measurements and subsequent spring measurements should be determined in relation to vegetation type (e.g., Kentucky bluegrass (Poa pratensis) vs. green needlegrass (Stipa viridula)) (reference for plant scientific names is Flora of the Great Plains. 1986), winter precipitation, grazing after fall measurements, and other factors.*

Initial Position Statement

We are interested in the amount of residual cover remaining after the grazing season for several reasons. These include the role of residual cover in reducing erosion; enhancing snow intercept; and providing nesting cover the following spring.

Residual cover is measured in the fall for three reasons: 1) residual cover levels are then largely reflective of recent livestock grazing patterns (i.e. the cover levels are still little impacted by snow packing or wind clipping), 2) there are fewer logistical constraints (such as flooded, muddy, or snowed-in roads) during the fall than during the following spring, and 3) VOR measurements are a measure of residual vegetation only (i.e. not a mix of residual vegetation and new spring growth).

As called for in the Grasslands Plan (p. 4-21), and detailed in the DPG's Monitoring Handbook, we will periodically remeasure VOR transects the following spring to assess overwinter loss. We will summarize this data by vegetation type in the subsequent Annual Monitoring Report.

SRT Issue II - 4: *The potential influences of various ecological sites on vegetation composition and subsequent structure are inadequately considered in Robel pole data interpretation.*

SRT Recommendation II - 4: *All Robel pole data should be collected, summarized, and interpreted with full consideration given to potential influences of ecological sites on plant species composition, and current and potential vegetation structure.*

Initial Position Statement

Based on input received from SRT members in 2003, we revised our VOR monitoring protocol to not cross vegetative community boundaries. As recommended in the SRT report, we will continue to collect VOR data in this manner. We use habitat types as our basic vegetative mapping unit. Habitat types are delineated based on soils, aspect, and potential vegetative composition.

Section III - Management Indicator Species (MIS)

SRT Issue III - 1: *Monitoring sharp-tailed grouse and greater sage-grouse (Centrocercus urophasianus) only on "reference areas" of the LMNG, Cedar River National Grassland (CRNG), and Grand River National Grassland (GRNG) will be inadequate to guide management for each allotment and the interplay of all allotments towards a functioning grassland ecosystem.*

SRT Recommendation III - 1: *Monitoring of habitat features considered key to the success of gallinaceous MIS populations should be intensified. Intensification should include both an increase in the sampling intensity using current methodology as well as using additional techniques as necessary (e.g., June infrared photograph showed well-established dancing grounds in northwestern North Dakota). Realizing that intensive monitoring each year is difficult on 1 million acres, monitoring 20 percent, as an example, of non-referenced areas each year over a five-year period will locate many lekking arenas on the entire DPGs. Over several years this should help detect any change in lekking arena numbers; thus management adjustments could be made accordingly, if necessary. Methodology for monitoring lekking 16 arenas should be stringent, standardized across years and sites, and detailed in annual training workshops. In addition, a Geographic Information System driven data base system should be developed for permanent record-keeping of display grounds to evaluate changes in conditions affecting populations (e.g., number and location of arenas, and number of males on each display ground).*

Initial Position Statement

We conduct both extensive and intensive monitoring of sharp-tailed grouse each spring. The purpose of the DPG's extensive sharp-tailed grouse monitoring is to find as many leks as possible in an area of interest (e.g. all grazing allotments in eastern Slope County). This information is needed because the Grasslands Plan provides special direction for livestock grazing and energy development near active leks. Data collected by these efforts will be used to guide management for individual grazing allotments and energy development projects. The locations covered by extensive lek surveys vary year-by-year in response to various project areas. For example, leks in the eastern third of Slope County were surveyed in 2003, where leks in eastern Billings County were surveyed in 2005. Overall, approximately half of the DPG will be censused every five years if current project levels and funding remain constant.

The purpose of intensive sharp-tailed grouse lek monitoring is to assess the landscape-level consequences of our land management. This data is not designed to guide management for each allotment, because not every allotment is monitored under this effort. Instead, a series of blocks (varying in size from 5,760- 10,240 acres) have been identified across the DPG. Intensive lek surveys will be conducted in each block every year. We developed this monitoring protocol in conjunction with researchers at North Dakota State University. It is similar to the protocol used by North Dakota Game and Fish Department, statewide. Based on findings in the SRT report, we will periodically

provide both our extensive and intensive sharp-tailed grouse population monitoring data in our Annual Monitoring Report.

All survey data, both intensive and extensive, will be archived in Forest Service databases and will be available to the public.

Note that the North Dakota Game and Fish Department monitors all greater sage-grouse leks in the state each spring, and shares the data with the DPG and the public at large. Note too that the DPG monitors all great prairie-chicken leks on the Sheyenne National Grassland each spring (the species does not occur on any other DPG unit).

