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Department of
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Forest Service

Intermountain
Region

Caribou-
Targhee
National
Forest

Curlew National Grassland

Curlew Monitoring and Evaluation Report

2002-2003

Curlew National Grassland

Grassland Plan Monitoring and Evaluation Report

Abstract

The Curlew National Grassland (hereafter generally referred to as the "Grassland") is a portion of the Caribou-Targhee National Forest Administrative Unit. Specifically administered as a part of the Westside Ranger District, the Grassland is situated in southeast Idaho, north of the Utah-Idaho State line. It encompasses approximately 47,600 acres of federal land intermixed with private land. It is located approximately 17 air miles west of Malad, Idaho.

The Curlew National Grassland Land and Resource Management Plan was signed in February of 2002. The monitoring activities in the Plan were developed to address priority management emphasis, goals and objectives. Monitoring and evaluation activities may vary each year in response to changing issues, budgets, science and methodologies. The monitoring program outlined in the Plan is the optimal level, assuming the plan is fully funded. In fiscal years 2002 and 2003, forest funding fell short of optimal levels but the majority of the monitoring was accomplished.

This document reports and evaluates monitoring and accomplishments in the first year of implementation of the Plan. Where available, information from 2003 has also been reported. The Curlew Plan has annual monitoring as well as monitoring required at different intervals. The Plan separated monitoring into 2 priority groups, in anticipation of budget limitations. In 2002, all of the Priority Group 1 annual monitoring was completed to the level specified in the Grassland Plan. The monitoring has identified some problems to address but overall, standards and guidelines are effective and helping accomplish the resource objectives.

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Forest Supervisor's Message

This report is the first Curlew National Grassland Monitoring and Evaluation Report. The Land and Resource Management Plan for the Curlew National Grassland was approved by Regional Forester Jack Troyer on February 8, 2002. The actual time period covered by this Monitoring and Evaluation Report is from March of 2002 through August of 2003.

The Monitoring and Evaluation Plan, Chapter 5 of the Grassland Plan, was designed to meet the requirements set forth in the National Forest Management Act. The results of our annual monitoring activities have been evaluated to verify the propriety of current actions, standards and guidelines; and to determine the need to change them. To assess the performance of the Grassland Plan, the Monitoring Items are separated into three types: implementation, effectiveness, and validation. Implementation monitoring forms the basis for all other monitoring since it measures the actual use of standards and guidelines. Effectiveness monitoring answers the question, "Is implementation of the standards and guidelines showing the results we expected?" Validation monitoring is conducted to verify the basic assumptions in the RFP.

The Curlew Grassland Plan also identified goals and objectives for resource management. Goals describe desired conditions for the future; they are typically general, without a specific timeframe for achieving them. In planning, one way to track how we achieve our goals is through the measurement of objectives. An objective is a quantifiable statement of achievement expected within a determined time frame. In this Monitoring and Evaluation Report, we have measured our progress towards meeting the objectives in the Curlew Plan.

Based on the information in this report, we have not identified any changes needed in the 2002 Curlew Grassland Plan. I certify that implementing direction in the Plan will continue to move the Grassland toward desired future conditions.

Jerry B. Reese

JERRY B. REESE

Caribou - Targhee National Forest Supervisor

Objectives

The Curlew Plan identified goals and objectives for forest management over the next decade. Goals describe desired conditions for the future; they are typically general, without a specific timeframe for achieving them. In planning, one way to track how we achieve our goals is through the measurement of objectives. An objective is a quantifiable statement of achievement expected within a determined time frame. The implementation of the Grassland Plan is displayed in the table of objectives and timeline for meeting those objectives in Chapter 5 of the Plan (Plan, Table 5.1). This schedule is being used to help design the program of work for each resource group and to assist budget allocations each year. The following discussion lists actions we have taken towards meeting the objectives in the Grassland Plan. Currently we are in the second year of the 10-year Plan so many of the objectives have not been met.

Ecological Processes and Patterns

General Ecological Conditions

- Within 10 years after signing the ROD, reassess vegetation PFC of ecosystems on the Grassland and adjacent areas, to determine if resources are moving toward DFCs.

Physical Elements

Water Quality

- Proactively address all impaired waterbodies within 5 years subject to funding and State schedules.

Biological Elements

Fisheries, Water, and Riparian Resources

- Establish an upward trend on all perennial riparian systems within the next decade.
 - ☑ *In 2003, Grassland managers developed a proposal to exclude certain riparian areas from grazing and to graze others as riparian pastures. This interdisciplinary proposal was included in the scoping statement for the Curlew and Buist Allotment Management Plan (AMP) updates, sent to the public in June, 2003.*

Vegetation

- Treat 12,100 acres of sagebrush over the next 10 years.
 - ☑ *Grassland managers have been refining the canopy cover maps to develop a proposal for sagebrush treatments. A proposed action is not likely to be finalized until 2004. That proposal would then be sent to the public for review and comment and subject to environmental analysis.*

Wildlife

- Assess the changes to sagebrush habitats in the Greater Curlew Valley, including canopy cover, adjacent land use, understory conditions, every five years. Coordinate with interested groups.
- Build a blind for lek observation.
- Develop a map in cooperation with IDFG to identify functional and degraded breeding habitat within 2 years of the signing of the ROD.
 - ☑ *The Grassland wildlife biologist and a biologist from Idaho Fish and Game are working together to define breeding habitat features specific to the Grassland.*
- Map stream reaches and identify existing and potential willow shrub communities within 2 years of signing the ROD.
 - ☑ *In the summer of 2003, the Forest contracted with the Idaho Conservation Data Center (CDC) to have a botanist survey and map willow shrub communities. Most of the floristic inventory was completed in the summer of 2003; the remainder of the work will be done in the 2004 field season.*

Forest Use and Occupation

Heritage Resources

- Inventory 100 to 500 acres of the Grassland each year to locate and identify archaeological and historic properties.
 - ☑ *Approximately 300 acres were surveyed in 2002 and 2003. Two sites were located and evaluated for eligibility in the National Register of Historic Places.*
 - ☑ *In 2002, Weber State University Field School excavated one of the above sites and determined that it was eligible for inclusion on the National Register of Historic Places.*
- Within 5 years of signing the ROD, develop a predictive model to guide the design and completion of cultural resource inventories.
 - ☑ *The Forest archeologist has the northern Curlew Valley prehistoric settlement system mapped. This map will be used to predict the probability of archeological sites on that portion of the Grassland. This will be refined as more data is available.*

