BLM USFS Permittee

Wyoming Cooperative Permittee Monitoring Record

Allotment/Pasture Use

Permit Name: _____ **Date:** _____

Allotment: _____ **Pasture:** _____

Notes:

_____

_____

Livestock Movement and Grazing Season:

Class &/or Group of Livestock	Number	Date In	Date Out	Grazing Season Length	Animal Use Days
				Totals	
				Approximate AUMs, based upon 30 day month and AUM conversions for this (these) class of stock	

Notes regarding animal movements or events which affect production &/or Utilization:

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Residual Stubble Height - Riparian

Date: _____ Permanent Site ID: _____

Allotment: _____ Key Species: _____

Pasture: _____ Observer(s) _____

Notable Facts which affect production &/or Utilization:

_____

_____

_____

Table 1: Average Plant Heights

	Check if Not Grazed	Height		#	Check if Not Grazed	Height		#	Check if Not Grazed	Height	
1				21				41			
2				22				42			
3				23				43			
4				24				44			
5				25				45			
6				26				46			
7				27				47			
8				28				48			
9				29				49			
10				30				50			
11				31				Total of all heights			
12				32							
13				33							
14				34				divided by 50 = AVG Average Plant Height			
15				35							
16				36							
17				37							
18				38							
19				39							
20				40							

Key Species:

Notes:

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Upland Trend Cover by Lifeform

Date: _____ Permanent Site ID: _____

Allotment: _____ Basal or First Intercept (From Plan Worksheet. Circle one)

Pasture: _____ Observer(s) _____

Notable Facts which affect results (weather, use, events, etc.)

_____

Table 1 Mark one cover type in the column for each foot (sample point) along the tape.

CoverType	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	**Total**
Grasses																																																			
Shrubs																																																			
Forbs																																																		
Litter *																																																		
Rock																																																		
Bare Ground																																																		

Table 2

CoverType	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	**Total**
Grasses																																																			
Shrubs																																																			
Forbs																																																		
Litter *																																																		
Rock																																																		
Bare Ground																																																		

* ***Litter: Mosses, lichens, dead bio-mass, manure, sticks, etc. (Everything but soil, rock or plants)***

Notes:

Summary (Copy point totals from above) **Basal or First Intercept** (Circle one)

Cover Type	Table 1 (50 points)	Table 2 (50 points	Cover % (100 point total)
Grasses			
Shrubs			
Forbs			
Litter			
Rock			
Bare Ground			

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Wyoming Cooperative Permittee Monitoring Record - **Utilization**

Date: _____ Site ID: _____

Allotment: _____ Key Species: _____

Pasture: _____ Observer(s): _____

Notable Facts which affect production &/or utilization:

_____

Plant Heights and Utilization (Ungrazed plants are 0% utilization regardless of height.)

#	Not Grazed	Height	% Wheel Reading
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
		Subtotal	
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
		Subtotal	

#	Not Grazed	Height	% Wheel Reading
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
		Subtotal	
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
		Subtotal	

#	Not Grazed	Height	% Wheel Reading
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
		Subtotal	
Total of all readings			
divided by 50 equals Average Utilization			

Ungrazed Plant Height worksheet (Transfer ungrazed heights from Table 1. If minimum of 20 is not reached, continue sampling until 20 Ungrazed Heights are recorded. Set wheel pointer to this value for the key species to derive utilization in Table 1, column 4)

	Ungrazed heights	
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
	Subtotal	

	Ungrazed heights	
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
	Subtotal	

Total of all ungrazed heights	
Divided by number of ungrazed heights	
Provides average ungrazed plant height	

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Monitoring Summary

Monitoring Site ID and Method; Pasture , AUM's and Utilization, etc.	**Year:**	**Year:**	**Year:**	**Year:**	**Year:**

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Landscape Appearance Method - Utilization

Permanent Site ID: _____ GPS Location: _____ N. _____ W.

Name of Location: _____ Date: _____

Transect direction: _____ Pace interval: _____

(25 Sample assessments recommended (20 foot half circle). Transect begins from known point in predetermined direction. Observations made at predetermined pace intervals.)

