

SOUTH FORK CHEWELAH ALLOTMENT

ALLOTMENT MANAGEMENT PLAN

REVIEWED BY: Larry Sweet DATE: 4-21-2010
Larry Sweet, Permittee

REVIEWED BY: Brandon Weinmann DATE: 4/21/10
Brandon Weinmann, Rangeland Management Specialist

APPROVED BY: Fred E. Way DATE: 5/4/10
Fred E. Way, District Ranger

This Allotment Management Plan is hereby made part of the Term Grazing Permit Number 00192B-COL in accordance with Part 2 Item 8 (a) issued to Larry or Angela sweat and signed by Janice K. Hays on December 11, 2003.

South Fork Chewelah Creek Allotment **Allotment Management Plan**

Introduction

The South Fork Chewelah Creek Cattle & Horse (C&H) Allotment is located about 7 miles northeast of Chewelah, Washington. It currently encompasses an area of about 11,568 acres. The South Fork Chewelah Allotment has most recently been managed according to the 1985 Allotment Management Plan and has been modified over time to account for changes.

This Allotment Management Plan (AMP) has been developed to implement the Chewelah Grazing Complex Decision Notice signed by Fred L. Way, District Ranger, on June 1, 2009. Grazing on the allotment is in compliance with all standards and guides of the Colville National Forest Land and Resource Management Plan (The Forest Plan), as amended by INFISH, as well as all other applicable policies, laws, and regulations.

Desired Future Conditions

The Colville National Forest Land and Resource Management Plan desired future condition for the Forest in ten years states that livestock grazing will be more intensively managed. Livestock use will stay within the established use rates. Permittee control will be at an adequate level and, overall, more intensive management systems will be employed. All allotments will emphasize riparian habitat protection and/or recovery.

Current Conditions and Site Specific Desired Future Conditions

Upland Habitat Types

The South Fork Chewelah Creek allotment is a mix of many habitat types and aspects. There are areas of denser timber on north facing slopes and in the eastern portions of the allotment that provide few foraging areas for livestock. Most livestock foraging areas in the allotment are found in naturally open areas, homestead meadows and open canopy timber stands that provide transitory rangelands. Elevation within the allotment ranges from approximately 2,900 to 4,900 feet.

Most of the allotment is timbered with major tree species being red cedar, Douglas fir, grand fir, ponderosa pine, lodgepole pine and western larch (see Appendix A of scientific names).

Principle forage species within the allotment include Idaho fescue, Bluebunch wheatgrass, Kentucky bluegrass, redbud, orchard grass, timothy and pinegrass. Shrubs found on the allotment which appears to furnish browse for livestock and wildlife are; redstem ceanothus, serviceberry, snowberry, ninebark and oceanspray (see Appendix A of scientific names).

The primary rangelands in this allotment are the most productive areas and are composed of large park-like areas with open fir and ponderosa pine timber stands and a grass

understory. Dominant grass species in these primary range areas are a mix of native grasses, such as bluebunch wheatgrass and Idaho fescue, and native forbs. The homestead meadows in the allotment are considered to be primary rangelands. Of the 11,263 acres within this allotment 3,873 acres are considered to be primary rangelands. Secondary rangelands, which are slightly less desirable than primary rangelands and productive foraging areas, also exist in the allotment. There are 2,080 acres considered to be secondary rangelands. Transitory rangelands also exist in this allotment and are the result of past timber harvest and road construction activities. The number of transitory rangeland acres is continually changing because of the amount of timber harvest and the amount of time that has passed since the timber harvest. Transitory rangelands in the South Fork Chewelah Creek Allotment have not been calculated. Transitory rangelands have been seeded with palatable forage species, such as redtop, orchard grass, timothy and Kentucky bluegrass, which provide additional areas of forage production (see Appendix A of scientific names).

Monitoring

Utilization information has been infrequently collected for the South Fork Chewelah Creek allotment. Below is a table of past utilization measures that have been collected for the allotment. Based in the Colville National Forest Land and Resource Management Plan, utilization limits are 45% in forested areas and 55% in grasslands.

