

## 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. **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 needs to change?
4. What alteration in management would facilitate those changes?
5. What indicator(s) let you know that change is occurring?
6. What data set(s) would be a reflection of that indicator?
7. And, finally, what monitoring methodology provides that data?

There are two forms. 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.



Cooperative Permittee Monitoring Record

**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: \_\_\_\_\_ , \_\_\_\_\_

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

## 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: \_\_\_\_\_ , \_\_\_\_\_

<b>Objectives Section</b>	
<b>The reason for this monitoring study</b> 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.	<i>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 . . .</i>
<b>Threats/hazards/emerging issues</b> Examples of statements refining the statement: . . . perceptions of over use. . . . complaints about streambanks. . . . drought and attendant reductions in stocking rates.	<i>Things which could become important to the management of the grazing program on this landscape might include. . .</i>
<b>What do you want continue to achieve</b> Examples of statements refining the statement: . . . maintain the current state. . . . assure adequate watershed (erosion) protection. . . . maintain forage production/quality & weight gains.	<i>We have agreed that we want to . . .</i>
<b>Management Strategy Section</b>	
<b>Current and past management strategies</b> 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 June 15 – Sept. 15. . . . dormant season grazing.	<i>The grazing management strategies that have resulted in the state of this rangeland have been. . .</i>
<b>Hazards of the strategy</b> Examples of statements refining the statement: . . . decreased ground cover. . . . non-vegetated point bars. . . . increasing noxious and invasive weeds.	<i>If things were to begin to come apart under current grazing management strategies, the first indicator would likely be. . .</i>
<b>Monitoring Methodology Section</b>	
<b>Location selection</b> 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.	<i>This is a <u>key area</u> because. . .</i>
<b>Data Requirements</b> Examples of statements refining the statement: . . . permanent plot photographic comparisons. . . . line transect frequency indicating basal cover. . . . stubble height.	<i>The data which will be gathered is . . .</i>
<b>Methodology Employed</b> 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.	<i>The methodology employed to generate required data, and the time and frequency of data collection will be. . .</i>