Production of Commodity Resources

Livestock Management

- Within 3 years of signing the ROD, AMPs will be updated for the Curlew Valley and Buist Association fields.
 - ☑ *The proposed action for updating the AMP's on these allotments was sent out for public review in June of 2003. The interdisciplinary team (IDT) is reviewing public comments and identifying significant issues currently. An environmental assessment will be prepared in the fall of 2003. A decision is scheduled for early winter or spring of 2004.*

- Within 2 years of signing the ROD, develop a monitoring protocol for livestock use monitoring and recording on the Grassland, following the C-T Rangeland Monitoring Protocol and FS Handbook direction.
 - ☑ *Livestock monitoring in 2002 and 2003 has been done using currently approved protocols and forms developed at Utah State University. Once the FS Handbook for rangeland analysis has been finalized, the Forest will develop a coordinated Monitoring Protocol for the Curlew, Caribou, and Targhee zones. This is likely to occur in 2004.*

➤ Rx 2.8.8 Riparian/Wetland Areas

- For riparian improvement, by 2008 corridor fence those streams that are "at risk" and will benefit from that fencing.
 - ☑ *In 2003, Grassland managers developed a proposal to exclude the following riparian areas from grazing. This interdisciplinary proposal was included in the scoping statement for the Curlew Allotment Management Plan (AMP) updates, sent to the public in June of 2003. If the proposed action is chosen, the Forest expects to begin construction on fences in the spring of 2004.*
 - ☑ *Meadowbrook (Huffman Spring)—this will be fenced in fall of 2003 with grant money from the C-T Resource Advisory Committee (RAC).*
 - ☑ *North Canyon*
 - ☑ *Lower Southwest Peterson-Lonigan*
 - ☑ *Northwest Peterson-Lonigan Area*
 - ☑ *Southwest Peterson-Lonigan Area*
- On the remaining perennial streams (outside of existing riparian pastures and corridor fenced "at risk" streams) fence into riparian pastures using existing boundary fences by 2010.
 - ☑ *One of these areas was also included in the Curlew AMP Updates proposed action. The East Huffman Riparian Pasture would be created after the "at risk" streams are corridor fenced.*



East Huffman riparian area, scheduled to be fenced into a riparian pasture.

Rx 3.4.1 Special Wildlife Areas

- Maintain existing fences annually to meet wildlife habitat goals.
 - ☑ *In the summer of 2003, the Youth Conservation Corps crew did "heavy maintenance" on the fences at Sweeten Pond. Yearly maintenance on those fences is performed by the livestock permittees.*
- Maintain water in Sweeten Pond each year, by pumping when needed.

Rx 6.5 Rangeland Vegetation And Upland Bird Habitat Management

- Within 10 years of the ROD, treat 2,500 acres of bulbous bluegrass and reseed with native and non-native grass, forb, and shrub seed mixtures.
 - ☑ *Grassland managers have been refining the maps of bulbous bluegrass dominated fields. No new treatments are proposed at this time.*
- Within 10 years of the ROD, treat 9,600 acres of sagebrush with herbicides or other appropriate methods to reduce canopy cover from >25% canopy cover and to achieve other resource objectives.
 - ☑ *Grassland managers have been refining the canopy cover maps to develop a proposal for sagebrush treatments. A proposed action is not likely to be finalized until 2004. That proposal would then be sent to the public for review and comment and subject to environmental analysis.*



Male sage grouse on the Curlew National Grassland, photograph by Ken Timothy, USFS.

Monitoring Items— Curlew Grassland Plan

This section includes the results of each monitoring item and an interdisciplinary evaluation of those results. First there is a summary table of the above parameters. After the summary table, there is a more detailed discussion of the monitoring results and evaluation. Information included in this section is a compilation of site specific monitoring conducted by the Districts, Supervisor's Office specialists, consulting firms, State agencies, etc.

Table of Monitoring Items and Results

Table 1: Monitoring Items from Chapter 5 of the Curlew Grassland Plan.

Resource	Parameter Monitored	Monitoring Activity	Type of Monitoring	Frequency of Measurement	Priority	Results
Soils	Detrimental Soil Disturbance	Evaluate according to R-4 Soil Quality Standards. Apply Grassland-wide on representative sites of various land treatments.	Implementation Effectiveness	Annually	2	No new land treatments have been implemented since the Plan was developed
	Ground Cover	Grassland-wide on representative sites or habitat types where new land treatments occur. Evaluate the rate at which habitat types recover from hydrologic disturbances. Include measurements of fine organic matter to address long-term soil productivity.	Implementation Effectiveness	Annually	2	No new land treatments have been implemented since the Plan was developed
	Soil Heating	Evaluate fire intensity to determine impacts on soil quality. Measure area extent of severely burned soils.	Implementation	After each fire event.	2	No fire events have occurred since the Plan was developed

Resource	Parameter Monitored	Monitoring Activity	Type of Monitoring	Frequency of Measurement	Priority	Results
Vegetation	Big Sagebrush and Mountain Brush Canopy Cover	Reevaluate sagebrush canopy cover classes using a Landsat analysis similar to the USU and Prevedel studies or a more site-specific inventory method. Approved methods in the FSH 2209.11 will be used.	Implementation Effectiveness	Every 10 years	1	Will be done by 2012
	Changes in shrub and understory diversity in bulbous bluegrass treatments.	Establish a monitoring plan in consultation with the Regional Ecologist, using control plots to determine vegetation trends. Protocol will include methods that will show the changes in understory and overstory vegetation and canopy cover reestablishment.	Implementation Effectiveness Validation	Bulbous bluegrass treatments would be measured at times prescribed by Regional Ecologist	1	No bulbous bluegrass treatments have been proposed since the Plan was developed. Forest managers are currently reviewing the second half of the previously approved North Carter treatment.
	Changes in shrub and understory diversity from other vegetation treatments.	Protocol will include methods that will show the changes in understory and overstory vegetation and canopy cover reestablishment and other shrub parameters. Include evaluation of sage grouse habitat quality.	Effectiveness Validation	Before treatment and in years 3 and 10 after treatment.	1	No new vegetation treatments have been proposed. Grassland biologist has been coordinating with Idaho Fish and Game to discuss evaluation of grouse habitat quality.
	Long-term vegetation benchmarks	Establish at least one nested frequency transect within representative native vegetation in the NW unit to monitor long-term condition and trend.	Effectiveness	Every 10 years	1	This was accomplished in 2002. A nested frequency transect was established in the West Peterson-Lonigan field.
	Vegetation Changes	Document and map natural and man caused disturbances.	Implementation	Annually	1	No known natural and man-caused disturbances have changed vegetation types.

