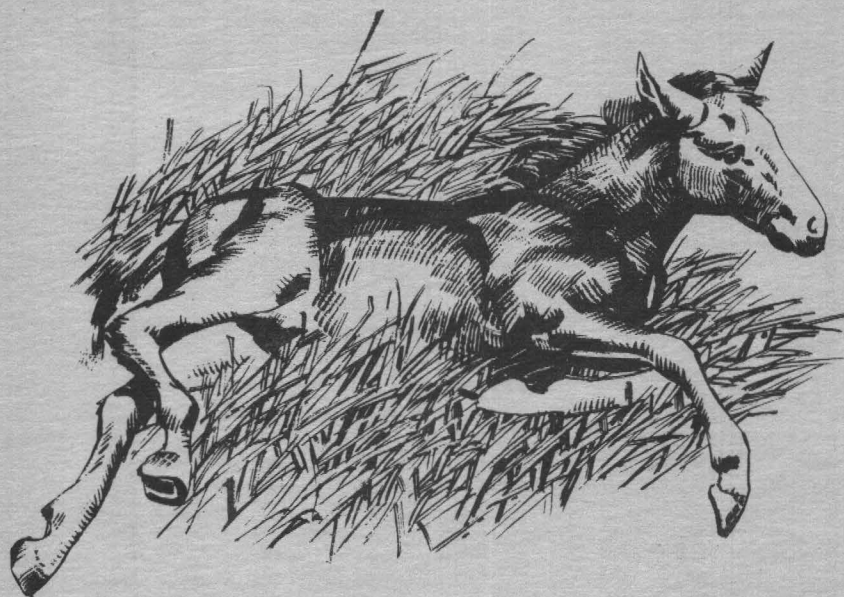


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A Management Plan for the Nevada Wild Horse Range



Prepared by the
Nevada State Office
Bureau of Land Management
U. S. Department of the Interior
March 1966

MANAGEMENT PLAN FOR THE NEVADA WILD HORSE RANGE

<u>Contents</u>	<u>Page</u>
1. Summary and Recommendations	1
2. Introduction	5
3. Authority	10
4. Objectives	13
5. Past History and Management of Areas	15
6. Present Uses	17
7. Description of the Horses	19
8. Range and Vegetation Data	21
9. Grazing System and Stocking Rate	23
10. Present Range Improvements	27
11. Proposed Range Development	28
12. Priority of Range Improvement Work	29
13. Movement of Horses and Control of Population	30
14. Wildlife Benefits	32
15. Public Use and Interpretation	33
16. Resource Management Evaluation	38
17. Staffing	41
18. Information and Publicity	42
19. Impact on State and Local Economies	44
20. Time Schedule for Implementation of the Plan	45
21. Cost Data	48

Appendix

1. Sketches of Control Triggers
2. Documents and Agreements
3. Maps

SUMMARY AND RECOMMENDATIONS

The Nevada Wild Horse Range has some of the greatest potential of any area under the administration of the Bureau of Land Management for public use and enjoyment; conservation and historical interpretation and education; and resource management training and research.

It is a unique area, established for a unique purpose. It can and should provide a link with the past. It can give the American public and foreign visitors an opportunity to see the famous "wild horses" -- the Mustangs -- of North America in their native habitat running free and wild as they did in frontier days.

At the same time it can be a "showcase" for the proper development, conservation, and management of the Nation's public land resources.

The Wild Horse Range can provide excellent opportunities for research and evaluation of resource management practices. It can become an area for training resource managers in range conservation, grazing administration, wildlife habitat management, watershed protection, animal husbandry, public use and interpretation, and other activities.

The Nevada Wild Horse Range is presently located near a main tourist route, U. S. Highway 6, and a large number of visitors can be assured.

The Secretary of the Interior promised the American public that "we will make the effort (to preserve a typical herd of feral horses by establishing a Wild Horse Range) to assure those of us who admire the wild horse that there will always be some of these animals."

Therefore, this plan recommends:

1. Development of the Nevada Wild Horse Range to its full renewable natural resource production potential . . . both animal and vegetative . . . in harmony with military operations, and to manage it thereafter for public benefit and service and sustained yield of renewable natural resources;
2. Deletion of the northeast corner of the Wild Horse Range containing about 78,620 acres from the Nellis Air Force Base Bombing and Gunnery Range and development of that area for public use;

3. Closing of the exterior boundaries of the Wild Horse Range by fencing to eliminate trespass livestock and control the drift of feral horses into and out of the range;
4. Establishment of a three-pasture, three-treatment, rest-rotation grazing system within the Range to assure a sustained yield of forage and water for feral horses and native wildlife;
5. Installation of traps at specific sources of water within the Wild Horse Range employing a harmless triggering device which would provide a simple and economical method of gathering wild horses in order to keep the herds in balance with the carrying capacity of the range;
6. Construction of roads and a headquarters complex within the area deleted from the military withdrawal and establishment of a comprehensive public use and interpretation program under the direction of a resident Range Manager;
7. Establishment of a resource management research, evaluation, and training program on the Range; and

8. Implementation of an information program to acquaint the public, schools, governmental agencies, etc. with the opportunities available at the Wild Horse Range.

INTRODUCTION

"WE WILL MAKE THE EFFORT"

THE HORSES, wild and free, made the plains, deserts, and mountains their home. They swept in a living tide over all of the vast country from the Mississippi to the Pacific, from Mexico to the Arctic Circle.

The Indians caught them, half tamed them, rode them with crooked legs clasped about their barrels, hard hands hauling at their jaws.

Later came the white men, hunting them for mounts, then for money, then as pests who got in the way of progress.

Now they are nearly all gone, the wild and free, and much of the land lies empty, lifeless and abandoned.*

To author and educator J. Frank Dobie the mustang . . . halted in animated expectancy or running in abandoned freedom . . . "was the most beautiful, the most spirited and the most inspiring creature ever to print foot on the grasses of America."

*Adapted from an introduction to THE MUSTANGS by J. Frank Dobie, Bantam Edition, New York, 1954.

Sentiments like those expressed above vividly illustrate the emotional attachment of the American people to the concept of wild horses. To many, wild horses are the essence of freedom -- thoroughly integrated historically into our culture.

Hardy, freedom loving fur trappers, buffalo hunters, Indian scouts, pony express riders, cowboys, and settlers won the West, but they could never have done it without the horses. Those tough, wiry little mustangs that were free for the taking wherever there was open range, grass and water.

Movies, television and countless books and magazine articles have firmly impressed the image of that era on the minds of millions of Americans. And to many of those people just the knowledge that the mustang still exists somewhere in the West gives them a warm, comfortable feeling. A feeling that not all of America . . . as it was . . . is lost; a feeling that they still have a link with the romantic and colorful past.

