

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MANAGEMENT FRAMEWORK PLAN - STEP 1
ACTIVITY OBJECTIVES

1/1981
Name (M/F)

SCHELL

Activity

WILD HORSES

Objective Number

WH-1

Objective: WH-1

Maintain and improve wild horse populations.
Says nothing - be more specific

Rationale:

Maintenance and improvement of wild horse herds assures the continuance of healthy, viable wild horse populations.

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WILD HORSES

Overlay Reference

Step 1

Step 3

Recommendation: WH-1.1

Adjust wild horse population numbers and/or sex ratios to levels which will provide adequate competition for the females by the males within all herd units.

What is this ratio - is competition inadequate now?

Rationale:

~~It is currently believed that when populations are excessively low or when sex ratios which greatly favor the female are present, there will be inadequate competition for female horses by the stallions. The result of these situations can be the occurrence of inbreeding which is detrimental to the genetic pool within the population. By adjusting sex ratios in favor of stallions, competition for mares increases, which will lower the rate of population increases will be deterred reducing the cost of capture and removal.~~

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who believes this. This is not true.

This was not mentioned in step 4
Also, it is not true both from an inbreeding standpoint and from a ~~concept~~ conception standpoint. ~~The effects of~~

See Nelson, Kurt J. 1978 "On the Question of male limited population Growth in Feral Horses" MS Thesis '68 p New Mexico State ~~University~~ University Las Cruces

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Name (MFP)	SMITH
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Step 1	Step 3

Recommendation: WH-1.2

Remove old, debilitated, diseased, and/or lame horses from the Herd Management Areas.

Rationale:

What are we going to do -- seek these out & destroy ~~them~~ or remove them. These animals will die naturally. Lets put our efforts into studies

These animals that are severely handicapped or hindered by disease, injury, age, or any debilitating condition are susceptible to suffering from a lack of food, water, and/or cover if their ability to move is inhibited.

Mares in a weakened condition may be unable to support the needs of their young or abort before giving birth to foals. Certain diseases cause a higher rate of abortion in mares, such as Rhinopneumonitis, and if untreated detract from improving wild horse populations.

Which diseases. I don't believe we have these so why recommend anything

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Recommendation: 1.3

Introduce a sterilization program in those regions where forage, water and cover are limited.

Rationale:

Castration of stallions in areas where requirements are in short supply would decrease the conception rate, thus reduce substantial increase in numbers. With this method of birth control implemented the available forage, water, and cover and living space would be able to support existing numbers of wild horses.

Will have no effect

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Recommendation: 1.4

Based upon current range survey data, allocate available AUM's to wild horses and increase or decrease horse numbers in accordance with forage reservations.

HERD UNIT	EXISTING #'S	AUM DEMAND	MAXIMUM #'S	AUM'S AVAILABLE
ANTELOPE	252	3780	176	2640
WILSON CREEK	180	1950	516	7740
DRY LAKE	48	945	350	5250
SEAMAN	20	300	253	3795

Rationale:

Reservations of forage for wild horses are required to support the existing population within each herd unit; however, when all available AUM's have been allocated in the Antelope Herd Unit those horses unable to be maintained on available forage will have to be redistributed into an area which will provide adequate vegetation until forage production increases. A surplus of AUM's in the Wilson Creek, Seaman, and Dry Lake Herd Units will accommodate the transfer of these horses from Antelope Herd Management Area.

Note: Attach additional sheets, if needed

(Instructions on reverse)

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Recommendation: WH-1.5

Increase the wild horse population in the Antelope, Wilson Creek, Dry Lake, and Seaman Herd Units in accordance with increases in forage production achieved through vegetal manipulation. The number of acres to be converted in each herd unit are as follows:

Antelope Herd Unit - 61,730 acres
Wilson Creek Herd Unit - 260,712 acres
Seaman Herd Unit - 72,950 acres
Dry Lake Herd Unit - 12,281 acres

With increased forage production through vegetal manipulation estimated optimum numbers within each herd unit as follows:

HERD UNIT	OPTIMUM #'s	TOTAL AUM's
ANTELOPE	600	8,805
WILSON CREEK	800	12,240
DRY LAKE	650	9,750
SEAMAN	250	3,795

Rationale:

By manipulating existing vegetation, optimum numbers of horses in each herd unit can be increased in accordance with the additional AUM's provided by specific land treatments.

Note: Attach additional sheets, if needed

(Instructions on reverse)

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Recommendation: WM-1.6

Furnish safe, sturdy, portable management facilities for the capture and containment of wild horses during gathering operations. Do not use permanent corrals.

Rationale:

Equipment utilized to facilitate the capture and confinement of wild horses during roundups should be safe to prevent injury, strong to avoid escape, and portable to provide for easy assembly, location, and transport. Avoid the use of permanent facilities or abandoned homestead or ranching resources. These forms of capture equipment invite illegal gathering and may not be safe, strong, or located in the vicinity of wild horse herds.

What about
HMAP facilities?

Note: Attach additional sheets, if needed

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Recommendation: WH-1.7

Remove all livestock in the Antelope Herd Management Area.

Rationale:

Utilization of available forage by livestock together with present wild horses exceeds the carrying capacity. In order to provide forage for horses in the herd area at the number recommended in WH-1.4, all livestock will have to be removed.

Note: Attach additional sheets, if needed

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Recommendation: WH-1.3

Introduce young, viable stallions and/or mares into the Herd Management Areas to replace the old, diseased, debilitated, and/or lame horses.

Rationale:

Initiation of this program will aid in upgrading the herds and enhance adaptability potential. The injection of healthy, viable horses would also assist in preventing or decreasing the occurrence of genetic defects. Adjustment of numbers and/or sex ratios must be studied carefully so that the selection of those young horses turned out in herd units promote competition for females by males.

Contra
in

ess
ion

There is nothing wrong with existing wild horse health or viability or resistance to disease

Note: Attach additional sheets, if needed

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WILD HORSES

Objective Number

WH-2

Objective: WH-2

Manage wild horse habitat to provide optimum forage, water, cover, and living space conditions.

~~Soils~~

Rationale:

Forage, water, and cover, as well as living space are critical elements necessary for the survival of wild horse populations.

OK

~~Be more specific~~
~~# waters~~
~~# Miles fence removal~~
~~# Acres through seeding~~
~~etc~~
~~etc~~

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Recommendation: WH-1.1

Develop Wild Horse Management Plans for the four Herd Management Areas within the Schell Resource Area.

Rationale:

*This is BLM Policy
not suited for MFP
step 1, 2 or 3*

Management plans are necessary to outline: specific objectives for managing wild horses, techniques for maintaining and improving their habitat, needed management facilities, methods for the removal of excess animals, and provisions for the management of wild horses on a multiple use basis with other resources.

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Name (MFP)	SMALL
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Step 1	Step 3

Recommendation: WH-2.2

Increase forage production through application of specific land treatments, i.e. chaining, spraying, seeding, burning, fertilizing, and/or soil modifications.

Rationale:

Vegetation manipulations would release desirable grasses and forbs, improve horse habitat, improve range condition and trend, and provide better distribution of the horses in the Hand Management Areas. Through increased forage production optimum numbers of horses can be established in each hand unit.