Resource	Parameter Monitored	Monitoring Activity	Type of Monitoring	Frequency of Measurement	Priority	Results
Water and Riparian	Riparian Properly Functioning Condition	Reassess streams for PFC using the BLM/FS Protocol and the Integrated Riparian Evaluation Guide or other established protocols. Compare recovery rates between annually and periodically grazed pastures.	Effectiveness Validation	Every 5 years	2	Will be conducted in 2007.
	Water Quality	Monitor water quality on water quality limited streams.	Effectiveness Validation	Annually	1	This was conducted but since there was no water flow in the stream, no measurements were taken.
Wildlife— Management Indicator Species	Sage Grouse and Columbian Sharp-tailed grouse	Each spring conduct sage and sharp-tailed grouse lek surveys in cooperation with BLM, IDFG and other interested parties on known active and inactive leks.	Validation	Annually	1	This has been conducted, see write-up for 2001-2003 results.
	Riparian Breeding Birds	Monitor riparian breeding bird habitat keying in on willow shrub structure. Methods may also include long-term point counts for birds.	Effectiveness	Every 5 years	1	Will be conducted in 2007. In 2003, willow dominated riparian areas were identified and mapped (see objectives write-up).
Livestock Grazing	Livestock Utilization	Monitor grazing utilization/stubble height parameters; protocol to be established in consultation with IDT and Regional Ecologist. Protocol will include (at a minimum) yearly utilization mapping and upland and riparian key area utilization transects.	Implementation Effectiveness	Annually—use mapping on 100% of CNG; transects/cages in at least 25% of pastures	1	This has been conducted in 2002 and 2003. See attached map for 2002 utilization mapping. Utilization cages were installed, stubble height and percent utilization comparisons were made (see write-up).

Resource	Parameter Monitored	Monitoring Activity	Type of Monitoring	Frequency of Measurement	Priority	Results
Recreation and Access	Developed Site Conditions	Review fee records and other methods to determine use levels and site conditions.	Implementation Effectiveness Validation	Annually	1	Use level in Curlew Campground increased in 2003 over 2002 levels. Improvements to CG were made in 2002.
	Dispersed Area Use and Condition	Use observations, road and trail counters to monitor resource conditions and use levels at dispersed recreation sites.	Effectiveness	Annually	1	No monitoring occurred.
	Travel and Recreational Activity Impacts	Use observations and surveys to assess resource conditions in areas of concern such as high use areas or along travel routes.	Implementation Effectiveness	Annually	2	No concerns of high use impacts in developed sites. Experiencing some motorized vehicle travel off designated routes.

Annual Monitoring Results and Evaluation

Monitoring requirements and tasks are developed to be responsive to the objectives and scale of the plan, program, or project to be monitored. They determine how well objectives have been met and how closely management standards and guidelines have been applied. Monitoring generally includes the collection of data and information, either by observation or measurement. Evaluation is the analysis of the data and information collected during the monitoring phase. The evaluation results form a basis for adaptively managing the Grassland.

In this Report, the annual monitoring data has been compiled and analyzed to determine if the Forest is following the Plan and if the activities prescribed by the Plan are moving the Grassland toward the Desired Future Conditions. With adaptive management, this evaluation is critical to the success of the program. If the monitoring shows that activities are not moving Grassland conditions towards goals and DFC's, then management strategies can be adjusted. Continual re-evaluation of conditions is designed to insure that management of the Grassland will achieve the goals for the next decade.

In the Curlew Monitoring Plan, several monitoring items apply only to vegetation treatments or fires. Since no new vegetation treatments have been proposed or implemented, those items will not be discussed in the following evaluation. Only annual monitoring requirements are reported in this 2002-2003 Monitoring and Evaluation Report as well.

Vegetation

Long-term Vegetation Benchmarks

Requirements

The Grassland Plan requires establishment of at least one nested frequency transect within representative native vegetation in the NW unit to monitor long-term condition and trend.

Results and Evaluation

In 2002, a nested frequency transect was established in the West Peterson-Lonigan field. This will provide baseline data from which the Grassland managers can determine long-term condition and trend of native vegetation. This will enable us to validate whether livestock grazing levels will maintain and improve vegetation conditions. The transect is located in a mountain big sagebrush/bluebunch wheatgrass habitat type. Cheatgrass and crested wheatgrass were also present at this site.

In the FEIS of the Curlew National Grassland Plan, only five species of noxious weeds were identified. Canada thistle, musk thistle and black henbane were reported as static and leafy spurge and diffuse knapweed were declining under intensive annual treatments. Noxious weed infestations were found along road edges and in the Twin Springs Campground. The Grassland is covered by the Utah-Idaho Cooperative Weed Management Area (CWMA) and uses an integrated pest management approach to weed treatment. Thus far, there have been no biological control efforts on the CNG because the infestations are too small to support insect populations. In 2003, a large infestation of musk thistle was discovered below the dam at Stone Reservoir. Youth Conservation Corps (YCC) employees were used over a three-day period to clip and bag the weeds in a 10-acre area. This area was then sprayed with herbicides in the fall. Some diffuse knapweed was clipped and bagged from Grandine Guard Station and Twin Springs Campground. The biggest threat is potentially coming from existing infestations of leafy spurge but the overall trend is static or some slight headway in reducing the acreage attributable to leafy spurge.