Year	Pasture			
	S. Fork Chewelah Cr.	Bell	Dahlstrom	Bisbee
1973	66%	49%	29%	53%
1974		66%	55%	
1978		40%	60%	
1980	75%			
1983	50%	15%		
1984	65%	30%	55%	0%
1986	30%			
1987	30%	40%	40%	
1995	34%	0%	38%	2%
1997	35%	30%	40%	60%
1999		60%		
2007	46%	4%	44%	60%

Monitoring will continue to occur at the existing Condition and Trends (C&T's) and more C&T's may be established to determine the condition and trend of the resource. Trend will be based on change of plant species composition and/or changes in ground cover. If it is found that a downward trend in vegetation conditions or soil conditions exists (change in species composition or ground cover), modification of livestock or allotment management would occur. Adjustments may include but are not limited to changes in salt location, amount of riding, change in authorized numbers, season, and/or pasture rotation schedule.

Current Riparian Conditions

As a whole, the South Fork Chewelah Creek Watershed is functioning-at-risk and stability is at a downward trend (table 3.5). Two of the streams are properly-functioning and two of the streams are functioning-at-risk within this watershed.

The South Fork Chewelah Creek watershed has been subject to a substantial amount of road building and grazing throughout its management history. In several reaches of South Fork Chewelah Creek there still remain small clearings and old skid trails within close proximity to the riparian area from past logging operations. Some of these logging practices occurred before the advent of BMPs, however, logging practices have since changed and provide for better protection of aquatic resources. The South Fork Chewelah Creek drainage exhibits signs of an impaired watershed. Stream bank stability varies throughout the channel and erosion of banks and sediment transport occur in multiple reaches. If the degradation continues, the system will not be able to accommodate and contain the resulting energy especially if a catastrophic event were to happen (e.g. 100 year flood, stand replacing fire, numerous road and culvert failures). With the implementation of BMPs and other mitigation practices, such as INFISH, grazing can occur, even in impaired watersheds, without detrimentally contributing to the watershed condition. In some instances the use of new management practices can actually improve watershed conditions and aid in the recovery of impaired areas. In the case of the South Fork Chewelah Creek Watershed, the improvements and recovery would come from water developments, fencing and meadow retention in the proposed action.

Table 3.5 Summary table showing surveys by stream and corresponding function determination.

Watershed	Stream	# of surveys	Function Determination
Moran Creek	Twelvemile Creek	1*	None Made
North Fork Chewelah Creek	Bayley Creek	4	Functioning-At-Risk
	Butte Creek	1	Functioning
	Drummond Creek	6	Functioning-At-Risk
	Harthill Creek	2	Functioning-At-Risk
	Krumm Creek	3	Not-Properly-Functioning
	NF Chewelah Creek	8	Functioning-At-Risk
South Fork Chewelah Creek	Healey Creek	3	Functioning
	SF Chewelah Creek	4	Functioning-At-Risk
	Sixmile Creek	3	Functioning
	Wilson Creek	5	Functioning-At-Risk
Dry Creek	Deer Mountain Creek	1*	None Made

Qualitative assessment only.

Livestock Management

Permitted Numbers and Season

The term grazing permit will authorize a total of 43 cow/calf pairs with a season-of-use from June 1st to September 30th. Livestock use will not exceed 173 AUMs though seasonal adjustments in timing of use may occur. Depending on allotment conditions range readiness (drought, fire, saturated soil conditions, forage use, etc.), this season of use may be modified or shortened to avoid or reduce unwanted impacts to resources and to maintain consistency with Forest Plan management direction.

Management System

The proposed grazing schedule for the South Fork Chewelah Creek Allotment applies to the larger allotment but includes use periods for each fenced meadow. This method is intended to give managers greater control over livestock access to the meadows, and improve protection of riparian health. The approximate pasture use periods for the allotment would be as follows (table 2.7).

Pasture	Approximate dates*
South Fork Chewelah	June 1 to September 30
Bisbee Meadow	Open meadow from June 1 until upland plants are grazed to 4 inch stubble height
Bell Meadow	Open meadow from July 1 until upland plants are grazed to 4 inch stubble height
Dahlstrom Meadow	Open meadow from July 15 until upland plants are grazed to 4 inch stubble height
Total days	June 1 to September 30

Number of

days may be less during years of low forage production.

Annual operation instructions will be issued identifying specific management instructions for that year. This AOI would detail the seasons grazing schedule, maintenance responsibility, range development program, etc. This plan will become an amendment to this AMP and as such, a part of the Term Grazing Permit.