Use Class & midpoint	**Tally**	**Tally Count**	**Tally Count times Midpoint**	**Description of Landscape Appearance**
0-5% (2.5%)				The rangeland shows evidence of no grazing, or of **negligible use**.
6-20% (13%)				The rangeland has the appearance of **very light grazing**. The herbaceous forage plants may be topped or slightly used. Few current seedstalks and young plants are grazed
21-40% (30%)				The rangeland may be **topped, skimmed, or grazed in patches**. The low value herbaceous plants are ungrazed and 60-80% of the number of current seedstalks of herbaceous plants remain intact. Fewer than 50% of the young plants are grazed.
41-60% (50%)				The rangeland appears entirely **covered as uniformly as natural features and facilities will allow**. 15-25% of the number of current seedstalks of herbaceous species remain intact. No more than 10% of the number of low-value herbaceous forage plants have been utilized.
61-80% (70%)				The rangeland has the **appearance of complete search**. Herbaceous species are almost completely utilized with less than 10% of the current seedstalks remaining. Shoots of rhizomatous grasses are missing. More than 10% of the number of low-value herbaceous forage plants have been utilized.
81-94% (88%)				The rangeland has a **mown appearance** and there are indications of repeated coverage. There is no evidence of reproduction or current seedstalks of herbaceous species. Herbaceous forage species are completely utilized. The remaining stubble of preferred grasses is grazed to the soil surface.
95-100% (97.5%)				The rangeland appears to have been **completely utilized**. More than 50% of the low-value herbaceous plants have been utilized.
	Totals	A	B	
	Average Utilization = B/A		%	

AUM's were taken from this allotment (retrieved from Actual Use Worksheet for this Pasture)

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Allotment/Pasture Use

Permit Name:_____ **Year:** _____

Allotment: _____ **Pasture:** _____

This form has been designed to parallel the Actual Grazing Use Report which is required of BLM Permittees at the end of permitted use. Entries are made as cattle are turned into or taken out of the allotment, and the columns have been designed to guide the calculation of grazing AUMS. It is provided as an avenue to record actual use and the number of AUM's taken during the year. It should be stored in the annual monitoring report. Logically, it would be associated with the annual use monitoring for this allotment. It is not intended to replace the form the agency will require to be completed and returned. Actual AUM's calculated and billed by your agency may differ based on inholdings, classes of stock, etc.

Actual Grazing Use				**Calculation of AUM's**					
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**
Class or Kind of Livestock	Date of Livestock addition or subtraction	Number of Head turned in	Number of head removed	Total Head in pasture after adjustment Previous total plus or minus adjustment)	Start date for this number (From column B)	End Date for this number (The day brfore Column B, next row down,)	Days this number grazed (Diff. Between F and G Dates)	Animal Unit Days (Column E times Column H)	Animal Unit Months (Column I divided by 30)
							Totals		

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Field Photography Record

Date	Roll #	Shot #	Site ID	Picture of:

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Use of the Monitoring Study Worksheets

One of the often under emphasized pieces of rangeland monitoring work is the thoughtful creation and recording of the reason for installing a monitoring study and the purpose the study serves. How many monitoring studies exist with no permanent record of the study's objective?

There must be some fundamental reason to make the time and resource investment in the installation and reading of a monitoring study. However, the basic reason for the study is often lost as the years pass, as is other important logic supporting the decision to invest in a study site.

These worksheets have been developed to facilitate the orderly and logical planning of a study site. One is for setting up a monitoring study in a situation in which a change in grazing strategy is contemplated. It goes into more detail regarding how the impact of the proposed management would realistically achieve the objective.

The second form is for designing monitoring plans in situations which are less complex. This form was created because many monitoring studies are installed to monitor "status quo" management, and thus don't require the detail involved in understanding the ecological impact of altered grazing management. The two forms have been designed to accommodate the unique aspects of planning these two categories of monitoring studies.

They are intended to be included in the permanent file for a study site, and one of these Monitoring Study Worksheets should be completed for every monitoring study. They record the pertinent information all study sites should have, such as site name, location, establishment dates, and principals involved. They were also designed to assist in the defining of monitoring objectives, and to stimulate thinking and planning regarding the site's establishment. They follow a logical sequence of inquiry:

1. What is the objective?
2. What is the current state?
3. What, if anything, needs to change?
4. What alteration, if any, in management would facilitate those changes?
5. What indicator(s) let you know that change (good or bad) is occurring?
6. What data set(s) would be a reflection of that indicator?
7. And, finally, what monitoring methodology provides that data?

Thoughtful answers, created in partnership with your Cooperative Monitoring partner, constitute a well thought out study plan addressing a relevant and defined objective.

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Monitoring Study Worksheet A –planning/assessing changed management

This is to be included in Permanent Site Record.
There should be a worksheet prepared and retained for every monitoring site installed.