Water and Riparian

Water Quality

Requirements

The Grassland Plan requires monitoring of water quality on water quality limited streams, annually.

Results and Evaluation

The only stream listed as water quality limited by Idaho Department of Environmental Quality is the South Fork of Rock Creek. This is located on the northwest side of the Curlew. In both 2002 and 2003, the streambed was damp but there was no water flow on the Grassland portion of the stream. Thus, no measurements were taken.

Wildlife--Management Indicator Species

Sage Grouse and Columbian Sharp-tailed Grouse

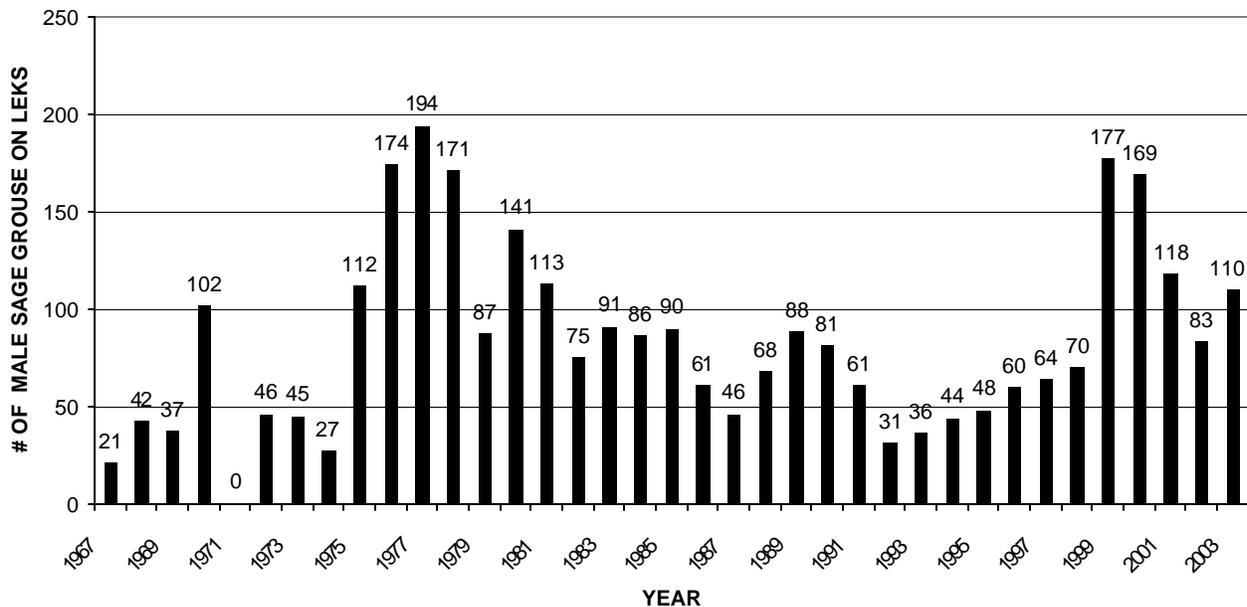
Requirements

According to the Plan, each spring sage and sharp-tailed grouse lek surveys should be conducted in cooperation with BLM, IDFG and other interested parties on known active and inactive leks.

Results

In the winter of 2002/2003, Grassland biologist and Idaho Fish and Game biologists met to coordinate the continuing monitoring of sage grouse and sharp-tailed grouse leks in the Greater Curlew Valley. Monitoring would be standardized to ease in data comparison and trend evaluation. In 2002, a total of 83 male grouse were counted on leks on the Grassland. In 2003, over 100 male grouse were counted. The table below shows fluctuations in lek count data collected by the Westside District since 1967.

MALE SAGE GROUSE LEK COUNTS - CURLEW NATIONAL GRASSLAND (District files)



Sage Grouse Breeding Habitat

As discussed in the Curlew Plan FEIS and sage grouse management documents, herbaceous cover (grasses and forbs) provides hiding cover for sage grouse nests and broods. The Idaho Sage Grouse Management Plan (Idaho, 1997) and Connelly et al. (2000) recommended that nesting and early-brood rearing habitat be managed to provide 15 to 25 percent canopy cover of sagebrush and a seven inch stubble height of herbaceous vegetation to provide optimum nesting habitat during the May nesting period (Curlew FEIS, page 3-63). A seven-inch stubble height guideline was not adopted in the Curlew Plan for various reasons, including the difficulty of using stubble height as a use standard in upland vegetation. In general, livestock graze upland vegetation unevenly so average stubble heights are very difficult to measure. The Curlew Plan does include a guideline to lower livestock use levels "in areas of 16-25 percent sagebrush canopy cover to leave adequate residual vegetation for hiding cover" (Plan, page 4-17, Livestock Management Guideline #1).

To determine how the Grassland grazing system is providing for this residual vegetation, managers have been measuring percent forage utilization and stubble height to provide a "cross-walk" between the two parameters since 1999. All of the years measured have been below normal precipitation. It is very difficult to make a Grassland-wide correlation between stubble height and percent utilization on uplands due to variables such as plant species and canopy cover of sagebrush. The following discussion summarizes the data collected over the past several years.

- In 1999, ten fields were sampled by Grassland biologists and all but three of them exceeded seven inches after fall re-growth. The average across all measured fields was nine inches of residual vegetation.
- In 2000, crested wheatgrass and bluebunch wheatgrass plants were clipped and weighed to correlate stubble height with percent utilization. According to this information, 40 percent use by weight on bluebunch wheatgrass would result in a 3.5-inch stubble height. In crested wheatgrass, however, plants clipped to 50 percent by weight were about 5.5 inches tall (Process Paper #2, 2000).
- In 2001, 40 percent use (by dry weight) of crested wheatgrass corresponded to an average stubble height of 5 inches, prior to fall regrowth (Curlew FEIS, 3-64-3-65). Under a normal precipitation pattern for this area, these sites would likely exceed seven inches after regrowth.
- In 2002, Grassland managers again compared percent utilization by weight to stubble heights. Average stubble height in the six measured crested wheatgrass fields was 7.4 inches. The table below compares the average stubble heights measured to the percent utilization by weight (using a weighted average).