New Rangeland Improvement Projects

Twelve projects were identified to support the proposed grazing reauthorization in the South Fork Chewelah Allotment. These projects are needed to improve water quality, riparian habitat and livestock management. Not all are structural rangeland improvement projects. Descriptions are given in table (2.8) and in project notes that follow.

Table 2.8 Proposed projects by location in South Fork Chewelah Allotment

Project Number	Location	S. Fork Chewelah Watershed	Treatment	Measure
<i>Bisbee Meadow Pasture</i>				
1	Bisbee Meadow	S. Fork Chewelah and Wilson Creeks	Exclosure	1.0 mile fence reconstruction, 15 acres excluded
2	Bisbee Meadow	S. Fork Chewelah Creek	Meadow Retention	12 acres
<i>Bell Meadow Pasture</i>				
3	Bell Meadow	Wilson Creek	Meadow Retention	12 acres
4	Bell Meadow	Wilson Creek	Water Development#1	1 trough
5	Bell Meadow	Wilson Creek	Water Development #2	1 trough
6	Bell Meadow	Wilson Creek	Replace road berm	1 gate
<i>Dahlstrom Meadow Pasture</i>				
7	Dahlstrom Meadow	Unnamed trib to S. Fork Chewelah Creek	Exclosure	1.8 acres
8	Dahlstrom Meadow	Unnamed Trib to S. Fork Chewelah Creek	Meadow Retention	11.3 acres
<i>General Allotment Pasture</i>				
9	Wilson Creek	Wilson Creek	Exclosure and Rehabilitation	0.5 acres excluded, 0.2 miles fence, 0.1 acres rip & seed
10	Wilson Creek	Wilson Creek	Hardened Crossing	1 crossing
11	Six Mile Creek	Healy Creek	Fence Construction	0.75 miles
12	Near 9517-300 road	Unnamed Trib to S. Fork Chewelah Creek	Water Development	1 trough

