

MODOC/WASHOE
EXPERIMENTAL
STEWARDSHIP PROGRAM
ANNUAL
REPORT
FISCAL YEARS 1984-1985



MODOC/WASHOE EXPERIMENTAL STEWARDSHIP PROGRAM
FY'84 & FY'85 ANNUAL REPORT

Final
September, 1984

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THE 1985 EXPERIMENTAL STEWARDSHIP PROGRAM REPORT TO CONGRESS

I. An Overview of the Experimental Stewardship Program (ESP)

A. What is the ESP?

The Experimental Stewardship Program (ESP) was authorized under Section 12 of the Public Rangeland Improvement Act of 1978 (PRIA). The Act directed the Secretaries of Interior and Agriculture to establish and implement a program to provide "incentives to, or rewards for, the holders of grazing permits and leases whose stewardship results in an improvement of range condition of those lands under permit or lease". Section 12 of PRIA also encouraged use of "... cooperative range management projects designed to foster a greater degree of cooperation between the Federal and State agencies charged with the management of the rangelands and with local, private range users, ..."

The Secretaries of Agriculture and Interior, acting on the advice of the U.S. Forest Service (USFS) and Bureau of Land Management (BLM), designated three formal Stewardship Program Areas in 1979 (Modoc/Washoe, Dillon, and Challis), and the Bureau also initiated several individual Stewardship Programs in various states. This report is about the Modoc/ Washoe ESP.

B. What are the general accomplishments of the Program?

The Modoc/Washoe ESP achieved many objectives in its purpose to create incentives for improved range condition through a coordinated, cooperative structure. Notable among these are vastly improved communication, coordination, and changes in attitude; innovative on-the-ground resource management; incentives for improved stewardship of public lands; integrated management of inter-mingled private and public lands; intensification of livestock grazing management throughout the Program Area and especially in established wilderness areas; inter-agency and interdisciplinary review of wilderness study areas for recommendations to the BLM; monitoring, wild horse management, grazing fee experimentation, Area of Critical Environmental Concern (ACEC) designation and cultural resource management. Specific accomplishments are detailed in following sections of this report.

C. Purpose of Report

The purpose of this report is to describe the results of Phase I (1980-1984) of the Modoc/Washoe Experimental Stewardship Program. The report will explain the background, operations and accomplishments of the Modoc/Washoe Program.

II. Description of the Experimental Stewardship Program (ESP) Project Areas

A. Name and Location

Modoc/Washoe Experimental Stewardship Program (M/W ESP): is located in northwest Nevada (Washoe and Humboldt Counties) and northeast California (Modoc and Lassen Counties).

B. Physical Characteristics

The M/W ESP area includes the Surprise Resource Area of the Susanville BLM District and the Warner Ranger District of the Modoc National Forest. It is an extremely diverse area.

1. Topography

The Modoc/Washoe ESP Area encompasses the northwestern fringe of the Great Basin Section of the Basin. The boundaries are the Warner Mountains on the west and the Granite Range and Calico Mountains on the east. The area can be divided basically into north-south trending mountains with intermingled valleys or basins. East of the Warner Mountains, most of these valleys are enclosed basins, receiving all of the drainage from surrounding mountains. The west flank of the Warner Mountains serves as the headwater to the Pit River which is a major tributary of the Sacramento River.

The present relief was formed as a result of uplifting and settling of the lava plateaus. Mountain crests range between 7,000 to 10,000 feet which are at least 2,500 feet above the adjacent valley floors.

Time and erosion have only begun to modify slightly the topography. Most stream channels and valleys are in early stages of development. The stream channels, characteristically, have steep-sided canyons and steep, irregular stream gradients. The major valleys, for the most part, have no drainage outlet. As such, they have become catchment basins for stream flow from the surrounding mountains.

2. Climate

The direct influence of the Pacific Ocean on the Area is negligible, even though the ocean generally dominates the weather over the western part of the continent. Moisture is extracted as air moves inland over the mountains in western California. Consequently, precipitation is considerably lighter across the M/W ESP Area than it would be without the influence of the mountains to the west.

Precipitation varies from 6-28 inches in the M/W ESP Area and occurs mostly during the winter months. Winter precipitation is usually snow, although rain is not uncommon in January or

February. Precipitation amounts gradually decrease after February or March as storm tracks tend to migrate northward. Summer precipitation is very light except for occasional thunderstorms, and precipitation is very light.

Summer temperatures are moderate to warm averaging from 40° F. - 100° F. Winter high temperatures average in the mid-30°F range. Extreme lows, however, have been recorded at -30° F.

The growing season ranges from 40 days in the higher elevations of the Area to as much as 130 days near Cedarville. Occasional late freezes occur through May in the spring and early freezes occur mid-August - September.

Prevailing winds are westerly with wind speeds generally less than 15 miles per hour.

3. Soils

Soils of the M/W ESP Area are grouped based upon physiographic characteristics:

- a) lowlands, foothills, and upland basins;
- b) upland plateaus, terraces, and lower mountain slopes;
- c) moderately sloping to very steep uplands.

The soils vary from alkaline tight clays in the lowlands to very stony loams in the very steep uplands. A small percentage of the lowland soils are suited to intensive cultivation while the rest of the area is best suited to supporting vegetation for livestock grazing, wildlife habitat, timber production and watershed protection.

Erosion susceptibility is low in the lowlands and upland plateaus due primarily to the low to normal relief. Severe relief in the moderately sloping to very steep uplands creates a high susceptibility to erosion.

4. Vegetation

The vegetative communities occurring throughout the area are highly variable and mostly dependant on climatic and soil conditions. They can be grouped into seven broad categories:

- a. Saltbrush Type - This vegetative group occurs on low lying and intermediate alluvial fans, lake terraces, and playas in a precipitation zone of 8-10 inches. The type is dominated by alkaline tolerant shrub species such as saltbrush and greasewood and grass species such as inland saltgrass.

- b. Sagebrush Type - This vegetative group occurs on upland terraces, alluvial fans and plateaus with precipitation of 10-12 inches. This type is dominated by shrub species such as big and low sagebrush and bitterbrush; bunchgrass species such as cheatgrass, Idaho fescue, squirreltail, Thurber's needlegrass, and Sandberg's bluegrass; and numerous forbs such as buckwheat.
- c. Juniper Type - This type occurs in shallow, stony soils in the 11-16 inch precipitation zone. It is commonly associated with low sagebrush, a wide variety of forbs, and bunchgrass species such as Sandberg's bluegrass, squirreltail, and cheatgrass.
- d. Mountain Shrub Type - This vegetative group occurs on high, rocky ridges, east and north slopes in a precipitation zone of 14-16 inches. This type is dominated by mountain mahogany, bitterbrush, mountain big sagebrush and snowberry; numerous forbs such as mule's ear and lupine; and bunchgrasses such as needlegrass, Idaho fescue, and bluebunch wheatgrass. Aspen patches are also scattered throughout this type.
- e. Meadows - The entire M/W ESP Area is scattered with springs and streams with associated meadows. The meadows vary from small essentially dry meadows to extremely wet meadows. Vegetative variety is directly correlated to the amount of moisture and soil depth. All meadows have a large variety of grass species and forbs. The wetter meadows also have species such as willow and aspen.
- f. Timber Type - This vegetative group occurs in the mountainous uplands with precipitation varying from 14-28 inches. This vegetative group is dominated by tree species such as ponderosa pine, lodgepole pine, white fir, Jeffery pine, and aspen. The preponderance of this type occurs on the Warner Mountains.
- g. Range Seedings - This grass type has been artificially created in areas predominantly on BLM land. It lies mainly in the 8-10 inch precipitation zone and consists of desert wheatgrass seedings on areas with shallow, gravelly, sandy soils.

C. Existing Users and Uses

Uses of the M/W ESP Area are extremely varied. The following table depicts the uses and the amount of use within the M/W ESP Area.

TABLE 1

Uses of the M/W ESP AreaActivity

Fishing	BLM - 1,000 fisherman days	
	FS - 168,000 fisherman days	
Hunting - deer	BLM - 11,000 hunter days	
	FS - 16,000 hunter days	
- antelope	BLM - 1,500 hunter days	
	FS - 9,000 hunter days	
- sage grouse	BLM - 2,000 hunter days	
	FS - 2,000 hunter days	
- chukar	BLM - 1,000 hunter days	
	FS - 60,000 hunter days	
Recreation dispersed ^{1/}	BLM - 51,823 visitor use days	
	FS - 125,000 visitor use days	
Livestock		
BLM - 41 operators	97,770 AUMs	
FS - 41 operators.	26,000 AUMs	
Wilderness	FS - 42,000 visitor use days	
Camping ^{2/}	FS - 108,900 visitor use days	
Timber products ^{3/}	BLM - 8 MMBF	
	FS - 15 MMBF	
Wild horses	BLM - 500 wild horses	
Cultural resources	BLM - 13 sites/section	
	FS - Unknown	
Minerals	BLM - \$214,000 (Receipts)	
	FS - \$2,100 (Receipts)	

1/ Includes sightseers, rockhounds, camping in undeveloped areas, Off Highway Vehicles (OHV's), etc.

2/ Camping at developed areas

3/ Includes fuelwood and timber

III. Brief History of the Modoc/Washoe Experimental Stewardship Project

A. Background, Criteria, Interest Group Involvement

The M/W ESP came into being because livestock producers and their allies were opposed to certain actions proposed by the BLM and because many individuals locally, and in the Forest Service, believed public land use planning and management should be done by Coordinated Resource Management Planning (CRMP) procedures.

M/W ESP Area was an area of historical conflict and cooperative effort as follows:

1963: Range Renewal Program initiated. Proposed orderly construction of range improvement projects. Involved ranchers, Cooperative Extension, Soil Conservation Service (SCS), Nevada Department of Wildlife, California Fish and Game Department. Recommendations never adopted by BLM.

1963-68: Range Adjudication. Based on one-time inventories, ranchers ordered to cut livestock numbers by 30-60% in M/W Area.

1975: Federal Court ordered BLM to prepare more than 200 site specific grazing Environmental Impact Statements (EIS).

First California Draft EIS (Tuledad/Home Camp in M/W) written. Proposed action called for 25-33% reduction in livestock numbers.

1976: Second California EIS (Cowhead/Massacre in M/W) inventory and analysis begun.

1977: BLM invited public rangeland user representatives to participate in planning groups to develop proposed action for Draft Cowhead/Massacre EIS. Groups represented were Wilderness Society, Sierra Club, Fund for Animals, Audubon Society, National Wildlife Federation, California and Nevada Departments of Fish and Game, U.S. Fish and Wildlife Service, Nevada and California Cooperative Extension, Soil Conservation Service (SCS) and ranchers.

1978: Chapter 1, Proposed Action of Cowhead/Massacre EIS released. It did not include recommendations of 1977 planning group.

Public Rangeland Improvement Act passed by Congress. It included Section 12 mandating Experimental Stewardship Program.

1979: Final Cowhead/Massacre EIS released.

The ranchers spearheaded an attempt to form the Surprise Valley Range Improvement Committee. It fell short in an

attempt to generate support for a broad based cooperative management effort.

ESP Formation Committee seeks support for M/W ESP designation. Committee included ranchers, BLM, FS, University Extension, SCS, Agricultural Stabilization and Conservation Service (ASCS), and local government representatives.

District Manager and Forest Supervisor applied for M/W ESP designation.

1980: Modoc/Washoe designated as one of three formal ESP areas. Steering Committee appointed. First meeting held April, 1980.

The BLM and Forest Service used the following criteria to select formal ESP areas:

- A. a representative spectrum of range condition and trend;
- B. intermingled land ownerships;
- C. completed land use planning and associated EISs;
- D. existing resource conflicts;
- E. public interest and support.

In 1979 the M/W area met those criteria as follows:

- A. According to BLM inventory data the two planning units contained 96,392 acres in good condition, 972,640 acres in fair and 110,776 in poor. Trend was upward on 42% of the area, 48% was static and 10% was downward. Forest Service lands contained 17,746 acres in good condition, 72,554 in fair and 58,924 in poor with 19,080 acres condition unknown and 165,867 acres as unsuitable. Trend was upward on 8% of the Forest, static on 72% and downward on 20%.
- B. Private lands comprise 23% of the M/W Area. The States of Nevada and California own 1%. The remaining 76% is public lands.
- C. The EIS and grazing decisions were complete on one planning unit. The Final EIS was nearing completion on the second unit. The Forest Service planning was on schedule.
- D. Resource conflicts existed on both the BLM and Forest Service lands.
- E. There was a tremendous public interest and support for formation of an ESP to resolve conflicts.

B. Steering Committee Formation and Selection

The Steering Committee membership was set at 21 people by the Formation Committee. The following groups were asked to select a spokesman/representative. The following table shows the name, title and affiliation of Steering Committee members:

C. Rex Cleary - BLM, Susanville District Manager
Lynn Sprague - Modoc National Forest, Forest Supervisor
A.E. Naylor - Calif. Dept. of Fish & Game, Regional Manager
Sam Millazzo - Nev. Dept. of Fish & Game, Regional Manager
Marv Kaschke - US Fish & Wildlife Service, Sheldon Refuge Manager
Curt Spalding - Audubon Society, Eagle Lake Chapter
Bill Reavely - Wildlife/Environmental Interests
Bill Webb - SCS, Red Bluff Area Conservationist
Dave Grove - Surprise Resource Conservation District
Ed Berryessa - Vya Resource Conservation District
Bob Crockett - California ASCS, Co. Exec. Director, Alturas
Jeanni Conlan - Nevada ASCS, Co. Exec. Director, Fallon
John Laxague - Modoc County Board of Supervisors
* Steve Brown - Washoe County Commissioners*
Dianne Clapp - Wild Horse and Burro Interests
Cecil Pierce - Univ. of Calif. Cooperative Extension, Alturas
Wayne Burkhardt - Univ. of Nev. at Reno, Renewable Natural Resources
Jim Cockrell - Tulead/Home Camp Permittees Association
Jean Schadler - Cowhead/Massacre Permittees Association
Joe Harris - Warner Mountain Ranger District Permittees
John Weber - Modoc Cattlemen's Association

* Currently Nevada State Department of Agriculture, Executive Director.

Steering Committee members were selected from decision-making levels of each agency or organization. Some members, such as the regional directors of California and Nevada Fish and Game, were appointed by their agencies. Others, such as rancher representatives, were elected by their Associations. All members served at the discretion of their organizations. They were appointed to the Program by the ~~Secretaries~~ *Susanville District Manager & the Modoc National Forest Supervisor*

IV. Roles of the Participants in the ESP

This section will describe the roles of the BLM and Forest Service, the Modoc/Washoe Steering Committee, its subcommittees and Technical Review Teams.

A. Role of the BLM and Forest Service

The BLM and Forest Service occupied three distinct roles in the ESP. The two federal agencies represented the Secretaries of Interior and Agriculture. Personified by the District Manager and Forest Supervisor, the Secretaries had ultimate authority over all aspects of

the Program. The District and Forest level administrators received the bulk of the land management and policy recommendations generated by the Stewardship Program. They adopted, modified and implemented, or rejected Steering Committee recommendations. They provided access to the upper reaches of their organizations for recommendations requiring a waiver or change in policy.

As Steering Committee members, the District Manager and Forest Supervisor functioned in a second role. They were full participating members of the Steering Committee, representing the interests of the land management agencies in the Committee's deliberations.

Finally, the BLM and Forest Service provided the bulk of the line staff necessary to carry out the cooperative planning effort. Staff from every level and professional field from both agencies were active in the Modoc/Washoe Program. Agency staff maintained records, organized meetings and provided data and interpretation. The preparation and support provided the Technical Review Teams (TRT) by agency staff will be cited later in this report as a major reason for the success of the TRT effort. Without intent to denigrate the considerable contribution of staff from other agencies and groups, the efforts of the BLM and Forest Service clerical, technical and administrative staff were commendable.

B. Role of the Steering Committee

The Steering Committee was the administrative board of the ESP. It guided the ESP by the dictates of the Role Statement. It reads:

"The Modoc/Washoe Experimental Stewardship Area was established pursuant to Section 12 of the Public Rangeland Improvement Act of 1978. It encompasses more than two million acres of private and public lands in Modoc and Lassen Counties of California and Washoe and Humboldt Counties, Nevada. The Program for this Area will be developed and guided by a steering committee whose major purpose is to foster coordination and cooperation among the various users, the public, and Federal, State, and local agencies in a manner which will result in: 1) environmental improvement; 2) integrated and improved management of all ownerships; and 3) through improved management, long-range stability of the local economy.

The role of this committee is: 1) to explore, experiment and develop innovative and creative techniques, policies, and management practices leading to improved range condition and livestock production; 2) to develop and support incentives and rewards of substance to permittees who institute creative and innovative practices that result in range improvement; 3) to seek ways to integrate private land potential with public lands and to support funding for improvements and practices; 4) to promote practices which will improve wildlife and wild horse habitat, protect cultural and historical sites, and enhance recreation opportunities; and 5) to make available program information and encourage public involvement."

Using the goals and objectives delineated in the Role Statement, the Steering Committee selected and directed projects to improve range condition. It created incentives and rewards to encourage livestock operators, and other users, to practice care and conservation of the public lands and resources. It encouraged similar care and conservation of privately owned assets and resources. It promoted a land management ethic that valued each resource for its contribution to a diverse and healthy environment, with concern for a long-term, stable local economy.

C. Role of Subcommittees

Subcommittees were the working groups of the ESP. All issues or tasks undertaken by the Steering Committee were delegated to subcommittees for research and debate. ESP project proposals and policy recommendations were drafted by subcommittee's for Steering Committee action.

Subcommittees provided the opportunity for research, debate, information transfer, brainstorming and negotiation which led to cooperative, coordinated proposals.

Subcommittees generally averaged about nine members. Some were as small as three people, others as large as 25. Usually, they were chaired by a Steering Committee member. They were heterogeneous, composed of technicians, representatives and citizens from a broad range of interest groups and agencies. They reported exclusively to the Steering Committee, or its officers, the Executive Committee.

Subcommittees accomplished several purposes. They distributed the Program workload among Steering Committee members. They provided a means to involve interested or knowledgeable persons who were not members of the Steering Committee. They made efficient use of staff and citizens' expertise. They formed an ever-increasing network of professional contacts for information transfer.

D. Role of the Technical Review Teams (TRT)

The Technical Review Team (TRT) was a specialized subcommittee used exclusively for land use planning. The TRT reviewed Allotment Management Plans (AMP) in use or proposed by the agency. The Team examined the allotments in the field. It reviewed existing data, analyzed resource needs, and proposed livestock grazing management plans.

