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Abstract: Managing the public lands in Nevada involves integrated planning through coordination, cooperation, and consultation with the allotment operator and other affected interests and the use of the minimum monitoring methods identified in the Nevada Rangeland Monitoring Handbook. Since adopting the Nevada Rangeland Monitoring Handbook in 1981, the Bureau of Land Management (BLM) has initiated monitoring on 300 plus allotments. Through quality control field reviews that emphasize coordinated planning, compliance with BLM policy, and technical adequacy in field methods and management actions as well as the use of the computer analysis program XMONITOR, the monitoring and management approach in Nevada has achieved a high level of professionalism. For each priority allotment being intensively monitored, specific management objectives are developed, monitoring is established to determine if they are being met, evaluation time-frames and approach are identified, and a management plan is written to document these actions through the coordination, cooperation, and consultation process in all six BLM districts in Nevada.

in 1980, The management of the public lands administered by the BLM took a new direction. The basis for management actions was changed from relying solely on vegetation inventories reflecting one point in time to the use of monitoring. Additionally, there was a renewed emphasis on participatory planning and decision making involving the agency, users and interest groups. At that time, there was a fair amount of conflict, animosity, and poor communication concerning grazing management in Nevada. The objectives for the change in direction were to provide a consistent supportable approach management implementation and monitoring as well as improve BLM's interactions with the users and affected Interests on the Public Lands.

In 1980, Ed Spang, the State Director, directed the BLM in Nevada to work with the Nevada Range Studies Task Group (NRSTG) and cooperatively develop a consistent, technically adequate, and cost-effective set of grazing management monitoring procedures for approximately forty-six million acres of public land in Nevada. In June 1980, the task force made up of academia, extension service, consultant, and state and federal resource management agencies began to draft and adopt the procedures contained in the Nevada Rangeland Monitoring Handbook. In December 1984, the NRSTG edited and revised the procedures. The BLM in Nevada accepted and adopted these changes.

During this period, the BLM was an active member of the Nevada Coordinated Resource Management and Planning Group (CRMP) and initiated consultation, cooperation, and coordination throughout their management and planning processes.

By the end of 1985, all but one of the Environmental impact Statements (EIS) in Nevada have been completed and five field seasons have been used to evaluate the progress of the monitoring and coordinated planning approach. It is the purpose of this presentation to review the events that have occurred since 1981 to achieve the two general objectives of a consistent and sound approach to management implementation and monitoring and improvement of our interactions with the users and affected interests on the Public Lands.

MANAGEMENT IMPLEMENTATION APPROACH

The approach taken to implement management and monitoring can have a much greater impact on the end product than the actions taken or the field procedures employed. This does not imply that the actions and the field procedures are unimportant. Quality and consistency have been stressed in BLM*s overall approach to management in Nevada.

The approach taken in Nevada since 1981 to implement management and monitoring involves a number of steps. The initial step is to gather and review all available information on the allotment. This includes all planning documents such as the Environmental impact Statement, Resource Management Plan, Rangeland Program Summaries, and other specific activity plans. The professionals are to become familiar with the past historical uses that have occurred, the allotment in the field, and the livestock operators plans.

Maps, overlays and tables are put together to display the allotment information in a easily readable and interpretable format. Information such as grazing use patterns, ecological status, fences and waters are some of the types of information displayed.

Following overlay development, allotment management objectives are identified, developed and modified through consultation, cooperation, and coordination with the livestock operator and other interests. These objectives must be consistent with the land use plan, related to issues, attainable through grazing management, measurable, reasonable, site specific, and have time-frames identified.

Management plans or actions are then developed. Grazing practices and any range improvements are proposed through coordinated planning and are designed to resolve conflicts and meet objectives.

Monitoring studies and the evaluation procedures are then clearly documented. Studies are site specific and have objectives. Time-frames are identified for periodic allotment evaluations and, within the legal and regulatory constraints of the BLM, are agreed to by the operator and affected interests. This systematic approach is not new. The concepts have been a part of sound range management for many years.

FIELD PROCEDURES AND QUALITY CONTROL

The minimum field procedures or methods recommended by the task group in the Nevada Rangeland Monitoring Handbook include recording actual use, mapping use patterns, measuring key forage plant utilization, evaluating utilization cages, collecting frequency and trend ecological status data on key areas, and noting growing conditions and other observations. While these are the recommended techniques where resource conditions dictate, other methods may be and are being used by the BLM in Nevada.

Actual use is the number of grazing animals using a specified area for a period of time. These include big game, as well as livestock and wild horses. Use pattern mapping involves delineating six grazing use zones. Examples of these zones are no use, slight use (1-20% utilized), light use (21-40%), moderate use (41-60%), heavy use (61-80%), and severe use (81-100%). frequency method used is a belt transect with two hundred quadrats. Ecological site descriptions and status analysis are based on the methods identified in the Soil Conservation Service's (SCS) National Range Handbook where the present community is rated in relation to its departure from the potential Growing natural community. conditions are precipitation and other weather conditions. Other events observations may include insect damage, rodent or rabbit use, fire, disease, or any other event that causes an impact on the environment.