*How much
be specific*

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Recommendation: WH-2.3

Modify ^{water} developments designed to provide water only during seasons when livestock grazing occurs so that water will be available on a year-long basis for wild horses. Provide access to available water sources that prevent use by wild horses, i.e. fenced reservoirs.

Good
Recommendation

Rationale:

Spring developments consist of a fenced spring source with a pipe extending from it to a trough. All are equipped with valves so that water can be turned off during seasons of non-grazing. Bureau guidelines require that water be available at all spring sources on a year-long basis.

What restrictions?
The present restrictions do force ^{this} ~~these~~ horses to be dependent upon and concentrate around springs where water supplies are not always available. ^{is true of livestock} ~~not~~ horses

Other developments such as: wells, reservoirs, and pipelines should also provide water on a year-long basis and be accessible. All storage tanks need to be checked periodically to insure that maximum capacity is maintained.

Note: Attach additional sheets, if needed

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WILD HORSES

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Recommendation: WH-2.4

Maintain existing and new waters in conditions which provide for maximum production of water.

Rationale:

Proper maintenance of water developments will enhance the availability of water during periods of limited supply. Water supply must meet demand to support existing horse population. An adequate water supply is vital in maintaining healthy horse herds especially during times of drought.

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Name (MFP)	SOWEL	
Activity	WILD HORSES	
Overlay Reference	Step 1	Step 3

Recommendation: WH-2.5

Improve living space conditions for wild horses by removing fencing projects as shown on Step 4 URA Overlay for the following Herd Management Areas:

1. Wilson Creek - 39 miles of fence removal
2. Dry Lake - 14.2 miles of fence removal
3. Antelope - 11.5 miles of fence removal

Rationale:

At the present time these fences are believed to restrict wild horses to an extent which limits access to available water sources, additional forage and cover, and reduces amount of available living space. Therefore, if these required elements are to be provided these fences must be removed or relocated to provide optimum living conditions.

weak rationale

Restricting or impeding the wild and free-roaming nature of wild horses can create undue stress amongst bands of horses comprising horse herds. By providing vast, open areas free from obstructions the survival of wild horse populations can be secured. The wild and free-roaming behavior of feral horses must be preserved.

~~What is the rationale for the removal of fences?~~

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Activity

WILD HORSES

Overlay Reference

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Recommendation: WH-2.6

Avoid any actions which could result in the physical separation of existing wild horse habitat. Do not construct any new fences within the confines of the four herd units until definite movement patterns have been determined. When fences ~~are~~ constructed use smooth wire to protect horses from possible injury.

Rationale:

Physical separations could restrict normal movement of wild horses and block access to available water. Such separations could be detrimental to the seasonal use areas of wild horses unless migratory patterns are considered in the planning of such projects. Also, populations could be confined to the extent that population numbers are too great for available area.

Discuss preservation of Home Ranges as stated in Draft BLM manual 4730

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WILD HORSES

Overlay Reference

Step 1

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Recommendation: WH-2.7

Insure that wild horse needs and habitat requirements are met in all range management actions such as: livestock grazing/management, permits, licenses, allocations of forage, and wildlife habitat management.

Rationale:

Livestock and wildlife management may have a profound effect on wild horse habitat conditions. Close coordination with any management action should be required for full consideration of wild horse needs. Unless the necessary requirements for wild horses are provided i.e. forage, water, cover, and living space their survival may be endangered.

Note: Attach additional sheets, if needed

(Instructions on reverse)

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Recommendation: WH-2.3

Preserve timbered areas for wild horses in each herd unit to insure adequate cover required for foaling grounds and protection from predators, adverse weather, and man. Leave intermittent zones of timber when chaining, spraying, or burning.

Rationale:

Without sufficient timber species horses are subject to harsh conditions such as extreme heat, cold, wind, and precipitation events. Wild horses are also more vulnerable to predation and harassment from man or machine. Newborn foals need shelter for the same reasons.

Note: Attach additional sheets, if needed

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Activity

WILD HORSES

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Recommendation: WH-2.9

Control the invasion and spread of noxious and poisonous plants in all Herd Management Areas.

Rationale: How?

Consumption of poisonous plants by wild horses can cause severe metabolic disturbances and/or death if large quantities are ingested. Invasion of noxious and poisonous plants deplete soil moisture needed by more desirable species. Noxious plants can cause injury to animals and spread disease and parasites associated with certain types.

Note: Attach additional sheets, if needed

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Recommendation: WH-2.10

Remove hydrophytes from around seeps and springs to reduce transpiration and subsequent loss of water needed to sustain wild horse herds.

Isn't this

carrying the tunnel vision approach a bit far? Is this technically feasible?

Rationale:

By clearing water-loving plants surrounding seeps and springs the water supply can be increased substantially. Seeps are potentially suitable water facilities but the quality and quantity of water are often poor due to the presence of hydrophytes. Water flow at springs can be increased greatly by removing aquatic plants.

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Overlay Reference

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Recommendation: WH-2.11

Develop and maintain new water sources in the Antelope, Wilson Creek, Dry Lake, and Seaman Herd Management Areas.

Rationale:

With the gradual establishment of optimum numbers additional water will be needed to support ^{the} increase in numbers of wild horses. Auxiliary developments can aid in obtaining a more even grazing distribution by controlling the availability at specific locations. These new facilities must be inspected periodically to insure supplies are adequate, quality of water is acceptable, and that water is available on a year-long basis, especially in areas of livestock grazing, unless water is being used as a tool to achieve a more uniform distribution. Watering rights should be well-defined and carefully safeguarded for wild horses.

Note: Attach additional sheets, if needed

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Recommendation: WH. 2.12

Restrict activities in the Seaman Herd Unit that conflict with the well-being of the wild horse population.

Rationale:

Both sheep and cattle utilize key seasonal areas inhabited by wild horses creating competition for forage. Domestic livestock should be restricted from these areas to provide available forage for wild horses until the bands move on to another use area.

Increased mining activity has forced horses out of crucial foraging areas. Mining claims should also be restricted to regions outside major use areas; as well as seismic exploration. These activities can also create water shortages. (Refer to overlay).

Note: Attach additional sheets, if needed

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Activity

WILD HORSES

Objective Number

WH-3

Objective: WH-3

Cooperate and coordinate information with all organizations interested in the welfare and management of wild horses.

Rationale:

Cooperation and coordination with other organizations is important for communication and obtaining input and support for the wild horse program.

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WILD HORSES

Overlay Reference

Step 1

Step 3

Recommendation: 3.1

Cooperate and coordinate information with wild horse organizations such as: Wild Horse Organized Assistance, National Mustang Association, American Horse Protection Association, International Society For The Protection Of Mustangs & Burros, Animal Protection Institute of America, and other national, state, and local organizations concerned with the welfare of the wild horse.

Rationale:

All of these organizations are interested in the welfare and management of wild horses. Cooperation and coordination with these organizations is important for communication and gaining input and support of these organizations for the wild horse programs. They can also assist in the management of wild horses by screening applicants for any excess horses which may have to be removed.

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WILD HORSES

Objective Number

WH-4

Objective: WH-4

Reduce the number of Herd Units as designated in the Schell Resource Area by Removal or Combination of Existing Herd Units.