SRT Issue III - 2: *Annual monitoring of gallinaceous MIS's lekking arenas will not detect woody habitat changes soon enough to prevent population crashes.*

SRT Recommendation III - 2: *Monitoring protocols must include assessment of rate and extent of change of woody plant communities.*

Initial Position Statement

We monitor three species of prairie grouse (sharp-tailed grouse, greater sage-grouse, and greater prairie-chicken) at dancing grounds each spring to assess the effect of our management decisions. Prairie grouse are most responsive to management decisions that impact the availability of residual herbaceous vegetation, which can vary widely, year-to-year.

In general, the more residual cover left on the national grasslands, the more prairie grouse benefit (the actual relationship, of course, is more complicated due to the interaction of weather and landscape patterns). Management decisions that affect the extent of woody habitat changes are much less likely to be reflected in prairie grouse population trends, as these habitat changes occur over a much wider span of time (i.e. decades).

The SRT report points out that prairie grouse reaction to woody vegetation is driven by a threshold tolerance level (i.e. a few more trees, or a few less trees are unlikely to be reflected in grouse population changes unless the area in question is near the threshold tolerance level). Because we are concerned that portions of the Sheyenne National Grassland may be approaching this threshold level, we have removed approximately 400 trees over the last three years. This has enhanced hundreds of acres of greater prairie-chicken habitat by removing potential raptor perches.

We agree our prairie grouse population monitoring will not effectively detect woody habitat changes, nor was it designed to measure that aspect. We have, and will continue to, periodically monitor woody plant changes using methods such as satellite imagery, aerial photography, and ground truthing. Also see Initial Position Statements VI-1 and VI-2.

SRT Issue III - 3: *Considering structural attributes of western snowberry (Symphoricarpos occidentalis) as the equivalent to those of herbaceous vegetation is inappropriate.*

SRT Recommendation III - 3: *VOR field sampling and subsequent summarization and interpretation of data should be appropriately stratified in accordance with vegetation type (i.e., herbaceous vs. half-shrubs vs. shrubs, etc.). A maximum number of high-structure readings obtained from snowberry should be established.*

Initial Position Statement

Western snowberry (commonly called "buckbrush") is found across the DPG. It occurs in a variety of habitats including woody draws and badland arroyos. On mixed-grass prairie, it is often present in small, scattered patches. These patches are often intermixed with patches of lightly grazed mid-height grasses, and provide important nesting sites for species such as sharp-tailed grouse.

Under our standardized monitoring protocols, we monitor VOR along a transect randomly placed in a single vegetative community "biologically capable of producing high structure herbaceous vegetation" (see discussion in I-3 above). This definition includes much of the mixed-grass prairie habitats, but excludes woody draws and badland arroyos.

The sampled vegetative communities are delineated by habitat type (which considers soil, aspect, and potential natural vegetative community) and existing vegetation. Any inclusion of western snowberry encountered along a VOR transect is measured. Inclusions of other shrubs, such as buffaloberry or chokecherry (which provide much different vegetative structure), are excluded.

Western snowberry was the dominant or co-dominant vegetation in about four percent of the VOR transects sampled in autumn 2004. To more clearly display this information to the public, we will modify our sampling and reporting protocols to specify how often western snowberry is a dominant or co-dominant species at sampled sites.

Section IV - Monitoring

SRT Issue IV - 1*: The absence of historical pasture-specific grazing records limits evaluation of the past effects of grazing strategies.*

SRT Recommendation IV - 1: *All parties should agree to share detailed (i.e., number and size of grazers, on and off dates, etc.) pasture-specific records on an annual basis.*

Initial Position Statement

We completely agree. The grazing agreements, our partnerships, and our cooperative investment in the resource are all based on good, pertinent, and timely information. The trust fostered by openly and accurately sharing those facts between cooperators is imperative to good management and future planning. The different grazing agreements speak clearly to the issue: "…furnish data and reports/summaries as requested…" or "…make all applicable records of the Association available and open to inspection by the USFS…". We will continue to work with the grazing associations to improve the collection of pasture specific grazing use numbers and dates.

This recommendation of sharing of records between Forest Service and Grazing Association could be strengthen and clarified in new Grazing Agreements/Rules of Management.

SRT Issue IV - 2*: Inadequate data is available to determine the capacity of both past or present management strategies and tactics to meet stated goals and objectives.*

SRT Recommendation IV - 2: *The FS should collect, on a periodic basis, information that will permit them to determine the effectiveness of management actions (see specific recommendations related to monitoring below).*

Initial Position Statement

Both the Forest Service and the SRT recognize the vital role that monitoring plays in land management. As noted in the SRT's report, some monitoring should be focused on Grassland-wide questions, and some monitoring should be focused on site-specific monitoring.

In order to provide budgeting, scheduling, and protocol direction, the DPG is currently developing a "Monitoring Handbook". This document will be finalized in December 2005. Many of these monitoring techniques were presented to the SRT for review and comment during the Sample AMP review process.

As in past years, we will present our monitoring results to the public through publication of our "Annual Monitoring Report". The most recent version is on-line at http://www.fs.fed.us/r1/dakotaprairie/1230final_03_monitoring.pdf (reports are published one year out – the report covering October 1, 2003 through September 30, 2004 will be completed by September 30, 2005).