TRT makeup evolved differently to meet the objectives of each land management agency. BLM TRTs were composed of a minimum of five individuals representing the affected livestock permittee(s), State Game Department, BLM, Soil Conservation Service and an environmental group. Other resources specific to that allotment were also represented, such as wild horses, off-road vehicle recreation, etc. Several individuals, such as the SCS representative, served on almost every one of the 20 BLM TRTs. The affected livestock

permittee(s), however, represented the livestock grazing interest only on his/her allotment.

On Forest Service allotments, a subcommittee of grazing permittees was chaired by the Forest Permittee representative of the Steering Committee. The Warner Subcommittee reviewed the management alternatives developed by agency staff and the affected livestock operator(s). At times, the Subcommittee, agency staff, environmental representatives and other interested parties toured the allotment to discuss management alternatives. The Subcommittee was instrumental in developing management plans which involved combining or changing historical allotment boundaries.

The difference in the two agency approaches was due to the BLM need to review every allotment in the Surprise Resource Area within 24 months. The planning schedule was imposed by the EIS process. The BLM was required to issue detailed grazing decisions including stocking rate, season of use, and intensive livestock grazing management methods. The BLM allotments had to be reviewed, on-the-ground, thoroughly and quickly. All published data and management preconceptions had to appear open to modification. The most professionally knowledgeable people available had to be teamed up with the livestock professional in a way that would allow a free exchange of information within a tight time frame.

Pre-tour preparation by the BLM staff for each TRT accounts for much of the success of the TRT process. The information packet format and orientation process has become a model for cooperative planning and problem solving. The packet allowed each TRT member to begin work on an equal footing. A visible staff commitment to the cooperative planning and consensus process encouraged team members to put a high value on their own involvement.

The Forest Service Technical Review was not under a severe time schedule. The Forest Service reviewed two to five allotments per year under normal Forest planning procedures. The Warner Subcommittee had ample time to work with affected permittees to find the optimum management objective. They had time to study private land potential for increased production and to do cost feasibility studies on land improvements. Hostilities between the agency and its user groups were at a minimum. The FS TRT allowed opportunity to make the greatest improvement of resources while striving for improved efficiency or cost benefit to the livestock operator.

TRTs accomplished several purposes. They created broad commitment to implementation of plans. They provided an incentive for ranchers and other user groups to participate in resource stewardship. They were a more cost efficient planning method than the standard adversarial method that was resulting in drawn out litigation.

SUMMARY

The roles of the participants in the ESP were inter-related and interdependent. The Steering Committee handled policy and direction

while the subcommittees and TRTs were technical working groups. The BLM and Forest Service provided support and leadership. The Steering Committee could not have functioned without their participation. On the other hand, they could not have readily implemented projects and experimentation without the support of the other 19 member groups. A clear definition of goals, objectives and roles contributed to ESP success.

V. Goals and Objectives of the ESP

The goals and objectives of the M/W ESP were those in our Role Statement.

The purpose of the Steering Committee was to develop and guide an experimental and advisory program to foster cooperation and coordination among the various users, the public, and Federal, State, and local agencies in a manner which would result in 1) environmental improvement, 2) integrated and improved management of all ownerships, and 3) through improved management, long-range stability of the local economy.

It is important that the Steering Committee focused on a land ethic rather than technical fine-tuning of livestock management. The Steering Committee recognized its potential economic impact on the livestock/timber based economy of Modoc County. Washoe County is not significantly affected by federal land actions within the Modoc/ Washoe Program area.

The five stated Goals of the Program defined the land ethic inherent in the purpose of the Steering Committee.

GOAL I: "To explore, experiment and develop innovative and creative techniques, policies and management practices leading to improved range condition and livestock production."

Innovative was defined as practices and techniques "not commonly in use in the Area prior to Stewardship" (Five Year Action Plan). Techniques were understood to be technical field application, under normal manpower and funding limitations, of resource or livestock management theory. Policies were administrative practices of state and federal agencies. Management practices were normal operating procedures, technical, administrative or regulatory.

The objective of this goal was to address any aspect of agency or organization administration necessary to obtain satisfactory condition of natural resources and/or to improve the use of livestock as a management tool without undue disruption of the livestock operation.

GOAL II: "To develop and support incentives and rewards of substance to permittees who institute creative and innovative practices that result in range improvement."

The objective was to identify agency actions which would encourage cooperation, concern for resources and a desire to improve the condition of rangeland resources. The Steering Committee made a distinction between "awards" and "rewards". Awards offered little substance for a

businessman who spent several hundred or thousand dollars participating in a cooperative planning effort. An incentive or reward was defined as something that would eventually decrease costs or increase income for the businessman. Therefore, the objective was to make a businessman want to spend his own money and/or time to improve the condition of the range by rewarding that effort with the potential for increased income or decreased cost of operation.

GOAL III: "To seek ways to integrate private land potential with public lands and to support funding for improvements and practices."

Private lands in the Modoc/Washoe Area are intermingled rangelands and crop lands. Increased production had the potential to decrease use of the public lands. Crop land production, however, appeared to be at near maximum level. Better integration of the public/private intermingled land appeared to offer more flexibility in livestock management.

Objectives of this goal were 1) to determine if more efficient or productive land use could be made; and 2) to determine what resource trade-offs were possible. For instance, could wildlife be benefited on private land in exchange for certain livestock practices on public land?

GOAL IV: "To promote practices which will improve wildlife and wild horse habitat, protect cultural and historical sites and enhance recreation opportunities."

The objective was to define a holistic land ethic that emphasizes the interrelated nature, and value, of all natural resources. Land managers cannot manipulate one resource without affecting another. Therefore, a program which concentrated on encouraging ranchers to take responsibility for improved range condition must necessarily assert that all resources are equivalent to the forage resource.

GOAL V: "To make available program information and encourage public involvement."

One objective was to write and disseminate as much technical information as possible to improve the state of the art of rangeland management. Another objective was to draw a broad network of people into participation in the Program. The Steering Committee established, in this goal, its desire for public review, comment, suggestion and criticism of the Program.

VI. Operations of the ESP Area

The four major program functions administered by the Steering Committee were A) coordination between agencies, user groups, and others; B) development of experimental incentives/rewards and other projects; C) program monitoring, that is, documentation, tracking, reporting and evaluation, and D) sharing the lessons learned with others, or public information and education.

A. Coordination, Between Agencies, User Groups, and Others

The Steering Committee distributed power equally among the diverse 21 members by voting to make all decisions by consensus. Consensus is defined as "unanimous agreement by all members present and acting". During the four and one-half years of Phase I of ESP (1980-1984), the following Philosophy of Operation for the Steering Committee evolved.

The Modoc/Washoe Experimental Stewardship Program recognizes the necessity for each representative to participate with power and influence equal to every other member or group of members. Therefore, no action shall be taken over the objection of any member of the Steering Committee. Whereas, an alliance of resource interests shall not take precedence over any other resource, neither shall any member impede progress toward management problem-solving through unreasonable use of objections. Recommendations or actions not acceptable to a Steering Committee member shall always have the option of further subcommittee work to incorporate the concerns of objecting members. Renewed debate based upon new evidence, persuasion, or new method of approach shall be an option.

In order for the Committee to reasonably weigh the value and impact of any recommendation upon the land and its users, the groups must have access to the collective knowledge of Committee members. Each Steering Committee member has an obligation to clearly articulate the philosophy, needs and limits of the group he/she represents. Each member recognizes the obligation to hear and be sensitive to the philosophy, needs and limits of every other member.

Committee actions must fall within the scope of the Steering Committee Role Statement. The Role Statement clearly states the purpose of the Stewardship Program. The Steering Committee is committed to cooperative problem-solving to accomplish the goals of environmental improvement, improved and integrated land management and contribution to a stable local economy. It identifies the means by which we will pursue those goals.

Any proposal which falls outside the limits of the Role Statement, or which does not gain unanimous support of the membership through the consensus procedure, will not be undertaken by the Steering Committee.

The philosophy was unwritten until this report. The written record of debate and official actions of the Steering Committee show a consistent pattern of coordination (equality of rank among the members) and cooperation (joint action toward common ends).

The Operating Philosophy resulted in direct benefits to each participating member and his/her group. These included increased experience in consensus decision-making, expanded knowledge about natural resources and their users, clearer lines of communication and professional contacts. The TRT land use planning experiment resulted

in an environmental representative requesting the process be used in the BLM Wilderness Review. TRT Wilderness Review was initiated in the spring of 1984. The TRT recommendations on Wilderness suitability have resulted in broad based support, because of the participative process that generated them. (Appendix 1)

In the field, the Operating Philosophy is typified by the TRT process.

The TRT process is two steps:

- 1) Development - Each grazing system was developed for the conditions of a specific allotment. All allotment resources were identified. The basic needs of each resource was incorporated into each system. Therefore, no two grazing systems are exactly the same. The "cookbook grazing management systems" (i.e. three pasture rest-rotation, two pasture deferred rotation, etc.) were modified to make each grazing system fit the conditions of a particular allotment. Trade offs and compromises were made among all the interests involved in order to develop a well balanced resource activity plan. Participation of all interests was vital to the success of this approach.
- 2) Implementation - Grazing systems were designed to be implemented in stages, with the Team setting priority for each stage of implementation. The most critical resource needs were met at the early stages. Livestock operators then had an opportunity to adjust livestock operations. The degree to which the system met resource management objectives could then be measured before the entire grazing system was locked in place. Progressive implementation coincided with completed range development work. As a result, the type and location of proposed expensive range improvement projects could be re-evaluated at each stage. The TRT structure ensured each participant understood and approved modifications to meet management objectives. Progress toward plan implementation could be documented and monitored. If necessary the TRT was reconvened. The Steering Committee served as a check and balance to assure the TRT considered all possibilities and concerns and that the TRT developed recommendations to meet all concerns. (Appendix 2)

Pre-tour preparation by the BLM staff for each TRT accounted for much of the success of the TRT process. The information packet format and orientation process has become a model for cooperative planning and problem solving. The packet allowed each TRT member to start work on an equal footing. A visible staff commitment to the cooperative planning and consensus process encouraged team members to place a high value on their involvement.

out of date

*no longer to be
managed as grazing
allotment*

MASSACRE MOUNTAIN/HIGH ROCK

Technical Review Team
Information Packet

I. PURPOSE

The purpose of the Massacre Mountain/High Rock Technical Review Team is to make a detailed on the ground evaluation of the values and conflicts, study the various recommendations of the diverse interests (both past and present), evaluate the alternatives and make recommendations for future management actions in the area.

II. BACKGROUND

The High Rock Canyon Area has generated more public interest and controversy than any other issue in the District in the last decade. This interest has expanded beyond the District to State and even National attention. The reason for the interest is the apparent conflicts between resources: cattle, sheep, wild horses, bighorn sheep, cultural resources, pioneer trails, wilderness values and riparian zones.

In comparison to the High Rock Area, the Massacre Mountain Area to the north and west is almost forgotten in the controversy. The Area is almost as large as the High Rock Area and the management of the area depends directly on what happens in High Rock.

The goal of this packet is to provide the team members with a synopsis of values and conditions in the entire area and a history of the planning efforts to date.

III. DESCRIPTION OF AREA

The Massacre Mountain/High Rock Area encompasses 147,103 acres in northern Washoe County, Nevada (Map 1), of which 141,691 acres are public and 5,412 acres are private.

The Area supports wild horses, deer, antelope, sage grouse, chukar, cattle, sheep, and numerous non-game wildlife species (most notably high densities of golden eagles).

The Area also has exceptional archaeological and historic values as well as high value as potential bighorn sheep habitat.

The present livestock operations consist of one desert sheep operation (2000 ewes) and two cow/calf operations (1400 cattle). The sheep operation's use periods are April 1 to June 30 and October 16 to December 7. The cattle operations use the allotment from April 1 to October 15 with no grazing system being employed at this time.

Two operators receive licensed grazing use in this allotment. Bob Bunyard controls the desert sheep operation and a cow/calf operation. Cockrell, Inc. controls the other cow/calf operation through a base property lease with Ken Earp.

Grazing preference (AUMs) are as follows:

	<u>Total</u>	<u>Suspended</u>	<u>Active</u>	<u>Exchange of Use</u>
Bob Bunyard	2,818	564	2,254	176
Cockrell, Inc.	10,960	2,677	8,283	-0-
ls Earp	_____	_____	_____	_____
TOTAL	13,778	3,241	10,537	176

In order to facilitate a detailed discussion of the area, we have broken the area into seven (7) units.

Unit 1 - MASSACRE MOUNTAIN UNIT

The Massacre Mountain Unit consists of all those areas above the 6,000 foot elevation line in the north end of the allotment. In this portion of the Resource Area 6,000 foot elevation corresponds reasonably well to the bottom of the bitterbrush zone. Additionally, the 6,000 foot line corresponds well to the break in slope between relatively flat benches and the mountain area.

The Massacre Mountain Unit contains approximately 29,191 acres, of which 27,379 acres are public and 1,812 acres are private.

The Unit is a mixture of higher elevation vegetation types. Range survey typing from 1981 estimated the vegetation in the Unit to be mostly big sagebrush types with scattered low sagebrush stands. Most of the big sage types have some bitterbrush within the stand. Condition transects from 1981 place most of the map units in fair/good condition with poor conditions existing in livestock travel and concentration zones.

The Unit is grazed by both sheep and cattle. Sheep use is made between May 1 to June 30 in the summer and from October 20 to November 30 in the fall. Cattle use is made between May 1 to October 15. Higher concentration of cattle use this Unit during the late summer and early fall. These use patterns by cattle and sheep are due to the high productivity of the area and due to the availability of water.

The Unit provides year round habitat for a population of mule deer. Antelope do make some summer use of the open slopes in the summer. Sage grouse use centers on the series of upland wet meadows scattered throughout the Unit during the summer brooding period. Small resident chukar populations are associated with the steep rocky draws. Other non-game values have not been surveyed in detail, but it is expected that non-game species diversity is high on the Unit.

Wild horses do not use this Unit on a regular basis.

The Unit is a mixture of higher elevation vegetation types. 1981 Range survey data indicates the vegetation in the Unit to be mostly big sagebrush types with scattered low sagebrush stands. Bitterbrush is found throughout the Unit. The 1981 Range Survey data places 72% of the Unit in good condition, 11% in fair to good condition, 15% in excellent condition, and 2% in poor condition. Browse condition varies from good to excellent.

The Unit is grazed by both sheep and cattle. Turnout for the Allotment is April 1, however, sheep use is normally made from May 1 to June 30 and October 20 to November 30. Cattle use in the Unit is normally from May 1 to October 15. Higher concentrations of cattle use this Unit during late summer and early fall. The livestock use patterns are due to the high productivity of the area and to the availability of water.

The Unit provides year round habitat for moderate to high populations of mule deer. Moderate to high numbers of antelope use the Unit in the late summer to winter months. High numbers of sage grouse use numerous upland wet meadows scattered throughout the Unit. Very small resident chukar populations are associated with steep rocky draws. Non-game specie diversity is high.

A predator control program is conducted in the Unit within the parameters established in the Susanville District Predator Control Plans.

Wild horses do not use this Unit.

The Unit has a fairly good distribution of water, primarily from springs. The springs are found on both public and private land. The potential for development of additional water through reservoirs is fair due to the relatively high precipitation of the Unit. There is good potential for dispersion of water both inside and outside of the Unit through pipelines.

The Unit has no potential for increasing forage through seedings. Rocky soils, steep slopes and existing good conditions make seeding impractical and unnecessary. The Unit has the potential to improve range conditions through management, chemical treatment, and burning.

There are 20 known cultural resource sites in this area. However, areas near water sources, such as springs and canyons, have a high potential to contain National Register Quality sites.

None of the Massacre Mountain Unit is within a WSA.

Moderate to severe erosion exists on the Grassy Meadow complex. Potential for meadow rehabilitation is high.

Moderate to high recreation use occurs in the Unit.

The Unit has a fairly good distribution water, primarily from springs. The springs are found on both public and private land. The potential for development of additional water is fair due to the relatively high precipitation of the Unit.

The Unit has no potential for increasing forage through seedings. Rocky soils, steep slopes and existing good conditions make seeding impractical and unnecessary. The Unit does have the potential to increase forage production of grasses and bitterbrush through proper application of herbicides. Burning could be effective in increasing grass production.

There are no known cultural resource sites in this area. However, areas near water sources, such as springs and canyons, have a high potential to contain National Register Quality sites.

None of the Massacre Mountain Unit is within a WSA.

Unit 2 - MASSACRE RANCH BENCH

The Massacre Ranch Bench Unit consists of the benches and drainages below and north of the 6,000 foot elevation of the Massacre Mountain Unit.

The Unit contains approximately 5,898 acres of which 5,158 acres are public and 740 acres are private.

The Unit is almost exclusively big sagebrush with a few scattered fingers of low sagebrush. Bitterbrush is only rarely found in the Unit. Condition varies from poor to good with most areas in fair or better condition.

The Unit is grazed by both sheep and cattle. Sheep use is made during late June while the ewes are being sheared and just prior to the sheep leaving the allotment to be trailed to the forest. Cattle use is from April 1 to late summer. Forage quality and quantity is good during the late summer months, but available water is limiting in this Unit.

The Unit receives little deer use and some antelope use during spring and summer. Sage grouse use the few meadows (private) during brooding. Non-game wildlife are expected to be relatively low due to the relative homogeneity of topography and vegetation.

Wild horses do not use this Unit on a regular basis.

The Unit has an uneven water distribution, primarily from springs. Several of the private springs are fenced from the allotment and are unavailable for use by livestock. Potential for additional water development is fair.

The Unit has some limited potential for increasing forage production through seeding or herbicide application.

The vicinity around Mud Spring contains cave site, lithic scatters and other significant cultural resource sites. The Lassen-Applegate Trail passes through the southwest corner of this area. No other sites are known to exist, however, areas near water sources, such as in canyons and near springs, have a high potential to contain National Register Quality sites.

None of the Massacre Bench Unit is within a WSA.

Unit 3 - GRASSY TABLE

The Grassy Table Unit is a large area of benches, rolling hills and abrupt drainages. The Unit is bounded by Massacre Mountain on the north, Home Camp on the west, Yellow Rock on the south and High Rock on the east.

The Unit contains approximately 25,631 acres of which 25,381 acres are public and 250 acres are private.

The Unit is almost exclusively low sagebrush with big sagebrush confined to swales and drainages. Range condition is mostly good or better.