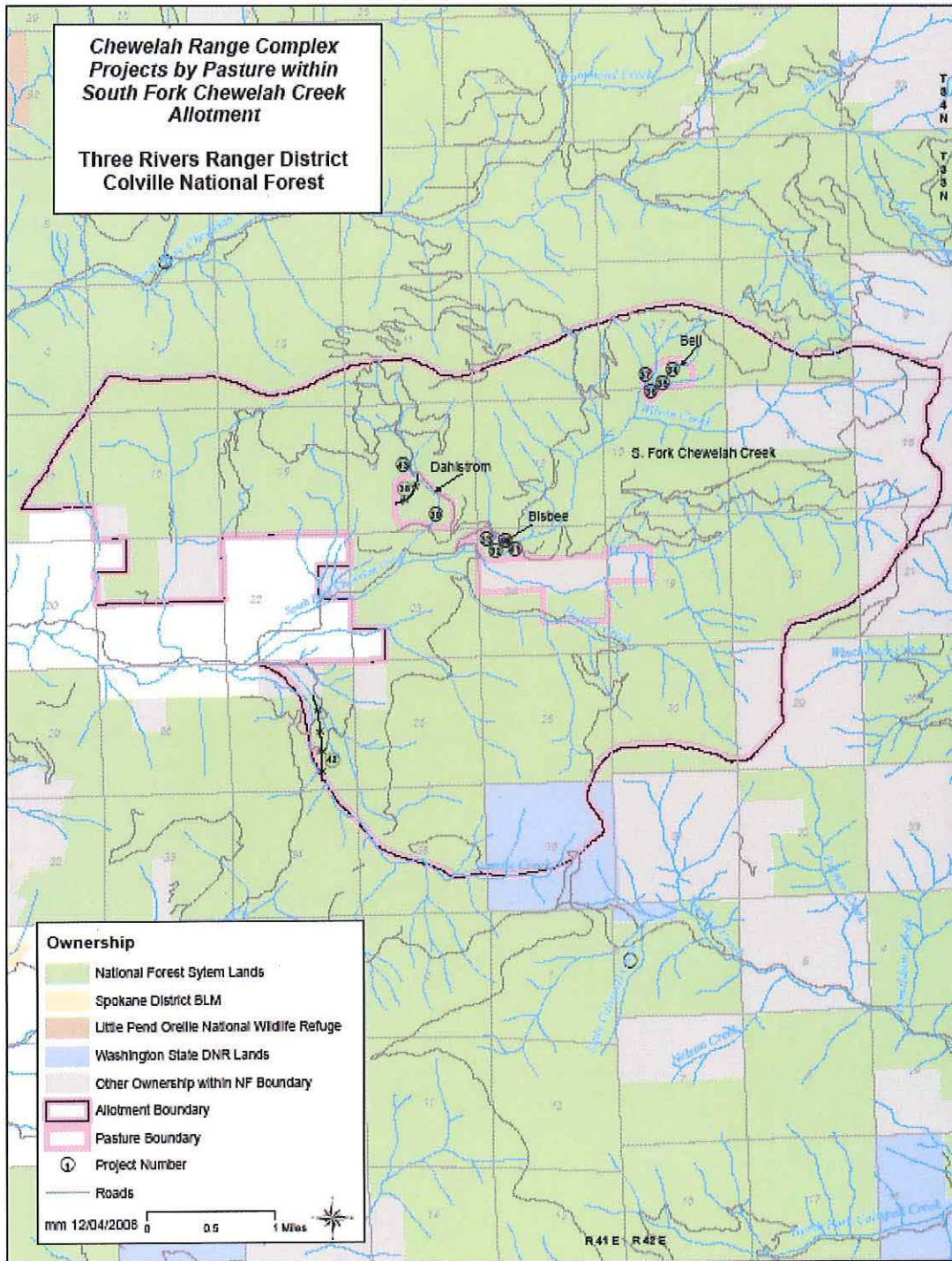
Project Notes

1. Bisbee Meadow Exclosure – This project would consist of the Forest Service constructing and maintaining a barbed wire exclosure around the riparian areas within this pasture. The exclosure would utilize the existing southern boundary fence of the pasture and follow along the wet areas north of Wilson Creek within the existing pasture boundary.
2. Bisbee Meadow Retention - The treatment area would be outside the exclosure.
3. Bell Meadow Retention - No additional project notes.
4. Bell Water Development –The water source for the trough would be a tributary of Wilson Creek. The soil around this trough will be armored.
5. Bell #2 Water Development –The location would be slightly downstream from the Bell Meadow boundary fence. This would allow for livestock watering in the late season when the gates to Bell Meadow have been closed to allow for riparian recovery. The soil around this trough will be armored.
6. The road into Bell Meadows will be temporarily opened (berms removed) for administrative access to place the troughs and conduct the meadow retention. It will be effectively closed with a gate to allow future administrative access including but not limited to weed eradication and pasture maintenance.
7. Dahlstrom Meadow Exclosure – Construct a fence creating an exclosure in the northwest portion of Dahlstrom Meadow. The fence would allow for aspen regeneration and protection of the spring located in this portion of the pasture. The grazing permittee would be responsible for maintenance of fencing which creates a new pasture boundary and the Forest Service would be responsible for maintaining the existing, or older portion of the exclosure fencing that is currently the pasture boundary. The two subpopulations of the sensitive blue-eyed grass would be included in the fenced area of the Dahlstrom Meadow exclosure.
8. Dahlstrom Meadow Retention - Cut trees would be used to armor head cut areas (areas of gully migration) and the water channel that runs through this pasture. Cut tree segments would be keyed (their bases buried) into the banks to catch sediment and stabilize the water channel. Avoid trampling and dragging trees over the two sensitive plant (blue-eyed grass) sites in the meadow. Where fuel disposal is required, broadcast burning would be employed rather than hand-piling and burning piles. Avoid burning the two sensitive plant (blue-eyed grass) sites.
9. Wilson Creek Exclosure – This project would increase the size of the existing exclosure on Wilson Creek north of where it intersects the 9517 road. The exclosure would take in a portion of the existing maintenance level 1 closed 9517400 road bed which runs next to the creek. The road bed would be ripped, seeded with appropriate species and planted to create a buffer strip next to the stream and allow recovery of

the area. Placement of a physical barrier, such as boulders, may be needed to discourage unauthorized motorized use and potential damage to enclosure fencing.