Field Name	Average % Utilization by weight ¹	Average Stubble Height (inches)
East Kurtz Riparian Pasture	32	10.9
North 13	38	7.9
West Carter	42	8
North Funk	38	5.9
Salyer	49	4.4
South Huffman	40	7.4
Average	40	7.4

¹: Weighted average for the field based on utilization mapping or paired plot method.

In addition to gathering the stubble height information, Grassland managers looked at the grazing patterns to see how much of the Grassland was being grazed by cattle during the nesting season. Of the fields with greater than 15 percent sagebrush canopy cover, 26 percent are actually grazed during the nesting season. Thus, because of rotation schedules, 74 percent of the potential sage grouse nesting habitat is not grazed during the nesting season. Over 90 percent of the Grassland does not have livestock on it during the nesting season for most birds (April 16th through June 16th) (CNG grazing files, Timothy 2001).

Evaluation

As discussed above, a 50 percent utilization level in crested wheatgrass provides about 5 inches of residual herbaceous cover, even during extreme drought years, prior to fall regrowth. If normal weather patterns prevail, residual vegetation height is likely to double that. In sites dominated by native understory vegetation and sites

dominated by bulbous bluegrass, prescribed use levels would likely result in shorter residual vegetation heights even though allowable utilization by cattle is lower. This is due to the different growth structure of those plants.

Overall, the potential sage grouse nesting habitat will very nearly meet the Connelly (2000) recommendations for residual vegetation, even in drought years, therefore it should be met or exceeded in normal and wet years. Further, only one quarter of the optimum grouse nesting habitat is grazed during the nesting season in any given year. This indicates that the grazing systems on the CNG are leaving adequate residual vegetation to provide for sage grouse.

Riparian Breeding Birds

Requirements

The Plan requires monitoring of riparian breeding bird habitat, keying in on willow shrub structure, every five years. Methods may also include long-term point counts for birds.

Results and Evaluation

The breeding bird surveys will be conducted in 2007. In preparation, the Caribou-Targhee Forest contracted with the Idaho Conservation Data Center (CDC) to have a botanist identify and map willow dominated riparian areas in the summer of 2003. The CDC will supply the Forest with a report detailing riparian classification and include a floristic inventory of upland sagebrush habitat. The botanist completed most of the inventory in the summer of 2003 but will do follow-up work during 2004. We expect to receive a preliminary report during the winter of 2004 and a final report following the 2004 field season.

Livestock Grazing

Livestock Utilization

Requirements

The Grassland Plan requires a variety of monitoring methods for measuring livestock utilization. Annual monitoring will include (at a minimum) yearly utilization mapping and upland and riparian key area utilization transects. The livestock use mapping is to be done annually on 100 percent of the Grassland and key area transects and/or utilization cages will be installed in at least 25 percent of the 50 pastures.

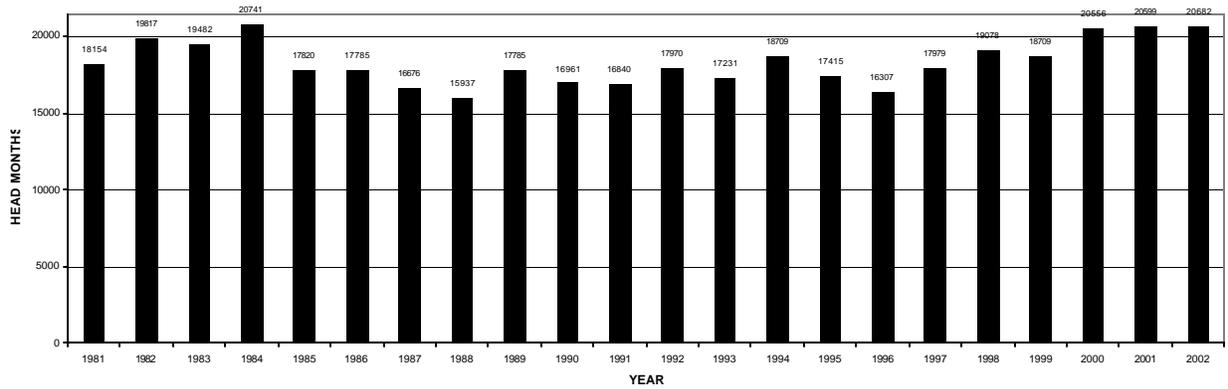
Results

In 2002 and 2003, livestock utilization was measured using several different methods. These are described in the following sections. See also the Wildlife, Sage Grouse and Sharp-tailed Grouse, Sage Grouse Breeding Habitat section, above.

Actual Use

As explained in the Grassland FEIS, livestock are moved when the pastures meet allowable utilization limits. For the past 20 years, the Grassland has not been grazed by the full, permitted number of livestock. The following chart shows actual animal months grazed in relation to the permitted number of animal months.

ACTUAL HEAD MONTHS GRAZED IN RELATION TO TOTAL PERMITTED HEAD MONTHS (TOTAL=21,480 HM)



Annual Utilization Mapping

Annual utilization mapping is shown by utilization category and provides a pictorial view of livestock grazing distribution across the Curlew National Grassland. Since the 2003 grazing season is still underway, this mapping is only available for 2002. As required by the Monitoring Plan, 12 utilization cages were established in representative sites across the Grassland. The forage produced in the cages was clipped and weighed, as was remaining forage that had been grazed outside of the cage. These amounts were compared to determine the percent utilization by dry weight. This is called the “paired plot” method of determining livestock utilization. This method, along with ocular estimations, was used to determine the utilization levels depicted in the map. These maps were used to determine acres of the Grassland grazed to the different utilization level categories. The following pictures show various utilization levels on upland and riparian vegetation. The utilization maps are shown on the following pages.



