Monitoring grazing lands

Range Beef Cow Symposium XX
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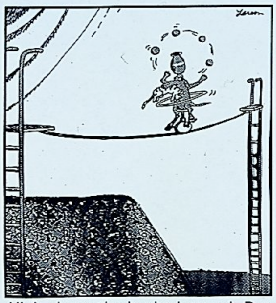
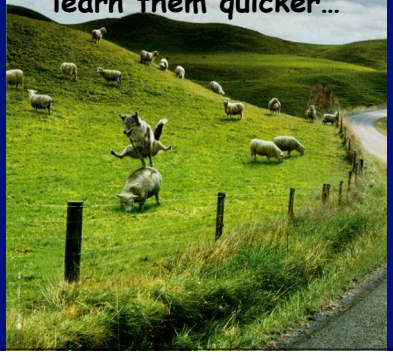


High above the hushed crowd, Rex tried to remain focused. Still, he couldn't shake one nagging thought: He was an old dog and this was a new trick.

Old dogs can learn new tricks, but young dogs learn them quicker…



Where We Are Headed

- Why monitor? / Objectives
- Where to monitor / Objectives
- Definition and types of monitoring
- The link between two types of monitoring
- Who should be involved?

Why Monitor?

- "To see if…" "To make sure…"
- NOT "To prove…"
- Collect the information needed to make good management decisions
- Determine progress toward objectives

Where to Monitor

- Not practical to monitor every acre
- Key areas
  - Representative
  - Meaningful to management decisions
  - Broadly applicable
- Critical areas (special areas)
  - Information applies only where collected
  - "don't care" what is happening elsewhere

OBJECTIVES?

Objectives

- Objectives describe what we want the ground to "look like"
- Good objectives
  - Plant community or natural resource based
  - Include input from agencies, operators and society's needs
- Objectives are directly tied to the system's response(s) to
  - Our management inputs
  - Mother Nature's inputs

8/22/2002

Objectives

Example objectives

- Increase total ground cover
- Increase grass cover
- Decrease forb cover
- Maintain sedge cover
  - Improve streambank stability
  - Capture sediment

Monitoring Defined

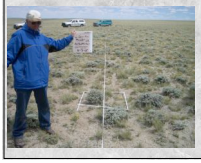
The orderly collection, analysis and interpretation of resource information and data used to make short-term and long-term management decisions.

Monitoring Defined

- Orderly process
  - Collection, analysis & interpretation of information to support management
- Information is used to make management decisions
  - Short Term
  - Long Term

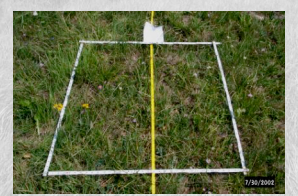
Types of Monitoring

- Long term (trend)
  - Plant community or system responses over time
  - Composition of the plant community, plant cover & structure, resource conditions…



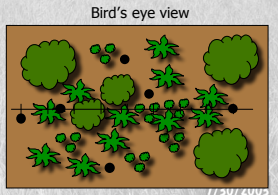
Examples of Information Collected – Long Term

- Trend
  - Photographs – qualitative & quantitative



Examples of Information Collected – Long Term

- Trend
  - Cover by Life Form - quantitative
    - Forb, grass, shrub, rock, litter, bare ground



7/30/2003

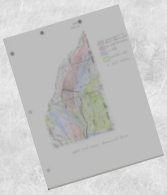
Examples of Information Collected – Long Term

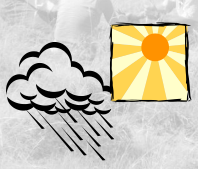
- Trend
  - Greenline Stability

7/30/2003

Types of Monitoring

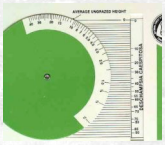
- Short term (annual)
  - Things likely to vary by year (inputs)
  - Annual use, growing conditions, on dates, off dates, animal numbers, wildlife use…

