Rangeland Management Objectives

As we are beginning to evaluate monitoring data in many allotments to determine if the objectives are being met, we find immediately that most AMP objectives have been stated in unrealistic and/or unmeasurable terms. Frequently objectives are "God and Motherhood" statements that sound reassuring but are not measurable. Often they are simplistic statements to the effect of improving range condition from poor to fair or from fair to good etc. without any reliable knowledge of range condition status at the time when the plan was implemented and less thought given to what "improving range condition" really means in terms of changing plant community characteristics. Such objective statements fail to identify the characteristics of the desired vegetation on a particular landscape. Neither do such statements provide any rationale which would assure us that the resulting vegetation characteristics of "improved range condition" would better meet our real land use goals such as mule deer winter range, antelope spring habitat, livestock forage etc. Such objective statements are often predicated on a blind assumption that improving condition is possible and desirable. We should and can do much better than this.

The ideas developed and tested during the Susanville workshop provides a systematic analytic process for developing allotment goals and defining management objectives in terms of quantifiable characteristics of vegetation that would meet or supply the goals. Trend monitoring can then be designed around these objectives and subsequent interpretation and reporting of management accomplishment becomes a straight forward logical output of properly defined objectives. In a step wise fashion this approach might be laid-out as follows:

1. Identify planning area (i.e. allotment) resource and land use issues and based on these issues develop management goals for the planning area. Identifying issues and developing goals should utilize the CRMP or TRT approach. Goals should be statements such as to provide mule deer winter habitat or antelope spring range or livestock summer forage or aquatic habitat.

2. Define management objectives for the planning area based on the goals and site capabilities. These objectives should be quantitative statements of the desired plant communities which are realistically possible and which best provide for the realization of our goal. Such vegetation then becomes the focus of our management and the measure of management accomplishments on any particular landscape. To develop management objectives requires an inventory or knowledge of the ecological sites present or the planning area. Those sites which have the potential to uniquely provide vegetation favorable to attainment of a particular goal are aggregated. The range of possible plant communities for these sites (low to high seral) are identified and the vegetation characteristics within that broader gradient which best provides for the particular goal is described. This then becomes our desired plant community (DPC) which is the basis for a management objective and the focus of our management activity on that particular area or landscape.

good

good

J. Wayne Burkhardt
Dept. of Range,
University of Nevada Reno
1000 Valley Rd.
Reno, Nev.

An example of this approach might be as follows:

Planning area - North Mtn.

Resource or Land Use Goal - the CRMP group or technical review team agreed that late fall-early winter range for mule deer was an important issue on portions of North Mtn. Therefore the goal would be to provide late fall-early winter habitat for mule deer.

The inventory or professional knowledge of North Mtn. indicates that the deer use area is a collection of several ecological sites all of which support mountain big sagebrush - bitterbrush vegetation. i.e.

loamy 14-16
stony loamy 12-14
loamy slopes 14-16
loamy bottoms
stony sloper

} ARTRVA - PUTR

The range of possible vegetation on this aggregation of sites might be expressed as a gradient.

← DPC →

60-80% Grass	Gradient	60-80% Shrubs
5-10% Forbs		0-10% Forbs
0-10% Shrub		5-10% Grass

Within that range of possible vegetation (from a grassland to a closed shrub stand) the vegetation which might best provide late fall-early winter mule habitat is represented by the DPC portion of the gradient and could be described 40-80% shrub, 5-10% forbs and 5-40% grass.

This description then becomes our management objective expressed in quantitative terms which can be trend monitored.

If on the other hand our primary goal for North Mtn. had been livestock summer forage, then the DPC would likely be on the opposite end of the gradient and could be described as 40-80% grass, 5-10% forbs and 0-40% shrubs.

In neither of the two examples would it have been appropriate to have described our management objective in terms of improving range condition. In the case of the mule deer habitat goal we would likely want to move toward or maintain a lower condition class. In the case of the livestock forage goal we may well be wanting to manage for a vegetation which would rate a higher condition but so stating the objectives obscures the real attribute of vegetation (structure) and replaces it with an abstraction (condition rating).

J. Wayne Burkhardt
Dept. of Range,
University of Nevada Reno
1000 Valley Rd

3. Develop management or activity plan. This would be the traditional plan detailing how grazing is to be conducted or how vegetation manipulations will be done to attain or maintain the DPC.

4. Develop a monitoring plan which details how annual events occurring on the planning area will be recorded and how long term accomplishment of objectives will be measured.

5. Evaluation and Reporting. Evaluation involves the periodic assessment of monitoring information to identify changes in the nature of the vegetation resource which have occurred and the events which likely produced those changes. These changes are then compared against the appropriate management objectives to evaluate the success of management. Reporting could be in the following terms:

!!!

Management On Target

Present plant community is within the limits of the DPC and trend in stable or toward DPC.

Management Off Target But Acceptable

Present plant community ~~not within~~ limits of the DPC but trend is toward DPC.

Management Off Target and Unacceptable

good!

Present plant community outside DPC limits and trend stable or away from DPC.

Management On Target and Unacceptable

Present plant community within DPC but trend away from DPC.

What I have attempted is to explain the approach developed at Susanville. approach to developing management objectives and measuring management success. While this process may yet be improved on, it currently represents an improvement on the way business has been done.

AMEN!

Sincerely

J. Wayne Burkhardt

J. Wayne Burkhardt
Associate Professor