The Nevada Wild Horse Range can and should become that link. At present, it is not because few know of its existence.

It was established in 1962 by the Department of the Interior in cooperation with the Department of Defense in answer to pleas from across the Nation by thousands of wild horse admirers. But because the area is within a military withdrawal used extensively by the U. S. Air Force, and because of manpower and financial limitations and overriding program priorities nothing has been done to develop and manage the area.

This is an unfortunate situation because the Nevada Wild Horse Range has some of the greatest potential of any public land area under the administration of the Bureau of Land Management for public use and enjoyment, conservation and historical interpretation and education, and resource management training and research.

It is a beautiful piece of country within easy reach of U. S. Highway 6, a main tourist route across Nevada to the recreational attractions of southern Nevada and central and southern California.

The 394,000-acre range lies in the northeast corner of the Nellis Air Force Base Bombing and Gunnery range in Nye County. Parts of it are used intensively by the

Air Force for air to ground bombing and gunnery training and other parts of it are just buffer zones between the open public lands and areas of military activity and are not used at all. Military operations are limited to the interior of basins and dry lake beds and they have had no apparent adverse effect on the wild horses.

The range contains areas of spectacular scenic beauty. Parts of it have been free from intensive grazing by domestic livestock for over a quarter of a century and they support excellent stands of native perennial grasses. However, because of limited water development portions of the range are severely overgrazed by the wild horses. Also, there is a chronic livestock trespass problem in one area which is causing heavy damage to vegetation resources.

Between two and three hundred wild horses -- considered mixtures of Spanish mustangs, Indian ponies, and domestic horses that have strayed from surrounding ranches -- are on that range.

The few people who have been fortunate enough to visit the Nevada Wild Horse Range have gotten an idea and

feel of the West as it was in years past as they watched mustang stallions driving their bands of mares across those wide grassy basins.

Geography protects most of the wild horse range from the severities of nature. This makes it easy for the animals and it also means that parts of the range could be developed for year-round public use.

At the time the Nevada Wild Horse Range was established Secretary of the Interior Stewart L. Udall said . . . "Preserving a typical herd of feral horses . . . may prove difficult, but WE WILL MAKE THE EFFORT to assure those of us who admire the wild horse that there will always be some of these animals."

The purpose of this document is to offer a development and management plan for the Nevada Wild Horse Range to carry out the Secretary's wishes and, therefore, benefit wild horse admirers throughout the world. At the same time we believe it will bring many benefits to various resource management professions and it will lead to establishment of some excellent training opportunities for BLM resource managers.

AUTHORITY

The Wild Horse Range was established by a memorandum of understanding between the Air Force, Bureau of Sport Fisheries and Wildlife, Bureau of Land Management and Department of the Interior signed by Elmer Bennett 1/20/61 and Dudley Sharp 12/8/60. A Cooperative Management Plan was developed and signed by the Commander, Nellis Air Force Base and the State Director, Bureau of Land Management in June 1962. This document was revised and the boundaries modified by a similar document signed by State Director, BLM, and Commander, NAFB, on June 2, 1964 and June 18, 1965, respectively.

The remainder of the entire Management Plan is based upon the premise that an additional modification of the present boundary can be obtained and that the present military withdrawal on approximately 78,620 acres be revoked or other arrangements made to allow public access to this area.

The proposed modifications are as follows:

Delete from Wild Horse Range.

Township 6 South, Range 50 East, East 1/2

Township 7 South, Range 50 East, NE 1/4

Township 7 South, Range 50 East, NW 1/4

This area is very rough and mountainous, and it is generally separated from the remainder of the horse range by rimrock and natural barrier.

Addition to Wild Horse Range.

Township 2 South, Range 49 East, East 1/2

Township 3 South, Range 49 East, East 1/2

This area is needed to balance out the available forage on the west side of the Kawich Mountain range so that a year-long management plan can be developed.

Revocation of Military Withdrawal.

Township 2 South, Range 51 East, All

Township 3 South, Range 51 East, All

Township 3 South, Range 51-1/2 East, All

Township 3 South, Range 52 East, All

This area comprises the northeast corner of the present Wild Horse Range and is adjacent to the military withdrawal boundary. It appears that the area is used primarily as a buffer zone for military operations. No indication of active military use of this area was observed.

The area is the most accessible portion of the Wild Horse Range and if public access was authorized, it would fulfill the requirement for an area to observe and study the wild horses.

OBJECTIVES

In general, the objectives of this plan are to develop the Nevada Wild Horse Range to its full renewable resource production potential . . . both animal and vegetative . . . in harmony where necessary with military operations, and to manage it thereafter for public benefit and service and sustained yield of renewable natural resources.

In particular, the plan meets these objectives by:

(1) offering a means of attaining a permanent supply of forage and water for a reasonable number of feral horses and wildlife; (2) offering a means of improving the water and vegetative resources of the range through better plant composition, increased plant density, improved plant vigor, increased soil fertility, minimizing soil erosion, and improved watersheds; (3) offering a system of development for public use including opportunities for observation of feral horses, wildlife and other aesthetic qualities . . . conservation and historical interpretation and education . . . and research and study; (4) offering a program of public information to acquaint wild horse admirers and researchers with the knowledge gained from operation and management

of the range and the opportunities available to them at the range . . . to keep various resource management professions apprised of management and research findings . . . and to keep the general public informed of management goals and activities; and (5) offering a means for establishment of a training program and facility for resource managers concerned with range conservation, development, and management . . . grazing administration . . . wildlife habitat management . . . watershed protection . . . animal husbandry . . . and other activities.

PAST HISTORY AND MANAGEMENT OF AREA

The general area of the Nevada Wild Horse Range has a long history of grazing and mining use similar to all of central Nevada. Wild horses have been in the area since the first Americans came on the scene. Domestic livestock grazing began in the late 1800's and continued in an uncontrolled manner until the area was withdrawn for military purposes in 1940. The area shows evidence of mining activity and the old mining camp of Gold Reed is situated near the center of the range.

Grazing by domestic livestock has continued on portions of the range since the military withdrawal, although, such use is not authorized. Since access to the area has been limited, most of the natural and developed livestock waters have deteriorated.

Water is extremely limited on the west side of the Kawich Mountains and use by trespass domestic livestock is generally confined to the winter months when snow is available.

Several large earthen reservoirs have been developed and natural springs improved in the Kawich Valley which provide yearlong water. Consequently, this area has received and is continuing to receive heavy grazing use by trespass cattle.

Competition for forage and water between wild horses and trespass cattle is so severe in some areas that the wildlife population is very small.

PRESENT USES

Most of the military use of the Wild Horse Range appears to be confined to the west side of the Kawich Mountains, although, there has been some air-to-ground gunnery use near the old Gold Reed mine site and the dry lake bed in Kawich Valley.