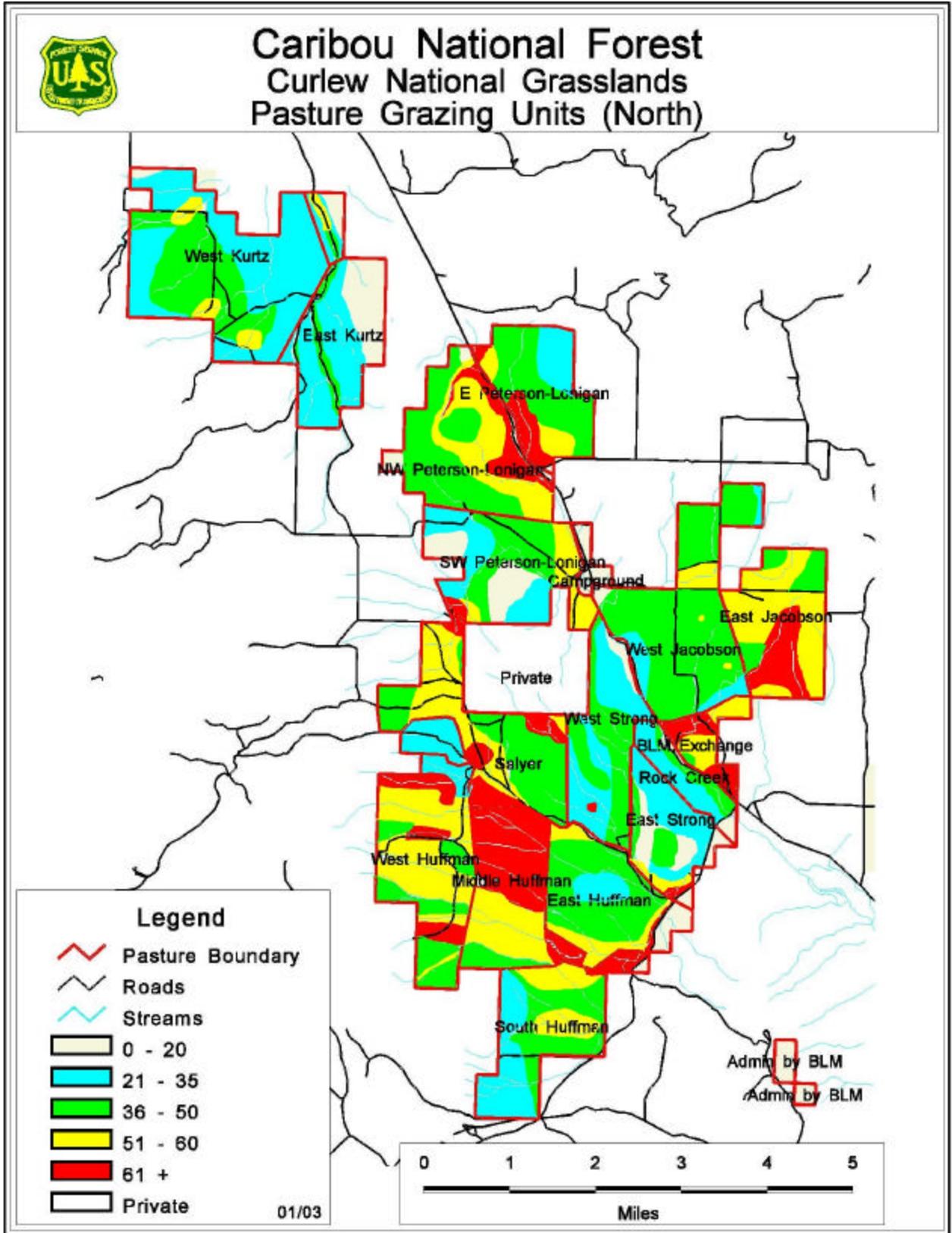
South Funk field, understory dominated by crested wheatgrass. Picture on the left shows 21 – 35 % utilization. Picture on the right shows 36 – 50 % utilization (September 2001).