The Unit is grazed by both sheep and cattle. Sheep make use in this area immediately following lambing. Sheep will move through this area until such time as the early season forbs begin to diminish. Cattle use this area from April 1 to June 15. Forage quality and quantity begins to decline for cattle in this area by June 15, as does water availability.

The Unit serves as the winter and spring range for a large population of antelope (approximately 1000). There is little deer use of the Unit. The entire Unit is used by sage grouse. Non-game species diversity is expected to be fairly low due to the lack of structural diversity in topography and vegetation.

There is limited wild horse use in this Unit. Horses will move into this Unit during the winter months on occasion.

The Unit has little water and almost no water in summer and fall. Potential exists for additional spring/early summer water from reservoirs.

The Unit has virtually no potential for increasing forage production through land treatment projects.

There are no known cultural resources, identified at this time, however, areas near water sources such as springs and in canyons have a potential to contain National Register Quality sites.

The majority of the Unit is contained within WSA's CA-020-913A and B.

Unit 4 - MASSACRE LANE

The Massacre Lane Unit is the narrow dogleg west of the main portion of the allotment.

The Unit contains approximately 13,002 acres of which 10,792 are public and 2,210 acres are private.

The vegetation in the Unit consists of big sagebrush benches and slopes and alkaline flats dominated by greasewood and rabbitbrush. Range condition is generally good.

The Unit is presently used only by cattle. Cattle use is confined to the spring due to the low availability of water. Use is limited in this area due to the presence of larkspur (poisonous plant) in the spring.

The Unit receives very little use by big game, some by antelope. Sage grouse use the eastern hill area in winter. Non-game species diversity is expected to be low due to the dry, homogeneous conditions.

There are no wild horses in the Unit.

The Unit is poorly watered, by one spring and Lord's Lake. Potential exists for additional waters from wells and pit type reservoirs.

The Unit has the potential for increased livestock use through additional water, seeding, sagebrush reduction and chemical control of larkspur.

There are no known cultural resources, in this Unit, however areas near water sources such as springs probably contain National Register Quality sites.

None of the Massacre Lane Unit is in a WSA.

Unit 5 - LITTLE HIGH ROCK

The Little High Rock Unit is made up of the Yellow Rock basin, the uplands east of Mahogany Mountain and the benches bounded by the above areas and the Little High Rock and High Rock Canyons.

The Unit contains approximately 35,492 acres which are all public.

The vegetation of the Unit is dominated by low sagebrush with patches of big sage at higher elevation and in swales. There is also some bitterbrush on north facing slopes of the higher elevations. Range conditions range from poor in the vicinity of water to good in areas away from water.

The Unit is grazed by cattle and sheep. This Area is used as a lambing area by sheep. The use period is from April 1 to April 30. Cattle use in the area is predominately spring use April 16 to May 30 primarily due to the early developing phenology of the range sites and due to the poor availability of late season water.

The Unit is used by antelope, deer, sage grouse, chukar, and a wide range of non-game speices.

Approximately 32 wild horses use this Unit on a year round basis.

The Unit has a vary uneven water distribution, primarily from springs. Many of the springs do not flow during late summer or dry years. The potential for additional water is low due to a lack of significant runoff.

The Unit has little potential for increasing forage through cultural treatment because of the low inherent capacity of the range sites and the shortage of water.

There are no know sites in this Unit, except in the canyons merging with High Rock. Areas near water sources are expected to have potential National Register Quality sites.

The entire Unit is contained within portions of three WSA's (CA-02-913, 913A, 913B).

Unit 6 - EASTERN UPLANDS

The Eastern Uplands Unit consist of the area between Upper High Rock and Pole Canyons and the area east of Pole Canyon and lower High Rock Canyon.

The Unit contains approximately 21,342 acres all of which are public.

The Unit is almost exclusively low sagebrush with limited big sagebrush in a series of north-south drainages. Condition is estimated to be generally good.

The Unit receives no sheep use and very limited cattle use. The limited cattle use in this Unit is due to the low productivity of the range sites and due to a lack of available livestock water.

The Unit is lightly used by antelope in the spring. Other wildlife use is low due to lack of water. The southeast corner of the Unit has good potential for spring and early summer use by bighorn sheep.

Approximately 25 wild horses use this Unit on a year round basis.

The Unit has very limited water in spring and almost no water in summer or fall. Potential for additional water is low due to lack of runoff.

The Unit has almost no potential for increasing forage through vegetation modification.

There are no known cultural resources, in this Unit, however, areas near water sources, such as springs and in canyons, have a high potential to contain National Register Quality sites.

The entire Unit is within WSA CA-020-941.

Unit 7 - THE CANYONS

The Canyon Unit is a series of all or portions of five deep canyons. These canyons are High Rock Canyon, Grassy Canyon, the bottom of Yellow Rock Canyon, Mahogany Canyon and Pole Canyon.

The Unit contains approximately 16,547 acres of which 16,147 acres are public and 400 acres are private.

The Unit consists of two distinct vegetation types. The canyon bottoms are dry or semi wet meadow sites in poor condition dominated by sagebrush/rabbitbrush with heavily utilized understories of ryegrass and various meadow species. The canyon walls are steep rocky slopes broken by rims, talus and rock slide areas. Vegetation is a sparse mixture of high vigor grasses and upland shrubs.

The Unit is presently used only by cattle. Cattle use becomes concentrated in this area from mid June to October 15. This concentrated use occurs when water availability on the surrounding benches becomes limited during the course of the grazing season.

The Unit is home for a small resident deer population. Antelope do not use the Unit. Chukar frequent the rocky slopes. Nesting raptors are common, while other non-game species diversity is expected to be high due to topographic and vegetational diversity. The Unit has potential for supporting a minimum of 200 bighorn sheep.

Wild horses use the canyon bottoms and some slopes in winter.

The Unit has good water distribution in the canyon bottoms from shallow water table and several springs.

The Unit has some limited potential in the canyon bottoms for increasing forage through meadow restoration programs and burning.

This Unit contains a number of significant sites such as rock shelters, occupation sites, quarries, and lithic scatters. Approximately 25% of the area has been surveyed for cultural resources. There are six archaeological districts and ten sites eligible for the National Register of Historic Places. Additionally, the Lassen-Applegate Trail is included in the National Register of Historic Places.

The entire Unit is within portions of three WSA's (CA-020-913-913B and 941).

IV. HISTORY OF PAST PLANNING EFFORTS AND PUBLIC INTEREST

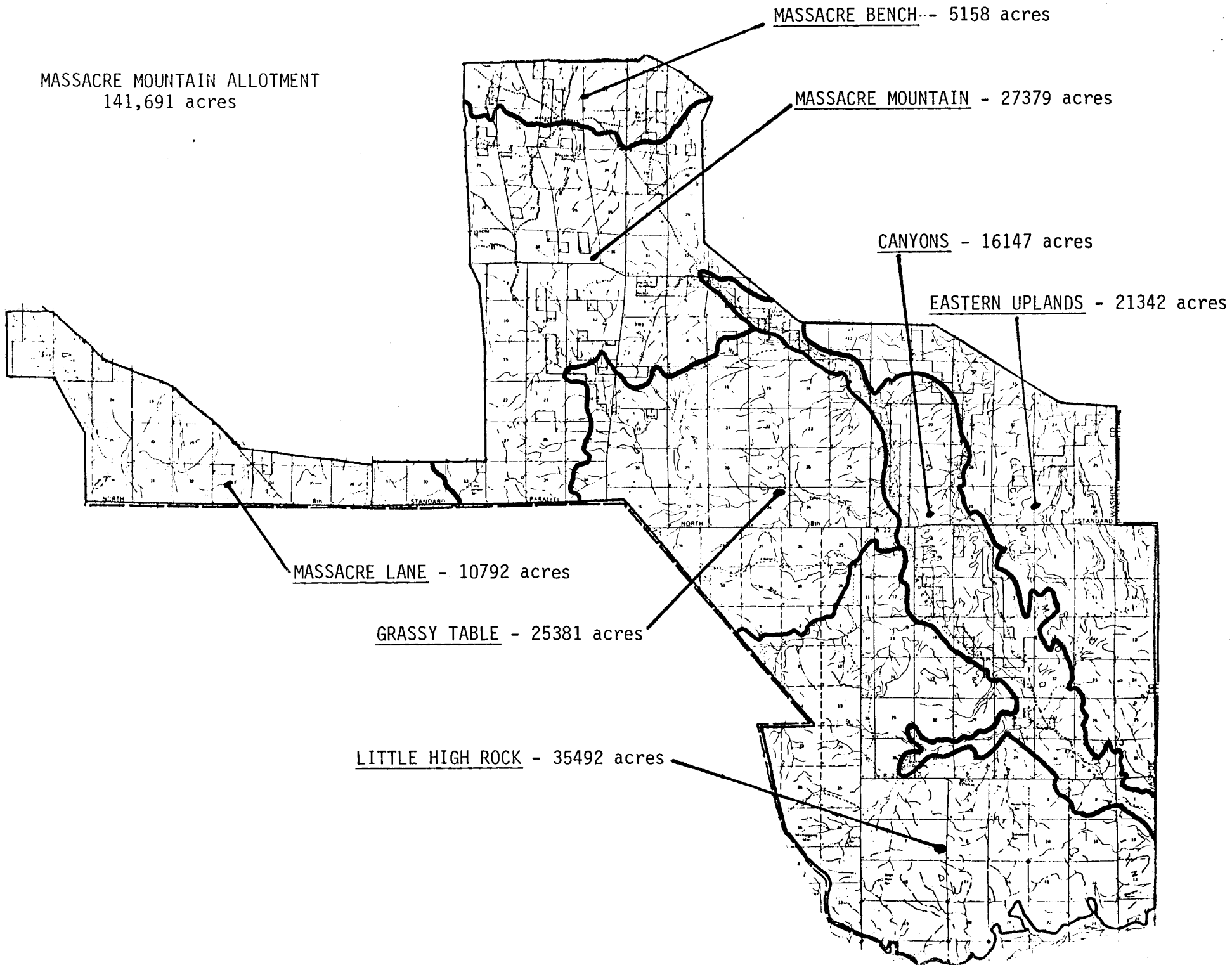
Although the High Rock Canyon complex has attracted the attention of archaeologists, recreationists, historic trail buffs, and wildlife biologists for at least several decades, the resources were not viewed as a composite until the Cowhead/Massacre planning effort of the late 1970's.

Since 1978 a series of planning groups and advisory committees have considered the High Rock Area and made a series of recommendations. To provide a good picture of the "action" since 1978 copies of the following documents are provided for review. The Final Land Use Plan (MFP III) is also included in this section.

<u>DATE</u>	<u>DESCRIPTION</u>
3-7-78	Summary of planning group recommendations - Lewis Nelson Extension Wildlife Specialist U.C. Davis.
5-23-78	Summary of planning group recommendations - Hal Salwasser U.C. Berkely.
5-25-78	Summary of planning group recommendations - Cecil Pierce Farm Advisor - Modoc County.
4-25-80	Letter from Ken Earp. re: Cowhead/Massacre EIS
4-29-80	Letter from Bob Bunyard, re: Cowhead/Massacre EIS
6-26,27-80	Sub Unit 1 recommendations Modoc/Washoe Experimental Stewardship Committee
3-17,18-81	Minutes: Susanville District Advisory Council Meeting
4-24-81	Portions of Cowhead/Massacre Final Land Use Plan (MFP III)
6-12-81	Presentation by Rex Cleary to Nevada State Multiple Use Advisory Committee on Federal Lands
6-13-81	Recommendation by Nevada State Multiple Use Advisory Committee on Federal Lands
7-24-81	Letter from Thomas Hunt: Committee for the Emigrant Trail National Monument
11-12-81	Letters reflecting Nevada Cattleman's Association views on ACEC
4-5-82	Letter from Division of State Parks, Nevada with attached resolution supporting Desert Trail.

V. MAPS

- A. Area Description Units and Acreage
- B. Wilderness Study Area
- C. Wild Horse and Sage Grouse Habitat; Bighorn Sheep Potential
- D. Big Game Use Areas
- E. Livestock Water Developments
- F. Spring Sheep Use Pattern
- G. Fall Sheep Use Pattern



MASSACRE MOUNTAIN ALLOTMENT
141,691 acres

MASSACRE BENCH -- 5158 acres

MASSACRE MOUNTAIN - 27379 acres

CANYONS - 16147 acres

EASTERN UPLANDS - 21342 acres

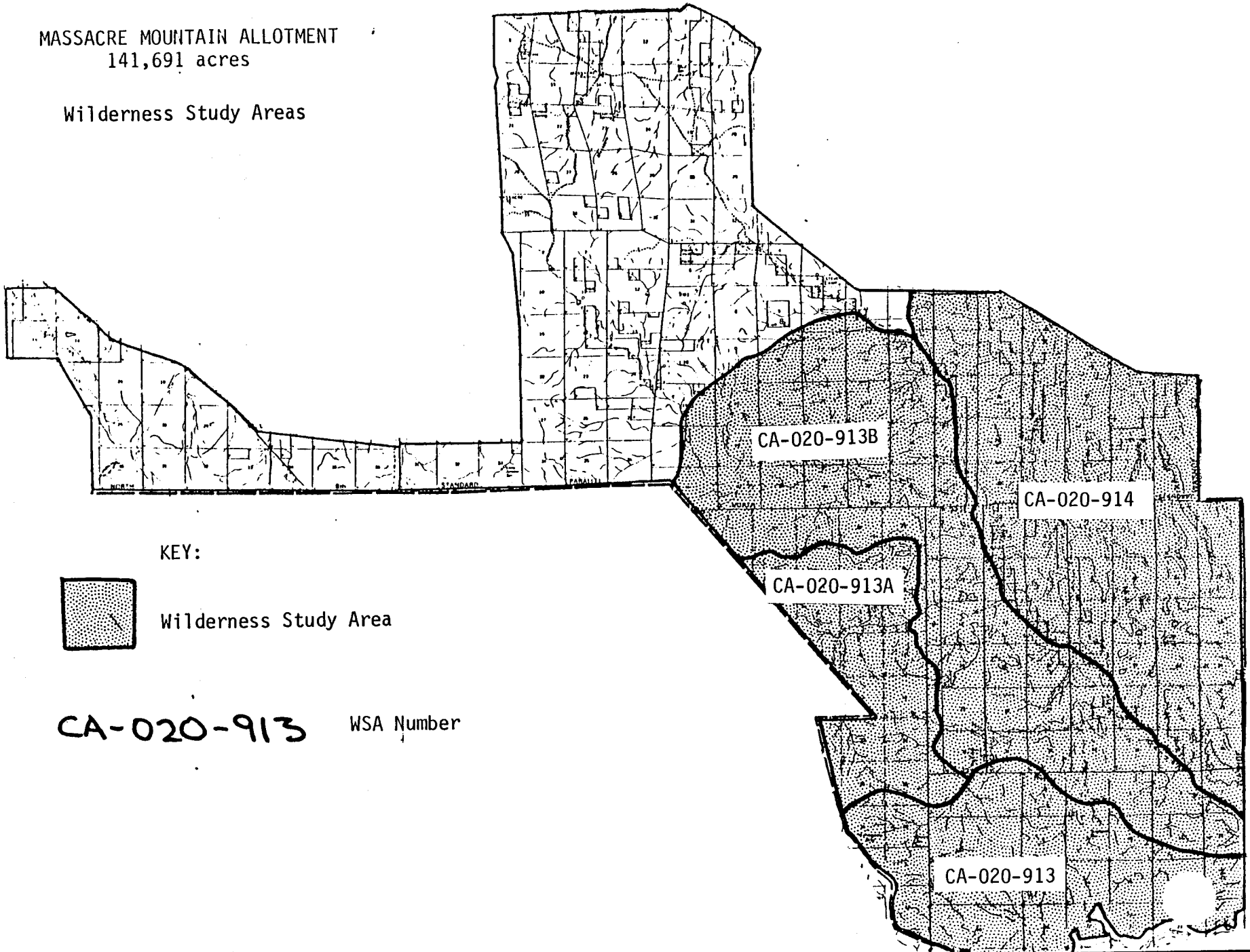
MASSACRE LANE - 10792 acres

GRASSY TABLE - 25381 acres

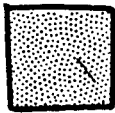
LITTLE HIGH ROCK - 35492 acres

MASSACRE MOUNTAIN ALLOTMENT
141,691 acres

Wilderness Study Areas



KEY:



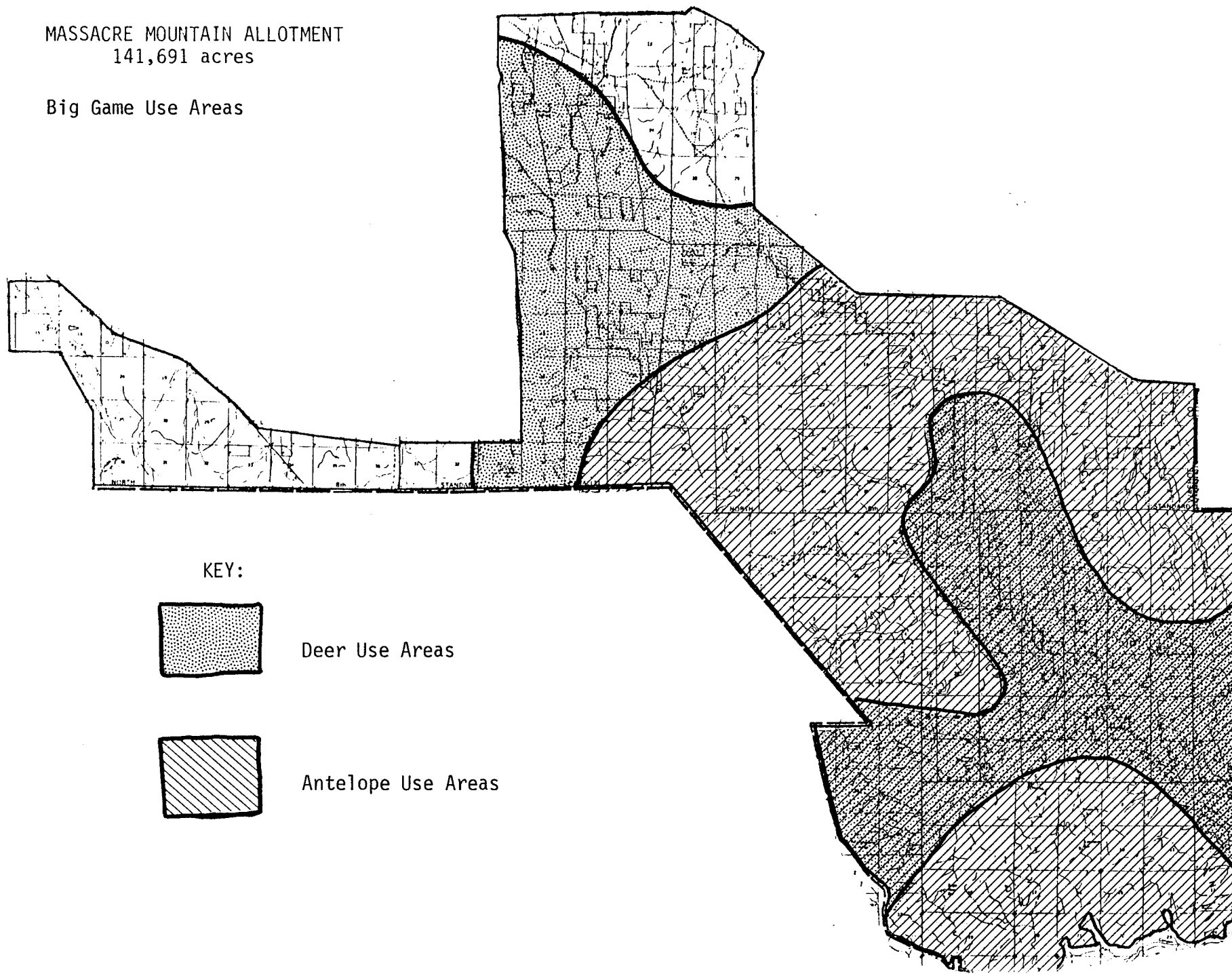
Wilderness Study Area

CA-020-913

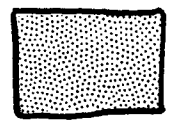
WSA Number

MASSACRE MOUNTAIN ALLOTMENT
141,691 acres

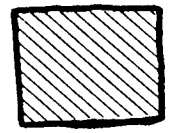
Big Game Use Areas



KEY:



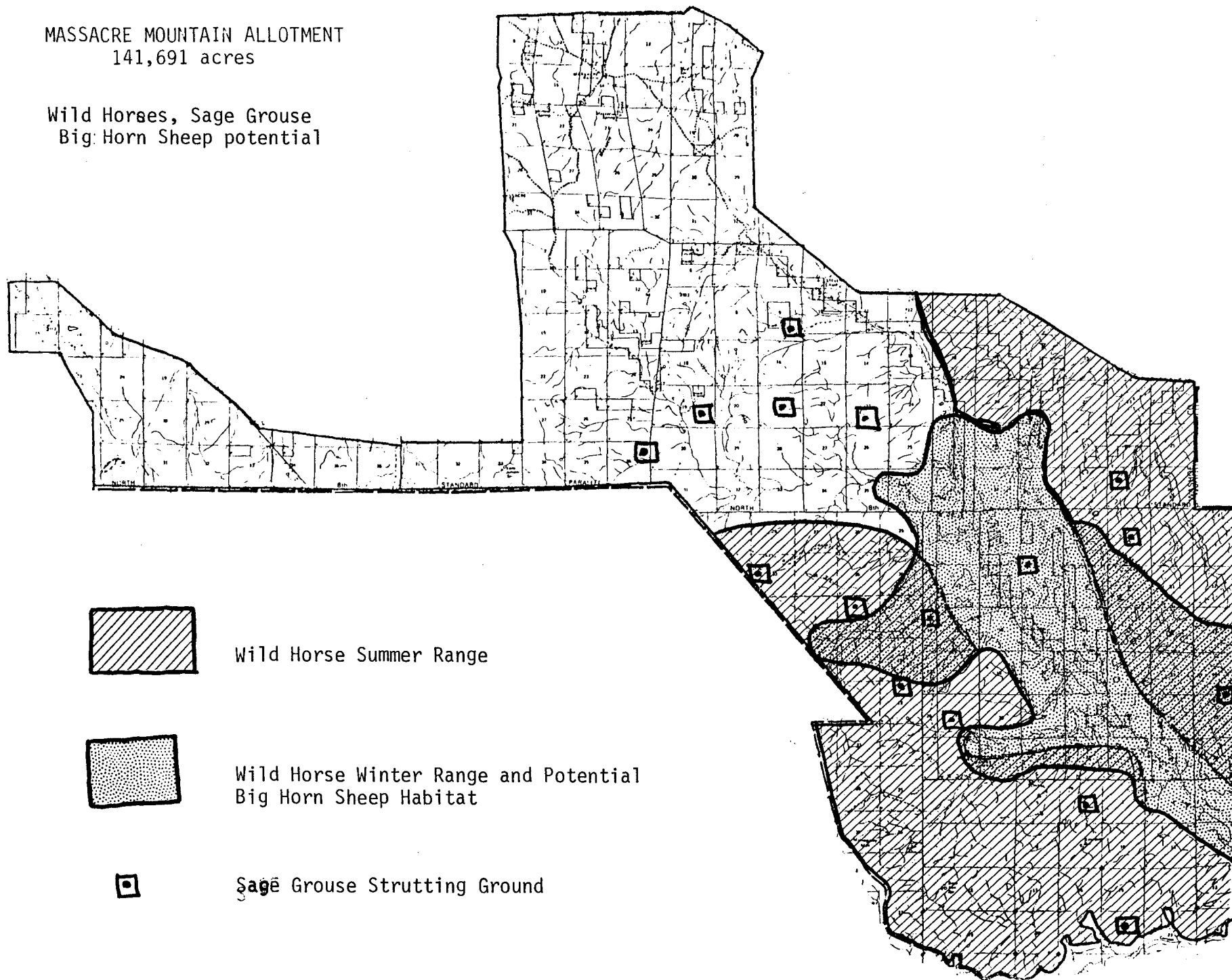
Deer Use Areas



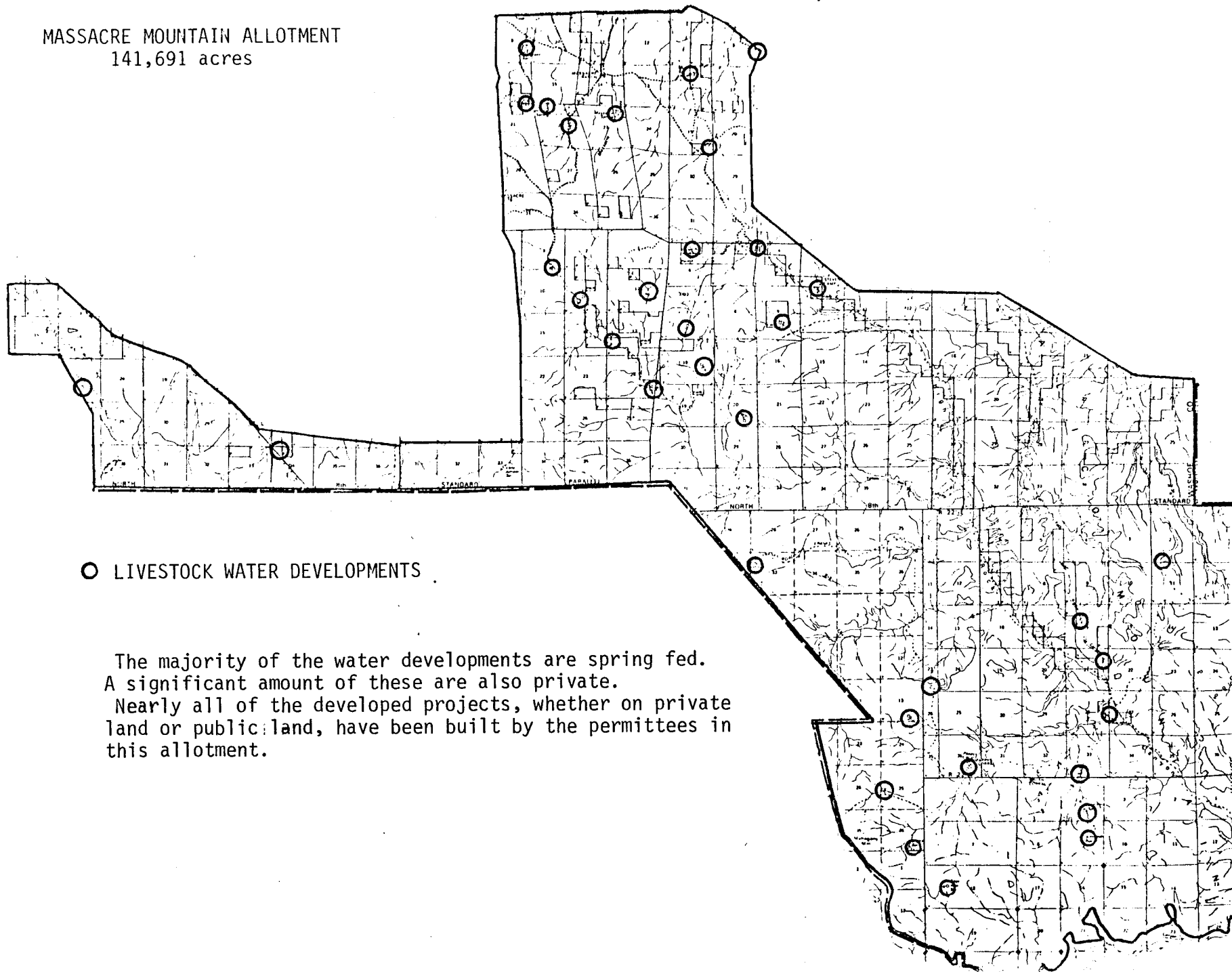
Antelope Use Areas

MASSACRE MOUNTAIN ALLOTMENT
141,691 acres

Wild Horses, Sage Grouse
Big Horn Sheep potential



MASSACRE MOUNTAIN ALLOTMENT
141,691 acres

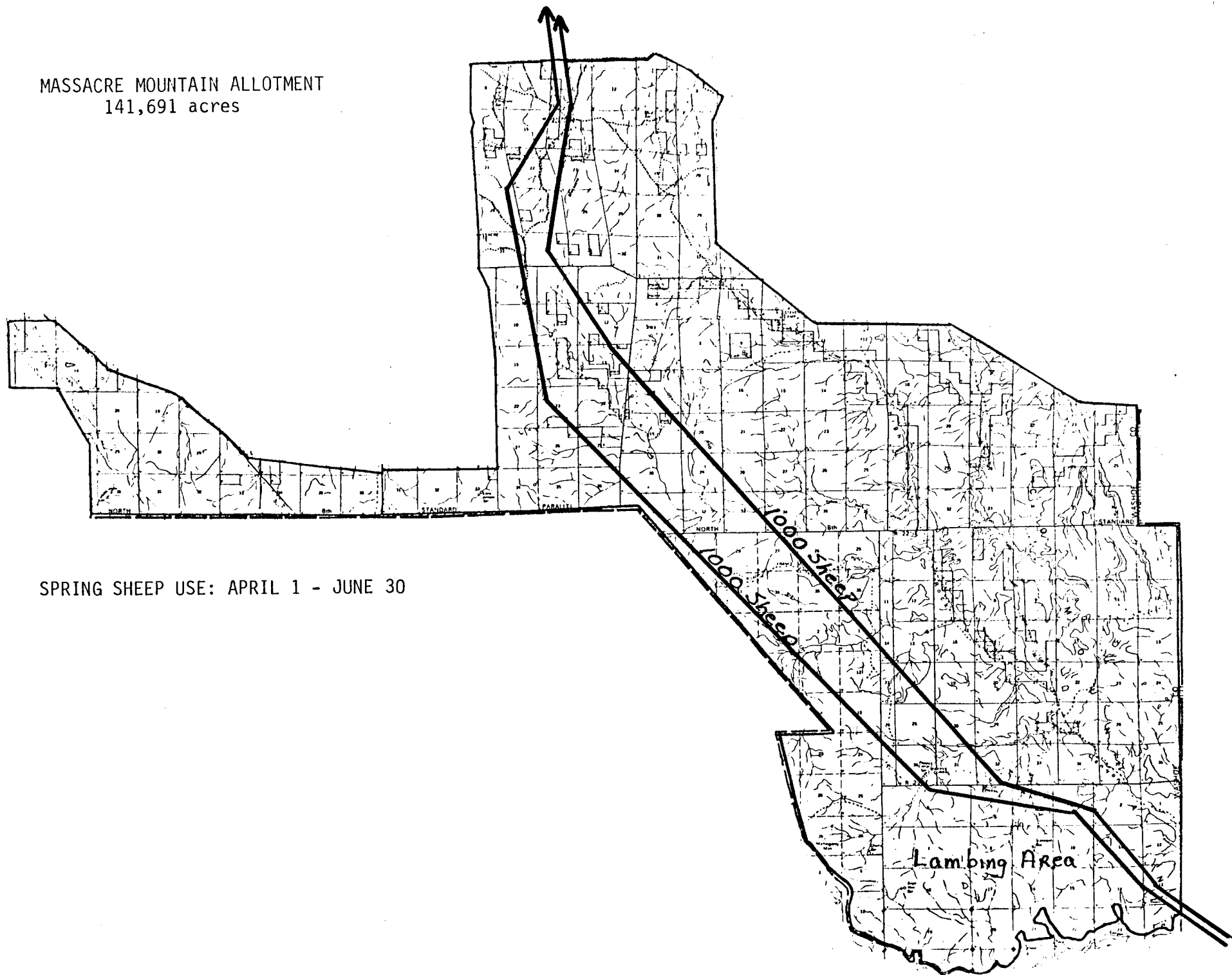


○ LIVESTOCK WATER DEVELOPMENTS

The majority of the water developments are spring fed.
A significant amount of these are also private.

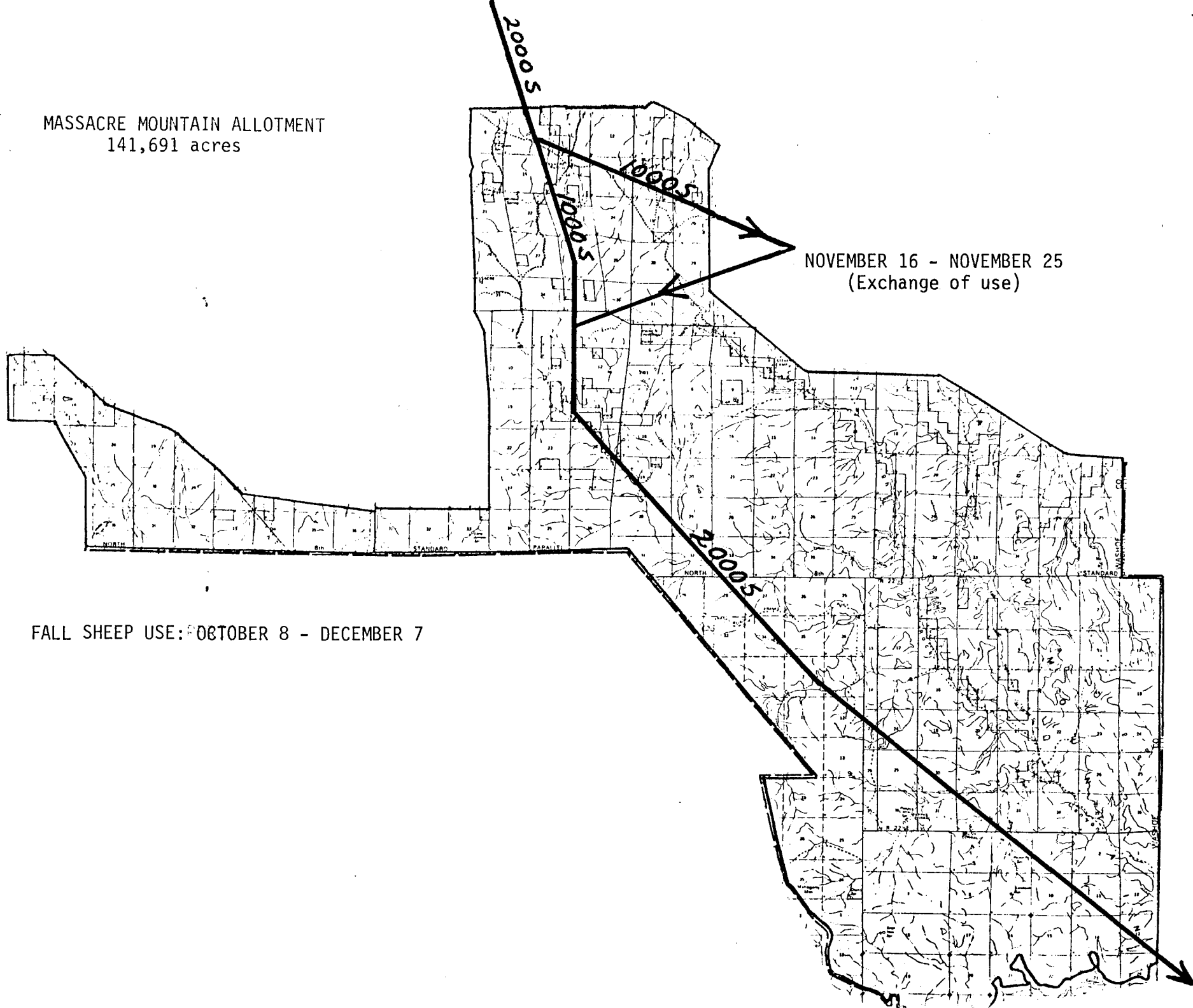
Nearly all of the developed projects, whether on private
land or public land, have been built by the permittees in
this allotment.

MASSACRE MOUNTAIN ALLOTMENT
141,691 acres



SPRING SHEEP USE: APRIL 1 - JUNE 30

MASSACRE MOUNTAIN ALLOTMENT
141,691 acres



NOVEMBER 16 - NOVEMBER 25
(Exchange of use)

FALL SHEEP USE: OCTOBER 8 - DECEMBER 7

COWHEAD/MASSACRE LAND USE PLAN

S UNITS

- 1) HIGH ROCK
- 2) MASSACRE - HUT MTH
- 3) LONG VALLEY - SAND CREEK
- 4) MOSQUITO
- 5) WARNER MTH

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INTRODUCTION

Location of Area

The Cowhead/Massacre Planning Area lies in northeastern California and northwestern Nevada (MAP 1). It encompasses 1,094,000 acres of land, including 769,000 acres of public land, 315,000 acres of private land, and 10,000 acres of state land.

Cowhead/Massacre Planning Process

The Cowhead/Massacre Land Use Plan is a culmination of four years of planning and environmental assessment efforts.