Wild horses use the entire area to some extent and the Kawich Mountains show severe grazing use by horses, especially in the northwestern portion of the range near the available waters.

There is limited use of the area by deer, antelope and desert bighorn sheep. The limited big game population appears to be the result of severe competition between wild horses and trespass cattle for water and forage. Under proper management, the population of these big game species can be expected to increase along with some species of upland game birds.

Grazing use by trespass cattle in the Kawich and Reveille Valleys is severe. Cattle drift into Reveille Valley and the north end of the Kawich Valley from an

adjacent ranching operation. It appears that a major cattle operation has continued to make yearlong use of the central and southern portion of the Kawich Valley. This is a major operation and involves several hundred cattle.

It is absolutely necessary that the exterior boundaries of the wild horse range be fenced where open before any type of management can be effective. Trespass use by domestic livestock must be terminated.

DESCRIPTION OF HORSES

On-the-ground estimates indicate that between two and three hundred head of feral horses occupy the Wild Horse Range. At some points there is undoubtedly some migration of feral horses into and out of the range. However, it is believed that the majority of the animals occupy the range year-round.

The name mustang is of Spanish origin. It is believed to have derived from mestenas which in early Mexico meant wild, estrayed livestock. There are no original mustangs in the sense of a horse with distinctive blood lines and characteristics which identified them as a breed.* The mustang was a melting pot of blood lines, but heavily favored with Arabian-Barb -- the dominant blood lines of the Spanish horses introduced into western North America.

Field observations indicated that different types of feral horses occupy the wild horse range. Some of the horses are small and short coupled in conformation and appear to be closely related to the original mustangs.

*A mustang registry has been started in recent years to freeze the mustang blood lines as they now exist.

Others are much larger and heavier and probably descended from strays off surrounding ranches. It is difficult to estimate, but there has probably been some "downbreeding" in the area resulted from undesirable crosses and inbreeding.

Implementation of this plan will upgrade the horses by providing better forage and water on a year-round basis and selective thinning of the horse herds to keep them in balance with the carrying capacity of the range and improve breeding practices.

RANGE AND VEGETATION DATA

Elevations in the Wild Horse Range vary from approximately 5,000 feet at the Kawich and Gold Flat Valley floors to nearly 9,000 feet at the crest of the Kawich and Belted Mountains.

Average annual precipitation varies from 5 inches at valley floors to 20 inches on the mountain peaks.

The vegetative composition varies from a good stand of grass and desert shrubs in the valley bottoms to a relatively dense stand of Pinion-Juniper on the mountain tops. The major forage producing species are perennial grasses and shrubs. Relatively few annual grasses and forbs were noted and the only poisonous plants observed were halogeton and loco weed in scattered patches. The major forage producing plants are listed below:

GRASSES

Galetta	Hilaria jamesii
Indian ricegrass	Oryzopsis hymenoides
King desert grass	Blepharidachne kingii
Needle-and-thread	Stipa comata
Sand dropseed	Sporobolus cryptandrus

GRASSES (contd.)

Spike dropseed	Sporobolus contractus
Squirreltail	Sitanion hystrix
Sandberg bluegrass	Poa secunda
Nevada bluegrass	Poa nevadensis

SHRUBS

Shadscale	Atriplex confertifolia
Budsage	Artemisia spinesuns
White sage	Eurotia lanata
Nevada jointfir	Ephedra nevadensis
Littleleaf horsebrush	Tetradymia glabrata
Spiny hopsage	Grayia spinosa
Big sagebrush	Artemisia tridentata
Pinyon	Pinus edulis
Utah juniper	Juniperus osteosperma
Western snowberry	Symphocarpus occidentalis

GRAZING SYSTEM AND STOCKING RATE

The total area of the Wild Horse Range is approximately 394,000 acres. In order to develop and place into effect a practical range management plan, it will be necessary to divide the range into three separate management units. By taking advantage of approximately 50 miles of natural barrier, 358,000 acres can be enclosed and managed with a minimum of exterior boundary fencing. The area outside of this enclosure is extremely rough and mountainous and does not lend itself to inclusion within the management units.

The general topography divides the range into two natural management units. These are the Kawich and Gold Flat Valleys. Since public access is a desirable and necessary part of this plan, the Kawich Valley area has been divided into two grazing management units. One of these units will encompass the portion that is open to the public. In this manner, it will be possible to assure a population of wild horses available for the public to view, study and enjoy.

The grazing management system to be used on each management area is a three-pasture, three-treatment, rest-rotation system. The treatments will be as follows:

Treatment A - Spring-Summer use, April to Sept. 31.

Treatment B - Fall-Winter use, Oct. 1 to March 31.

Treatment C - Complete rest.

The sequence of use will be according to the following table:

	Pasture #		
	<u>1</u>	<u>2</u>	<u>3</u>
	A	B	C -- 1st year
Treatments	B	C	A -- 2nd year
	C	A	B -- 3rd year

By following this system, each pasture will receive all three treatments during any three-year period and two-thirds of the management area will be used each year. This will allow for two years rest during the spring-summer growing season. The fall and winter use will help provide a seedbed for germinating seedlings during the following year.

The year with complete rest will allow for seedling establishment and litter accumulation. Under this system all areas of each pasture, including areas around water developments, will receive the same treatment, and range and watershed conditions should rapidly improve.

Basic data on each management unit is as follows:

MUSTANG MANAGEMENT UNIT

Reveille Valley Pasture-----	23,000 acres
Cedar Well Pasture-----	25,000 acres
Belted Mountain Pasture-----	27,000 acres
Total area-----	75,000 acres

Grazing Capacity = 250 Horses - yearlong

KAWICH VALLEY MANAGEMENT UNIT

Gold Reed Pasture-----	50,000 acres
Cliff Spring Pasture-----	50,500 acres
Shirley Spring Pasture-----	51,500 acres
Total area-----	152,000 acres

Grazing Capacity = 500 Horses - yearlong

GOLD FLAT MANAGEMENT UNIT

Silver Bow Pasture----- 43,000 acres
Cedar Pass Pasture----- 46,400 acres
Quartzite Mountain Pasture ----- 42,000 acres
Total area ----- 131,400 acres
Grazing Capacity = 450 Horses - yearlong

The above grazing capacity 1,200 horses yearlong is based upon present forage conditions and the development of water and construction of fences to control utilization as proposed. The grazing capacity should increase after the complete plan is in operation.

PRESENT RANGE IMPROVEMENTS

The only range improvements existing on the area are spring developments and earthen reservoirs. There are no fences at the present time. The springs are in poor to fair condition and can be further developed to supply additional water. Some of the existing reservoirs should be improved.

PROPOSED RANGE DEVELOPMENT

Improvement of present water sources and the development of additional water accompanied by the construction of boundary and pasture fences is absolutely necessary in order to obtain any management and preserve the natural resources.