Rationale:

The migratory patterns of wild horses within each herd unit overextend the designated herd unit boundaries thus mixing animals labeled as belonging to a specific herd. By combining these herd units into a single herd the horses can be truly represented.

Removal of horses in the Moriah and White River herd units can be justified by the presence of numbers too low to manage as viable herds.

But will these then be "manageable units"? Or will they be too "Big"

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Recommendation: WH-4.1

Discontinue management of the Merish and White River Herds and remove the existing numbers. Dispose of the wild horses gathered through one of the following methods:

1. Bureau's adoption process
2. Redistribution to the Seaman, Wilson, Creek, and/or Dry Lake Herd Management Areas
3. Destruction in the most humane manner

Rationale:

Inventory data through 1979 indicates that horse numbers are too low to adequately manage as a viable herd even through the development of a management plan. This decline may be an indication of harassment, illegal gathering, transport and/or processing.

So why are not these proposed as relocation areas as per Recommendation WH 4.3

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Recommendation: WH-4.2

Combine the following herd units into four major Herd Management Areas:

Schell and Goshute Herd Units → Antelope Herd Management Area
Fortification and Patterson-Eagle → Wilson Creek Herd Management Area
Cave Valley and Dry Lake Herd Units → Area Dry Lake Herd Management Area
Golden Gate and Seaman Herd Units → Seaman Herd Management Area

Rationale:

Wild horses move in and out of the existing HMA's on a regular basis with few bands remaining within the confines of the designated herd unit boundaries. Evidence of these movements gathered during inventories supports the need to combine those herd units which border each other and assign a common name to the herd(s) established. This will create a more realistic management design.

~~Don't list the units as~~
~~with~~

See comments on
Objective WH-4

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Recommendation: WH-4.3

When disposing of animals under population reduction or maintenance programs utilize the following techniques:

1. Turn wild horses over to private individuals for private maintenance through cooperative agreements.
2. Redistribute wild horses from areas of greater concentration to less populated regions.
3. Destroy animals in the most humane manner.

Rationale:

Why do we need an
MFP Recommendation
to re-state Regulation

Something will undoubtedly have to be done with excess ^{43CFR} ⁴⁷⁰⁰ horses removed under population reduction and maintenance programs. The methods and order of disposal identified are considered to be in the best interest of wild horses:

1. Turning wild horses over to private individuals will insure they are well taken care of; if periodic investigations follow the adoption process. In addition this is a publicly accepted method of disposal.

2. By redistributing excess wild horses from one management area to another, grazing pressure will be relieved preserving existing forage for numbers remaining and at the same time provide adequate forage, water, and cover for horses transported to a new location.

Note: Attach additional sheets, if needed

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When used as a last resort for disposal, destruction of horses will make additional room available for existing wild horses and serve as a means of removing old, diseased, and/or lame horses unsuitable for adoption.

Note: Attach additional sheets, if needed

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Activity

WILD HORSES

Objective Number

WH-5

Objective: WH-5

Promote, support, and strongly enforce any legislative acts designed and implemented to protect wild horse herds and wild horse habitat.

Rationale:

Without national, state, and local support and understanding for wild horse populations, illegal gatherings, processing, and harassment will continue to occur. The wild horse must be considered as an integral part of our national resource lands in areas where they presently reside.

*This is your job
not appropriate for
MFP*

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WILD HORSES

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Step 3

Recommendation: WH-5.1

Protect wild horses by enforcing the existing legislation. Safeguard against harassment, unauthorized transport, sale(s), and slaughter; whether it be for processing for consumption or wasteful extermination.

Rationale:

Protection is necessary to preserve wild horse populations. Horse herds will continue to decline and in extreme cases face possible extinction if their well-being remains unguarded. Although it has not been proven, it is believed that horses are being illegally removed and sold from several of the herd units.

Once again your
This is your

Note: Attach additional sheets, if needed

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WILD HORSES

Overlay Reference

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Recommendation: WH-5.2

Restrict aerial inventories and roundups during foaling season, and until foals have acquired enough strength to evade and/or sustain oncoming aircraft without injury.

*already Nev 5.0.
policy*

Rationale:

Newborn foals are initially weak and unable to travel great distances, until they have obtained adequate nourishment and develop anatomical strength.

Aircraft can cause undue stress and/or injury to both mares and foals. Proper scheduling of aerial inventories and roundups will provide the needed protection to guard against such damage.

Note: Attach additional sheets, if needed

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WILD HORSES

Objective Number

WH-6

Objective: WH-6

Study and inventory wild horses to obtain information pertinent to the management of wild horses.

Rationale:

Existing data on wild horses is insufficient for the development of management plans. Information on wild horses needs to be up to date so that present situations can be analyzed.

~~Specific objectives are
going to study needs?~~

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Step 3

Recommendation: WH-6.1

Initiate studies to determine reproduction, mortality rates, survival rates, sex ratios, age classes, contracted diseases, water requirements, habitat conditions, and competition with other animal species for food, water, cover, and living space.

How about population estimates?

Rationale:

Studies to determine these needs and problem solutions are necessary to establish management requirements and objectives. The answers to these problems will be the basis for managing wild horse populations.

Note: Attach additional sheets, if needed

(Instructions on reverse)

Form 1600-21 (April 1975)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MANAGEMENT FRAMEWORK PLAN
RECOMMENDATION-ANALYSIS-DECISION

Name (MFP)

SHELL

Activity

WILD HORSES

Overlay Reference

Step 1

Step 3

Recommendation: WH-6.2

Initiate studies to determine seasonal distribution, migratory patterns, foraging habits, cover requirements, and water distribution needs.

Rationale:

This information is needed to assure that habitat requirements of wild horses are met when managing wild horse herds. Data gathered pertaining to critical survival elements is a prerequisite to the maintenance of healthy wild horse populations.

Note: Attach additional sheets, if needed

(Instructions on reverse)

Form 1600-21 (April 1975)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MANAGEMENT FRAMEWORK PLAN
RECOMMENDATION-ANALYSIS-DECISION

Name (MFP)	SHELL
Activity	WILD HORSES
Overlay Reference	
Step 1	Step 3

Recommendation: WH-6.3

Conduct studies on wild horse habitat in the four Herd Management Areas as follows:

1. Utilization, actual use, and integrated resource studies.
2. Fecal analysis.
3. Seasonal use areas by immobilizing ^{or other appropriate capture techniques} and collaring horses and tracking them on a seasonal basis by fixed wing aircraft.
4. Inspect fences, water developments, and improvement projects and determine their effect on the physical environment of horses.
5. Biotic environment.

Support Needs:

CSU is not the only place doing fecal analysis.
A contract with Colorado State University will be needed to analyze fecal samples and compile data.

Contract not needed.
Purchase order will do.

Note: Attach additional sheets, if needed

(Instructions on reverse)

Form 1600-21 (April 1975)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MANAGEMENT FRAMEWORK PLAN
RECOMMENDATION-ANALYSIS-DECISION

Name (MFP)

SCHELL

Activity

WILD HORSES

Overlay Reference

Step 1

Step 3

Rationale:

These studies will provide the following information:

Verify and analyze forage use patterns, grazing use in specific regions, and range condition and trend.