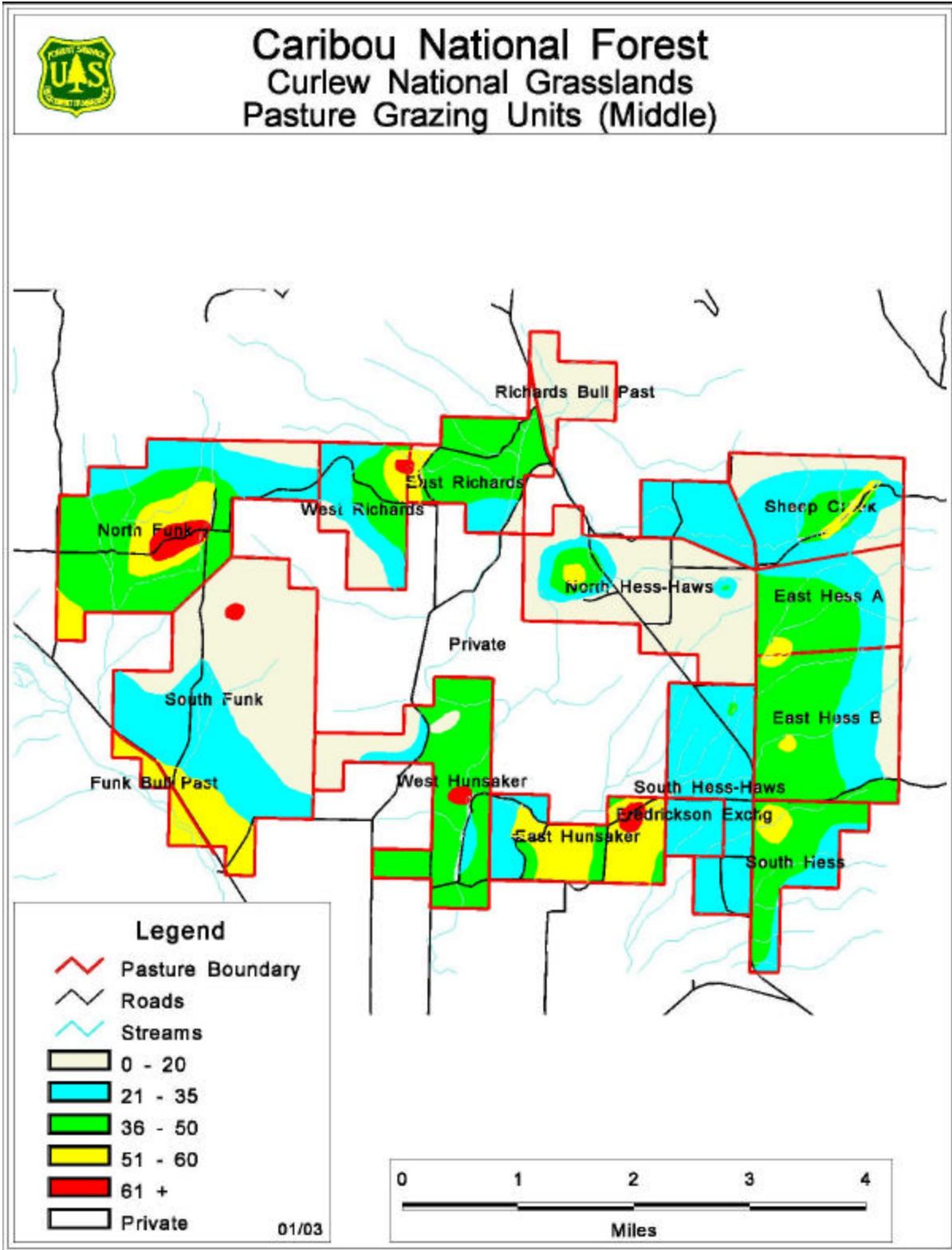


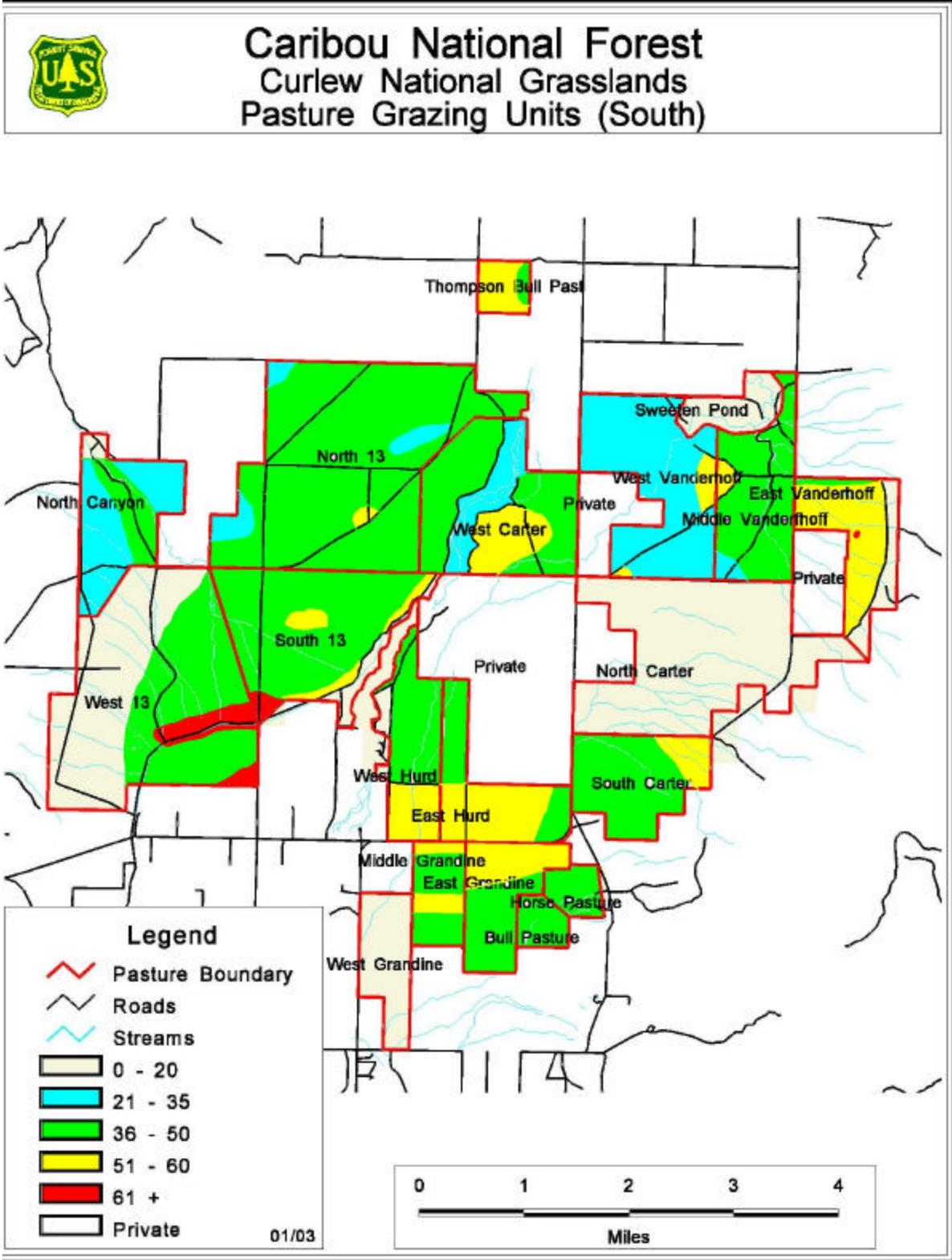
North 13 Field in July 2002, shows 36 – 50% utilization on crested wheatgrass.



*Utilization cage in the North 13 Field showing 38% utilization on crested wheatgrass.
Average stubble height in the field was 7.9 inches in 2002.*







Riparian Utilization

The Curlew Grassland Plan also established riparian utilization levels. According to Management Prescription 2.8.8—Riparian/Wetland Areas, livestock grazing utilization levels are to be set using an interdisciplinary process. The Caribou Riparian Grazing Implementation Guide is being used as a basis for establishing riparian use limits. These limits will be set in the Allotment Management Plan (AMP) updates which are currently being conducted. Over the past several years permittees and Grassland managers have established several riparian pastures including Southwest Peterson-Lonigan, Sheep Creek, Strong Corral, Salyer, East Kurtz, Grandine Horse and Bull Pasture, and Rock Creek. These are grazed for short periods of time each year. Using weighted averages, the riparian pastures were grazed an average of 30 percent utilization by weight during the 2002 season. An enclosure was created in Northwest Peterson-Lonigan.