The plan is based upon the construction of the following range improvements and management facilities.

<u>Improvements</u>	<u>Units</u>
Exterior Boundary Fences	75 miles
Interior Pasture and Water Control Fences	85 miles
Cattle Guards	18 each
Spring Developments	6 each
Wells	9 each
Earthen Reservoir	1 each
Water Storage Tanks (25,000 gallon)	13 each
Water Troughs (500 gallon)	41 each
Pipeline	83 miles

PRIORITY OF RANGE IMPROVEMENT WORK

The first consideration for management of the area after the proposed adjustments in boundary and status are completed would be the construction of boundary fences. Use by trespass domestic livestock cannot be effectively controlled unless the area is fenced.

Improvement of existing waters and development of new water sources should coincide with the boundary fences to partially counteract the present severe use adjacent to existing waters. After the key water developments are completed the interior pasture and water control fences would be constructed and the complete rest-rotation grazing system placed into effect.

MOVEMENT OF HORSES AND CONTROL OF POPULATION

A rest-rotation grazing system as proposed in this plan requires the movement of the horses from one pasture to another at six month intervals. This movement is based upon complete control of every water source within each pasture. It is recognized that it is not possible to round-up the pasture and make a rapid movement within a day or two as would be done with domestic livestock, however, with complete water control, the job can be accomplished with a minimum of effort during a relatively short period.

The use of livestock "triggers" to move and control both domestic livestock and feral cattle and burros has been effectively used in the southwest and Mexico for many years. Water control is the key to the use of triggers. It is an effective and humane method of moving animals and can be used to trap or capture the animals if this is desired. It has seldom been used to capture wild horses because the key factor is complete control of all water sources and that is not generally possible or practical in wildland areas. A simple sketch of these control triggers is included in the appendix.

The present population of wild horses within the Wild Horse Range is estimated between two and three hundred head. If trespass domestic livestock were removed from the area and the proposed management plans completed, the present population could expand for several years before the numbers would exceed the grazing capacity.

It can be expected that some of the horses now using the area are branded animals and ownership claims will be initiated. These claims will involve legal implications and problems which will not be discussed in this plan.

Under Nevada State Law, the ownership of estrays and wild or unbranded horses rests with the State Board of Stock Commissioners. A memorandum of understanding or other necessary provisions must be developed between the Bureau of Land Management and the State Board of Stock Commissioners and other State and County officials as required to provide for a legal and desirable method of disposition of surplus animals when this becomes necessary.

WILDLIFE BENEFITS

The area has a small population of deer, antelope and desert bighorn sheep. The small populations appear to be the result of severe competition for water and forage. The wildlife situation should improve immediately upon implementation of the grazing management plan.

A rest-rotation grazing system as planned will leave one-third of the total area available for wildlife each year without competition. An additional one-third of the area will be available for six months each year without competition.

All water developments would be available for wildlife use even during the periods they may be closed to horses. Provisions for this use can be made during the construction period with very little additional cost.

PUBLIC USE AND INTERPRETATION

The northeast corner of the Wild Horse Range has been designated the "Mustang Management Unit", and it is proposed that this 78,000-acre section be developed for public use and interpretation. To do this it would have to be deleted from the bombing range or arrangements would have to be made with the Department of Defense to allow public access into and use of the area.

From all appearances the Mustang Management Unit does not receive intensive use by the military. However, it is by far the most scenic portion of the Wild Horse Range and it contains some of the existing waters. As a result many of the wild horses now congregate in that area. The Mustang Management Unit is also the most accessible portion of the range. It is in close proximity to U. S. Highway 6 and State Highway 25, both of which are paved.

A Wild Horse Range headquarters complex including living quarters for a Range Manager, garage and storage facilities, bunkhouse, parking lot, and interpretive center would be located in the Mustang Management Unit. Also, about

50 miles of roads would be improved or constructed complete with turnouts and overlooks so that the public could tour the area and view the horses.

Interpretive programs provide a unique type of educational experience. They have not been employed to any extent in BLM, but they have a long record of success in the National Parks and increasingly they are being implemented in the National Forests with equal success.

The purpose of an interpretive program is to lead the visitors down paths of greater understanding; to open up to them the deeper meaning of a significant area, activity, or program. It does this by means of exhibits, signs and labels, guided tours, and other devices.

The Wild Horse Range interpretive center would be constructed along the lines of those presently used by the Forest Service and National Park Service. It would contain a series of three-dimensional exhibits depicting the history and habits of the mustang, map displays of the Wild Horse Range, a lecture and projection room, and visitor counter where maps, brochures and other literature could be obtained.

The proposed road development would provide a series of self-guided tours of the Mustang Management Unit. Turnouts and overlooks would be strategically located to provide the best opportunities for observations of wild horses. Signs would be placed at the overlooks explaining the management program of the Range and the history and habits of the horses.

A State Highway Department traffic counter located at Warm Springs on U. S. Highway 6 just north of the Wild Horse Range indicated an average traffic flow of 170 vehicles per day during 1964. And the Highway Department estimates that 74 percent of the traffic is tourist, which would amount to 126 vehicles per day.

Using a figure of two and one-half people per car (average automobile occupancy for normal highway traffic in Nevada), at least 315 tourists per day or 115,000 tourists per year are now driving past the Nevada Wild Horse Range and none of them can visit it.

There is no definite way of determining how much of the tourist flow on U. S. Highway 6 would turn into the Nevada Wild Horse Range if the Range was fully

developed and open to the public. But for purposes of speculation let's say that 70 percent would turn in for a visit. That would amount to 80,500 visitors per year.

State recreation planners tell us that if the Range was opened up and developed according to this plan we could expect at least a 30 percent increase in tourist traffic on U. S. Highway 6. That would amount to 38 more cars per day -- all of them headed for the Range.

If the two and a half people per car average was applied again that would equal 95 more visitors per day or about 35,000 more visitors per year, making the potential total 115,500 visitors per year.

However, State recreation planners use a figure of four and one-half people per car when making estimates of recreational visitor days to proposed public recreation sites. If that figure was applied to the 30 percent increase in tourist traffic (i.e., the 38 more cars per day), it would amount to 171 more visitors per day, 62,415 more visitors per year, and a potential total of 143,000 visitors per year.

These statistical estimated don't include the traffic on State Highway 25 because we don't have figures on the traffic flow at a point near the Wild Horse Range.

Except for the 170 vehicles per day that now pass through Warm Springs on U. S. Highway 6 the above figures are purely speculative. However, we are convinced that if the Range is fully developed, opened to the public, and widely publicized it will act like a magnet on a large percentage of the family tourists entering the State of Nevada.

A Nevada State Highway Department survey conducted in 1963 estimated that 17,246,000 out-of-staters visited Nevada that year and 3.7 million of them visited the existing outdoor recreation areas of the State -- 143,000 is only 4 percent of 3.7 million.