Forage preferences by season and forage competition between wild horses, livestock, and wildlife.

Seasonal use areas, migratory routes, and possibly crucial areas.

Fences, water developments, and other projects which interfere with the wild and free-roaming nature of wild horses, restrict their grazing use or present a hazard to them.

Conflicts with other resources and their affects on wild horses i.e. human activity, mining, recreational use, domestic livestock grazing, and intensive wildlife management.

Note: Attach additional sheets, if needed

(Instructions on reverse)

Form 1600-21 (April 1975)

Movement of horses across HMA boundaries should not be the only basis for establishing HMA boundaries. HMA boundaries should contain a manageable unit (i.e. can or will actions taken in the area affect all of the animals or just a portion). For example, it may be better to have smaller units (regardless of herd interplay) which can be treated at the same time as an entire unit.

Introduction:

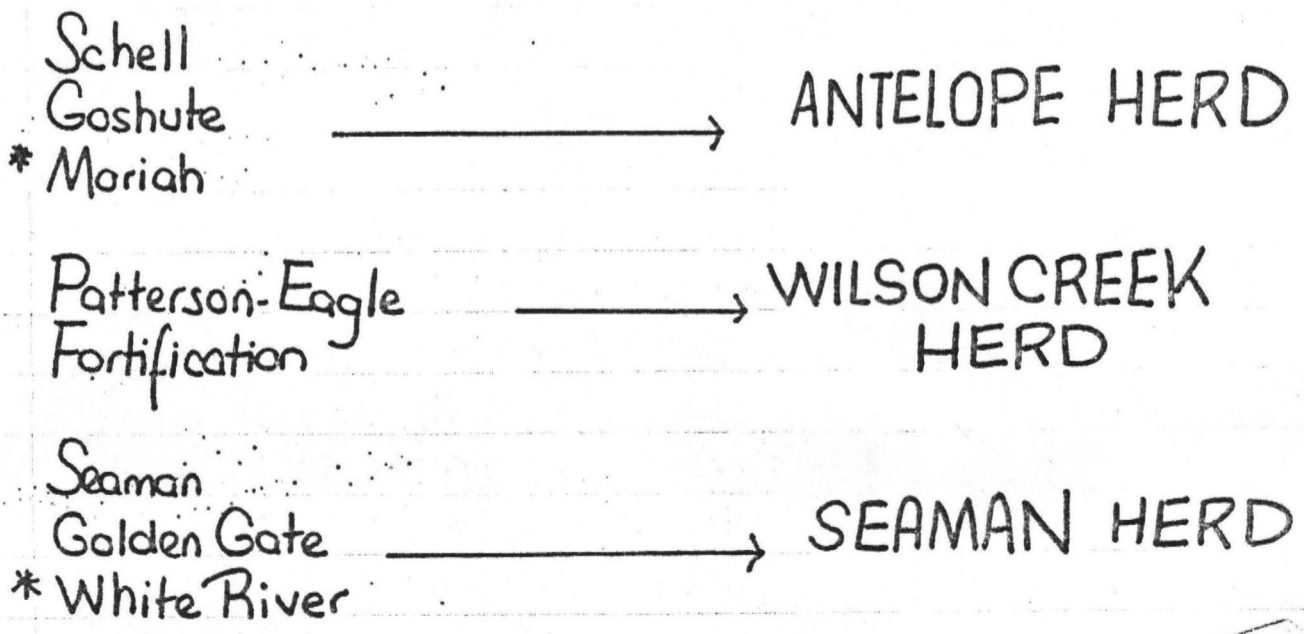
Justification for Reduction in the Number of Herd Units by Removal or Combination of the Existing Herd Units (See Overlay(s) WH-3)

There are presently ten horse herd units within the Schell Resource Area. They are as follows: Schell, Goshute, Moriah, Patterson-Eagle, Fortification, Seaman, Golden Gate, White River, Dry Lake, and Cave Valley.

Movement of wild horses in and out of their respective HMA's occurs on a regular basis with few bands remaining within the confines of the present herd unit boundaries. Horses sighted in regions adjacent to designated herd areas during aerial inventories indicates interplay across the herd unit boundaries.

Evidence of this migratory activity supports the need to combine those herd units that border each other and assign a common name to the herd established.

The following plan has been designed for consolidating those herd units where movement of wild horses creates interchange across boundaries.



SCHELL WH-(1)

LISA DIEP
JANUARY 1981

Dry Lake
Cave Valley



DRY LAKE
HERD

Not responsive to
Congressional mandate
Not Nev. S.O. policy
Also not in B. Conference
w/ W.O. 8/1/45

The Moriah and White River Herd Units do not merge with other herd areas; however, they periodically migrate into adjacent regions. Horses in the Moriah HMA move into portions of Western Utah and those animals in the White River Herd Unit cross over into the Southern part of the Egan Resource Area. ~~intermittently displacing them outside the Schell Resource Area.~~

There have been few sightings of wild horses during inventories conducted in the Moriah and White River HMA's. In these areas where horse numbers are so low, Management is hardly practical nor economically sound. These herd units are ^{thus} subject to removal.

↓ Upon implementation of a capture plan, horses from the White River Herd Unit, located North of the Wayne A. Kirsch Wildlife Management Area, would be redistributed to the South and incorporated into the Seaman Herd Unit or transported to Palomino Valley Holding Facility in Carson City for adoption. A final aerial inventory should be flown to assess the present population in both HMA's.

Horses comprising the Moriah Herd Unit could be redistributed into either Seaman or Dry Lake Herd Units or put up for adoption.

Other alternatives for removal include: humane destruction of horses unable to survive in the wild i.e. lame or diseased or those unsuitable for adoption or allow the existing numbers to remain without management or protection.

URA-4
SCHELL

WH-(2)

LISA OIERCKS
JANUARY 1981

Antelope Herd Unit:

(1) Habitat Improvement Areas

The Antelope Herd Management Area can be improved by increasing forage. The opportunity exists to increase the amount of forage available to horses by reducing the number of AUM's now used by domestic livestock. An additional 1142 AUM's are needed to support the present population. A substantial reserve of forage is also needed to supplement the existing vegetation during times of drought and to support future increase in numbers. This surplus can be obtained by further reduction in AUM's allocated to domestic livestock.

Another method of increasing forage production for wild horse consumption is to alternate the use of existing water sources so as to create a more even grazing distribution thus resting a percentage of forage at any given time. Strategic location of water sources will induce migration. This technique implements a modified rest-rotation system without interrupting the wild and free-roaming behavior of wild horses.

Specific land treatments can also be applied to raise the current rate of forage production. A ^{inject from pg. 4} potential 61,730 acres has been proposed for vegetal manipulation within the Antelope HMA. (See Overlay . . .). Completion of this program will increase the carrying capacity of this herd unit by 6,731 AUM's; thus providing enough additional forage to support 448 horses. The maximum number of horses maintained within the Antelope Herd Unit should not exceed 700 head. This figure is in keeping with the [REDACTED] forage, water, and living space available within the HMA after

What about improvements in living space? Are there any areas restricting movement?