The DPG has placed a much greater emphasis on monitoring in recent years. At the SRT's urging, we will continue to do so in the future, dependent on available funding. Many of our current and upcoming efforts pertain to grazing allotments scheduled for AMP revision. For example, we collected Belt Transect data on approximately 120

grazing allotments in McKenzie and Billings Counties during summer 2004. Plans for summer 2005 include expanding these efforts to include monitoring of key focal species, as well as basal frequency readings.

Section V - Grazing Management Issues

SRT Issue V - 1: *The absence of historical pasture-specific grazing records creates serious challenges for managers to assess past, present, and future consequences of specific grazing tactics or strategies such as kind and number of animals and time and length of each grazing event. This information is critical for assessing the consequences of any grazing strategy or tactic. The allotment-level animal data provided were of limited value in a historic assessment of stocking rates and grazing intensities, because the information did not include estimates of the size or weight of the grazing animals, accurate herd size estimates, or the timing and length of grazing events.*

SRT Recommendation V - 1: *Maintain and share detailed, pasture-specific grazing records by Grazing Association and FS personnel.*

Initial Position Statement

We completely agree. The grazing agreements, our partnerships and our cooperative investment in the resource are all based on good, pertinent and timely information. The trust fostered by openly and accurately sharing those facts between cooperators is imperative to good management and future planning. The different grazing agreements speak clearly to the issue already: "…furnish data and reports/summaries as requested…" or "…make all applicable records of the Association available and open to inspection by the USFS…". We will continue to work with the grazing associations to improve the collection of pasture specific grazing use numbers and dates.

SRT Issue V - 2: *The current management plan fails to adequately account for changes in animal unit forage demands with changes in cow/calf size.*

SRT Recommendation V - 2: *Redefine the Animal Unit to reflect current cow size along with older, larger calves and recalculate the corresponding authorized livestock numbers on allotments.*

Initial Position Statement

The Forest Service issues grazing permits based on number of livestock for a specified period of time. These permits are based on historic use, estimations of the amount of forage being produced on suitable rangelands and the amount of forage that is allowed to be removed by livestock while still meeting other multiple use and resource objectives.

Although the permit numbers have historically been fairly constant, the amount of forage available for use varies on an annual basis.

The widely accepted unit of measurement for grazing livestock is an "Animal Unit Month" (AUM). An AUM is the amount of forage (approximately 780 pounds) that a 1,000 pound cow consumes in a 30 day period. This definition of an AUM is the one used by the Society for Range Management, Forest Service, Bureau of Land Management and NRCS.

There is an advantage to using a standardized unit of measure to compare different grazing areas. Because cattle of different sizes (from 900 to over 1800 pounds per cow) are currently being grazed on the grasslands, the standard AUM is not reflective of actual forage being removed by livestock.

As explained in Appendix C of the Grasslands Plan, adjustments for different cattle size is done by calculating "animal unit equivalents". The DPG can display forage utilized on each allotment by using either the University of Nebraska's "A Guide for Planning and Analyzing A Year-Round Forage Program", or North Dakota State University's "Animal Unit Equivalent for Beef Cattle" formulas (see the Grasslands Plan Appendix C for details).

In response to the SRT's concerns, we will calculate grazing levels based on animal unit equivalents, as described above, to display the amount of forage consumed by livestock. The DPG will work with the Grazing Associations in the Grazing Agreement/Rules of Management to develop a process to assess cow size for the individual allotment. We will consider this data, along with data on current livestock numbers, and local forage production. Decisions on whether or not permitted numbers need to be revised, however, will be made based on an assessment of whether or not on-the-ground conditions are meeting or moving toward meeting the Grasslands Plan goals and objectives.

SRT Issue V - 3: *Redistributing animals over time and space in contrast to reducing animal numbers has been inadequately considered.*

SRT Recommendation V - 3: *Increase the use of management tools such as temporary electric fencing, herding, combining allotments, prescribed fire and water developments (wells, pipelines and tanks) in order to achieve specific ecological improvement and restoration goals.*

Initial Position Statement

We agree with the SRT that managing livestock distribution over time and space will be a critical factor in achieving grazing-related Grasslands Plan goals and objectives. We also agree a variety of tools should be considered to accomplish this task.

The Grasslands Plan does emphasize using nonstructural techniques over structural ones. This does not exclude or prevent the use of structural tools. For example, during development of the sample AMPs reviewed by the SRT, we proposed using herding, combining allotments, and using prescribed fire to achieve Grasslands Plan goals and objectives (these are all nonstructural techniques). However, we also proposed adding approximately 5 miles of temporary fence, 18 miles of permanent fence, and 15 new water developments in the sample grazing allotments (these are all structural techniques). We will continue to evaluate and use all of the management tools and techniques listed above during revision of actual AMPs.