RESOURCE MANAGEMENT EVALUATION AND TRAINING

Implementation of this development plan for the Nevada Wild Horse Range would create many opportunities for the testing and evaluation of resource management practices and professional training.

The proposed grazing management program is a three-pasture, three-treatment, rest-rotation system. Rest-rotation grazing is fairly new in BLM and the Wild Horse Range would provide an excellent area for experimentation, practice, and evaluation of the system.

Similarly, various improvement practices and management techniques connected with wild land administration could be tested and evaluated on the Wild Horse Range.

Once again the control and management of feral horses on public range lands in the West is becoming a serious problem. For instance feral horses are on the increase in every grazing District in Nevada.

There are many reasons for their increase, such as favorable winter weather in recent years, improved range

conditions, more range water developments which permit horses to range over larger areas, and recent Federal restrictions on rounding up horses with mechanical equipment.

The management of feral horses on the Nevada Wild Horse Range could serve as a prototype for dealing with horse problems in other areas. In particular, the development of methods for gathering and removing excess populations would be of value to resource managers.

Additional management and training opportunities in watershed protection, wildlife habitat management, animal husbandry, information and education, and public use and interpretation would be available on the Wild Horse Range.

BLM has had practically no experience with the conduct of interpretive programs for the public. But now that the Bureau has become a full-fledged member of the Federal outdoor recreation team it will become increasingly involved with the development and conduct of interpretive programs and other forms of visitor services. The Wild Horse Range would provide an excellent area for development of such programs and services and subsequent training of BLM employees involved in such activities.

It is proposed that the interpretive center located in the headquarters complex be used as a training facility during the "off-season" for tourists. If constructed along the lines of the interpretive centers currently used in National Parks and National Forests there should be a lecture and projection room in which the public can listen to talks or see colored slides or movies of the area and programs being interpreted. This same room would serve very well for training purposes.

Overnight accommodations for small groups are presently available in the vicinity of the Wild Horse Range. It can be expected that additional accommodations would be constructed shortly after the Range was opened to the public.

STAFFING

Because of the large number of potential visitors to the Nevada Wild Horse Range, its remoteness from major communities, and the fact that portions of it will be closed to public access we believe that it will be necessary to have a full-time Manager permanently located at the headquarters complex in the Mustang Management Unit. This plan envisions the construction of modern living accommodations for the Manager and his family.

During the summer tourist season it would be advisable to have one or two Assistant Managers with specialized training and skills in interpretive work and natural history.

The Manager should be skilled in animal husbandry with special emphasis on horses, range management, wildlife habitat management, interpretation, visual communications, employee training and administration. When needed, additional part time assistance would be provided from District Offices or the State Office as appropriate.

Fire protection would be provided by District Offices.

INFORMATION AND PUBLICITY

The emotional attachment of the American people to the concept of wild horses and the role such horses played in the "winning of the West" was pointed out in the Introduction.

We are convinced that the Nevada Wild Horse Range when developed and opened to the public will attract the attention and interest of people throughout the Nation -- particularly school children. We also believe that as news of the Wild Horse Range spreads many tourists will plan their western vacations to include a visit to the Range. Therefore, an integral part of any development and management plan for the Wild Horse Range is the dissemination of information about the Range and the opportunities provided for recreation, education, and research.

The Wild Horse Range was established in answer to public demand and it continues to exist for the primary purpose of serving the public. To obtain this service the public must know what is available to them. Secondary values of the Wild Horse Range are education and research (discussed in more detail in an earlier section). Again,

people must know what is available if they are to take advantage of the education and research opportunities on the Range. Therefore, there must be a continuous information program tied directly to administration of the Range. This program should be directed at local, State and National news media; schools; other governmental agencies; historical institutions; conservation organizations; and other groups with a special interest in the Wild Horse Range.

The Information Program should utilize all of the various audio-visual and written communications techniques. Because of the uniqueness of the product being publicized we believe it will be possible to secure a large amount of free publicity from private organizations. Such a possibility should be fully explored.

The Information Program should begin immediately after approval of this plan. Initially, it should be handled at the local and State levels by the Resource Utilization Specialist, Nevada State Office, and at the National level by the Information Officer, Washington Office. Eventually the Wild Horse Range Manager would assume responsibility for the local information program.

IMPACT ON STATE AND LOCAL ECONOMIES

The authors of this plan did not have the time or resources necessary to make an accurate forecast of the impact that implementation of this plan would have on the economies of the State of Nevada, Nye County, and the communities of Tonopah, Warm Springs, Alamo and others situated near the Nevada Wild Horse Range. However, from the discussion preceding this section it is apparent that the impact would be significant and favorable.

As was pointed out in the PUBLIC USE AND INTERPRETATION section there are now about 115,000 tourists a year passing the Nevada Wild Horse Range on U. S. Highway 6. Practically none of these tourists now stop in the communities of Warm Springs or Alamo (Alamo is located on State Highway 25 south of U. S. Highway 6 and west of the Wild Horse Range).

A potential visitor volume of 143,000 was predicted. That would bring many new tourist dollars into the State of Nevada and it would precipitate the development of motels, restaurants, automobile service stations and other tourist facilities along U. S. Highway 6 and State Highway 25 in the vicinity of the Wild Horse Range.

TIME SCHEDULE FOR IMPLEMENTATION OF PLAN

This plan should be fully implemented within four years beginning with fiscal year 1968 and ending in fiscal year 1971.

Negotiations with the Department of Defense for boundary adjustments between the Wild Horse Range and the Nellis Air Force Base bombing and gunnery range should begin immediately. Particular emphasis and priority should be placed on deletion of the Mustang Management Unit from the military withdrawal so that it can be developed for public use.

The first step in the improvement program should be construction of exterior boundary fences to eliminate trespass livestock and control the drift of feral horses. Also, during the first year after approval of this plan an access road leading to the site of the headquarters complex in the Mustang Management Unit should be constructed and one well and one spring development should be completed in the Mustang Management Unit.

Development of the Mustang Management Unit (public use area) would be spread over the entire four-year period.

However, the other two management units (which will not be open to the public) would be developed one per year during the last two years of this plan.

The Mustang Management Unit should be opened to public use in June 1969, which would be at the end of fiscal year 1969 and the beginning of fiscal year 1970. Prior to that time -- during the first two years of this plan -- the headquarters complex should be fully constructed and developed, one 19-mile loop road for public use complete with overlooks and interpretive signs should be completed, key water developments should be completed, and principal units of interior pasture and water control fencing should be constructed. The remaining developments within the Mustang Management Unit consisting of one 22-mile loop road for public use, one 17-mile loop road for public use, additional interpretive signs, water developments, and fencing would be completed during the third and fourth years of this plan.