Proliferation of the herd will create a demand for more water. The increase in AUM's attained through vegetal manipulation will furnish more forage thus allowing an increase in numbers of wild horses. An additional 2,452,800 gal./yr. or 10.4 acre-ft./yr. will be required to sustain an additional 448 horses

An already existing water source, Antelope Well (T25N R68E S26) is in the process of being improved. Restoration of the well will supplement other sources currently providing water to wild horses within the Antelope HMA. Water supplies will be increased by 8,640 gal./day or 3,153,600 gal./yr. when the Antelope Well is in full operation (6 gal./min.) A storage tank has been installed with a capacity of 20,000 gallons. If the criteria previously discussed are closely adhered to, the Antelope Well, as well as existing sources will furnish an ample supply of water for wild horses.

Antelope Herd Unit

Wild Horse Facilities

to exclude capture facilities and include mgmt facilities

Management facilities are needed for removing excess horses. Equipment used during roundups includes water and wing traps for capture, loading chutes, and corrals for containment. Only portable corrals should be used as holding facilities while gathering wild horses. This method of confinement can be strategically located, easily transported, and is very functional.

Abandoned corrals are not dependable due to the lack of maintenance and often unfavorable location. Permanent facilities invite illegal gathering activity, portable equipment discourages this practice.

Areas heavily used by wild horses need be inventoried to determine the best location of capture facilities in order to maximize the removal of excess animals.

URA Step 4 manual
Guidance requires identification of facilities for mgmt. of wild horses through HMA's. The facilities should be capture facilities & do not operate in the Herd Unit - change narrative
Talk about opportunities for mgmt not removal

Antelope Herd Unit
(4) Living Space

The living space needed to maintain a quality free-roaming environment for wild horses is a vast, open area free from any obstructions such as: cattleguards, fencing projects, ranching and mining operations, open trenches, and seismic activities.

With the exception of the Robinson-Henroid Control Fence and the Henroid Allotment Reseeding Fence in North Spring Valley, living space does not appear to be a limiting factor to wild horses in the Antelope Herd Unit, however, removal of these fences would increase available living space.
(See Overlay)

Antelope Herd Unit

(5) Conflicts

The major conflict within the Antelope Herd Unit is grazing of domestic livestock as discussed in Part I - Habitat Improvement Areas.

Both cattle and sheep utilize the area creating competition for desired available forage. Continued use ^{by domestic livestock} in this region will cause substantial loss of key species consumed by existing horses.

Prohibiting grazing by domestic livestock will also conserve available water supplies and prevent competition at watering facilities.

Existing fences pose a second conflict within the Antelope Herd Unit. The Robinson-Henroid Control Fence (0475) which designates the boundary between Tippet and Chin Creek Allotments runs 7 miles East-West across North Spring Valley blocking North-South movement of wild horses.

Another fencing problem arises on the west end of the Robinson-Henroid Control Fence where the Henroid Allotment Reseeding Fence (0480) ties in. This fence consists of 4.5 miles that encloses the Henroid Seeding; thus blocking access into ^{and}/or through the seeding. Not only does this interrupt patterns of movement but removes the seeding as another source of forage.

To resolve this conflict the fencing projects could either be removed or access granted to wild horses by entry through the numerous gates installed along the fence lines. (See Overlay)

Antelope Herd Unit

(6) Population Improvement

Several opportunities exist to improve the wild horse population in the Antelope Herd Management Area.

Increasing the current rate of forage production is one of the best methods towards improving herd condition. Providing an abundance of vegetation insures continued survival and well-being of wild horse herds. In areas of high concentrations of horses, a percentage can be redistributed. (See Part 1 - Habitat Improvement Areas)

Another method of improving wild horse populations is the introduction of young, viable stallions and mares to replace the old, debilitated, lame, and/or diseased animals unable to reproduce strong, healthy offspring. This action would also aid in upgrading the herd thus enhancing adaptability potential. The injection of healthy, viable horses would also aid in preventing or decreasing the occurrence of genetic defects. Mares who have contracted diseases, such as, Rhinopneumonitis, tend to have a higher abortion rate. Weak, old mares who give birth to foals may be unable to support the needs of their young. Those animals determined to be unfit for survival in the herd unit would have to be removed and destroyed in the most humane manner, unless suitable for adoption.

(?) → Herd condition could also be improved by introducing a sterilization program. Castration of stallions would lower conception rates thus

(8)

Contrary to intent of P.L. 92-195 - Also, do we really have the problems we are seeing to solve? Who says we have genetic defects? Current H. Management

we have this problem absolutely no effect! not sol will have effect!

not so!

reduce substantial substantial increase in numbers in regions where available water, forage, and cover require carrying capacity to be kept in check.

How do we keep carrying capacity in check?

Providing dependable, year-round water sources is required to maintain a healthy herd. Shortages of water can severely debilitate herd condition if not kill; therefore is of utmost importance in all herd units. (See Water Development Potential - Part 2)

Kill herd cond?

Shelter and security are crucial elements in preserving herd condition. Wild horses rely on timbered areas for protection from predators, adverse weather conditions, and man. Although there is no evidence, the use of piñon-juniper zones for foaling areas is likely to occur. Each herd management area should contain a substantial number of acres of timber and dense brush. An abundance of cover fulfills one of the necessary requirements for herd survival.

what is the opportunity?

contains 161,400 timbered acres

Control of poisonous plants is yet another notable component towards improving population. There are numerous noxious and poisonous plants scattered throughout the region that are hazardous to grazing animals, halogeton (Halogeton glomeratus) and greasewood (Sarcobatus vermiculatus) being the most widespread in the Antelope Herd Unit. As long as an adequate amount of desirable forage species are available to horses poisonous plants should not create a serious problem. (See Chart 4)

do we do this?

Protection is an increasingly important factor in preservation of wild horse herds. Laws protecting wild horses from harassment, unauthorized transporting, and slaughter; whether it be for consumptive purposes or intimidation, should be enforced to preserving the existing wild horse

How do we do this? This is our job. No need to restate our job in approvals documents.

population. The opportunity exists to assign aerial and ground personnel in those areas where illegal activity is taking place, not only in the field but also at livestock sales. Periodic checks might also be made at processing plants.

Protection for wild horses can be afforded by restricting aerial inventories during foaling season and until foals have developed enough adequate anatomical strength to evade oncoming aircraft without injury. Proper scheduling of aerial inventories will provide this necessary protection.

Continued research on the existence of wild horses on rangelands will reveal the problems they are confronted with enabling authorized agencies to manage them more efficiently and indirectly aid in their survival. Initially, studies can be conducted on an annual basis to determine

an accurate population census. Further studies should concentrate on population dynamics, including mortality and birth rates, age classes, migratory patterns, and overall herd condition. Habitat data can be obtained by analyzing foraging habitats, vegetative condition, seasonal use areas, soil structure, climate, topography, and any limiting physical and biotic factors in the environment. Opportunities for gathering this information are present with the manpower to conduct wild horse research.

appropriate vehicles for aerial inventories, and knowledge of the methods utilized for developing

(19) If you don't know this all you have to do is ask

These are BLM conducted studies, not research

where are these areas

Why would the Ely D.O. do this?

there is no need to do this aerial census causes no problems.

Why not just keep aircraft far enough away that we don't injure animals?