Permanent Site ID: _____ GPS Location: _____ N. _____ W.

Name of Location: _____ Date Established: _____

Dates written or amended: _____ Date for Review:_____

Individuals writing this objective: _____ , _____

Management Objectives Section	
Common Global Vision/Directive (Multiple statements allowed/encouraged. Example statements: valued for multiple uses; mostly allocated to energy resources; excellent sage grouse habitat; critical to the ranch grazing program; used in compliance with permit conditions)	***We believe that this landscape should be/is . . .***
Common Assessment of the Resource (Multiple statements should be linked with Global statements Example statements: is in good shape; should provide better grouse nest cover; has to much bare ground)	***Further, we believe that this key area . . .***
Common Desire for the Resource (Example statements: maintain the current state; decrease bare ground; increase forage production/quality; increase forb diversity)	***We have agreed that we want to . . .***
Management Strategy Section	
Strategies identified to accomplish desired state (Example statements: heavy spring grazing; rotational grazing; herding; late season grazing)	***Some management strategies that the grazing program can employ to accomplish the things we desire are . . .***
Predicted outcome of strategy (Example statements: decrease bare ground, increase forb diversity, enhance nesting cover, increase animal performance)	***This strategy will . . .***
Ecological Logic (explain the linkage between strategy and outcome)	***The system will deliver this outcome because . . .***
Responsiveness (the timeframe you expect)	***We would anticipate seeing results in our data . . .***
Monitoring Methodology Section	
Data Requirements (Example statements: photographic comparisons, line transect frequency indicating increased cover, four inch stubble height)	***Data results which will monitor for the desired outcome are . . .***
Methodology Employed (Example statements: Cover by Lifeform taken early September every three years; USFS Utilization Wheel method on Bottlebrush squirreltail at end of grazing, annually.)	***The methodology employed to generate required data, and the time and frequency of data collection will be. . .***

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Cooperative Permittee Monitoring Record

Monitoring Study Worksheet B – for simpler objectives (status quo)

This is to be included in Permanent Site Record.
There should be a worksheet prepared and retained for every monitoring site installed.

Permanent Site ID: _____ GPS Location: _____ N. _____ W.

Name of Location: _____ Date Established: _____

Dates written or amended: _____ Date for Review: _____

Individuals writing this objective: _____ , _____

Objectives Section	
The reason for this monitoring study Examples of statements refining the statement: . . . document longstanding stewardship. . . . gather baseline information on the resource. . . . gather information documenting compliance with permit terms and conditions . . . gather information assisting in grazing program scheduling.	***We believe that any issues or concerns that we have for this landscape do not warrant a change in grazing management at this time. Our interest in installing a monitoring study site at this location is to….***
Threats/hazards/emerging issues Examples of statements refining the statement: . . . perceptions of over use. . . . complaints about streambanks. . . . drought and attendant reductions in stocking rates.	***Things which could become important to the management of the grazing program on this landscape might include. . .***
What do you want continue to achieve Examples of statements refining the statement: . . .maintain the current state. . . . assure adequate watershed (erosion) protection. . . . maintain forage production/quality & weight gains.	***We have agreed that we want to . . .***
Management Strategy Section	
Current and past management strategies Examples of statements refining the statement: . . . May 1 – July 1 continual grazing 550 pairs. . . . 3 pasture rotational grazing, 250 pairs, June 1 – Aug 15. . . . herding 600 yearlings Ju.ne 15 – Sept. 15. . . . dormant season grazing.	***The grazing management strategies that have resulted in the state of this rangeland have been. . .***
Hazards of the strategy Examples of statements refining the statement: . . .decreased ground cover. . . .non-vegetated point bars. . . .increasing noxious and invasive weeds.	***If things were to begin to come apart under current grazing management strategies, the first indicator would likely be. . .***
Monitoring Methodology Section	
Location selection Examples of statements refining the statement: . . . it is an average use area. . . . it is a typical range site within the allotment. . . . it is a reasonable distance from points of concentration.	***This is a <u>key area</u> because. . .***
Data Requirements Examples of statements refining the statement: . . . permanent plot photographic comparisons. . . . line transect frequency indicating basal cover. . . . stubble height.	***The data which will be gathered is . . .***
Methodology Employed Examples of statements refining the statement: . . . basal cover by lifeform taken early September every three years. . . . USFS Utilization Wheel method on Bottlebrush squirreltail at end of grazing, annually.	***The methodology employed to generate required data, and the time and frequency of data collection will be. . .***


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