All improvements within the Mustang Management Unit would be designed to "blend in" with the natural landscape

of the area so that from the public use roads the unit would appear "natural" and undisturbed.

On page 48 is a detailed schedule for development of the Wild Horse Range under this plan.

Type of Development	Fiscal Year									
	68		69		70		71		TOTAL	
	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost
Exterior Boundary Fence	75	60,000							75	60,000
Interior Pasture and Water Control Fencing			30	24,000	35	28,000	20	16,000	85	68,000
Cattleguards	8	4,800	5	3,000	4	2,400	3	1,800	20	12,000
Spring Developments	1	500			3	1,500	2	1,000	6	3,000
Wells	1	6,000	2	12,000	4	24,000	2	12,000	9	54,000
Earthen Reservoirs							1	3,000	1	3,000
Water Storage Tanks			3	7,500	6	15,000	4	10,000	13	32,500
Water Troughs			9	2,250	18	4,500	14	3,500	41	10,250
Pipelines			17	17,000	36	36,000	30	30,000	83	83,000
Sub-Total (Resource Management)		71,300		65,750		111,400		77,300		325,750
Access Roads	17	85,000	19	95,000	22	110,000	17	85,000	75	375,000
Interpretive Center		50,000								50,000
Parking Facilities		15,000								15,000
Exhibits and Signs		25,000								25,000
Living Quarters		20,000								20,000
Garage Facilities		5,000								5,000
Bunkhouse		10,000								10,000
Sub-Total (Public Use and Interpretation)		125,000								125,000
GRAND TOTAL		156,300		285,750		221,400		162,300		825,750

COST DATA

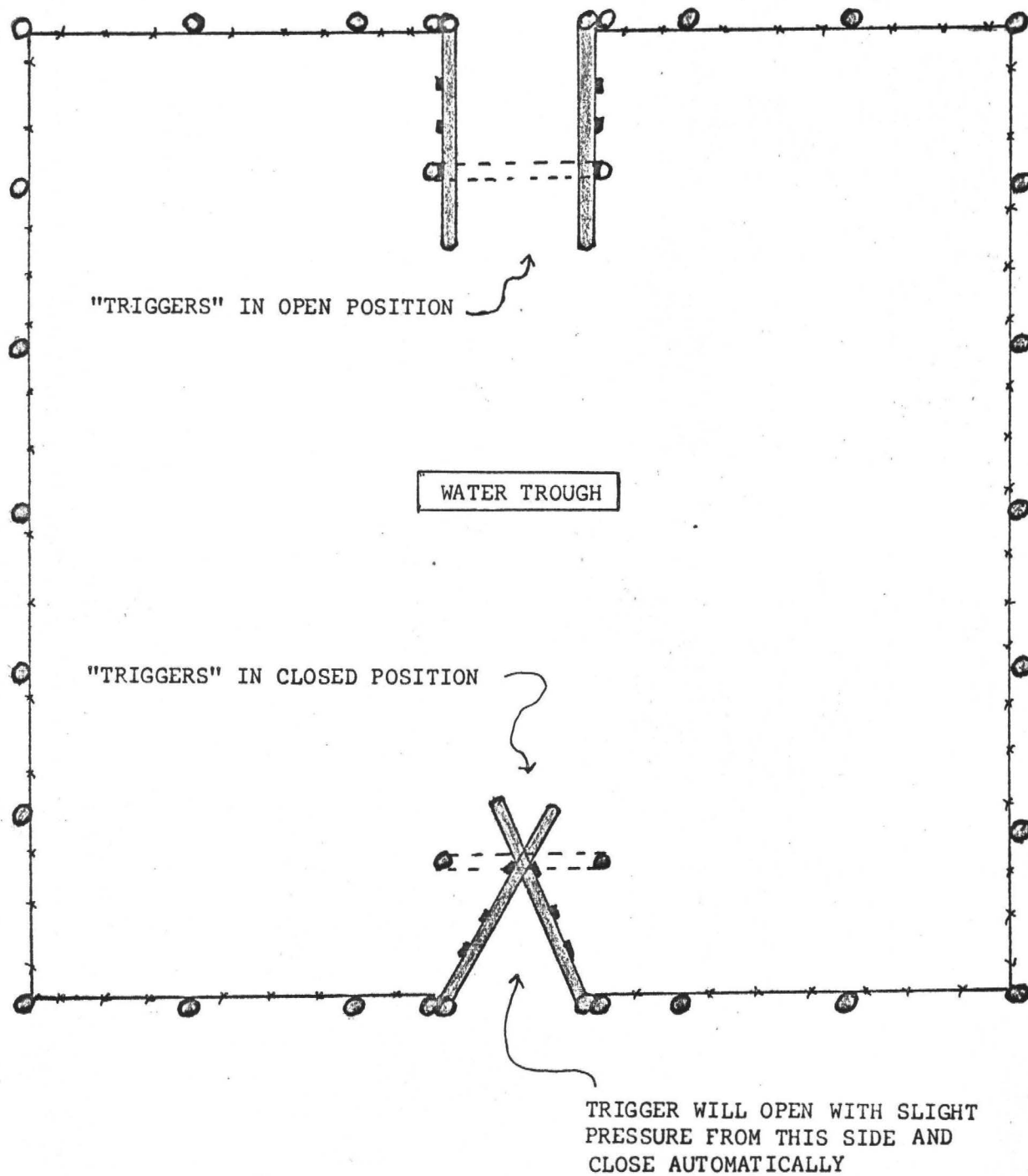
Public Use and Interpretation

Interpretive Center		\$ 50,000
Parking Facilities		15,000
Exhibits & Signs		25,000
Living Quarters for Refuge Manager		20,000
Garage Facilities		5,000
Bunkhouse		<u>10,000</u>
Sub-total		\$125,000