What does this mean? says nothing.

... studies cannot determine an accurate census!

data already available

data available in Ely D.O. for Duckwater etc

this is not research

inject at end of pg. 11 after age class.

Much of this data is available now. We simply fail to use it.

Fecal analysis says nothing about utilization as the term is used in BLM (% current years growth taken)

inject after ... factors in the environment pg. 10
management plans. Much of the information can be obtained by immobilization of the animals followed by a thorough examination and collaring before release. Certain behavioral characteristics can be studied through extensive observation. Documentation can be achieved with photography. Fecal analysis is an excellent means of acquiring data on utilization and forage preferences, as well as nutritional information. Dental inspection during the immobilization phase will aid in attaining knowledge on age class.

Not unless compared w/ nutrient content of plants

* Supplement to improving populations:

Adjust sex ratios in favor of competition for mares by stallions. Competition for mares will increase, which will lower the rate of conception. This will aid in deterring drastic population increases and reduce the costs of capturing and removing excess horses

1. What is the sex ratio which favors competition for mares?
2. What study, research or documented observation, shows a correlation with increased competition for mares and a lowered conception rate? This is simply not a true hypothesis and shows a complete lack of understanding of wild horse behavior and population dynamics

TABLE #1

AUM REQUIREMENTS, AVAILABILITY, AND DIFFERENCES
BY HERD UNIT AND ALLOTMENT(S)

HERD UNIT	Allotments within herd unit area	AUM's required to support existing horses	AUM's available for horse use	AUM deficit or surplus
<u>ANTELOPE</u> EXISTING NUMBERS: 252 HEAD	Becky Springs	190	151	-39
	Chin Creek	1763	1173	-590
	Sampson Creek	154	127	-27
	Tippet	818	675	-143
	Tippet Pass	71	58	-13
	Goshute Mt.	45	26	-19
	Deep Creek	739	428	-311
	3780	2638	-1142	
<u>WILSON CREEK</u> EXISTING NUMBERS: 130 HEAD	S. Spring Valley	2	2	0
	Cottonwood	299	460	+161
	Hamblin Valley	653	1005	+352
	Geyser	452	696	+244
	Wilson Creek	544	5577	+5033
	1950	7740	+5790	

HERD UNIT

Allotments within herd unit area AUM's required to support existing horses AUM's available for horse use AUM deficit or surplus

DRY LAKE
EXISTING NUMBERS:
63 HEAD

Narrows	1	3	+ 2
Geyser	33	209	+176
Grassy Mt.	2	9	+ 7
Wilson Creek	774	4813	+4039
Fox Mt.	31	52	+ 21
Sunnyside	104	173	+ 69
	945	5259	+4314

SEAMAN
EXISTING NUMBERS:
20

Fox Mt.	18	197	+179
Oreana Springs	66	723	+ 657
Timber Mt.	22	238	+ 216
Needles	65	840	+ 775
Seaman Springs	43	473	+ 430
Wilson Creek	29	320	+ 291
Forest Moon	49	876	+ 827
Botterman Wash	0	0	0
Sunnyside	7	123	+116
Dry Farm	1	7	+ 6
	300	3797	+3497

HERD UNIT	PRESENT HORSE POPULATION	AUM's / MONTH REQUIRED TO SUPPORT EXISTING POPULATION	AUM's / YEAR REQUIRED TO SUPPORT EXISTING POPULATION
ANTELOPE	252	315	3,780
WILSON CREEK	130	163	1,950
DRY LAKE	63	79	945
SEAMAN	20	25	300
(TOTAL :	465	582	6,975

HERD UNIT	EXISTING HORSE POPULATION	TOTAL ACRES COMPRISING HERD AREA	VEGETAL MANIPULATION	WATER DEVELOPMENT	FENCE REMOVAL
ANTELOPE	252	311,869	61,730	1	11.5 MILES 0480 - 4.5 0475 - 7.0
WILSON CREEK	130	691,000	260,712	2	39 MILES 0058 - 4.0 0043 - 4.6 0774 - 2.5 0660 - 6.5 0167 - 17.5 0656 - 3.9
DRY LAKE	63	496,500	72,950	3	14.2 MILES 0163 - 8.0 0970 - 4.2 4230 - 2.0
SEAMAN	20	340,100	12,281	2	—

COMMON NAME	SCIENTIFIC NAME	LOCATION	TIME	ANIMALS AFFECTED
CHOKECHERRY	(<i>Prunus</i> spp.)	MOUNTAINS, VALLEYS, ROADSIDES	ALL SEASONS	ALL, MAINLY SHEEP
DEATH CAMASS	(<i>Zygadenus</i> spp.)	FOOTHILLS, WET DESERTS	EARLY SPRING	ALL, MAINLY SHEEP
<u>GREASEWOOD</u>	(<i>Sarcobatus</i> <i>vermiculatus</i>)	BOTTOMLANDS, WASHOUTS	SPRING	ALL, MAINLY SHEEP
<u>HALOGETON</u>	(<i>Halogeton</i> <i>glomeratus</i>)	INTERMTN. REGION, SALT DESERTS	FALL/WINTER	ALL, MAINLY SHEEP
HORSEBRUSH	(<i>Tetradymia</i> spp.)	INTERMTN. REGION, DRY SEMI-DESERT	SPRING	SHEEP
LARKSPUR	(<i>Delphinium</i> spp.)	DESERTS, PLAINS, FOOTHILLS	EARLY SPRING	CATTLE
LUPINE	(<i>Lupinus</i> spp.)	MOUNTAINS, FOOTHILLS; SEMI-DESERTS	MOST DANGEROUS WHEN IN FRUIT	SHEEP
LOCOWEED	(<i>Astragalus</i> spp.)	MOUNTAINS, DESERTS, PLAINS	ALL SEASONS; ESPECIALLY SPRING	ALL
MILKWEED	(<i>Asclepias</i> spp.)	WASTE AREAS, SANDY SOILS, MOIST BOTTOMS	ALL SEASONS, ESPECIALLY SPRING	ALL, MAINLY SHEEP
* RUSSIAN THISTLE	(<i>Salsola kali</i> <i>tenuifolia</i>)	BOTTOMLANDS, DESERT	SPRING, SUMMER	CAN BE UTILIZED BY ALL ANIMALS

* RUSSIAN THISTLE IS CLASSIFIED AS A NOXIOUS PLANT.

Seaman Herd Unit

(1) Habitat Improvement Areas

To date, there are no land treatments in the Seaman Herd Unit. That part of ^{the range} the herd unit inhabits prevails in a different latitude and climate not conducive to the establishment of conventional seedlings sown with introduced species such as Agropyron cristatum.

The semi-arid climate within the herd unit is characterized by extreme temperatures, brief, intense periods of precipitation, high, drying winds, and low humidity. These factors coupled with the presence of clay and/or sandy soils discourage seeding applications. Sandy soils possess high permeability properties while clay has poor absorptive water qualities; therefore the moisture intercepted by the soil is either flushed through or is never absorbed.