In developing the land use plan (MFP-3) for Cowhead/Massacre, BLM specialist recommendations (MFP-1), the area manager's recommendations (MFP-2, Proposed Action, C/M FEIS) and the Cowhead/Massacre Final Environmental Impact Statement were utilized. All recommendations were either accepted, rejected, or modified, based on public input, staff analysis, and management judgement. Additionally, some decisions which were not part of MFP-2 have been included in the land use plan, as a result of additional resource data and/or staff and public input. For those land use decisions which significantly deviate from MFP-2 or the Cowhead/Massacre EIS recommendations, the reasons for the deviations have been provided in the rationale for those decisions.

Public Participation

Public participation has been extensive throughout the planning process which began in 1977. Numerous meetings were held with the livestock operators from 1977 to present. Consultation will continue through 1982 under the auspices of our experimental stewardship program, as authorized under Section 8 of the Public Rangeland Improvement Act.

An ad hoc committee composed of local ranchers, Nevada and California academia, county Agricultural Extension Service, environmental groups (Sierra Club, Audubon Society, and Wilderness Society), U. S. Fish and Wildlife Service, Nevada and California Fish and Game, National Wildlife Federation, Modoc County, Fund for Animals, and National and Modoc County Cattlemen's Association representatives, met three times in late 1977 and early 1978 to provide guidance on management for Cowhead/Massacre. Their input was then reviewed by the BLM, synthesized, and incorporated into the Cowhead/Massacre MFP-2 recommendations and DEIS.

Management alternatives, particularly those for High Rock (Subunit 1), were presented to the Modoc-Washoe Stewardship's Experimental Stewardship Committee during 1980 for input. This committee is composed of ranchers, Modoc and Washoe Counties, California and Nevada Fish and Game, California and Nevada academia, County Agricultural Extension Service, BLM, U. S. Forest Service, Agriculture Stabilization and Conservation Service, Soil Conservation Service, U. S. Fish and Wildlife Service, and environmental group representatives. Input from this group is reflected in the Subunit 1 section of Alternative 4 in the Cowhead/Massacre Final Environmental Impact Statement. This group will steer the consultation effort mentioned earlier, and make recommendations to the District Manager, based on a technical team review of each allotment.

Each technical team will be composed of BLM, SCS, rancher, Fish and Game, and environmental representatives. Additional representatives, such as wild horse advocates, will be added when appropriate.

The Susanville District Advisory Council reviewed a draft of this plan in March, 1981 and made several suggestions on format, process, and content. This council is composed of environmental, county government, wildlife, agriculture, livestock, general public, recreation, Native American Indian, and cultural resource representatives.

Several meetings and letters were held or received in relation to the committee actions, environmental impact statement, and management proposals. As with any land use planning process, these meetings and letters reflect very diverse opinions on what "multiple use management" entails, and demonstrates that multiple use is truly in the eyes of the beholder.

Relationship to Subsequent Management Plans

This land use plan provides both general and specific decisions to guide the overall management of the Cowhead/Massacre area. It also serves as the Record of Decision (ROD) for the Cowhead/Massacre Grazing Environmental Impact Statement. Discussion of alternatives of the C/M FEIS and approved mitigation will be included in the Rangeland Program Summary (RPS).

The grazing decisions covered in this land-use plan include AUM allocation to livestock, wild horses, and wildlife as well as season of use for livestock. More detailed grazing decisions including:

1. Phase-in of livestock AUM allocations,
2. Phase-in of livestock season of use,
3. Utilization standards and phase-in, and
4. Grazing systems,

as well as responses to the 51 comments received on the Cowhead/Massacre FEIS will be summarized in the Rangeland Program Summary (RPS). Subsequent RPS updates and Individual Rancher Decisions will include the final grazing management program on the items listed above for the RPS, Area of Use, and Base Property Attachment of Qualifications.

Upon completion of the RPS updates and Individual Rancher Decisions, specific on-the-ground management plans (including information on such items as grazing system schedules, exact livestock turnout dates, location of leave areas within seedings, location and design of range improvements, etc.) will be developed. Where possible, one coordinated resource management plan will be developed to encompass those resources previously managed under Allotment Management Plans (AMPs), Herd Management Area Plans (HMAPs), Recreation Management Plans (RMPs), Habitat Management Plans (HMPs), and Cultural Resource Management Plans (CRMPs).

As management plans are formulated, additional data is accumulated, and monitoring systems are implemented, some changes in management decisions may be necessary to more effectively meet the Cowhead/Massacre Land-Use objectives and goals. It must be understood that such management flexibility is essential to provide prudent management on an allotment by allotment basis.

Relationship of Public Lands to Private Lands

The 315,000 acres of private land in the planning unit (approximately 29 percent of the P.U.) was obtained by early settlers, through various government land disposal programs, and includes only the choicest parcels such as springs, streams, and meadows.

Private land plays a vital role in providing critical habitat for fish and wildlife, such as meadows for sage grouse strutting and brooding, and indispensable deer winter range. Many important archaeological sites and other cultural resources are also found on private holdings.

Intermingled private and public lands offer a compelling opportunity for range management under a coordinated resource planning concept. Livestock grazing would be drastically reduced without the water and forage found on private land, and, by the same token, private holdings are too small to support viable livestock enterprises without public grazing. Range improvements and livestock grazing systems must be planned and synchronized to best utilize both private and public resources.

Unless otherwise stated, the land use decisions only pertain to the public lands administered by the BLM. However, although the BLM only has the responsibility for managing public lands, close cooperation with private landowners, permittees, and other land managing agencies is essential to achieve the goals and objectives described in this plan.

Format

Cowhead/Massacre has been divided into five subunits (MAP 2): High Rock (Subunit 1); Massacre-Nut Mountain (Subunit 2); Long Valley-Sand Creek (Subunit 3); Mosquito (Subunit 4); and Warner Mountains (Subunit 5). Dividing the planning unit into subunits allows land use planning on an areal basis for easier determination of land use goals and decisions for smaller, more workable units of public land. Land use goals and decisions were formulated for Subunits 1-4. Land use decisions for Subunit 5 have been deferred and will be formulated during the Alturas Resource Area management planning effort, since the lands and resources in Subunit 5 more closely resemble those of the contiguous National Forest Lands and the public lands in the Alturas Resource Area. Consequently, Subunit 5 will not be discussed in this document.

The following land use goals and decisions have been divided into two parts: (1) overall land use objectives and planning goals, and those decisions which apply study area-wide or to two or more subunits, and (2) significant issues, planning goals, and decisions specific to each subunit. Each set of decisions is followed by a set of rationale which gives the reasons for each decision, the beneficial and adverse impacts, and how each decision was derived. Each rationale is numbered to correspond with the appropriate decision for easy reference.

GENERAL OBJECTIVES, GOALS, POLICY, DECISIONS, AND RATIONALE

Land Use Objectives and Goals

The overall land use objectives for Cowhead/Massacre are:

1. Improve the ecological condition of public lands by preventing destructive uses and by providing for their orderly use and improvement.
2. Give special consideration and priority to the protection and management of areas with special environmental concern.
3. Stabilize the social and economic environment of the local community with special consideration for the family owned and operated ranch business and lifestyle.

The following overall planning goals have also been developed:

- a. Maintain the primitive values and scenic resources in the High Rock area.
 - B. Manage livestock grazing in the Cowhead/Massacre area at a level compatible with other resource needs and at the capacity of the vegetative resource to provide for sustained yield/use without changes in livestock use in all but the severest drought years. Increase livestock carrying capacity by 40,000 animal unit months (AUMs) in 20 years.
 - c. Raise the average range condition class of the planning unit from "poor/fair" to "good" by 1998 (615,000 acres).
4. Provide forage for about 2,300 deer (4,700 AUMs) and 1,800 antelope (2,800 AUMs), reasonable numbers as agreed upon by BLM and Nevada Department of Wildlife. Reasonable numbers of deer are determined by projecting population levels from harvest data, using the modified Selleck-Hart formula (Tsukomoto, 1977), and averaging the population levels for the 15-year period of 1961 through 1975. The average is considered to be a "reasonable number" of deer to manage. Reasonable numbers of antelope are determined by projecting population levels from annual aerial census data, assuming 50 to 55 percent of the population is observed during an aerial survey, and further expanding the estimated populations by 50 percent.
 5. Protect and maintain a population of 270 wild horses in the Cowhead/Massacre area.
 6. Improve 10.0 miles of stream habitat to excellent condition by 1990.
 7. Protect archaeological and historic resources, as required by law.

Anticipated Degree that Land Use Decisions Will Meet
Overall Land Use Objectives and Goals

Objective 1: Objective will be met. Managing livestock grazing within the physiological limits of the forage species will benefit all resources by improving ecological conditions.

Objective 2: Objective will be met. The Cowhead/Massacre land use decisions recognize the primitive and scenic values of the High Rock Canyon area, provide habitat for the reintroduction of bighorn sheep, ensure that the tremendously important cultural resource values are not damaged, and protect and enhance important wildlife habitat such as meadows, riparian areas, raptor nesting sites, and key mountain brush areas.

Objective 3: Objective will be met. Although short term adjustments in livestock use will have economic impacts on some livestock operators, an anticipated increase in 52,000 AUMs of forage over the long term, development of additional range improvements, and seedings will stabilize the social and economic environment of the local community and give special consideration for the family owned and operated ranch lifestyle.

Goal 1: Goal will be met.

Goal 2: Goal will be exceeded. Managing livestock grazing within the physiological limits of the forage species is compatible with other resource needs and provides for sustained yield/use in all but the severest drought years. Livestock carrying capacity will be increased by 52,000 AUMs (130% goal achievement).

Goal 3: An estimated 396,000 acres of rangeland (64% goal achievement) will be improved to good condition by 1998.

Goal 4: Goal will be met.

Goal 5: Initially, forage is allocated for only 225 wild horses (85% goal achievement), but as additional forage becomes available, horse numbers will be allowed to expand to meet or exceed the goal of 270.

Goal 6: Goal will be met.

Goal 7: Goal will be met, with adequate mitigation.

Policy and Management Guidelines

In addition to land use decisions, management actions must adhere to a number of laws and policy guidelines. Most notable among these are the following:

1. Wilderness Study Areas (overlay 1) will be managed pursuant to BLM Interim Management Policy and Guidelines for Lands Under Wilderness Review, dated December 12, 1979, until Wilderness Studies are completed. All projects must follow the non-impairment criteria of the Interim Management Guidelines.

2. A cultural resource survey will be required for each project site before construction (BLM policy; National Historic and Preservation Act of 1966; National Environmental Policy Act of 1969; Executive Order 11593; 36 CFR 800).
3. Endangered and threatened species survey and clearance will be required for each project site before construction (Endangered Species Act). Also, the BLM policy on Conserving Rare, Threatened or Endangered Plants on Public Lands in California (I.M. No. CA-77-256) requires that special consideration be given to candidate species and California Native Plant Society listed species. Any species found that are on lists covered by the above Instruction Memorandum will be given that consideration required by I.M. No. CA-77-256.
4. Environmental damage during construction of projects will be minimized (BLM policy; BLM Manual 6300) by adhering to the following:
 - a. Permanent roads or trails will not be constructed to project sites. Existing access and off-road vehicles will be used, where needed (BLM policy).
 - b. Disturbance of soil and vegetation at all project sites will be held to an absolute minimum.
 - c. Land clearing of only the project site will be allowed, except on sites requiring excavation.
 - d. Areas where soils would be disturbed will be finished to blend into the surrounding soil surface.
 - e. Visual resource contrast ratings will be applied in the planning stage of major proposed facilities.

Decisions

- ✓1. Give preference to maintaining the Bunyard livestock operation in Subunit 1, 2, and 3 (Massacre Mountain Allotment). Maintain Earp's livestock operation in that portion of the Massacre Mountain Allotment that lies in Subunit 2 and 3, to the extent possible after allocation is made to Bunyard's operation.
- ✓2. Allow livestock turnout dates on those allotments designated for intensive management in subunits 2 through 4 as follows: 1/
 - a. After a grazing system has been implemented, turnout may occur 4/15 or later if the grazing system provides adequate residual forage to support such early turnout. If the grazing system does not provide residual forage, turnout will be based on allotment specific range readiness of the major ecological sites (Anderson, 1978) which normally occurs between 4/15 and 5/15.
- 1/ The Rangeland Program Summary (RPS), rather than this land-use plan, will address how turnout dates will be determined in the interim (phase-in period) before the levels of management prescribed in the land-use decisions are achieved.

- b. Livestock turnout may occur anytime after 4/15 on native range identified as seeding areas (overlays 4-6).
 - c. Livestock turnout may occur anytime after 4/1 on existing seedings.
3. Ensure that moderate use (40-60%) is the upper limit for livestock use for major use areas on the native range. For specific areas within Subunits 2 and 3 such as critical mountain brush types (overlays 4 & 5), light use on mountain bitterbrush will be the upper limit for livestock use.
 4. Do not allow livestock salting on springs, meadows, streams, and aspen areas. Location of salting stations will be determined by the BLM in consultation with the livestock permittees.
 5. Fence meadows and aspen stands which contain significant wildlife values such as sage grouse, and provide water outside the fences for livestock, wildlife, and wild horses. Allow prescribed grazing on these areas to maintain vegetative vigor and diversity. Provide at least one growing season of rest every two years.
 6. Encourage free use or commercial permits within Subunits 2 through 4 to meet local demand for fence posts, pole, and fuel wood.
 7. Do not allow land uses which would impair the qualities which qualify significant cultural resources for the National Register of Historic Places.
 8. Before initiating major ground disturbing activities, consult the local Native American community to prevent disturbance or destruction of places holding traditional heritage values (including, but not limited to, burial grounds, sacred places, and ceremonial activity sites).
 9. Encourage mineral exploration and development under appropriate laws on all public lands, except those withdrawn through specific decisions for each subunit.
 10. Encourage materials free use permits and material sales for aggregates (within Subunits 2 through 4) to meet public demand. Provide aggregate material to support BLM, state, county, and city projects.
 11. Encourage free collection of petrified wood and decorative stone, lying on the surface within Subunits 2 through 4, up to allowable limits. Conduct sales when subsurface collection involving surface disturbance is required to extract the material.
 12. Establish powerline right-of-way corridors on the east side of Surprise Valley, along the existing 750 KV transmission line and along the Forty-Nine Pass road.
 13. Allow miscellaneous rights-of-ways within Subunits 2 through 4, consistent with environmental concerns, as needs are identified by local government, citizen groups, and individuals.

14. Encourage land tenure adjustments, where these actions accrue multiple use benefits to the public.
15. Utilize fire as a range betterment tool.
16. Adhere to the following guidelines when designing and developing range improvements (planned at the Allotment Management Plan level).

A. Water Developments:

1. Fence and design with a buffer brush strip around the perimeter, those perennial reservoirs which have the potential for wetland development. Provide water outside the fenced areas.
2. Unless precluded by topography, fence springs as well as the meadows around the springs. Leave some water from each spring at the spring source and at ground level for wildlife, and locate watering troughs far enough from riparian habitat to prevent trampling. Fence overflow areas from the troughs to prevent trampling of the overflow pipe.
3. Provide water from selected wells for wildlife and wild horses during years when areas are rested from livestock grazing.
4. Provide a rock ramp in all water tanks to allow wildlife to safely use water tanks without risk of drowning.
5. Reseed areas disturbed during water development to minimize soil loss.

B. Fencing:

1. Keep fencing to the absolute minimum needed to complete the required job. Use herding and improved water availability for livestock as a method to control livestock instead of pasture fencing where livestock operators and BLM agree on feasibility during allotment management plan development.
2. Construct all new fences on deer and antelope range, using BLM Manual 1737 type 1 specifications for three-strand, and type A specifications for four-strand fences.
3. Install walk-overs, gates, letdown fence panels, or other appropriate devices where fences cross trails used by recreationists, livestock operators, wildlife, or wild horses.

C. Land Treatments (overlay 2):

1. All Areas:
 - a. Big Game

Do not allow brush removal within $\frac{1}{4}$ mile of antelope kidding grounds.

b. Sage Grouse

Leave 100 yard buffer zones around meadows and along drainages.

c. Raptors

(1) Leave buffer zones around rimrock areas.

(2) Design treatments within 1½ miles of active eagle or falcon eyries to provide edge effect, and leave 2,000 acres within this zone untreated (islands, etc.).

(3) Do not conduct land treatments within one mile of active eagle or falcon eyries between February 1 and June 15.

d. Other

Rest land treatment areas from livestock grazing until the area manager determines that the desired plant response is achieved.

2. Area A:

Conduct land treatments (spraying or burning) only when needed to enhance native vegetative qualities.

3. Area B:

a. Big Game

(1) Adhere to antelope guidelines (Guidelines for the Management of Pronghorn Antelope - 8th Pronghorn Antelope Workshop - Jasper, Alberta, 1978) for seeding developments.

(2) Allow spraying only in early spring to avoid killing bitterbrush on deer winter range.

(3) Ensure that treatment areas have areas of 20 to 40 percent of the total area.

(4) Include one pound of alfalfa and/or sweet clover per acre of seeding.

b. Sage Grouse

Ensure that all land treatments adhere to Nevada Department of Wildlife, "Guidelines for Vegetal Control Programs in Sage Grouse Habitats in Nevada (1969, revised 1972)."

c. Other

Allow land treatments (spraying or burning) on sites with high productive potential which do not respond to grazing management within a reasonable time.

4. Area C:

a. Big Game

(1) Ensure that treatment areas have leave areas of 10 to 20 percent of the total area.

(2) Include a seeding mixture of one pound of alfalfa and/or sweet clover per acre of seeding.

b. Sage Grouse

Adhere to the Nevada Department of Wildlife, "Guidelines for Vegetal Control Programs in Sage Grouse Habitats in Nevada (1969, revised 1972)." Strutting grounds of marginal importance may be considered for land treatment on a case by case basis. Their importance will be evaluated by State Fish and Game, and BLM wildlife biologists.

c. Other

Allow land treatments (spraying or burning) on areas which will not otherwise respond to grazing management within a reasonable time.

5. Area D:

a. Big Game

Include a seeding mixture of one pound of alfalfa and/or sweet clover per acre of seeding.

b. Sage Grouse

Evaluate on a case by case basis. Areas within two miles of strutting grounds which do not meet nest habitat requirements may be treated.

c. Other

Design vegetative manipulation projects to provide maximum livestock forage.

17. Allow predator control pursuant to the Susanville District Animal Damage Control Plan. Direct control towards the specific predators causing damage rather than the general predator population.