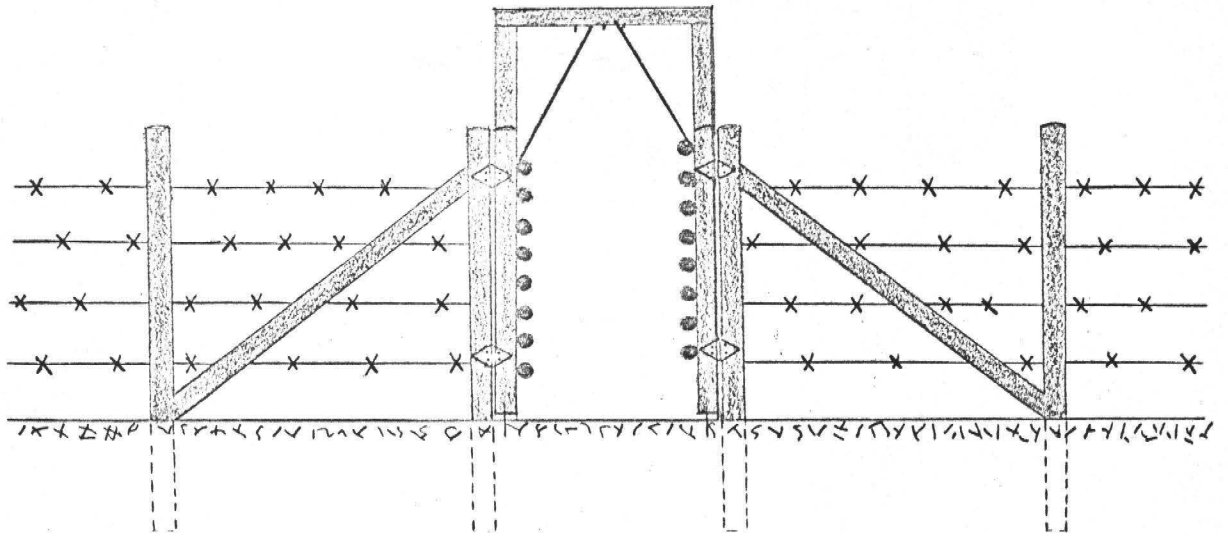
Resource Management

<u>Item</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Exterior Boundary Fence	75 miles	\$.800	\$ 60,000
Interior Pasture & Water Control Fences	85 miles	800	68,000
Cattle Guards	20 each	600	12,000
Spring Developments	6 each	500	3,000
Wells	9 each	6,000	54,000
Earthen Reservoirs (5000 cu. yds.)	1 each	3,000	3,000
Water Storage Tanks (25,000 gal.)	13 each	2,500	32,500
Water Troughs (500 gal.)	41 each	250	10,250
Pipeline	83 miles	1,000	<u>83,000</u>
Sub-total			\$325,750
Road Improvement and Construction (Access and tour roads within public use areas)	75 miles @ \$5,000/mile		\$375,000
Total Project Costs			\$825,750

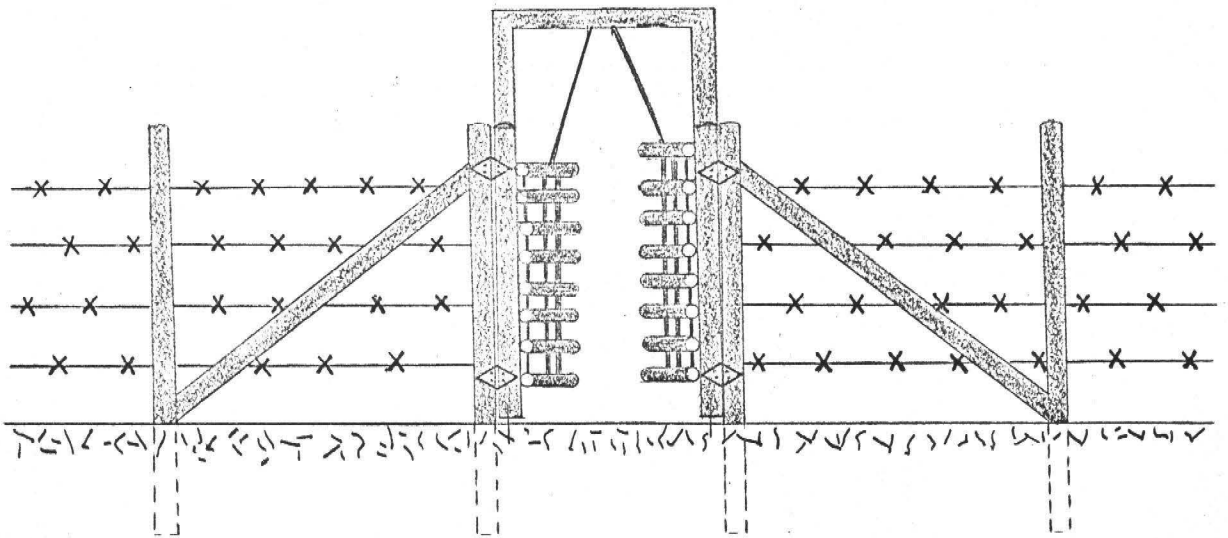
VERTICAL VIEW OF CORRAL AND "CONTROL TRIGGERS" INSTALLED



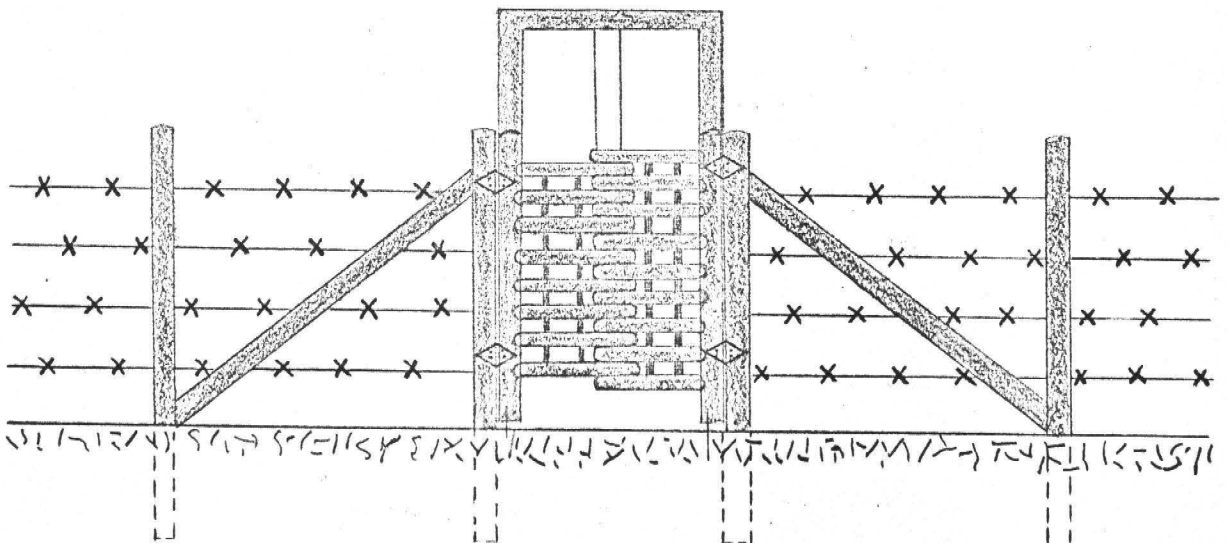
SIDE VIEW OF "CONTROL TRIGGERS" IN VARIOUS POSITIONS



OPEN POSITION



PARTIALLY CLOSED POSITION



CLOSED POSITION

WILD HORSE MANAGEMENT AREA

Nellis Air Force Base and Bureau of Land Management

A. Cooperative Management Program

1. Justification

Because of the deep concern expressed by a large number of people in regard to preservation of wild horses, and the need to manage and control their use, an area within the boundaries of the land withdrawn for the Nellis Air Force Base, Nevada, has been identified as a suitable wild horse area. The area is presently being used by wild or abandoned horses by their own selection. The horse use is not inconsistent with the needs of the Air Force and will not compete with established use by domestic livestock as the domestic livestock use has been withdrawn from the area. Identifying the area for horse use will provide an area which can be managed for the horses and their habitat. It is reliably estimated on the basis of counts made by the State Fish and Game Department that more than 200 wild horses now

run in this area. This approximate number of wild horses will be maintained as long as their use of the range remains in balance with the forage resources available. The horses using this area will be considered as a feral animal and will be managed and protected in a similar manner as wildlife that use the public lands.