SRT Issue V - 4: *Early-season grazing of crested wheatgrass/native range mix as a strategy to manage crested wheatgrass (Agropyron cristatum) is inappropriate.*

SRT Recommendation V - 4: *Where possible, crested wheatgrass in native grasslands should be fenced separately, prescribed burned, or fertilized. Where this is not possible, grazing primarily native grassland should not occur before the 3.5 leaf stage of the management plant species or June 1.*

Initial Position Statement

Crested wheatgrass is an exotic, tame grass species that was widely planted in the 1930s and 1940s on previously farmed ground. These plantings were of considerable value in slowing water and wind erosion of the soils on sites that eventually became the national grasslands. These planted sites, however, now create special challenges for land managers, particularly in areas where blocks of crested wheatgrass are intermixed with blocks of native prairie. This is largely because crested wheatgrass tends to start growing earlier in the season than does native grass species.

If livestock turn-in is delayed until the native grasses are able to tolerate grazing pressure, then much of the forage value of the crested wheatgrass is lost (because the crested has already matured and is then much less palatable). Conversely, if livestock are turned on a pasture early in order to utilize the forage provided by crested wheatgrass, then neighboring patches of native prairie are grazed too soon, resulting in decreased vigor and productivity of native grasses.

The SRT recommends fencing crested wheatgrass separately, when practical. We agree. This leaves unresolved, however, those situations when fencing out crested wheatgrass is not practical. The SRT recommends deferring early season grazing on units that are "primarily" native grasses, but does not define "primarily". The Grasslands Plan directs that pastures with 70 percent or more crested wheatgrass be managed as a crested unit. Other pastures should be managed as native grass units. Our approach seems consistent with SRT recommendations.

We agree with the SRT that range readiness and the management of crested wheatgrass will be addressed in the development of allotment management plans. The June 1 grazing date will be evaluated along with crested wheatgrass management and resource conditions in determining annual initial grazing dates.

SRT Issue V - 5: *Erroneous assumptions are made in estimating livestock carrying capacities by equating grazing/harvest efficiency to high, medium, and low structure without considering the production potential of the ecological site.*

SRT Recommendation V - 5: *Efforts should be expanded to define relationships among production, grazing/harvest efficiency, and post-grazing structure within ecological sites.*

Initial Position Statement

During development of the Grasslands Plan and associated Environmental Impact Statement, we displayed the likely effects of managing for the proposed increase in vegetative diversity. Of particular interest to the public were projected changes in allowable grazing levels.

The logical question was "how much forage can be removed from sites managed to produce low, moderate or high vegetative structure?" We displayed the methods and assumptions used to answer this question in both the Grasslands Plan (Appendix I), and in the Environmental Impact Statement. We recognize that these assumptions need to be tested. In fact, we require such testing be done (see Grasslands Plan p. 4-20 "Stocking Rate Guideline").

We will continue to look at the various methods available to determine how best to reach desired future conditions, while estimating the allowable livestock grazing levels.

Section VI - Woody and Riparian Communities

SRT Issue VI - 1: *Inadequate records are used to document historical trends in woody communities.*

SRT Recommendation VI - 1: *Use historical black-and-white aerial photographs and current Dragon data to document trends. Document historical woody trends using specific woody community types such as:*

green ash (Fraxinus pennsylvanica) draws	*willow (Salix spp.)*
quaking aspen groves	*cottonwood (Populus spp.)*
creeping juniper (Juniperus horizontalis)	*juniper (Juniperus spp.)*
ponderosa pine (Pinus ponderosa) savanna	*sagebrush (Artemisia spp.)*
bur oak (Quercus macrocarpa) savanna	*low-shrub*
tall-shrub	

Initial Position Statement

The Little Missouri National Grassland Rangeland Assessment (USFS 2002) provided an evaluation of the historical and current extent of woodlands, although it did not use historical aerial photographs to quantify the change. The document concludes that woodlands in general have increased since settlement due to changes in fire frequency, livestock grazing and other land uses. The Rocky Mountain Juniper and Ponderosa Pine types appear to be expanding at the greatest rate, while green ash draws appear to be negatively impacted by livestock grazing and fire management practices.

The issue of woodland management will be considered during site-specific analysis and historical aerial photographs can be used to provide information on vegetation changes. We will utilize any available tools such as current and historical aerial photographs, surveyor records, satellite imagery and ground truthing to assess local trends in woody plant communities.

SRT Issue VI - 2: *The LRMP has a lack of stated quantitative objectives for woody community types.*

SRT Recommendation VI - 2: *Develop quantitative objectives for each woody community type, and identify a range of patch sizes and distribution across the landscape for each type (see Recommendation VI - 1 of Woody and Riparian Communities for possible types).*

Initial Position Statement

The SRT is correct in stating that the Grasslands Plan lacks quantitative objectives for woody community types. The Grasslands Plan does have several qualitative vegetation objectives. These include the following:

> Move at least 80 percent of riparian areas and woody draws toward self-perpetuating plant and water communities that have desired diversity and density of understory and overstory vegetation within site capability.
>
> Within 10 years, implement management practices, including prescribed fire, that will move landscapes toward desired vegetation composition and structure as described in Geographic Area direction.
>
> Within 15 years, move forested landscapes toward desired conditions described in Geographic Area direction.