10. Wilson Creek Hardened Crossing – Locate on Wilson Creek below the culvert on the 9517 road.
11. “Six Mile” Fence – This project would consist of constructing a new barbed wire fence to stop livestock from drifting off of the allotment. The need for this project has arisen due to Forest Service timber sales breaching natural boundaries in the Six Mile Creek area.
12. Forest Road 300 Water Development – A trough would be placed off of the 9517300 road; the approximate location is NE $\frac{1}{4}$ of Section 14, T. 33 N., R. 41 E. The water source for the trough would be a perennial portion of the unnamed creek that runs through Dahlstrom Meadow. The areas around this water development would be armored.

Proposed Projects in the South Fork Chewelah Allotment.



Allotment Management

In order to achieve desired conditions and to be in compliance with the Forest Plan, the South Fork Chewelah Creek Allotment Decision Notice, Biological Assessments/Opinions, and other laws and policies, the following requirements are to be followed and may be modified over time to be compliant/consistent with changes in or additional laws and policies:

General Management

- 1) It is the permittee's responsibility to conduct scheduled livestock moves, provide field inspections to assure compliance with the term grazing permit, the AMP, or other instructions, assure livestock are in the appropriate location, and track utilization. All livestock will be moved to the next pasture in rotation or removed from the allotment by the scheduled move date or before management standards (such as proper utilization, stubble height or bank trampling standards) are exceeded.
- 2) Range Readiness and Turn On: Livestock entry on to the allotment or into a specific unit will not be permitted until such time as plant species are ready to graze and soils are dry enough to withstand grazing. See appendix B for the range readiness indicators.
- 3) Pasture Move Dates: Actual move dates will be determined, to the extent practical, by on the ground inspection. The permittee will plan on having the pasture move completed by the scheduled date or by the time that the allowable use level is reached, whichever comes first. Livestock movement between pastures will not take more than five days.
- 4) It is the permittees responsibility to maintain a current knowledge of the status of the allotment with regard to utilization levels, and either plan on moving early if needed or request an extension. Livestock remaining on the pasture after the scheduled off date or beyond the period in which the permittee was instructed to move these livestock the permittee may be billed for excess use at the unauthorized use and/or action may be taken against the term grazing permit. If the permittee believes that the additional time in the pasture is justified, the Forest Officer must be notified at least 10 days in advance to permit an adequate inspection and determination. Approval will be obtained in writing prior to extensions and may be denied for reasons other than resource concerns.
- 5) Allotment Exit: The off date is October 15th. Livestock may be required to move off the allotment early if utilization standards are met or if an event occurs that causes the Forest Service to require the permittee to move off early.
- 6) Livestock: Livestock will be only cow/calf pairs. Any deviation in use will need approval in advance by the District Ranger (example: yearlings). Any deviation in use must be requested by the permittee on the Annual Application so that the

billing for that season can be prepared accordingly. Total numbers must be at least 90% of those permitted, unless non-use is requested and approved in advance. Any livestock found on the allotment that are not owned by the permittee are to be reported to the Forest Service immediately. Excess use by the permittee or unauthorized use by others is subject to administrative or civil action.

- 7) Non-use in Part or in Whole: Unless non-use is applied for in writing and approved in writing in advance, the permittee must place 90% or more of the permitted numbers on the allotment. Non-use applies only to numbers and not to seasons. Approval of non use is not automatic. Personal convenience non-use cannot be authorized more than three consecutive years or four years in a ten year period. If personal convenience non-use is taken, a permit cannot be waived based on sale of permitted livestock.
- 8) Salting: All salt will be placed away from key areas and available water. Salt will be placed in areas where livestock use is usually light. In no case will salt be placed closer than 1/4 mile to streams or other wetlands without prior approval. Salt should be placed in areas such as old road beds or bare rock sites which are not visible from open roads. Salt will not be placed within tree plantations where the smallest trees are less than 3 feet tall. Salting will not be located within 100 meters of any known heritage resource site.
- 9) Riding and Herding: Depending on the pasture, the permittee should plan on spending as much time as necessary in moving the livestock away from the meadows, riparian areas and other key areas. This is entirely to the benefit of the permittee as reaching of the allowable use standard on key areas before the scheduled move date will result in early livestock removal from a unit or off of the Forest. Actual use records are required by permittees at end of season.
- 10) Dead livestock located on Forest Service administered lands and within 300 feet from any water source or designated roads, trails, or recreation sites will promptly removed and properly disposed by the permittee.

