

WATERSHED
INVENTORY, ANALYSIS AND PRIORITY
RANKING
PHASE I

Introduction:

One fundamental factor is recognized in this system of inventory that is: Soil and Water are Resources Needing Quantification. These two resources affect every aspect of society. Especially in this area - sound multiple use practices are based on sound soil and watershed management principles.

Our Bureau objectives in soil and watershed management include:

1. Maintain and restore soil productivity
2. Improve water quality and yield
3. Reduce damage from surface runoff

Purpose:

In order to reach these objectives the BLM developed a method of surveying watershed to provide a systematic procedure of:

- a. Inventory
- b. Analysis
- c. Priority ranking

to enable implementation of treatments of watershed problems.

We call this system Phase I of the Watershed Conservation and Development System of which there are six phases. (visual aid)

Discussion

Phase I or the Priority Ranking System is equated with the range surveys that are the bases of range management. Phase I is a system analyzing the physical factors of a watershed so that sound management decisions can be made. It resolves questions such as:

1. What are the soil and water resources
2. Are these resources being lost or degraded
3. What areas need attention
4. What kind of treatment is needed
5. Sequence of areas to be analyzed more closely

The system is composed of three steps. (visual aid)

Step 1 - Inventory and evaluation of the conservation factors

- a. Erosion activity on production land
 1. Vegetative cover - 100 pt transect
 2. Erosion condition (SSF)
- b. Productivity of the land
 1. Annual ppt.
 2. Effective Root Depth (ERD)
- c. Amount of productive land subject to erosion in the watershed
 1. <2% vs. >2% cover
 2. W/L, timber, range, vs. barren

Step 2 - Identification and Evaluation of developmental factors to:

- a. Reduce flood and sediment damage
- b. Increase water quality and yield

Step 3 - Priority Ranking (computerized) sum 1 & 2

- a. Based on physical factors
- b. Based on administration requirements in adjudication, agreements, prior commitments, etc.

SOUTH TABLELAND ALLOTMENT MANAGEMENT PLAN

Implemented: Spring of 1968 (4 years ago) Pasture #1
1968 - 4/16 to 5/15 - 1021 AUMs
System: A - 4 year cycle 1969 - 4/16 to 5/15 - 1021 AUMs
B - Deferred rotation 1970 - 5/16 to 6/15 - 1021 AUMs
C - 3 pastures 1971 - 5/16 to 6/15 - 1046 AUMs

Numbers and season: 1021 cattle from April 15 to June 30
Average stocking rate 5.1 Ac/AUM
Condition: remains poor
Trend: Static

Objective - Livestock

1. (Lower table)
 - a. More suitable forage production
 - b. Increase 5% to 25% needle and thread and squirrel tail grasses

Changes: Plant form has changed
No increase in basal area
Just change in plant form

2. (Upper table)
 - a. Increase from 10% to 30% needle and thread, squirrel tail, blue bunch wheat and Idaho fescue grasses
 - b. Reduce annual grasses from 36% to 15%

Pasture #2
1968 - 5/16 to 6/15 - 1021 AUMs
1969 - 5/16 to 6/15 - 1021 AUMs
1970 - 4/16 to 5/15 - 1021 AUMs
1971 - 4/16 to 5/15 - 1046 AUMs

Average stocking rate 5.8 Ac/AUM
Condition: Remains poor
Trend: Static
Changes: Plant form has changed
No increase in basal area
Just change in plant form

3. Wildlife
 - a. Maintain sagebrush stands for antelope
 - b. Maintain meadows for sagehen

Pasture #3
1968 - 6/15 to 6/30 - 512 AUMs
1969 - 5/16 to 6/30 - 512 AUMs
1970 - 6/15 to 6/30 - 319 AUMs
1971 - 6/15 to 6/30 - 319 AUMs

4. Watershed
 - a. Stable ground cover (perennial plants)
 - b. Increase average plant density from 30% to 40%
 - c. Increase litter or ground cover

Average stocking rate 14 Ac/AUM
Condition: Fair to good
Trend: Upward
Changes: Increase in number of new seedling
Photo Plot #1 - from 11 to 28 = 254%
Photo Plot #2 - from 13 to 18 = 138%
Average % increase = 191%