Furthermore, the Grasslands Plan contains a verbal description of target woody community types (see “Desired Conditions” on Grasslands Plan pp. 2-2 to 2-3, 2-10, 2-17 to 2-18, and 2-25). The lack of more detailed quantitative objectives for woody

community types in the Grasslands Plan is because these management issues were not raised during plan development.

Based on the SRT's recommendation, we will consider woody plant community type objectives in all upcoming site-specific NEPA that deal primarily with vegetative management (i.e. livestock grazing and prescribed burning projects). We will also continue to collect and review monitoring data on these communities. An amendment to the Grasslands Plan may be considered to add grasslands-wide quantitative objectives based on the information gathered through monitoring and site-specific project analysis.

SRT Issue VI - 3: *The Proper Functioning Condition (PFC) assessment of riparian areas is potentially inadequate.*

SRT Recommendation VI - 3: *Determine if PFC rating is applicable to North Dakota, use multidisciplinary team to conduct PFC ratings, and develop a training manual and process.*

Initial Position Statement

Proper functioning condition (PFC) is a widely accepted, interagency protocol used to quickly assess riparian conditions. It involves having a team of resource specialists walk along a stream to evaluate the stream's physical functioning. The team assesses a wide variety of attributes, including the degree of bank sloughing and erosion, amount and condition of vegetated streambanks, and the ability of the stream to handle flood events.

It should be stressed that PFC is designed to be a "first-look". It is not intended to be the one and only way to describe riparian areas. The value of the PFC protocol is that it provides a standardized, robust method to focus and prioritize land management efforts. In effect, it classifies stream reaches as "ok as is" (i.e. Proper Functioning Condition), "needs management attention" (i.e. Functioning, but at risk), or "in need of immediate remedial action" (i.e. Non-Functioning).

The SRT raises concerns about PFC: (1) Is the PFC methodology applicable to North Dakota? (2) Does the DPG use multi-disciplinary teams? (3) Will the DPG develop a training manual and process?

(1) *Is the PFC methodology applicable to North Dakota?* Yes, PFC methodology is applicable to North Dakota. This methodology was developed in the American West by federal land-management agencies and has been used extensively in the past decade. The DPGs' climatic, geologic and fluvial conditions are highly representative of many watersheds where the PFC methodology was developed and refined. A ranking member of the Interagency National Riparian Service Team (NRST), Wayne Elmore, visited the Little Missouri National Grassland in June of 1999, and found the methodology to be well suited for use in North Dakota.

(2) *Does the DPG use multi-disciplinary teams?* Yes, the DPG uses a team of resource specialists to conduct PFC surveys. This protocol is established both in the PFC method book (available online http://www.or.blm.gov/nrst/Tech_References), as well as in the DPG's Monitoring Handbook. Skills provided by the resource team consist of soils, hydrology, geomorphology, botany, ecology, geology, biology and range management. [NOTE: The field work done in southern Billings County in 1997 was not done with an interdisciplinary team due to a temporary lack of staffing. This is an undesirable practice that occurred episodically in response to changes in personnel, limitations of budget, and time constraints. It is not the accepted or general practice of the DPG.]

(3) *Will the DPG develop a training manual and process?* Yes, the DPG will provide standardized direction for local use of PFC protocol in the Grasslands' Monitoring Handbook. We agree with the need for additional training. DPG personnel are currently developing a localized training manual supplement more specific to the Great Plains. This includes work already started on a local plant species checklist to augment the national list of riparian plants. The DPG-specific list provides additional information to illustrate relations between certain PFC ratings and various groups of plant species. In addition, new practitioners will be teamed in the field with experienced ones to facilitate the training process.

SRT Issue VI - 4: *The grazing tactics in riparian areas are inappropriate.*

SRT Recommendation VI - 4: *Tailor grazing tactics to meet site-specific goals and objectives of riparian habitats.*

Initial Position Statement

Riparian areas are the terrestrial habitats adjacent to streams, rivers, springs and lakes. Because of their proximity, riparian areas are strongly influenced by the adjacent water bodies. Although riparian areas occupy only a small percentage of the landscape, they are particularly important for maintaining water quality and quantity, wildlife habitat, and overall aesthetics. Riparian areas are particularly sensitive to livestock, due to their heavy use as favored watering, grazing and loafing sites.

We share the SRT's concern with the present health of many riparian reaches. We also agree that grazing management strategies should include: (1) attractants and herding, (2) fencing, and (3) rotation grazing systems that use proper timing, duration and intensity. In fact, we proposed using these same strategies in several of the sample AMPs.

For example, of the 69 grazing allotments examined, we identified riparian issues in 19 of them. In the other sample AMPs, riparian habitat either was not present, or it was rated at PFC based on a recent inspections (see protocol in VI-3). In order to address the noted riparian issues, we proposed using attractants in nine allotments; herding in three allotments; fencing in nine allotments; changes in rotation grazing systems using proper

timing, duration and intensity in eleven allotments; and reductions in herd size in combination with a strategy listed above in two allotments.