Invasive Species

- 11) Noxious Weed: The Forest Service is committed to aggressive control and eradication of new noxious weed infestations. This commitment must be shared with all those who participate on land management activities on National Forest System lands for weed control to be effective. The Forest Service is requesting permittee cooperation in the following standards to prevent the introduction and spread of noxious weeds:
 - Locations of infestations shall be discussed with the permittee during Annual Operating meetings to prevent spread of these sites.
 - The permittee should inform the Forest Service of infestations on the allotment.

- Vehicles used in managing livestock on the allotment shall be cleaned of any weed transporting material such as hay, mud, or seeds.
- All hay used on USFS land shall be certified noxious weed free.

Cultural Resources

12) Archaeological surveys will be conducted before any ground is disturbed through the implementation of this plan, and if sites are encountered, site specific mitigation may be developed. Projects in this plan that would need to be reviewed prior to work beginning include:

- New trough installation
- Meadow retention with hand-piling and burning of slash
- Hardened crossing installation
- Exclosure construction

13) The permittee shall notify the Forest Service immediately by telephone and with written confirmation, the discover of human remains of funerary objects, sacred objects of cultural patrimony pursuant to regulation Section 10.4(b), of the Native American Graves Protection and Repatriation Act.

Implementation Monitoring

1) Monitoring Implementation Standards

Allowable Use – The following forage allocation is designed to meet the Colville National Forest Land and Resource Management Plan (The Forest Plan) Range Goals. The forage allocation listed is the maximum allowable utilization on the allotment in any specific area regardless of grazer. Maximum utilization levels listed here are consistent with Forest Plan standards and guidelines and applicable Biological Assessments or Biological Opinions. The prescribed utilization levels were developed to address specific resource objectives for the allotment and are expressed as percent utilization and/or stubble height. If applied stubble height standards are different from applied percent utilization standards the more restrictive standard will be applied. Percent utilization measurements are taken as a point in time.

	Maximum annual utilization (percent) 2/					
	Forest		Grassland		Shrublands	
Range Resource Level (FSH 2209,21 R6)	Satisfactory Condition 3/	Unsatisfactory Condition 4/	Satisfactory Condition 3/	Unsatisfactory Condition 4/	Satisfactory Condition 3/	Unsatisfactory Condition 4/
C – Livestock managed to achieve full utilization of allocated forage. Management systems designed to obtain distribution and maintain plant vigor include fencing and water development.	45	0-35	55	0-35	45	0-30

There are currently no areas classified as unsatisfactory. If future monitoring indicates that unsatisfactory situation exists, the location will be mapped, appropriate standards applied and permittee notified as to management changes.

2) General Allotment Monitoring

Forest Service Range Staff will visit the allotment as needed throughout the grazing season to monitor for compliance with grazing permit terms and conditions (i.e., improvements, maintenance, adherence to Forest Service issued written instruction, etc.).

- A) Utilization monitoring indicates the amount of forage that remains to be harvested. Utilization of the available forage resource will look at both upland and meadow grass to determine the levels of use. Allotments will be administered based on the Colville National Forest Land and Resource Management Plan. Utilization limits are 45% in forested areas and 55% in grasslands. Landscape appearance forms are used to collect information from strategic locations and homestead meadows on the Forest Service allotments. Forest Service Range Staff compile utilization levels based on a height to weight curve of specific grass species. This is done by running transects across the landscape in different locations.
- B) Forage utilization within the fenced meadows will be monitored by forage stubble height. This is the amount of ungrazed herbage left at any given time during the grazing season. A baseline standard of four inches is the end use point requiring the permittee to close gates on meadow pastures and move livestock to other locations within the allotment. Baseline standards are set as an indicator to provide resource protection, but can be adjusted depending on management objectives in land use. Actual stubble height varies with key species used as a forage indicator and the percent utilization of this herbaceous growth.
- C) Compliance monitoring will insure proper management and use. Permitted allotments are periodically inspected during the grazing season to look for the specific number, kind, class of livestock, period of use and rotation of pastures. Range improvements will also be inspected for routine maintenance and proper function.

3) Stream Channel Morphology Monitoring

Permanent hydrology cross-section sites will be established to evaluate the effects and determine trends of adaptive management on the stream channel.