2. Program

a. U S. Air Force Activities

Establish a liaison officer to work with Bureau of Land Management in scheduling wild horse management activities within the area. After appropriate scheduling with the liaison officer, the Bureau of Land Management shall have access to the area during the following times:

- (1) All regular weekend periods of Air Force inactivity.
- (2) For special periods for management activities, when previously coordinated and not to interfere with scheduled

training activities conducted by the units assigned or attached to Nellis Air Force Base.

b. Bureau of Land Management Activities

The Bureau of Land Management will cooperate with the Air Force and the Nevada State Game and Fish Commission in managing the range and maintaining the proper number of horses to utilize the area. The Bureau will inspect, if necessary, the condition of the horses and their habitat, and will initiate studies that may be necessary to determine the trend in range conditions. By cooperation with Nevada State and County officials, the control of the desired number of horses to use the range will be achieved.

3. Description

The area described by townships and ranges with references to the Mount Diablo Base Line is as follows:

T 1 S, R 49 E, E 1/2; T 1 S, R. 50 E All;
T 2 S, R 50 E, All;

T 2 S, R 51 E All; T 3 S, R 50 E, All;
T 3 S, R 51 E, All;
T 3 S, R 51-1/2 E, All; T 3 S R 52 E, All;
T 4 S, R 50 E, All;
T 4 S, R 51 E All; T 4 S, R 51-1/2 E,
T 4 S, R 52 E, All;
T 5 S, R 50 E, E-1/2; T 5 S, R 51 E, All;
T 5 S, R 52 E, All;
T 5 S, R 53 E, W-1/2; T 6 S, R 50 E, E-1/2;
T 6 S, R 51 E, All;
T 6 S, R 52 E, All; T 6 S, R 53 E, NW-1/4;
T 7 S, R 50 E, NE-1/4;
T 7 S, R 51 E, N-1/2; T 7 S, R 52 E, NW-1/4.

The area as described by longitude and latitude
is as follows;

Beginning at a longitude of 116°04' and a latitude
of 37°43' thence west on the same latitude to a
longitude of 116°13'; thence north on the same
longitude to a latitude of 37°49'; thence west
on the same latitude to a longitude of 116°20';
thence north on the same longitude to a latitude
of 37°54'; thence west on the same latitude to
a longitude of 116°30'; thence south on the same
longitude to a latitude of 37°49'; thence east
on the same latitude to a longitude of 116°26';
thence south on the same longitude to a latitude
of 37°33'; thence east on the same latitude to

a longitude of 116°23'; thence south on the same longitude to a latitude of 37°19'; thence east on the same latitude to a longitude of 116°11'; thence north on the same longitude to a latitude of 37°21'; thence east on the same latitude to a longitude of 116°07'; thence north on the same longitude to a latitude of 37°23'; thence east on the same latitude to a longitude of 116°04'; thence north on the same longitude to the point of beginning. Approximately 394,500 acres are enclosed within the boundaries described above.

APPROVED

/s/ Lloyd W. Brauer
Commander, Nellis Air Force Base

DATE 18 June 1965

APPROVED

/s/ J. R. Penny
Nevada State Director
Bureau of Land Management

DATE June 2, 1965

WILD HORSE MANAGEMENT AREA

Nellis Air Force Base and Bureau of Land Management

A. Cooperative Management Program

1. Justification

Because of the deep concern expressed by a large number of people in regard to preservation of wild horses, and the need to manage and control their use, an area within the boundaries of the land withdrawn for the Nellis Air Force Base, Nevada, has been identified as a suitable wild horse area. The area is well suited for this purpose as it is presently being used by wild or abandoned horses by their own selection. The horse use is not inconsistent with the needs of the Air Force and will not compete with established use by domestic livestock as the domestic livestock use has been withdrawn from the area. Identifying the area for horse use will provide an area which can be managed for the horses and their habitat. It is reliably

estimated on the basis of counts made by the State Fish and Game Department that more than 200 wild horses now run in this area. This approximate number of wild horses will be maintained as long as their use of the range remains in balance with the forage resources available. The horses using this area will be considered as a feral animal and will be managed and protected in a similar manner as wildlife that use the national land reserve.

2. Program

a. U. S. Air Force Activities

Establish a liaison officer to work with the Bureau of Land Management in scheduling wild horse management activities within the area. After appropriate scheduling with the liaison officer, the Bureau of Land Management shall have access to the area during the following times:

- (1) All regular weekend periods of Air Force inactivity.

(2) For special periods as scheduled for management activities. During such periods of use by the BLM, the Air Force may continue to utilize the lands for its practice operations with the following restrictions: that no bullets, rockets, or missiles will be fired into that part of the range used for wild horse management activities.

b. Bureau of Land Management Activities

The Bureau of Land Management will cooperate with the Air Force and the Nevada State Fish and Game Commission in managing the range and maintaining the proper number of horses to utilize the area. The Bureau will inspect, if necessary, the condition of the horses and their habitat, and will initiate studies that may be necessary to determine the trend in range conditions. By cooperation with Nevada State and County officials, the control of the desired number of horses to use the range will be achieved.

3. Description

That parties of the Nellis Air Force Range to be used by wild and abandoned horses comprises approximately 18 townships, or 435,000 acres.

The area is as follows:

T 3 S, R 51 E, 51½ E, 52 E, 53 E, and approximately the W½ of 54 E.

T 4 S, R 51 E, 51½ E, 52 E, 53 E, and approximately the W½ of 54 E.

T.5 S, R 51 E, 51½ E, 52 E, 53 E, 54 E, and approximately the W¼ of 55 E.

T 6 S, R 51 E, 51½ E, 52 E, 53 E, 54 E, and approximately the W¼ of 55 E.

APPROVED

/s/ Boyd Hubbard, Jr.
Commander, Nellis Air Force Base

DATE June 13, 1962

APPROVED

/s/ J. R. Penny
Nevada State Director
Bureau of Land Management

DATE June 18, 1962