Rationale

1. This is a new decision which reflects the intent of the Cowhead/Massacre land-use objective #3 to stabilize the social and economic environment of the local community with special consideration for the family owned and operated ranch business and lifestyle. This objective was developed early in the Cowhead/Massacre land-use planning process. (C/M Ad hoc committee, December, 1977-May, 1978.)

The Cowhead/Massacre ad hoc and Modoc-Washoe Experimental Stewardship committees strongly urged maintenance of the Bunyard livestock operation in addition to removing cattle grazing from Subunit 1 (C/M ad hoc committee reports, stewardship resolution). Earp was aware of these recommendations and was fully informed of possible reductions or elimination of livestock grazing from Subunit 1 (Swickard, telephone confirmation) prior to his acquiring the grazing preference in April, 1978.

Although regulations (43 CFR 4110.3-2) state that livestock reductions should be made proportionately among operators based on current grazing preference, proportionate reductions in the Massacre Mountain Allotment would mean the demise of the Bunyard livestock operation. There would not be adequate AUMs to support his sheep operation and conversion to cattle may not support the total existing ranch operation.

Maintaining Bunyard's livestock operation would help continue to support the local economy, whereas reductions in Earp's operation would have little effect on the local economy since his operation is centered outside the area. Therefore, this decision is consistent with the BLM's "good neighbor" policy which directs the BLM to be more responsive to the needs and desires of communities at the local level (Improving Public Service in the Bureau of Land Management, Jan. 1980, pgs. 14-15). This issue of socio-economic impacts surfaced not only during the land-use planning for Cowhead/Massacre, but also during preparation of the 4 year authorization for Fiscal Year 82-85 at the resource area level (Surprise Resource Area, October, 1979) and at the National level (BLM's Report to Congress in Support of the Fiscal Year 82-85 4 Year Authorization (Draft 2/29/80 part III B)).

Therefore, by giving preference to Bunyard's operation, this decision reflects public input and carries out the intent of one of the overall land-use objectives for Cowhead/Massacre as well as the BLM "good Neighbor" policy by protecting the integrity of the local socio-economic environment.

2. MFP 2 recommended turnout dates of not later than June 15 for areas 2A and 2E and May 15 for the rest of the Study area. However, it has been demonstrated through grazing systems just north of the Cowhead/Massacre Planning area, and pointed out in public comment to the FEIS, that rangeland improvement can occur with 4/15 and earlier livestock turnout dates (C/M FEIS, p. 3-11). Each of these systems was designed to provide adequate rest for vegetative recovery and to leave old forage to turn livestock onto the following grazing season. Numerous range experts have voiced support for this approach (Gus Hormay, personal communications and

published works; A. K. Majors, personal communications; Bill Phillips, personal communications; Bill Anderson, personal communication). Consequently allowing 4/15 turnout on those areas with systems which provide adequate residual forage should not adversely affect vegetative response and at the same time would not cause significant economic impacts on livestock operators.

Several areas have been identified for seeding to provide early turnout for livestock while delaying turnout on native range. Since these areas are scheduled for conversion to exotic species when funds are available, these areas could be fenced, provided with water, and used prior to seeding and still provide early turnout areas for livestock while delaying turnout on the rest of the native range. Livestock use dates for these areas would be approximately the same both before and after the seedings are established. Because of the limited use which allows regrowth of vegetation after May 1, native vegetation in these area could attain 85-90% normal growth. If this vegetation improves adequately, seeding with exotic species may not be necessary.

Those areas that are seeded will be used as early turnout areas (anytime after 4/1) for livestock. They can be grazed each spring as long as livestock are removed while there is adequate soil moisture for regrowth (Phillips, personal communications). If this stipulation is fulfilled, crested wheatgrass can be expected to store 85-90% of normal food reserves.

3. (Reflects intent of MFP-2 recommendations for individual subunits.) Limiting livestock use to 40-60 percent of annual growth will protect watershed values and ensure adequate wildlife forage and cover each year after livestock have been removed from the range. Limiting livestock use of bitterbrush to light use ensures that adequate browse is available for wildlife on those areas.
4. (Accepts MFP-2 recommendation.) Locating salting stations away from natural livestock concentration areas such as meadows will help prevent severe degradation through overgrazing and trampling of those areas.
5. (Modifies MFP-2 which recommended fencing 25-50% of the meadows within the study area.) Meadows and aspen stands are important to particular wildlife values throughout Cowhead/Massacre. However, because not all meadows and aspen stands are critically important to wildlife, careful evaluation must be made to ensure that those areas which are important are the ones fenced and given special management consideration. Providing at least alternate year's growing season of rest will significantly improve these meadows. Prescribed grazing provides inexpensive means to maintain vegetative diversity on meadows.
6. (Accepts MFP-1 recommendation.) At present and in the foreseeable future, the supply for these low-value products far exceeds the demand, and they can be harvested with minimal environmental impact.

7. (Accepts MFP-1 and 2 recommendations.) Protection of and consultation
8. on significant cultural resource values will guard against loss of valuable information and will recognize traditional heritage values of the modern Native American community.

9. (Accepts MFP-1 recommendations.) Only by keeping areas open to exploration can vital mineral discoveries be made, thus helping to reduce the
10. Nation's dependence on foreign mineral sources. Restricting mineral withdrawal to specific areas will protect unique resource values while
11. allowing mineral exploration and development elsewhere. Providing permits for sand, gravel, petrified wood, and decorative stone will help satisfy public demand for these materials.

12. (Accepts MFP-1 and 2 recommendations.) Routing powerlines, as indicated,
13. will minimize visual impacts on the area. Because access already exists
14. along these routes, there would be minimal disturbance during construction and maintenance of new lines. Miscellaneous rights-of-way and lands actions are necessary for the orderly development of the region while commercial power and adequate access are important amenities to rural populations.

15. (New Decision). Under certain situations, prescription burning as well as a "let burn" policy could effectively promote range improvement.

16. (Accepts MFP-2 recommendation.) The guidelines for range improvements will minimize impediment to movement of livestock, wildlife, and wild horses, protect important wildlife habitat (strutting grounds, meadows, kidding areas, etc.), provide water at ground level and for wildlife where water has not existed before.

17. This decision rejects the MFP-2 recommendation that no predator control be allowed, except in unusual circumstances, and on a case-by case basis. During the 1980 grazing season, Bunyard lost 900 lambs to predators. This is a heavy economic impact. Allowing predator control will lessen Bunyard's economic loss. The Animal Damage Control Plan currently contains time of control, method of control, and area of control specific to Bunyard's sheep operation. It can also provide for predator control on a case-by-case basis throughout Cowhead/Massacre, if livestock or wildlife losses warrant such measures.

HIGH ROCK
(Subunit 1)

HIGH ROCK (SUBUNIT 1)

ISSUES, GOALS, DECISIONS, AND RATIONALE

Issues

The following major issues were uncovered during the BLM planning process for Subunit 1 and were listed in the Cowhead/Massacre MFP II:

1. Livestock and wild horse use is conflicting with all resource objectives but reductions in grazing will have negative economic impacts and wild horse reductions are opposed by wild horse advocates.
2. Recreational limitations may protect resource values but these limitations constitute constraints on the public; constraints many don't want.

Land Use Goals

The following land use goals (listed in the Cowhead/Massacre FEIS, page 1-6) were developed to guide the overall management of the High Rock Subunit:

1. Maintain High Rock Complex in a primitive state by preservation of the natural characteristics of the area.
2. Preserve 1,953 archaeological sites, 12 historical sites, and 16 miles of the Lassen/Applegate Trail.
3. Provide wildlife habitat in suitable condition for bighorn sheep, 100+ species of nongame wildlife, 650 antelope, and 125 deer.

Anticipated Degree Land Use DecisionsWill Meet Planning Goals

Goal 1: Goal will be met on east-side of High Rock Canyon and met to a large degree on the west-side. High positive benefits will accrue to vegetation, soils and water, wildlife, and archaeological values.

Goal 2: Goal will be met with adequate mitigation. Substantial reduction in trampling of archaeological sites will occur (pg. 8-84, FEIS). Continued sheep grazing on the west side could have some impacts on 1200 sites but sheep could be herded away from sensitive zones (pg. 8-86, FEIS). The small herd of wild horses have a small but incremental effect on cultural sites (pg. 8-86. FEIS).

Goal 3: Goal will be generally met although the potential for successful bighorn reintroduction is diminished due to increased possibility of disease transmission from domestic sheep grazing on the west side (pg. 8-89, FEIS). However, with adequate mitigation, the potential for successful reintroduction is still good (Summary Table, FEIS).

Decisions

In addition to the following specific decisions, general decision numbers 1, 4, 7, 8, 15, 16, and 17 apply to the High Rock Subunit.

1. Adjust the northwest boundary of Subunit 1 to run southeast from Stevens Camp along the west rim of High Rock Canyon to the north rim of Yellow Rock Canyon to the Home Camp Allotment boundary fence (overlay 3).
2. Combine the Little High Rock and the Massacre Mountain Allotments into one allotment, hereafter referred to as the ~~Massacre Mountain~~ Allotment (overlays 3 and 4).
3. Allocate forage among both consumptive and non-consumptive resources as shown in TABLE A, Forage Allocation For Subunit 1. As additional forage becomes available, allocations will only be made to wildlife and non-consumptive uses.
4. Terminate cattle grazing in the entire subunit. Allow domestic sheep grazing to continue west of High Rock Canyon and north of Little High Rock Canyon and designate this area for intensive livestock grazing management (overlay 3).

Further cancellation of livestock will not occur to provide buffer zones to prevent disease transmission.

5. Provide habitat in the High Rock Canyon complex and east to the Winnemucca District Boundary for the reintroduction of bighorn sheep (overlay 3).
6. Manage all ecological sites within Subunit 1 to achieve site potential.
7. Establish the High Rock Herd Management Area (HMA) (overlay 1) and manage for a population of 70-100 wild horses, as long as monitoring shows that horses are not causing significant impacts on cultural resources with National Historic Register qualities. If wild horses do cause significant impacts on these sites, then remedial management action (i.e. herd reduction, removal, or relocation through fencing, etc.) will be taken to protect the particular sites that are being degraded.
8. Do not allow bulldozers or other mechanized surface vehicles for fire control unless there is significant risk to human life, wildlife habitat, or livestock.
9. Allow vehicular traffic in High Rock Canyon and on routes designated on overlay 3. Close all other routes of travel.
10. Prohibit vehicular travel through High Rock Canyon during the courtship and incubation period of raptors (February 15 to March 31) and during or immediately following periods of wet weather. Encourage travel on improved county roads (overlay 3) during these periods.

Table A
FORAGE ALLOCATION
Subunit 1

EXISTING FORAGE PRODUCTION (AUMs) ^{1/}	WATERSHED, WILDLIFE COVER, SOIL STABILIZATION	WILDLIFE (AUMs) ^{2/}				Total	Class	LIVESTOCK ^{3/}		WILD HORSES		GRAND TOTAL
		Deer	Antelope	Big Horn	Season			AUMs	Numbers ^{4/}	AUMs		
21,696	10,848	250	350	120	720	Sheep	04/01-04/30	500	100	1,200	13,268	
							12/01-12/15 ^{5/}					

^{1/} Cowhead/Massacre FEIS, p. 2-19. Existing livestock forage production is 10,848 AUMs at 50 percent use level. Therefore, total production is 10,848 AUMs X 2 = 21,696 AUMs.

^{2/} Allocation made on a unitwide basis.

^{3/} Livestock use area is west of High Rock Canyon and north of Little High Rock Canyon.

^{4/} Maximum numbers. Numbers can vary from 70 to 100.

^{5/} One week trail during a two week period.

*See MFP Amendment
dated 11/3/83 to*

11. Initiate a mineral withdrawal for the entire subunit to protect it from future mineral development. Obtain private mineral rights in High Rock Canyon, whenever possible.
12. Do not allow construction of any major utility or transportation facility within Subunit 1.
13. Acquire all private lands within Subunit 1.

Rationale

1. This decision modifies the subunit boundaries established in MFP-2, which consisted of an arbitrary straight line between Subunits 1 and 2. This line was established as much on the cost of fencing the line as on the similarities in resources, topography, etc. The new boundaries will more accurately conform to existing topographic features. Although adjusting the boundary will expose approximately 200 archaeological sites, which otherwise would have received greater protection in Subunit 1, to greater livestock related impacts, the objective to protect archaeological and historical resources will be met through mitigation under all management proposals (Summary Table 9, C/M FEIS). Also, adjusting the boundary has no impact on the other resource values in Subunit 1. Therefore, it is felt that the boundary adjustment will allow more prudent management in Subunit 2 without decreasing the values for which Subunit 1 was identified.
2. (New Decision.) Combining the Massacre Mountain and Little High Rock Allotments corresponds to actual livestock use and will decrease unnecessary administrative efforts.
3. Forage allocations (AUMs) were drawn from Alternative 6 (C/M FEIS) as necessary to support reasonable numbers of deer and antelope, a bighorn sheep reintroduction (100 head), 100 wild horses, and 2,000 domestic sheep. The allocation for domestic sheep (which will only be grazed for 5 weeks) was reduced to what Bunyard has historically used for his sheep operation in Subunit 1.

It is recognized that Subunit 1 produces far more forage than is necessary to support the above consumptive uses. However, land use goals for the subunit center primarily around non-consumptive uses which contribute to the primitive nature of the area. Therefore, the vegetative production in excess of that allocated for the consumptive uses is allocated to watershed protection, small nongame species, forage plant health, soil stabilization, etc.

4. This decision was drawn largely from Alternative 6 which rejects the MFP-2 recommendations to cancel all livestock grazing and wild horse use from Subunit 1. These were highly controversial recommendations which drew both strong support and strong opposition. It is felt that this decision is a logical compromise which will largely achieve the land use goals for Subunit 1. This decision will have the following impacts:

a. Beneficial Impacts

- (1) Increase in deer numbers from 100 to 130.
- (2) Doubling of antelope numbers from 450 to 900.
- (3) Increase in sage grouse productivity.
- (4) Establishment of potential bighorn reintroduction.
- (5) Dramatic increase in nongame cover and species density.
- (6) Maintenance of a healthy, viable wild horse herd.
- (7) Improvement of vegetative condition and trend on sites with high recovery potential (50% of the subunit).
- (8) 90 percent reduction in impacts on 12 National Register sites and 200 archaeological sites.
- (9) Continuation of a family owned and operated sheep operation which has been in existence and contributed to the local economy for 40 years. (pg. 8-88 through 8-90 C/M FEIS).

b. Adverse Impacts

- (1) Economic losses from removal of all cattle. Earp's total Susanville District cattle operation could be reduced by 48 percent or more (C/M FEIS, p. 8-90). The impact to his total economic picture is unknown as a large proportion of his income is from non-ranching business interests (C/M FEIS, TABLE 2-28, p. 2-81). He also owns two ranches in the Winnemucca District with BLM grazing privileges. Reduction of Earp's grazing preference will have little to no impact to the local economy as his business operation is centered elsewhere. Furthermore, this operator purchased his Susanville District privileges after being fully and clearly informed that reduction or cancellation of grazing could result from the planning process (telephone confirmation, 3/24/76, Swickard).
- (2) Reduced potential of successful bighorn reintroduction compared to MFP II recommendation, due to increased possibility of disease transmittal from domestic sheep on the west side of High Rock.

Public input throughout the planning process has expressed a strong desire to preserve Bunyard's operation while strongly recommending removal of cattle from Subunit 1.

Three advisory groups (Cowhead/Massacre Planning Group, Cowhead/Massacre Stewardship Committee, and Susanville District Advisory Council) independently recommended or concurred in the above decisions. The consistent advice from different and diverse advisory groups over a three year period was a persuasive element in this decision.

5. (Accepts MFP-2 recommendation.) The High Rock Canyonlands are considered excellent bighorn sheep habitat and afford the greatest potential for a successful bighorn sheep reintroduction in the Cowhead/Massacre planning area.
6. (Accepts MFP-2 recommendations.) Preservation of the primitive character of the subunit (land use goal #1) is best achieved by allowing habitats to evolve to site potential.
7. This decision differs from the MFP-2 decision which recommended removal of all wild horses from Subunit 1. It is believed that managing for a limited number of wild horses in the High Rock Subunit will assure minimal conflict with other resource values while maintaining a healthy, viable wild horse population. However, the decision does provide for wild horse removal, reduction of herd size, or other management action if necessary to prevent major deterioration of archaeological values, if monitoring shows that such damage is occurring.
8. (Accepts MFP-2 recommendation.) Use of surface vehicles in fire control will result in undesirable disturbance to the area. However, such disturbance may be warranted in unusual circumstances.
9. MFP-2 recommended closing all routes of travel except the High Rock Canyon Road to vehicular use. It also recommended closing High Rock Canyon to travel from February 15 to June 15 of each year to prevent disturbance to nesting raptors.
- 10.

The High Rock Canyon complex is thought to be second only to the Birds of Prey Area of Idaho in raptor density (Bloom, personal communication). Raptors are sensitive to disturbance during courtship through fledging stages and may desert a nest if disturbance occurs during this period. Although, nest desertion can still occur as late as Memorial Day weekend (Bloom, personal communication), the most critical time is during the incubation state (Herron, personal communication) which normally occurs from February 15 to March 31. Sensitivity to disturbance diminishes as the young mature and the parent raptors become more attached. Consequently, it was felt that closing High Rock Canyon between February 15, and March 31 should provide adequate protection to the nesting raptor population.

Closing High Rock Canyon to vehicle use during or immediately following periods of wet weather will prevent damage to the Lassen-Applegate Trail.

11. (Derived from MFP-2, Implementation Needs.) Withdrawing the area from future mineral development will ensure that the cultural, primitive, wildlife, and scenic values are not degraded by mineral exploration or development. Obtaining private mineral rights will prevent mineral exploration and development under existing mining laws.

12. (New decision derived from land use goal 1 and MFP-2 recommendation to designate the area visible from the floor of High Rock Canyon as a scenic area.) Utility or transportation facilities would greatly detract from the primitive and scenic character of Subunit 1.
13. (Derived from MFP-2, Implementation Needs.) Obtaining the remaining private lands in Subunit 1 will protect primitive, scenic, cultural, and wildlife values from development and will provide compatible multiple resource management on all lands within the Subunit.