Improvements

There are a total of three structural range improvements proposed for construction on the Twelvemile allotment, which include two fences and one water development. Maintenance responsibilities for these improvements, once constructed, will be assigned to the permittee through term permit modification or reissuance.

Maintenance responsibilities are shown on individual term grazing permits. Permittees will maintain all range improvements to Forest Service standards. All assigned improvements are to be maintained annually whether grazing occurs or not. Maintenance of the exterior fences must be completed prior to the turn on of either the Twelvemile livestock or the adjacent permittee(s). Interior fences must be maintained prior to turn-on into the affected unit unless otherwise specified in the AOI.

Water developments must be maintained prior to turn-on into the affected unit.

Improvements that have met their planned life expectancy shall be scheduled for replacement under a permit modification. Scheduling may be dependent upon funding, timing, and the ability to obtain the appropriate clearances. See Appendix A for a complete list of improvements and the maintenance schedule.

APPENDIX A: MAINTENANCE RESPONSIBILITY AND SCHEDULE

NUMBER	NAME	TYPE	CONDITION RATING	MAINTENANCE RESPONSIBILITY
130001	DAHLSTROM MDW	FENCE	SATISFACTORY	NATIONAL FOREST (NF)
130002	BISBEE MDW	POND	POOR	NATIONAL FOREST (NF)
130003	BELL MDW	POND	SATISFACTORY	NATIONAL FOREST (NF)
130004	SOUTH FORK	POND	SATISFACTORY	NATIONAL FOREST (NF)
130005	BELL-HARTILL	POND	POOR	NATIONAL FOREST (NF)
130006SP	POWERLINE	POND	POOR	NATIONAL FOREST (NF)
130006T	POWERLINE	POND	POOR	NATIONAL FOREST (NF)

APPENDIX B: RANGE READINESS

RANGE READINESS INDICATORS

Record of Range Readiness Checks

Allotment _____ Forest _____ Name of Observer _____
Observation Location (Vegetation type, zone or elevation, area) _____

Date	Species or Indicator	Vegetation Development Stage (Record plant height and development stage)	Soil Condition (Firm, Soft, Muddy)
Conclusions and recommendations:			

Note: Record key species or as many indicator plants as needed. Sheet may serve for several checks in one year or checks in several years.

Indicators of Range Readiness

Grasses

Wheatgrass	Agropyron app.	About 6 inches in height
Green Fescue	Festuca viridula	Leaves 5 inches in height, seed heads showing
Idaho Fescus	Festuca idahoensis	Leaves about 3 inches in height, seed heads showing
Prairie Junegrass	Koeleria cristata	Leaves about 3 inches in height, seed heads showing
Sandberg bluegrass	Poa secunda	Plants maturing, seed heads conspicuous
Pinegrass	Calamagrostis	Foliage 3-4 inches in height
Tufted hairgrass	Deschampsis cespitosa	4 inches or more in height, heads conspicuous

Grasslike

Elk sedge	Carex geyeri	Leaves 3 inches in height
------------------	---------------------	----------------------------------

Forbs

Western yarrow	Achillea lanulosa	Flower stocks beginning to show
Arrowleaf balsamroot	Balsamorhiza app.	Leafage about ½ developed
Geranium	Geranium app.	Leafage about 4 inches high, flower in bloom
Groundsel	Senecio app.	Leafage ¾ mature
Dandelion	Taraxacum officinale	Leafage developed, full bloom

Shrubs

Serviceberry	Amelanchier app.	Part of blossoms out
Antelope bitterbrush	Purshia tridentate	Flower buds conspicuously swollen
Snowberry	Symphoricorpus app.	7 to 8 pairs of leaves unfolded from each bud

Soils

Normally dry sites should be fairly dry and firm. Wet meadows, unless lightly stocked, should have most of the area dry enough to carry stock without breaking the sod and destroying the cover. Both soil and forage indicators must be considered in determining range readiness.

Indicators of Range Not Ready to Use

	<u>When in Flower</u>	<u>Soils</u>
Spring Beauty	Claytonia	Soils are wet, loose and subject to excessive compaction or damage from trampling
Lambtongue favclily	Erythronium	
Fritillary	Fritillaria	
Waterleaf	Hydrophyllum	
Sagebrush buttercup	Ranunculus	