The DPG is committed to improving riparian health as reflected in the goals and objectives for riparian habitat articulated in the Grasslands Plan. As recommended by the SRT, we will consider all of the riparian management strategies listed above during project implementation at the site-specific level.

SRT Issue VI - 5: *The LRMP does not include provisions to address timely responses for short-term circumstances that could lead to cottonwood regeneration.*
SRT Recommendation VI - 5: *Develop specific guidelines for quick response by the Grazing Association members and FS to exclude livestock when suitable flooding event(s) occur.*

Initial Position Statement

Cottonwoods are a key provider of woody habitat along many of the major waterways found on the DPG. Both the SRT and DPG have expressed concern about ensuring additional recruitment of seedling cottonwoods. Cottonwood establishment is largely dependent on a series of closely timed events, such as a flood scouring a suitable streambank or point bar to prepare a seedbed, at the same time that cottonwood trees are dispersing their seed.

The SRT recommendation to provide opportunities for cottonwood recruitment is consistent with the Grasslands Plan, which contains numerous standards, goals and objectives for riparian communities. These include, but are not limited to, the following:

> Move at least 80 percent of riparian areas and woody draws toward self-perpetuating plant and water communities that have desired diversity and density of understory and overstory vegetation within site capability.
>
> Design and implement livestock grazing strategies to provide for thick and brushy understories and ***multi-age*** structure in riparian habitats, wooded draws, and woody thickets, contingent on local site potential.
>
> Manage livestock grazing to maintain or improve riparian/woody draw areas. Implement the following practices:
>
>> Control the timing, duration and intensity of grazing in riparian area to promote establishment and development of riparian species. Guideline.

This direction would be implemented in site-specific projects, such as those updating AMPs. As recommended by the SRT, project design would include evaluation of the necessity for, and practicality of either excluding or deferring livestock grazing in seedling areas.

Section VII – Black-Tailed Prairie Dog Management

SRT Issue VII - 1: *The ability to use rodenticides as an effective tool for limiting black-tailed prairie dog (Cynomys ludovicianus) colonies to desired area(s) is uncertain.*

SRT Recommendation VII - 1: *Aggressively monitor colony expansion and proactively develop rapid response control procedures that limit expansion to desired area(s) in a timely manner (see Appendix C for greater detail on prairie dog control).*

Initial Position Statement

Prairie dogs remain a very controversial topic among landowners, land managers and conservationists. Currently, prairie dogs occupy less than 2 percent of the DPG. The Grasslands Plan and agency leadership direct that prairie dogs be increased over the next 10-15 years, but that this increase be done in a manner reflecting our "good neighbor" policy. This policy states that we will intensively manage prairie dog colonies that expand from the National Grassland onto neighboring private land.

Management tools include land purchase, land exchange, conservation easements, translocation, rodenticide (poison) and use of vegetative buffers. As noted in the SRT's Appendix C, vegetative buffers can be a very useful tool for slowing or redirecting expansion of prairie dog colonies.

No one technique, however, is effective in all situations. Because of that fact, the Grasslands Plan specifically allows use of rodenticide to control prairie dogs on the National Grassland. Rodenticides are, and will be, an important tool for effective prairie dog management.

In order to assess which management tools are appropriate at different sites, we assembled Interdisciplinary Teams to visit each prairie dog colony on the DPG, and recommend how each colony should be managed (i.e. eradicated, allowed to fluctuate naturally or encouraged to expand). These recommendations are summarized in a report that will be used to develop proposed actions presented to the public for comment under a National Environmental Policy Act (NEPA) process.

The report for the Grand River National Grassland was completed in 2004. The Medora Ranger District report will be completed in 2005, and the McKenzie Ranger District report in 2006. Regardless of when these reports are completed, any complaint of encroaching prairie dogs will be investigated immediately. If poisoning is appropriate, we will initiate the NEPA process for that site. If the NEPA process results in a decision to use rodenticides, poisonings will proceed the following autumn as funding allows (label use restrictions limit the use of rodenticides to the fall period).

To that end, the Medora Ranger District has one approved project to use rodenticides this fall, and the Grand River Ranger District is working on a decision that would also allow its use in conjunction with other management tools.

In regards to monitoring colony expansion, we will continue to map all prairie dog towns every three years, as has been done since the 1980s on the Grand River National Grassland, and the 1990s on the Little Missouri National Grassland.

Section VIII - Drought Management Strategies

SRT Issue VIII - 1: *There is no clear, proactive, destocking or grazing management plan for dealing with the detrimental effects of drought on livestock and wildlife carrying capacities.*

SRT Recommendation VIII - 1: *Develop viable, proactive drought management strategies and tactics that, when followed, reduce economic risks, minimize ecological risks, and enhance the long-term sustainability of both the responsible management enterprise and the grassland resource (see Appendix D for details regarding Drought Strategies).*

We agree that Drought Strategies need to continue to be implemented and improved upon. The responses have and need to be unique to each district or situation.