SUBUNIT 1

Support Measures Needed 1/

Wilderness Studies - 1984-85

ACEC Coordinated Resource Management Plan - 1983^{2/}

Cultural Resources
Wildlife
Livestock
Recreation (ORV, Camping)
Wild Horses

Implementation Needs

Short Term

Monitoring^{3/} - 1982 - Indefinitely
ACEC designation - 1983
Mineral withdrawal - 1986
Initiation of intensive cultural resource survey - 1984
Public use guidelines - 1984
Development of interpretive programs - 1984-1986
Project survey and design - 1982-1984

Long Term

Acquisition of private mineral rights in High Rock Canyon, whenever possible.
Acquisition of private lands in Subunit 1, whenever possible.
Introduction of bighorn sheep, when available.

-
- 1/ Implementation is contingent on adequate funding and manpower.
- 2/ One coordinated resource management plan, rather than separate activity plans for each resource, will guide the management of all resources.
- 3/ A standing subcommittee (stewardship) is developing a monitoring system for Cowhead/Massacre.

MASSACRE-NUT MOUNTAIN
(Subunit 2)

MASSACRE-NUT MOUNTAIN
(Subunit 2)

MASSACRE-NUT MOUNTAIN SUBUNIT 2

ISSUES, GOALS, DECISIONS, AND RATIONALE

Issues

The following major issues were uncovered during the BLM planning process for Subunit 2 and were listed in the Cowhead/Massacre MFP II:

1. Livestock use is conflicting with wildlife, cultural resources, and wild horses, but reductions will have severe economic impacts.
2. Restrictions on the recreational use of cultural resource values constitute constraints on the public; constraints many oppose.
3. One-fourth of the wild horses in the subunit are concentrated in the Massacre Lake area and will have to be removed to protect the cultural resource values; wild horse groups will oppose total elimination of wild horses from any area.

Land Use Goals

The following land use goals (listed in the Cowhead/Massacre FEIS, page 1-12) were developed to guide the overall management of the Massacre-Nut Mountain Subunit:

1. Provide 260,000 acres of habitat in "good" condition for wildlife by 1998.
2. Protect significant archaeological sites and districts, and increase public awareness of their values and sensitivity.
3. Improve 232,000 acres of range from "poor/fair" to "good" condition by 1998 and provide a 10,000-AUM increase in livestock grazing.
4. Provide 90,000 acres of habitat in "good" condition for 205 wild horses.

Anticipated Degree Land Use DecisionsWill Meet Planning Goals

Goal 1: 166,000 acres of habitat (64% goal achievement) will be improved to good condition by 1998 for wildlife (TABLE 8-29, FEIS).

Goal 2: Goal will be met.

Goal 3: 166,000 acres of range (72% of goal achievement) will be improved to good condition by 1998 with a 16,000 AUM increase (160% goal achievement) in livestock grazing.

Goal 4: Goal will be met.

Decisions

In addition to the following specific decisions, all of the general decisions listed previously, except decision number 12, apply to Subunit 2.

1. Designate the following allotments for intensive livestock grazing management (overlay 4):
 - a. Massacre Lakes
 - b. Crooks Lake
 - c. North Nut Mountain
 - d. South Nut Mountain
 - e. Wall Canyon
 - f. Sagehen
 - g. Massacre Mountain
2. Adjust Subunit 2 boundaries as described for Subunit 1 (overlay 4).
3. Divide the Nut Mountain Allotment into the North and South Nut Mountain Allotments. Authorize Don Coops to graze cattle in the North Nut Mountain Allotment and John Weber to graze cattle in the South Nut Mountain Allotment.
4. Allocate forage among both consumptive and nonconsumptive resources, as shown in TABLE B, Forage Allocation, Subunit 2. As additional forage becomes available, increase allocations will be made to wildlife, wild horses, and livestock based on needs, response to management, policy, etc.
5. Manage the ecological sites for mid-successional vegetative conditions (50-75% of ecological climax) - (Anderson, 1978).
6. Establish moderate use on grasses and light utilization on bitterbrush as the upper limits for livestock use in Subunit 2.
7. Give special management consideration to key mountain brush fields in Area 2E. Include rest periods and utilization limits to improve and maintain this important wildlife habitat type in satisfactory condition (USFS Range Analysis Handbook, 1969, Sections 740-760). Provide at least two growing seasons of rest every three years and limit livestock use to light utilization on designated areas (overlay 4).
8. Ensure that sufficient browse is available to support reasonable numbers of deer as follows:

a.	Area 2A	125
b.	Area 2B	90
c.	Area 2E	<u>460</u>
TOTAL		675 (+ 150 from existing levels)

Table B
FORAGE ALLOCATION
Subunit 2

AREA	EXISTING FORAGE PRODUCTION (AUMs) ^{1/}	WATERSHED, WILDLIFE COVER, SOIL STABILIZATION	WILDLIFE (AUMs) ^{2/}				LIVESTOCK			WILD HORSES		GRAND TOTAL
			Deer	Antelope	Big Horn	Total	Class	Season	AUMs	Numbers ^{3/}	AUMs	
2A	4,104	2,052					Cattle	4/15-10/15	1,446	-	-	
2B	3,430	1,715					Cattle	4/15-9/30	1,715	13	156	
2C	4,138	2,069					Cattle	4/16-8/31	1,342	7	84	
2D	800	800					-	-	-	-	-	
2E	31,922	15,961					Cattle	Seeding: 4/16-5/15		80	960	
								Native:	20,347 ^{4/}			
							Sheep	5/1-6/30 10/8-11/30				
TOTAL	44,394	22,597	1,350	770	-	2,120			24,850	100	1,200	50,767 ^{4/}

^{1/} Estimate based on 1979 and 1980 BIM actual use and utilization data except for Massacre Mountain Allotment. Livestock forage production is 22,597 AUMs at 50% use levels in the livestock use area, except Massacre Mountain Allotment (the entire 800 AUMs within area 2D is allocated to non-consumptive uses). Total production is 44,394 AUMs.

^{2/} Allocation is made on a unitwide basis.

^{3/} Average numbers. Numbers may vary from a low of 70 to a maximum of 125.

^{4/} Actual use data for the Massacre Mountain Allotment is incomplete. Therefore, total active use is being allocated until a production survey is completed in the Subunit 2 & 3 portion of the Massacre Mountain Allotment.

9. Provide habitat in satisfactory condition in Subunit 2 to support reasonable numbers of antelope as follows:

a.	Area 2A	75
b.	Areas 2B & 2C	150
c.	Area 2E	<u>225</u>

TOTAL 450 (+ 150 from existing levels)

10. Exclude factors from Area 2D (archaeological reserve zone) which may destroy the extremely high archaeological values within this area.
11. Acquire private lands near Massacre Lakes and in Hanging Rock Canyon, whenever possible.
12. Enact preservation/stabilization measures to preserve the cultural resource values of the Lassen-Applegate Trail, the 12 known sites within the subunit with National Register qualities, and any future sites which are determined to possess NRHP qualities.
13. Initiate a mineral withdrawal for Area 2D.
14. Treat approximately 6,500 acres suitable for brush control and seeding to be utilized for spring and summer livestock forage (overlay 4).
15. Establish the Board Corral, Massacre Lakes, Bitner, Nut Mountain, and Wall Canyon Wild Horse Herd Management Areas (overlay 1). Remove all wild horses from the Board Corral Herd Management Area (HMA) and Area 2D. Maintain a total population of 70 to 125 horses in the other HMAs (10-20 in the Massacre Lakes HMA; 15-25 in the Bitner HMA; 30-55 in the Nut Mountain HMA; and 15-25 in the Wall Canyon HMA).
16. Leave Subunit 2 open to ORV travel.

Rationale

- (Reflects intent of several MFP-2 recommendations.) Intensive management of livestock in those allotments with predominantly public lands will ensure that livestock are managed to achieve the multiple use objectives and goals identified through the planning process.
- (Modifies MFP-2 subunit boundaries.) Adjusting the boundary common to Subunits 1 and 2 will conform to topographic features and eliminate the existing arbitrary straight line (see rationale for Subunit 1, Decision 1).
- (New decision.) Dividing the Nut Mountain Allotment into two allotments will correspond to historical livestock use and afford more prudent resource management in the area.

4. Forage allocation is drawn from Alternative 6 (C/M FEIS), rejecting the MFP-2 recommendations which would have resulted in an approximate 9,800 AUM reduction in livestock use with severe impact to the livestock operators (C/M FEIS, page 3-65). These recommendations were possibly the most controversial of the entire planning effort, generating as strong a support and opposition as for those recommendations for Subunit 1. This MFP-3 decision will result in severe impacts on only one livestock operator (Earp), with no impacts to the local economy, while most of the land use goals for the subunit will be met or exceeded.

Total forage production for the major livestock and wild horse use areas in Subunit 2 was computed based on 1979 and 1980 BLM actual use and utilization studies. First, allocation was made to nonconsumptive uses and assured through livestock utilization limits. Consumptive allocations were made, as necessary, to support reasonable numbers of deer and antelope, livestock up to present active use (if not limited by available forage), and wild horses.

These forage allocations, coupled with grazing systems designed to help meet the land use goals, will have the following anticipated impacts:

a. Beneficial Impacts

- (1) 17,464 AUM (+ 77%) increase in vegetative production.
- (2) Increase in deer numbers from 675 to 775 (+ 15%).
- (3) Increase in antelope numbers from 330 to 555 (+ 68%).
- (4) Slight to substantial sage grouse population increases.
- (5) Slow to dramatic responses of nongame species.
- (6) Maintenance of existing livestock use levels, except in the Massacre Mountain Allotment which will experience substantial reductions in cattle use. (For impacts 1-5, C/M FEIS, pages 8-85 to 8-95.)

b. Adverse Impacts

- (1) Reduction in Earp's cattle operation of 48 percent or more as a result of management actions in Subunit 1 and preference given to maintain Bunyard's operation in Subunits 1 and 2.

Allocating additional forage to wildlife, wild horses, and livestock, as determined on a case-by-case basis, is consistent with land use objectives. No attempt is made to establish priority of allocation as this determination should be made at the allotment levels based on resource priorities, with cooperation from the involved interest groups.

5. Managing for mid-successional vegetative conditions will benefit most resources, such as deer, which benefit from various stages of disclimax. Therefore, maintaining a range of successional stages is most desirable.
6. (Modifies MFP-2 recommendation.) MFP-2 recommended limiting use on key forage species to light utilization (20-40%) to ensure that sufficient browse is available for wildlife use. However, because the mountain brush vegetative type constitutes only a small part of the existing ecological sites, and because the other key forage species found throughout most of Area 2E respond as well under moderate use limits (40-60%) as under light use, moderate use limitations on the general unitwide basis with light utilization limits imposed only on mountain brush areas, should be adequate to maintain sufficient wildlife browse.
7. MFP-2 recommended designation of key mountain brush fields as ACECs due to the importance of this habitat for deer migrating from the Sheldon Antelope Range. This recommendation was changed due to conflicting evidence on the degree of migration between the Sheldon Range and public lands in Subunit 2 (Cowhead/Massacre Final EIS, page 3-58). Regardless of this inconclusive data, these areas are still important to resident deer herds and should receive special management consideration. Providing at least two growing seasons of rest every three years should increase the condition class from poor to good in 20 years.
8. (Accepts MFP-2 recommendation.) Managing for reasonable numbers of deer
9. and antelope fulfills the agreement between the Nevada Department of Wildlife and the BLM.
10. (Accepts MFP-2 recommendations.) Area 2D contains extremely high and
11. especially vulnerable cultural resource values. To preserve these values, conflicting uses (recreation, livestock, mining, and wild horses) must be forfeited. Successful development and implementation of the Cultural Resource Management Plan requires intensive management of this nucleus of the CRMP area. Acquisition of private lands around Massacre Lakes and Hanging Rock Canyon will enhance management of and provide better protection for cultural resource values.
12. These decisions accept MFP-2 recommendations and reflect implementation
13. needs. Preservation of these important cultural resource sites will ensure that their scientific and educational qualities will be protected for future generations.
14. (New decision based on 1979-1980 BLM field recommendations.) Development of forage through artificial land treatments will offset forage loss and economic hardships created from later turnouts and utilization restrictions while delaying turnout on native range.
15. This decision modifies MFP-2 which recommended maintaining horse herds in the Board Corral and Sagehen Allotments. Removing wild horses from the Board Corral and Sagehen Allotments will prevent high mortality from severe winters, while removing wild horses from Area 2D will prevent further damage to the exceptional cultural resources in the area. Managing for 70-125 wild horses elsewhere in the subunit will provide for healthy, viable wild horse herds with minimal forage competition and resource damage.

16. This decision modifies MFP-2 which recommended restricting ORV use to existing roads and trails. However, ORV impact is low throughout Subunit 2 and restrictions are unnecessary at this time.

SUBUNIT 2

Support Measures Required^{1/}Wilderness Studies - 1984-85Cultural Resource Management Plan

Area 2D - 1983

Coordinated Resource Management Plans^{2/}

Wildlife

Area 2E - 1982

Livestock

North Nut Mountain Allotment - 1982
 South Nut Mountain Allotment - 1983
 Massacre Lakes Allotment - 1982
 Wall Canyon Allotment - 1982
 Board Corral Allotment - 1984
 Massacre Mountain Allotment - 1984
 Sagehen Allotment - 1983

Wild Horses

Massacre Lakes Herd Management Area - 1982
 Wall Canyon Herd Management Area - 1982
 Bitner Herd Management Area - 1982
 Nut Mountain Herd Management Area - 1983

Implementation Needs

Short Term

Monitoring^{3/} - 1982 - Indefinitely
 Project survey and design - 1981-1984
 Range improvements - 1982-1985
 Mineral withdrawal - Area 2D - 1986
 Fencing of Area 2D - 1985
 Removal of livestock and wild horses from Area 2D - 1986

Long Term

Acquisition of private inholdings in Massacre Lakes Basin,
 whenever possible

-
- 1/ Implementation is contingent on adequate funding and available manpower.
2/ Wherever possible, resource management will be guided by one coordinated resource management plan for all resources rather than by individual activity plans for each resource.
3/ Standing subcommittee (Stewardship) is developing a monitoring system for Cowhead/Massacre.

LONG VALLEY-SAND CREEK
(Subunit 3)

LONG VALLEY-SAND CREEK SUBUNIT 3
ISSUES, GOALS, DECISIONS, AND RATIONALE

Issues

The following major issues were uncovered during the BLM planning process for Subunit 3 and were listed in the Cowhead/Massacre MFP II:

1. Current livestock grazing practices are contributing to the deterioration of wildlife habitat and watershed conditions. Reductions will cause adverse economic impacts to the livestock operator.
2. Concentration of livestock at perennial water sources causes damage to the associated archaeological values. Fencing of these areas will have an impact on the distribution of livestock if water is not provided outside of the fence.
3. A potential conflict exists if the geothermal resources in Surprise Valley are developed. This will lead to the deterioration and loss of wildlife habitat.

Land Use Goals

The following land use goals (listed in the Cowhead/Massacre FEIS, page 1-17) were developed to guide the overall management of the Long Valley-Sand Creek Subunit:

1. Improve range condition to reach "good" condition on 280,000 acres and produce 15,000 AUMs of additional livestock forage by 1998.
2. Improve wildlife habitat to "good" ecological condition on 260,000 acres and to "excellent" condition on 1,000 acres by 1998.
3. Protect significant archaeological sites and enhance public awareness of their values.
4. Provide 40,000 acres of habitat in good condition for 26 wild horses.

Anticipated Degree Land Use Decisions
Will Meet Planning Goals

Goal 1: 62,756 acres (22% goal achievement^{1/}) will be improved to good range condition by 1998, with a 23,000 AUM increase (153% goal achievement) in livestock forage.

Goal 2: 62,756 acres of wildlife habitat (24% goal achievement^{1/}) will be improved to good ecological condition by 1998 with 300 acres (30% goal achievement) improving to excellent condition.

^{1/} This low degree of goal achievement does not reflect a poor management option, but rather an unrealistic optimism in developing Goals 1 and 2, since a large portion of the ecological sites are extremely dry and therefore, will respond very slowly to management (C/M FEIS, page 3-68 and Appendix J).

Goal 3: Goal will be met with adequate mitigation.

Goal 4: Goal will be met.

Decisions

In addition to the following specific decisions, all of the general decisions, except Decision 1, listed previously apply to Subunit 3.

1. Designate the following allotments for intensive livestock grazing management (overlay 5):
 - a. Long Valley
 - b. Little Basin
 - c. North Larkspur
 - d. Calcutta
 - e. Sand Creek
 - f. Horse Lake
2. Allocate forage among both consumptive and nonconsumptive resources, as shown in Table C, Forage Allocation - Subunit 3. As additional forage becomes available, increased allocations will be made to wildlife, wild horses, and livestock based on needs, response to management, policy, etc.
3. Manage the majority of the native range in the Long Valley and North Larkspur Allotments to meet the physiological needs of Great Basin wildrye.
4. Manage the Horse Lake, Little Basin, Calcutta, and Sand Creek Allotments to reach 50-75 percent of site potential. Provide at least one growing season of rest every two years on native range.
5. Give special management consideration to mountain brush fields in Area 3A. Improve this important wildlife habitat type to satisfactory condition (USFS Range Analysis Handbook, 1969, Sections 740-760). Provide at least two growing seasons of rest every three years and limit livestock utilization to light use of mountain brush species and moderate use of herbaceous species (overlay 5). Ensure that enough browse is available to support reasonable numbers of deer (200 - an increase of 25 from existing levels).
6. Provide winter browse in satisfactory condition in Area 3A to accommodate an additional 425 deer migrating from Forty-Nine Mountain during moderate to severe winters.
7. Provide habitat in satisfactory condition to support reasonable numbers of antelope as follows:

a. Area 3A	180	winter (provide additional 100 antelope in summer)
b. Area 3B	60	
TOTAL	240	(+ 100 from existing levels)

Table C
FORAGE ALLOCATION
Subunit 3

AREA	EXISTING FORAGE PRODUCTION (AUMs) ^{1/}	WATERSHED, WILDLIFE COVER, SOIL STABILIZATION	WILDLIFE (AUMs) ^{2/}				LIVESTOCK		WILD HORSES		GRAND TOTAL	
			Deer	Antelope	Big Horn	Total	Class	Season	AUMs	Numbers ^{3/}		AUMs
3A	13,644	6,822					Cattle	Seeding: 04/15-05/01	5,821	25	300	
								Native: 04/15-09/30				
3B	15,036	7,518					Cattle	Seeding: 04/16-07/31	7,841	-	-	
								Native: 04/15-10/31				
TOTAL	28,680	14,340	400	375	-	775			13,662		300	29,077 ^{4/}

^{1/} Estimate based on 1979 BLM actual use and utilization data. Existing livestock forage production is 14,340 AUMs at 50 percent use levels. Therefore, total production is 28,680 AUMs.