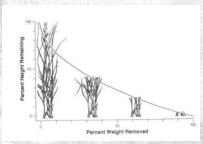




Examples of Information Collected – Short Term

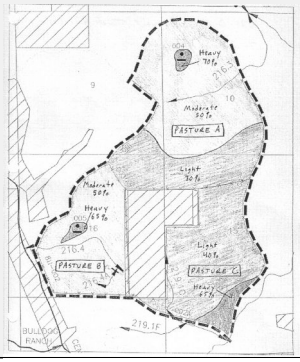
- Utilization
  - Utilization Wheel (height/weight relationships) - quantitative
  - Cages - qualitative





Examples of Information Collected – Short Term

- Grazing Use Map



Examples of Information Collected – Short Term

- Precipitation
- Growing conditions (soil moisture, cool, hot, early spring, late spring etc.)
- Animal numbers
- On dates, off dates, move dates
- Wildlife observations

How Short- and Long-term Monitoring Fit Together

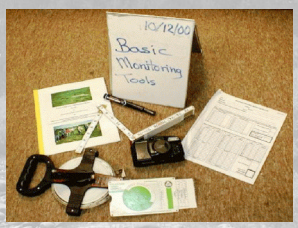
- Long Term Monitoring – *(response)*
  - Resource condition objectives / standards – *How should the area "look" and function?*
  - How are resource conditions changing relative to objectives and standards?
- Short Term Monitoring – *(inputs)*
  - What is happening year to year that might affect how the rangeland "looks" and functions
  - Mother nature's inputs & management inputs

How Short- and Long-term Monitoring Fit Together

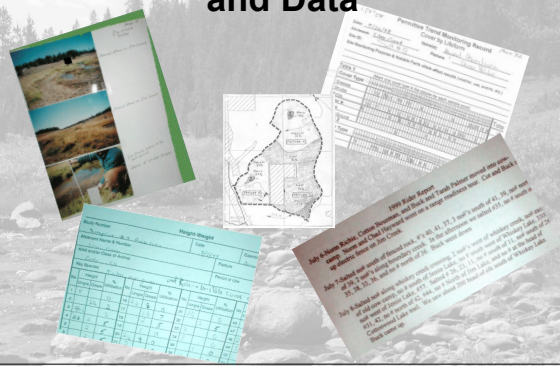
- Making necessary adjustments in management inputs (annual use, time and timing of grazing) to insure desired trend in resource conditions
- Annual Operating Instructions (AOI)
  - Moving targets or necessary flexibility?

Some Tools of the Trade

- Good information and data from "low-tech tools"



Organizing the Information and Data



Short Term or Long Term Monitoring?

Growing season precipitation	?
Utilization	?
Plant community composition	?
Width and depth of a stream channel	?
Amount of bare ground and total plant cover over time	?
Animal numbers, on-dates and off-dates	?
Grazing use distribution (use map)	?

Short Term or Long Term Monitoring?

Growing season precipitation	Short
Utilization	Short
Plant community composition	Long
Width and depth of a stream channel	Long
Amount of bare ground and total plant cover over time	Long
Animal numbers, on-dates and off-dates	Short
Grazing use distribution (use map)	Short

Who Should Be Involved?

The Value of Cooperative Monitoring: Responses of Agency Range Specialists

What value, if any, do cooperative monitoring programs have?

40% of responses – focus on resource and common <u>SCIENCE</u> (as opposed to personality problems)

35% of responses – improve working relations (even when pretty good already!)

"Provides both parties with valuable information to improve or validate their management."

"Only intelligent way to conduct a grazing program – especially on public land!"

"The most important thing is that the resource is better cared for."

"Permittees should provide information that they have the most knowledge of (actual use, animal performance, etc...)."

"For other more intensive natural resource monitoring, I don't believe it will work to have the permittee responsible for it – land managers should do it."

"I don't know about anybody else, but I wouldn't enter into an improved grazing program if the producer wasn't an <u>equal partner</u> in the development and implementation of the monitoring program."

Does anyone know where to find More information???

Eric Peterson's "how-to" video and booklets on Cooperative Rangeland Monitoring