For these reasons, no land treatments have been applied in this area; however, there has been a proposal to administer a treatment in the NW portion of the unit; SW of Forest Home Reservoir #3. Experimentation will reveal the success or failure of future applications towards increasing forage production. (See Overlay)

Forage production can be increased by natural means. With a reduction in the numbers of domestic livestock grazing within the unit boundaries plant vigor will improve and the invasion of undesirable species discouraged. More information is needed on seasonal use areas and migratory patterns of wild horses before additional recommendations to increase

forage can be made.

Seaman Herd Unit

(2) Water Development Potential

Watering facilities within the Seaman Herd Management Area provide an adequate supply of water for the existing numbers only if the following criteria are met:

- A) Water is available on a year-round basis
- B) Periodic maintenance inspections are conducted to assure that supply meets demand
- C) Water quality meets acceptable standards i.e. free from impurities, toxins,

Proper placement of water sources will aid in obtaining an even grazing distribution and help to relieve stress among specific bands of horses inhabiting certain territories.

Two additional water developments have been proposed for the Seaman Herd Management Area. Seaman Springs, located in the Seaman Springs Allotment, will provide the source from which water will be piped approximately 2 miles SW to a trough. If implemented, this facility should be maintained so that an adequate flow from the spring continues to supply the trough on a year-round basis.

Another potential water development needed in the Seaman Herd Unit could be implemented as a pipeline originating at Oreana Spring.

(See Overlay)

Seaman Herd Unit

(3) Wild Horse Facilities

Management facilities are needed for removing excess horses. Equipment used during roundups includes water and wing traps for capture, loading chutes, and corrals for containment. Only portable corrals should be used as holding facilities while gathering wild horses. This method of confinement can be strategically located, easily transported, and is very functional.

Abandoned corrals are not dependable due to the lack of maintenance and often unfavorable location. Permanent facilities invite illegal gathering activity; portable equipment discourages this practice.

Areas heavily used by wild horses need be inventoried to determine the best location of capture facilities in order to maximize the removal of excess animals.

(15)

Seaman Herd Unit

(4) Living Space

Due to the vast open areas within the herd unit, living space does not appear to be a limiting factor for wild horse populations. However, the presence of specific fences in the HMA restrict the potential for increasing living space. (Refer to: Part 5-Conflicts)

(23)

Seaman Herd Unit

(5) Conflicts

The major external influences on this herd are livestock grazing, mining, and fences.

A percentage of the herd unit is grazed by both sheep and cattle on a yearlong basis. This activity creates moderate competition between wild horses and domestic livestock; exceeding the carrying capacity of those regions thus reducing available forage required for maintaining the wild horse herd.

The Seaman Herd Unit presently consists of 20 horses that require 300 AUM's to maintain the existing population. A surplus of 3,497 AUM's are available providing enough forage to support an additional 233 head.

The conflict arises in those areas heavily grazed by both wild horses and domestic livestock. The location of existing water sources may attribute to these areas of greatest concentration. Grazing areas for domestic livestock could be designated and closely adhered to with a possible reduction in the grazing schedule imposed until overgrazed areas recover. Another means of resolving this conflict may be to alternate the use of existing water sources to encourage utilization throughout the herd unit, and therefore obtain a more even grazing distribution. If uniform foraging habits can be achieved, this HMA has the potential to support additional numbers - increases within the herd and/or horses redistributed from overpopulated areas.

A second conflict disrupting this herd unit is mining. Activity has increased greatly in the past few years. Mining claims staked in the Timber Mountain Pass region have contributed to the movement of numerous bands of horses out of the area. The activities of man and machinery discourage horses from utilizing this zone. Seismic exploration has also caused horses to leave traditional seasonal use areas.

Mining and seismic operations could be restricted to places not regularly inhabited by the Seaman Herd.

A third, and critical element affecting the well-being of wild horses, is the presence of fences. The fence line along SR 38 completely blocks Eastward movement of wild horses. The fence in Middle Coal Valley impedes movement to the Southwest. These fencing projects may not be in the main flow of migratory paths but their presence removes the opportunity to increase living space and access to additional water and forage.

Access should be granted by installing horse passes. Any movement of horses thereafter will indicate the desire of wild horses within the herd unit to extend their patterns of wild and free-roaming behavior. This migration may necessitate complete removal.

Seaman Herd Unit (6) Population Improvement

reference
Antelope
herd

Several opportunities exist to improve the wild horse population in the Seaman Herd Management Area.

Increasing the current rate of forage production is one of the best methods towards improving herd condition. Providing an abundance of vegetation insures continued survival and well-being of wild horse herds. In areas of high concentrations of horses, a percentage can be redistributed. (See Part I - Habitat Improvement Areas)

Another method of improving wild horse populations is the introduction of young viable stallions and mares to replace the old, debilitated, lame, and/or diseased animals unable to reproduce strong, healthy offspring. This action would also aid in upgrading the herd thus enhancing adaptability potential. The injection of healthy, viable horses would also aid in preventing or decreasing the occurrence of genetic defects. Mares who have contracted diseases, such as, Rhinopneumonitis, tend to have a higher abortion rate. Weak, old mares who give birth to foals may be unable to support the needs of their young. Those animals determined to be unfit for survival in the herd unit would have to be removed and destroyed in the most humane manner, unless suitable for adoption.

Herd condition could also be improved by introducing a sterilization program. Castration of stallions would lower conception rates thus

reduce substantial substantial increase in numbers in regions where available water, forage, and cover require carrying capacity to be kept in check.

Providing dependable, year-round water sources is required to maintain a healthy herd. Shortages of water can severely debilitate herd condition if not kill; therefore is of utmost importance in all herd units. (See Water Development Potential. Part 2)

Shelter and security are crucial elements in preserving herd condition. Wild horses rely on timbered areas for protection from predators, adverse weather conditions, and man. Although there is no evidence, the use of pinyon-juniper zones for foaling areas is likely to occur. Each herd management area should contain a substantial number of acres of timber and dense brush. An abundance of cover fullfills one of the necessary requirements for herd survival.

Control of poisonous plants is yet another notable component towards improving population. There are numerous noxious and poisonous plants scattered throughout the region that are hazardous to grazing animals, halogeton (*Halogeton glomeratus*) and greasewood (*Sarcobatus vermiculatus*) being the most widespread in the Seaman: Herd Unit. As long as an adequate amount of desirable forage species are available to horses poisonous plants should not create a serious problem. (See Chart 4)

Protection is an increasingly important factor in preservation of wild horse herds. Laws protecting wild horses from harassment, unauthorized transporting, and slaughter; whether it be for consumptive purposes or intimidation, should be enforced to preserving the existing wild horse

population. The opportunity exists to assign aerial and ground personnel in those areas where illegal activity is taking place; not only in the field but also at livestock sales. Periodic checks might also be made at processing plants.

Protection for wild horses can be afforded by restricting aerial inventories during foaling season and until foals have developed enough adequate anatomical strength to evade oncoming aircraft without injury. Proper scheduling of aerial inventories will provide this necessary protection.