^{2/} Allocation is made on a unitwide basis.

^{3/} Average numbers. Numbers may vary from a low of 20 head to a maximum of 30 head.

^{4/} Slightly more allocation than existing herbaceous forage production due to reasons stated for rationale #2.

8. Treat approximately 21,000 acres suitable for brush control and seeding (overlay 5). Provide leave areas along the Lassen-Applegate Trail and around archaeological sites judged to meet National Register quality.
9. Manage Sand Creek to enhance the riparian values (overlay 5).
10. Establish the Carter Reservoir Herd Management Area and manage for a total population of 20 to 30 wild horses (overlay 1).
11. Leave Subunit 3 open to ORV travel.
12. Encourage geothermal and oil and gas exploration and development.
13. Encourage communication development on Forty-Nine Mountain to satisfy communication needs before developing additional sites (overlay 5).
14. Provide a sanitary landfill site east of Middle Lake for the town of Cedarville (overlay 5).
15. Acquire private lands at Cedarville and Leonard Hot Springs, whenever possible (overlay 5).

Rationale

1. (Reflects intent of several MFP-2 recommendations.) Intensive management of livestock in those allotments with predominantly public lands will ensure that livestock are managed to achieve the multiple use objectives and goals identified through the planning process.
2. Forage allocation decisions for Subunit 3 were derived from the Proposed Action and Proposed Action as mitigated (Chapters 1 and 4, C/M FEIS) and as adjusted by 1979 and 1980 BLM actual use and utilization data. Total forage production was computed using actual use and utilization data. Allocations were first made to nonconsumptive uses and are assured through livestock utilization restrictions. Allocations for consumptive uses were made as necessary to support reasonable numbers of deer and antelope, livestock use up to active preference (as limited by available forage) and wild horses.

The actual use and utilization data for herbaceous species in the Long Valley Allotment indicate that a 27% reduction in livestock use is needed. However, it is noted that the cattle eat large amounts of greasewood. Therefore, a reduction would merely reduce utilization of greasewood and would not reduce utilization of herbaceous species as they are preferred and would be grazed first in any case. Because wildlife and other values are low in Long Valley, it is felt that the current level of livestock grazing can continue without detriment to other resources.

Allocating additional forage to wildlife, wild horses, and livestock, as determined on a case-by-case basis, is consistent with land use objectives. No attempt is made to establish priority of allocation as this determination should be made at the allotment levels based on resource priorities, with cooperation from the involved interest groups.

It is anticipated that developing grazing management systems based on Chapter 4 mitigation (C/M FEIS) will result in essentially the same impacts as those predicted for the Proposed Action. The impacts are:

- a. Nongame bird use would decline on the seeding areas but will increase on the native range.
 - b. Antelope numbers will increase from 160 to 280 (+ 75%).
 - c. Deer numbers will increase from 160 to 200 (+ 25%). Deer numbers may increase more than anticipated as attention will be given to provide winter habitat in good condition for approximately 425 deer migrating off private lands on Forty-Nine Mountain during moderate to severe winters. (This special management consideration goes beyond MFP-2 recommendation).
 - d. 300 acres of riparian habitat (Sand Creek) will support a 100 percent increase in wildlife use.
 - e. Vegetative production will increase by 24,653 AUMs (+ 126%).
 - f. Maintaining existing grazing levels and turnout dates in Subunit 3 will maintain the economic base of the 18 livestock operators. (C/M FEIS, Page 3-22, for impacts 1-5.)
3. These decisions modify MFP-2 which recommended that all of Area 3B be managed for Great Basin wildrye. Great Basin wildrye is the dominant grass species of the major ecological sites in the Long Valley Allotment and will provide the greatest opportunity for improving range conditions. The North Larkspur Allotment has been grazed late in the fall for several years and the Great Basin sites are already showing improvement. The Horse Lake, Little Basin, and Calcutta Allotments contain large acreages of ecological sites which do not have Great Basin wildrye as the key species. Managing to attain middle to late successional stages in these ecological sites will benefit most resources, such as deer, which benefit from stages of disclimax. Therefore, maintaining a range of successional stages is most desirable. Low sage sites are expected to improve from fair to good condition while big sage sites will exhibit a variety of responses.
 5. (New decision based on BLM staff input.) Providing at least two growing seasons of rest from livestock grazing every three years in Area 3A is expected to increase the condition class of bitterbrush from poor to good condition in 20 years. Managing for reasonable numbers of deer and antelope fulfills an agreement between the Nevada Division of Wildlife, California Fish and Game, and BLM. Approximately 500 deer summer and winter on private lands on Forty-Nine Mountain. Approximately 425 deer will probably migrate to adjoining public lands in Area 3A during moderate to severe winters.
 - 6.
 - 7.

8. (Accepts MFP-2 recommendation.) Development of forage through artificial land treatment will offset forage loss and economic hardships created from later turnouts and utilization restrictions while delaying turnout on native range. Archaeological leave areas will ensure that these valuable cultural resource sites are not destroyed. The entire Lassen-Applegate Trail has been nominated to the National Register and has been judged to qualify for National Register designation.
9. (Accepts MFP-2 recommendation.) Managing Sand Creek to protect and enhance the riparian values will greatly benefit the associated wildlife.
10. (Accepts MFP-2 recommendation.) Managing 20-30 wild horses ensures a healthy, viable wild horse herd which will not compete with livestock for forage or contribute to significant resource damage.
11. This decision rejects the MFP-2 recommendation which would restrict ORV use to existing roads and trails. Because ORV impact is low in Subunit 3, control measures are unnecessary at this time.
12. (Accepts MFP-1 and MFP-2 recommendation.) Only by keeping areas open to exploration can vital geothermal and oil and gas discoveries be made, thus helping to reduce the Nation's dependence on foreign energy sources.
13. (Accepts MFP-2 recommendation.) Communication sites will become more important as developments spread and small communities develop. Forty-Nine Mountain has access, power, and existing communication facilities and should be developed to its maximum before developing new areas.
14. (New decision.) Modoc County has inquired about a land fill in the approximate location of the existing trespass dump. Providing a sanitary landfill near Cedarville will save the residents of Cedarville at least a 20 mile round trip to the sanitary landfill at the upper end of Middle Lake.
15. (Accepts MFP-1 and MFP-2 recommendations.) The private lands at both Cedarville and Leonard Hot Springs contain highly significant cultural resources which form key elements in understanding prehistoric cultural ecosystems. Both areas are currently being extensively vandalized and would be better protected and managed in public ownership.

SUBUNIT 3

Support Measures Required^{1/}Coordinated Resource Management Plans^{2/}

Livestock

Long Valley Allotment - 1982
 Little Basin Allotment - 1982
 Calcutta Allotment - 1983
 Horse Lake Allotment - 1984
 Sand Creek Allotment - 1983
 North Larkspur Allotment - 1983

Wildlife

Sand Creek Allotment - 1983

Cultural Resources

Leonard Hot Springs - 1985

Implementation Needs

Short Term

Project survey and design - 1981-1984
 Range improvements - 1981-1985
 Fencing of sensitive areas - 1982-1985
 Monitoring^{3/} - 1982 - Indefinitely

Long Term

Acquisition of private lands around Leonard and Cedarville Hot Springs, whenever possible.

-
- 1/ Implementation is contingent on adequate funding and manpower.
- 2/ Wherever possible, resource management will be guided by one coordinated resource management plan rather than by individual activity plans for each resource.
- 3/ Standing subcommittee (Stewardship) is developing a monitoring system for Cowhead/Massacre.

MOSQUITO
(Subunit 4)

1. The first part of the document discusses the importance of the mosquito in the transmission of malaria. It notes that the mosquito is the only vector of the malaria parasite, and that it is essential for the parasite to complete its life cycle. The document also discusses the role of the mosquito in the transmission of other diseases, such as dengue fever and yellow fever.

2. The second part of the document discusses the life cycle of the mosquito. It notes that the mosquito has a life cycle of approximately 14 days, and that it is most active during the day. The document also discusses the role of the mosquito in the transmission of malaria, and notes that the mosquito is most likely to bite humans during the night.

3. The third part of the document discusses the control of the mosquito. It notes that the most effective way to control the mosquito is to eliminate its breeding grounds. This can be done by draining standing water, and by using larvicides to kill the larvae. The document also discusses the use of insecticides to kill the adult mosquitoes, and notes that this is a less effective method of control.

MOSQUITO SUBUNIT 4

ISSUES, GOALS, DECISIONS, AND RATIONALE

Issues

The following major issues were uncovered during the BLM planning process for Subunit 4 and were listed in the Cowhead/Massacre MFP II:

1. Current livestock grazing practices and the year round presence of wild horses are contributing to the deterioration of wildlife habitat and watershed conditions. The grazing practices do not allow for the physiological requirements of vegetation. However, reductions in livestock use would have a severe economic impact on the livestock operators.
2. Concentration of livestock on perennial water sources can cause irreparable damage to cultural resource values at each spring. Fencing these areas to exclude livestock can cause problems if water is not provided outside of the fenced area.

Land Use Goals

The following land use goals (listed in the Cowhead/Massacre FEIS, page 1-21) were developed to guide the overall management of the Mosquito Subunit:

1. Improve range conditions to "good" condition on 275,000 acres by 1998 and provide 15,000 additional AUMs of livestock forage.
2. Improve 10 miles of fisheries to "excellent" condition by 1998.
3. Protect significant archaeological sites and enhance public awareness of their values.
4. Provide 40,000 acres of habitat in "good" condition for 31 wild horses.

Anticipated Degree Land Use Decisions
Will Meet Planning Goals

Goal 1: Unknown for Area 4A. 126,000 acres will be improved to good condition in Areas 4B and 4C. An 18,800 AUM increase (125% goal achievement) in livestock forage is anticipated.

Goal 2: Goal will be met.

Goal 3: Goal will be met with adequate mitigation.

Goal 4: No wild horse herd management areas (HMAs) have been designated for Subunit 4 so this goal will not be met in this subunit. However, horse populations elsewhere in the C/M planning area will be allowed to expand over the long term to meet or exceed the overall goal of 270 wild horses.

Decisions

In addition to the following specific decisions, all of the general decisions listed previously, except Decision 12, apply to Subunit 4.

1. Designate the following allotments for intensive management (overlay 6):

- | | |
|-------------------|-------------------|
| a. Boggs | f. Mosquito |
| b. Nevada Cowhead | g. Little Valley |
| c. East | h. Holy |
| d. Board Corral | i. Nevada Coleman |
| e. South Larkspur | |

2. Designate the following allotments for nonintensive management (overlay 6):

- | | |
|---------------------|---------------------|
| a. Gravelly ✓ | g. Upper Sand Creek |
| b. Bally Mountain ✓ | h. West ✓ |
| c. Warner Valley ✓ | i. North Cowhead ✓ |
| d. Scammon | j. Ninemile ✓ |
| e. Twelve Mile* | k. Alkali Lake |
| f. Lartirigoyen* | |

* Manage the Twelve Mile and Lartirigoyen Allotments to protect the two listed sensitive plant species Galium glabrescens spp. modocense and Cordylanthus capitatus on public lands.

3. Allocate forage among both consumptive and nonconsumptive resources, as shown in Table D, Forage Allocation - Subunit 4. As additional forage becomes available, increased allocations will be made to wildlife, wild horses, and livestock based on needs, responses to management policy, etc.
4. Allow present livestock turnout dates on those allotments designated for nonintensive management.
5. Manage Subunit 4 to attain good ecological condition (50-75% of climax). Provide at least one growing season of rest every two years.
6. Treat approximately 15,000 acres suitable for brush control and seeding (overlay 6).
7. Manage Twelve Mile Creek to enhance the habitat of the Warner Valley Sucker (overlay 6).
8. Manage Coleman Creek to enhance riparian values (overlay 6).
9. Give special management consideration to those mountain brush fields on public lands in Subunit 4 which are considered important deer winter range (overlay 6). Improve and maintain this important wildlife habitat type to satisfactory condition (USFS Range Analysis Handbook, 1969, Section 740-760) and provide at least two growing seasons of rest every three years. Ensure that enough browse is available to support reasonable numbers of deer as follows:

a. Area 4A	625*
b. Area 4B	90
c. Area 4C	<u>500</u>

TOTAL 1,215

* 500 come off Balley Mountain during moderate to severe winters.

Table D
FORAGE ALLOCATION
Subunit 4

AREA	EXISTING FORAGE PRODUCTION (AUMs) ^{1/}	WATERSHED, WILDLIFE COVER, SOIL STABILIZATION	WILDLIFE (AUMs) ^{2/}				LIVESTOCK			WILD HORSES		GRAND TOTAL
			Deer	Antelope	Big Horn	Total	Class	Season	AUMs	Numbers	AUMs	
4A	7,500	3,750					Cattle	04/01-10/31	2,450	-	-	
							Sheep	07/01-09/30				
4B	15,248	7,624					Cattle	Seeding: 04/01-04/30	6,121	-	-	
								Native: 04/15-11/15				
4C	23,466	11,733					Cattle	Seeding: 04/01-04/30	9,387	-	-	
								Native: 04/15-11/15				
TOTAL	46,214	23,107	2,680	1,083	-	3,763			17,958	-	-	44,828

^{1/} Estimate based on 1979 and 1980 BLM actual use and utilization data and 1963 range survey. Existing livestock forage production is 23,107 AUMs at 50 percent use levels. Therefore, total production is 46,214 AUMs.

^{2/} Allocation is made on a unitwide basis.

10. Provide wildlife habitat in satisfactory condition to support reasonable numbers of antelope as follows:
- | | | |
|----|---------|----------------------------------|
| a. | Area 4B | 285 (summer), 90 (winter) |
| b. | Area 4C | <u>410</u> |
| | TOTAL | 695 (+ 170 from existing levels) |
11. Manage the northern portion of the Hays Canyon Range under an interim program of limited use (no increase in livestock numbers or recreational facilities) until a cultural resource management plan can be implemented (overlay 6). If possible, acquire Crooks Lake north and Cowhead southeast. Initiate a mineral withdrawal on public lands within these areas.
12. Acquire access to and use of part of Lake Annie shoreline, if possible (overlay 6).
13. Leave Subunit 4 open to ORV travel.

Rationale

1. (Reflects intent of several MFP-2 recommendation.) Intensive management of livestock in those allotments with predominantly public lands will ensure that livestock are managed to achieve the multiple use objectives and goals identified through the planning process.
2. (Accepts MFP-2 recommendation.) Because federal administration of these allotments, which consist of predominantly private lands, is inefficient and ineffective, the responsibility for managing the public lands within these allotments should lie predominantly with the livestock operator in cooperation with the BLM. The Bureau is mandated to manage public lands for the protection and enhancement of sensitive, threatened, or endangered plant species.
3. Forage allocation for Subunit 4 is drawn from C/M FEIS, Alternatives 1, 5, and 7 which modifies the season of use and stocking rates recommended in MFP-2. Although selecting from three management alternatives makes it difficult to project resource response, the forage allocation, combined with grazing management to help meet the land use goals for the subunit, should have the following results:
 - a. Increase in deer numbers from 595 to 825 (+ 40%).
 - b. Increase in antelope numbers from 510 to 980 (+ 92%).
 - c. Moderate to great variance in sage grouse productivity.
 - d. Substantial increases in nongame populations.
 - e. Dramatic improvement in riparian habitat on Twelve Mile and Coleman Creeks.
 - f. 18,801 AUM increase in vegetative production in Areas 4B and 4C.

(C/M FEIS, pages 8-71, 8-131, and 8-132; Tables 8-22 and 8-40)

Allocating additional forage to wildlife, wild horses, and livestock, as determined on a case by case basis, is consistent with land-use objectives. No attempt is made to establish priority of allocation as this determination should be made at the allotment level, based on resource priorities, with cooperation from the involved interest groups.

4. This decision rejects the MFP-2 recommendation of allowing turnout no later than May 15. Maintaining existing turnout dates for those allotments designated for nonintensive management allows the intermingled public lands to be managed consistent with management practices for the surrounding private lands. This puts the responsibility for managing the public lands within those allotments consisting of predominantly private lands cooperatively with the livestock operator for more efficient and effective management.
5. (Accepts MFP-2 recommendations.) Managing to attain middle to late successional stages will benefit most resources, such as deer, which benefit from stages of disclimax. Therefore, maintaining a range of successional stages is most desirable.

Providing at least one growing season of rest from livestock grazing every two years should improve the range condition of the major ecological sites. Low sage sites are expected to improve from fair to good condition while big sage sites will exhibit a variety of responses.

6. (New decision based on 1979-1980 BLM field recommendations and C/M FEIS analysis - Alternatives 5 and 7.) Development of forage through artificial land treatments will offset forage loss and economic hardships resulting from later livestock turnouts and utilization restrictions while delaying turnout on native range.
7. (Accepts MFP-2 recommendation.) The Warner Valley Sucker is currently being studied by the Lakeview District for possible designation as a threatened or endangered species. Under an administrative agreement, the Lakeview BLM District will develop an HMP for Twelve and Fifteen Mile Creeks to enhance the habitat of the Warner Valley Sucker, since the major portion of the habitat occurs in Oregon.
8. (Accepts MFP-2 recommendation.) The Coleman Creek drainage contains small, but important, riparian values on public lands.
9. (Accepts MFP-2 recommendation.) Providing at least two growing seasons rest every three years should increase the condition class of mountain bitterbrush from poor to good condition in 20 years. Managing for reasonable numbers of deer and antelope fulfills an agreement between the Nevada Department of Wildlife, California Fish and Game, and the BLM.
10. (Accepts MFP-2 recommendation.) Providing at least two growing seasons rest every three years should increase the condition class of mountain bitterbrush from poor to good condition in 20 years. Managing for reasonable numbers of deer and antelope fulfills an agreement between the Nevada Department of Wildlife, California Fish and Game, and the BLM.
11. (Accepts MFP-2 recommendation.) The northern portion of Hays Canyon Range, including private lands in Crooks Lake North and Cowhead Southeast, contains a very valuable complex of cultural resource sites. Acquisition of private lands, initiating a mineral withdrawal, and limiting development will ensure the protection of these sites until a coordinated resource management plan is implemented.

12. (Accepts MFP-2 recommendation.) Lake Annie lies entirely on private lands. Acquiring access will allow continued public use of this popular fishing area.
13. This decision changes MFP-2 which recommends restricting ORV use to existing roads and trails. ORV impact is low in Subunit 4 and control measures are not necessary at this time.