Based on Appendix D in the SRT report, roughly 69 percent of the perennial grass production is completed by June 1 and is based on precipitation in April and May. Weather conditions need to be monitored each spring to determine what the conditions are going to be and grazing adjusted accordingly.

The development of swing pastures and/or grassbank opportunities to allow for flexibility in management is worth pursuing. On the longer term, making adjustments for cattle size (see Initial Position Statement V-2) may also help better prepare allotments to deal with drought in the future.

Effective drought communication with grazing associations should also be part of implementing the strategy. Early recognition of dry conditions and plans to deal with it should be developed as soon as possible to give individual members as much time to adjust their operations as possible.

Unit-wide guidelines to implement drought management have not been developed yet. The DPG staff will be developing guidelines for dealing with drought based on guidance provided in Appendix D of the SRT report.

Section IX - Sheyenne National Grassland

SRT Issue IX - 1: *Historical, pasture-specific grazing records were not used in developing the LRMP.*

SRT Recommendation IX - 1: *Maintain and share detailed, pasture-specific grazing records between the FS and the Grazing Association.*

Initial Position Statement

Historical, pasture-specific grazing records were not used in the development of the Grasslands Plan. That process was based on large landscapes and used models with defined parameters. Site-specific grazing records are used in the development of Allotment Management Plans.

Presently, detailed annual operating instructions (AOIs) are developed for each allotment. Each AOI includes the map of the allotment, association member, class of livestock, numbers and the grazing rotation for each pasture. Changes in rotation are recorded in the administration notes each year and filed in the permanent allotment folder. This information was not provided in the sample AMPs, only the actual use for the allotment.

It is worth noting the Sheyenne Valley Grazing Association has been, and continues to, share records and information with the Forest Service, especially related to the kinds of records listed in Recommendation IX-1. This recommendation of sharing of records between Forest Service and Grazing Association could be emphasized in their Grazing Agreements/Rules of Management. We will continue to work with the grazing association to improve the collection of pasture specific grazing use numbers and dates.

SRT Issue IX - 2: *The frequency and intensity of livestock grazing over time and space was inadequately distributed.*

SRT Recommendation IX - 2a: *The SRT urges greater use of temporary electric fencing in the SNG to address specific ecological improvement and restoration goals.*

SRT Recommendation IX - 2b: *The SRT recommends that water development be positively considered as a tool to aid livestock grazing distribution in the SNG. The SRT does not recommend that additional water sources be constructed for the purpose of increasing livestock numbers. Rather, they should be used to modify livestock grazing distribution and reduce the frequency and intensity of use of individual plants and plant communities.*

Initial Position Statement

The tools identified by the SRT are allowed as needed under the Grasslands Plan to achieve desired vegetative conditions (see Grasslands Plan page 2-25 and 2-30). The sample AMPs for the Sheyenne National Grassland did have electric fences proposed for some allotments.

Additional improvements may allow more flexibility to meet desired conditions (orchids, nesting, structure, composition). These recommendations will be considered in the AMP development.

SRT Recommendation IX - 2c: *The SRT recommends combining grazing allotments and rotating two or more herds together through the combined pastures (preferably 10-12), or using temporary electric fencing to subdivide current pastures to obtain more grazing units. Given the need for ecological restoration in the SNG, adoption of rotation grazing systems by combining allotments, as well as stocking rate adjustments, are highly recommended strategies to achieve the stated goals of improving the ecological health in plant communities.*

Initial Position Statement

We agree that both of these strategies are valid and important strategies for improving ecological health in plant communities. This recommendation will be considered in the development of the allotment management plans. Also see Initial Position Statement V-2 and IX-3.

SRT Issue IX - 3: *Uncertainty exists regarding the "proper" rates of stocking to achieve desired ecological restoration in the SNG.*

SRT Recommendation IX - 3: *Proposed stocking rates should be implemented as necessary to achieve the desired resource management goals and objectives. However, clearly documenting the effects that changes in stocking rates have toward meeting resource management goals and objectives must be done in concert with reducing the stocking rates. It is also imperative that future increases or decreases in stocking rates be made based on documented changes in the resource.*

Initial Position Statement

We agree. The Grasslands Plan in Appendix I – Stocking Rate Guidelines states: "Monitoring will be conducted to validate that the stocking rate guidelines are meeting or making measurable progress in meeting the desired vegetation objectives (see Chapter 4). If they are not, adjustment in the stocking rate guideline will be made. Stocking rate guidelines may be adjusted through site-specific analysis if monitoring information available for an allotment or pasture supports the need for adjustment. The monitoring information must have been collected using standard methods determining production, composition, structure or utilization. Photograph and videography are also useful in supplementing monitoring information and evaluating guidelines."

This recommendation of stocking rates to meet resource objectives would be implemented at the time of AMP development. Monitoring would be conducted after the AMP is implemented.