East Kurtz Riparian Pasture utilization in 2001; use is estimated at 30%. Picture shows riparian vegetation has become established in a formerly incised channel.



Strong Corral Riparian Pasture utilization estimated at 5% in 2001. Picture shows evidence of riparian area rebuilding in the bottom of a previously washed out channel.

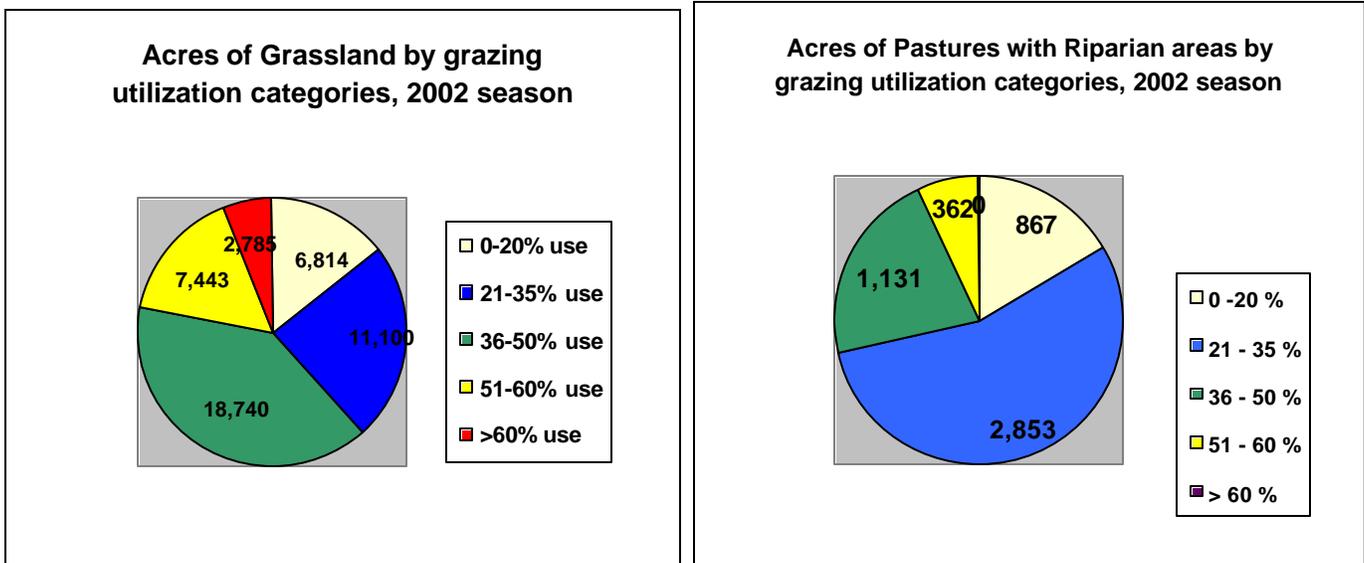
Evaluation

The Grassland Plan includes a standard and a guideline to set overall livestock utilization levels. According to Livestock Management Standard #1, the “average percent utilization of upland herbaceous vegetation across the Grassland will be 50 percent by dry weight” (Plan, page 4-17, Livestock Management Standard #1). Allowable use should be lower in optimum sage grouse nesting habitat and fields dominated by native vegetation. In fields dominated by crested wheatgrass, utilization levels may be higher (Plan, page 4-17, Guideline #1). The average use across the Grassland, however, must be 50 percent or less.

After two years of intensive actual use monitoring, the data indicates that livestock permittees are complying with the Grassland Plan standards. While some areas were overused, the vast majority of the Grassland has been grazed within the new Plan standards. In 2002, 75 percent of the Curlew Allotment and 91 percent of the Buist Allotment was grazed at or below 50 percent. Despite the severe drought conditions, approximately 78 percent of the Grassland was grazed at or below 50 percent. Of the acres grazed over the 50 percent use level, most of these were in crested wheatgrass dominated fields where higher use is allowed (CNG Plan, page 4-17). Based on preliminary information, average use on the CNG in 2003 appears to be about 45 percent by weight.

Using weighted averages, utilization in 2002 was well within the Curlew Grassland standards:

- utilization of upland vegetation averaged 38%
- utilization of riparian vegetation averaged 30%



These charts show the acres of the CNG grazed by utilization category during the 2002 grazing season. The chart on the left shows total acres and the chart on the right shows only riparian pastures.

Recreation and Access

Developed Site Conditions

Requirements

According to the Plan, the District Recreation Specialist will review fee records and other documentation to determine use levels and site conditions for the Grassland's developed recreation sites.

Results and Evaluation

There are two developed campgrounds on the Curlew Grassland: Curlew Campground and Twin Springs Campground. In 2001 and 2002, improvements were made to this campground at Stone Reservoir. Fee collections from 2002 were approximately \$4,500 while fee collections from January through mid-August of 2003 were over \$5,000. This indicates that use in this site will show a substantial increase from 2002 to 2003.

Twin Springs Campground was not a fee area in 2002. As of this date in 2003, no fees have been collected. This is likely because the campground is a dry site that would not receive much use in dry summers. Use is most likely to occur during the fall hunting seasons.

Dispersed Area Use and Condition

Requirements

According to the Plan, the District Recreation Specialist is to use observations, road and trail counters to monitor resource conditions and use levels at dispersed recreation sites.

Results and Evaluation

This monitoring was not conducted in 2002. Results from 2003 were unavailable at the time of this Report due to personnel being on fire assignment.

Travel and Recreational Activity Impacts

Requirements

Annually, the District Recreation Specialist is to use observations and surveys to assess resource conditions in areas of concern such as high use areas or along travel routes.

Results and Evaluation

Observations and informal surveys indicate that there have not been any substantial concerns about recreation impacts around the Curlew Campground and Stone Reservoir. The Curlew Plan determined that motorized use would be on designated routes only. Grassland managers and permittees have observed some motorized vehicle use, both ATV and full-size vehicles, off the designated routes. Most of this activity is in the vicinity of Stone Reservoir and Curlew Campground. The majority of the public has been observing the new regulations, however.

List of Contributors

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