The monitoring procedures detailed in the Nevada Rangeland Monitoring Handbook, allow the establishment of sound objectives and offer the measurement techniques to determine if they are met. They do this because they are predicated on ecological site principles and as such, present a standard yardstick in the form of the potential natural community. In using these procedures, the vegetation objectives for the key study areas for the allotment are determined after examining the existing seral stage, the plant species present and the potential natural community.

At the State Director's instruction, the resources staff in the BLM State Office in Reno has been conducting management implementation and monitoring field reviews annually on every district and resource area in the state since 1984. The purpose of these reviews is to insure quality and consistency in our efforts to effectively manage the public lands in Nevada using the planning approach. coordinated Additionally, the BLM State Office resources staff are available for hands-on assistance to the field offices and serve as a direct pipeline from them to the State Director. This has helped to improve overall field morale by offering field personnel an opportunity to have direct input into policy development.

The review process checks to see if the direction taken by an office has gone through coordinated planning, is in compliance with national and state policy, is technically adequate and is consistent. The review requires the use of numerous field procedure handbooks, knowledge of methods, land use plans and other documents to review grazing plans, monitoring plans, proposed management actions, and on-the-ground field applications.

RESULTS

Managers must monitor and evaluate their actions at the allotment level to determine if the objectives are met. periodically review agency must evaluate the overall effectiveness of its management approach. Only five years have elapsed since the BLM in Nevada adopted However, a comparison this direction. between 1981 and 1985 may serve as a measure of our success in moving toward a and sound approach implementation and monitoring improving BLM's interactions with the users and other interest groups (Table 1.)

Advances in meeting our objectives range from 134% to 1,200% increases in

Table 1. Management status of BLM lands in Nevada, in 1981 and 1985.

Units measured	1981	1985
Total number of allotments	792	792
Total acres (millions)	46	46
Total number of type I allotments ¹	253	253
Total acres of type I allotments (millions)	25	25
Number of allotments monitored	100	335
Approximate acres monitored (millions)	8	24
Number of type ! allotments monitored	30	145
Approximate acres in type I allotments monitored (millions)	5	19
Acres of order 3 soil surveys (millions) ²	13.7	32.0
Acres of ecological status mapped (millions)	0.8	10.7

^{1.} Type I allotments are identified in the Environmental Impact Statements as those with the highest resource concerns and issues requiring management actions.

units inventoried and monitored from 1981 to 1985 (Table 1). The BLM in Nevada is currently monitoring 52% of the the allotment acres in the state (Table 1).

The BLM has completed a draft Allotment Management Plan (AMP) handbook includes an approach to management implementation and the NRSTG procedures. This handbook has been field-tested and will be finalized this January. A computer program called XMONITOR, which is used to statistically analyze the monitoring data, has been in use for 5 years. In 1985, 23 new AMPs were initiated with 18 new and 7 revisions planned in 1986. During 1981, each District Office was required to develop a monitoring plan to guide their efforts and submit it for State Director review. These plans were updated in 1985 include the Districts' evaluation approach and a table identifying specific allotments scheduled for evaluation. State and District Office staffs conduct quality control field reviews each year in every Resource Area in the state. The state has met or exceeded its own internal planned units for AMPs, monitoring, soil survey and ecological status inventory for the past two years (1984 and 1985) and has worked jointly with the BLM's Saval Research effort in Elko and University of Nevada, Reno in designing a field test for our monitoring approach.

Formal CRMP committees or a coordinated planning effort has been initiated on every District Office in the state which meets our second objective. According to reports

from the field office managers, this appis time-consuming and laborintensive, however, the overall enhancement in cooperation has been noticeable statewide. While not all CRMP efforts are concerned with grazing allotments, the reaction of the participants, agencies and the public, has been generally positive. The participants identified it as a "real struggle at first but we ended up with most of the people working together." Coordination has resulted in the active involvement of the users and other interests in the monitoring, evaluation. decision, agreement process.

The Nevada State Director has also directed the Districts to coordinate and promote effective working relationships with the range consultants in the state. This coordination must necessarily be consistent with the high priority areas identified in each of the BLM's planning documents.

CONCLUSIONS

This record demonstrates that the BLM in Nevada has been attaining the objectives of a consistent approach to implementation and monitoring and improved interactions with the users and other interest groups. This has been possible primarily due to the high degree of local participation and interest, as well as the involvement of other state and federal agencies, and interest groups such as universities and consultants.

^{2.} An order 3 soil survey provides base information required for an ecological status inventory.