SRT Issue IX - 4: *Insufficient research information is available to develop sound management plans to sustain and enhance the western prairie fringed orchid (Platanthera praeclara) (WPFO).*

SRT Recommendation IX – 4a: *Core WPFO should be actively managed by rotational grazing and prescribed burning to prevent litter buildup, decrease competition, and increase suitable germination sites.*

SRT Recommendation IX - 4b: *Core WPFO populations should be managed to minimize potential grazing disturbance to flowering orchids. The SRT suggests adopting improved rotational grazing systems that allow deferment of core WPFO populations during flowering. (See Section IX - SNGs, grazing management issues one, two and three.)*

Initial Position Statement

The Grasslands Plan (see Appendix N) and associated FEIS (see Appendix H, page H-19) revealed data on the effects of management on the orchid can be limited. Despite these research limitations, a United States Fish and Wildlife Service (USFWS) approved management plan for the orchid is required under the Recovery Plan (USFWS 1996). Such a plan was developed in consultation with the USFWS during the Grasslands Plan revision process. The Forest Service will continue to consult with the USFWS on grazing, fire, and other management activities in orchid habitat. We will encourage additional research and will use best available research and monitoring data to determine the appropriate management regime.

SRT Issue IX - 5: *Switchgrass (Panicum virgatum) is an inappropriate MIS for the WPFO.*

SRT Recommendation IX - 5: *If a MIS is necessary to the recovery of the WPFO, slimstem reedgrass would serve as the best indicator of the orchid habitat.*

Initial Position Statement

Management Indicator Species (MIS) - is a plant or animal species selected because their status is believed to (1) be indicators of the status of a larger functional group of species, (2) be reflective of the status of the key habitat types or (3) act as an early warning of an anticipated stressor to ecological integrity. The key characteristic of a MIS species is that its status and trend provide insights to the integrity of the larger ecological system to which it belongs.

Switchgrass is not identified as a MIS in the Grasslands Plan. Five MIS were identified during the planning effort. These include sharp-tailed grouse, the greater prairie-chicken, the greater sage-grouse, black-tailed prairie dog, and the western prairie fringed orchid.

On the Sheyenne National Grassland, identified MIS are the greater prairie-chicken, sharp-tailed grouse and western prairie fringed orchid.

Switchgrass is referred in the draft monitoring handbook as an associated species for monitoring. It is sensitive to land management and is found in the wet prairie zones of the temporary and seasonal wetland habitat where the orchid is found. It is unknown if slimstem reedgrass (*Calamagrostis stricta*) is sensitive to land management. This will be evaluated and this species will be considered for monitoring.

SRT Issue IX - 6: *Increases in invasive and native woody species threaten the integrity of plant communities.*

SRT Recommendation IX - 6a: *Determine which plant communities and sites have crossed ecological thresholds. Identify ecological strengths and weaknesses of "undesirable" (invasive and undesirable natives) and "desirable" (e.g., big bluestem (Andropogon gerardii), Indian grass (Sorghastrum nutans), porcupine grass (Stipa spartea)) species and develop ecologically sound, integrated management strategies for each species.*

Initial Position Statement

The Forest Service is in the process of developing the Vegetation Classification for the Sheyenne National Grasslands. The Vegetation Classification will mesh Forest Service and NRCS protocols in developing state and transitional pathways and identifying ecological thresholds.

The Forest Service is also planning to develop a Restoration Strategy for the Sheyenne National Grassland. The Restoration Strategy is to be developed collaboratively with interested individuals, grazing associations, universities and resource specialists.

SRT Recommendation IX - 6b: *Develop and implement simple but effective monitoring protocols to be able to evaluate whether applied management is achieving the desired results.*

Initial Position Statement

We agree. The Forest Service is currently developing monitoring protocols working with universities and Rocky Mountain Research Station.

SRT Recommendation IX - 6c: *Apply management tools (prescribed fire, prescribed grazing, rest, herbicides, etc.) in a manner that is responsive to changing environmental conditions yet consistent in application. For example, if prescribed fire is to be applied to reduce Kentucky bluegrass or a woody plant component, ensure proper timing of burns and continued annual application across the same location(s) to ensure desired outcome.*

Initial Position Statement

We agree. The Restoration Strategy that is to be developed will be evaluating all the tools and the application of those tools for ecological restoration.

SRT Issue IX - 7: *The effectiveness of proposed ecological restoration on the SNG is questionable.*

SRT Recommendation IX - 7a: *Initiate ecological restoration projects on a small scale (few acres) and monitor to refine techniques before applying the techniques at larger scales.*

SRT Recommendation IX - 7b: *Seek expertise in other agencies and private industry that have experience in ecological restoration. If funding permits, contract out restoration efforts.*

Initial Position Statement

We agree. The Forest Service is currently working with universities, Agricultural Research Service and United States Geological Survey on small-scale restoration research projects to develop restoration techniques, such as prescribed fire, herbicides, and seeding on the Sheyenne National Grassland.

We will continue to work with all of our partners and interested publics in both the development of the Restoration Strategy and in the implementation of proposed projects.