Continued research on the existence of wild horses on rangelands will reveal the problems they are confronted with enabling authorized agencies to manage them more efficiently and indirectly aid in their survival. Initially, studies can be conducted on an annual basis to determine

An accurate population census. Further studies should concentrate on population dynamics, including mortality and birth rates, age classes, migratory patterns, and overall herd condition. Habitat data can be obtained by analyzing foraging habitats, vegetative condition, seasonal use areas, soil structure, climate, topography, and any limiting physical and biotic factors in the environment. Opportunities for gathering this information are present with the manpower to conduct wild horse research, appropriate vehicles for aerial inventories, and knowledge of the methods utilized for developing

injected at end of pp. 11
after age class.

management plans. ^{inject after ... factors in the environment pg. 10} Much of the information can be obtained by immobilization of the animals followed by a thorough examination and collaring before release. Certain behavioral characteristics can be studied through extensive observation. Documentation can be achieved with photography. Fecal analysis is an excellent means of acquiring data on utilization and forage preferences, as well as nutritional information. Dental inspection during the immobilization phase will aid in attaining knowledge on age class.

Wilson Creek Herd Unit

(1) Habitat Improvement Areas

Wild horse habitat can be enhanced by increasing forage production. One of the most successful means of raising current forage production levels is through vegetal manipulation. By applying specific land treatments to existing vegetation more forage can be made available for consumption by wild horses. Certain areas have been chosen in the Wilson Creek Herd Management Area as potential sites for vegetal manipulation. (Refer to Overlay)

The total rangeland eligible for manipulation is 260,712 acres. Treatments will be applied in the form of chainings, seedings, spraying, burning, and/or soil modifications such as: ripping, pitting, fertilizing, furrowing, and terracing. Implementation of the prescribed methods will increase forage production by approximately 26,000 AUM's providing enough additional forage to support 1,738 horses. The existing surplus of AUM's in Wilson Creek Herd Unit will support an additional 386 head prior to any vegetal manipulation. This surplus indicates the availability of forage within the HMA not only for existing numbers but substantial increases from foal crop, movement into the area by other horses i.e. possible exchanges from Dry Lake Herd Unit and/or horses redistributed from areas of forage shortage.

Forage can also be increased by alternating the use of available water sources. Not only will this create a more balanced grazing distribution but relieve pressure placed on vegetation growing near water facilities. Placement of watering sites should be studied carefully so as not

to create stressful conditions amongst bands. Location should induce migration so that horses will utilize all regions of the HMA.

Another provision for improving horse habitat is securing reservations of forage for the wild horse population. An estimated 7,800 AUM's are available to horses within the Wilson Creek Herd Unit.

This HMA is the only region inhabited by wild horses in the Schell Resource Area that now provides horses with a percentage of the total AUM's allocated.

Wilson Creek Herd Unit

(2) Water Development Potential

Much opportunity is present throughout the herd unit for improvement of existing water sources along with the development of new waters.

Two additional water developments have been proposed within the Wilson Creek Herd Management Area. A pipeline transporting water from Bradshaw Spring, SE of Atlanta Mine, 3 1/2 miles N to troughs and/or tanks is an extremely good proposal. This development would prevent possible use of the toxic Tailings Ponds near the Atlanta Mine and at the same time reduce the threat of harassment placed upon horses presently utilizing water sources in the vicinity of the mine.

A second proposal for water development has been made in the region West of White Rock Mountains. Several springs NE of the White Rock Seeding can provide a water source by piping from the spring approximately 3 1/2 miles SW to the seeding. Both of these proposals would aid in improving existing

habitat by providing additional sources of water.
(See Overlay)

Present and future water sources need to be maintained to ensure adequate yearlong supplies. Quantities of water flowing from available sources can be increased by clearing overgrown vegetation from seep areas to reduce transpiration. Availability can also be improved by providing easy access to the source. Water supply should always meet demand.

The available watering facilities presently within the HMA provide enough water to meet current demands; however, with any substantial increase in population, other potential water sources will have to be investigated and developed.

Wilson Creek Herd Unit

(3) Wild Horse Facilities

Management facilities are needed for removing excess horses. Equipment used during roundups includes water and wing traps for capture, loading chutes, and corrals for containment. Only portable corrals should be used as holding facilities while gathering wild horses. This method of confinement can be strategically located, easily transported, and is very functional.

Abandoned corrals are not dependable due to the lack of maintenance and often unfavorable location. Permanent facilities invite illegal gathering activity; portable equipment discourages this practice.

Areas heavily used by wild horses need be inventoried to determine the best location of capture facilities in order to maximize the removal of excess animals. (14)

privileges terminated.

Wilson Creek Herd Unit
(4) Living Space

The Wilson Creek Herd Management Area encompasses approximately 691,000 acres.

Living space does not appear to be a limiting factor due to the vast, open area comprising the Herd Management Area; however, living space can be further increased by removing existing fences, as stated in: Part 5 - Conflicts.

Wilson Creek Herd Unit

(5) Conflicts

The greatest conflict in the Wilson Creek Herd Management Area is existing fences. Numerous projects need to be removed or provide access to wild horses. (See Table 3)

Approximately 39 miles of fence line needs to be removed and 7 fences must grant access into the enclosed areas. By total removal or modification through installation of horse passes, more forage, water, and cover will be available and the wild and free-roaming nature of wild horses restored. (See Overlay)

Another conflict arises with the presence of mining activity. In the past, cases of harassment of wild horses while watering have been reported in the vicinity of Atlanta Mine. Wild horses inhabiting this area surrounding the mine can be encouraged to utilize other portions of the herd unit by developing alternate water sources away from the mine and fencing sources available at the Atlanta site.

The presence of domestic livestock creates a third conflict in the Wilson Creek Herd Management Area. Grazing by domestic livestock may discourage bands of wild horses from utilizing regions which may otherwise be crucial areas of seasonal use.

Fenced seedings or pastures reserved for livestock use not only prevent horses from obtaining additional forage but also water. After livestock are removed from the area, once available water may be discontinued when supplies are shut off. All facilities granted for livestock use must be made available to wild horses or else livestock

Wilson Creek Herd Unit
(b) Population Improvement

reference
Antelope
herd

Several opportunities exist to improve the wild horse population in the Wilson Creek Herd Management Area.

Increasing the current rate of forage production is one of the best methods towards improving herd condition. Providing an abundance of vegetation insures continued survival and well-being of wild horse herds. In areas of high concentrations of horses, a percentage can be redistributed. (See Part I - Habitat Improvement Areas)

Another method of improving wild horse populations is the introduction of young, viable stallions and mares to replace the old, debilitated, lame, and/or diseased animals unable to reproduce strong, healthy offspring. This action would also aid in upgrading the herd thus enhancing adaptability potential. The injection of healthy, viable horses would also aid in preventing or decreasing the occurrence of genetic defects. Mares who have contracted diseases, such as, Rhinopneumonitis, tend to have a higher abortion rate. Weak, old mares who give birth to foals may be unable to support the needs of their young. Those animals determined to be unfit for survival in the herd unit would have to be removed and destroyed in the most humane manner, unless suitable for adoption.

Herd condition could also be improved by introducing a sterilization program. Castration of stallions would lower conception rates thus

reduce substantial substantial increase in numbers in regions where available water, forage, and cover require carrying capacity to be kept in check.

Providing dependable, year-round water sources is required to maintain a healthy herd. Shortages of water can severely debilitate herd condition if not kill, therefore is of utmost importance in all herd units. (See Water Development Potential. Part 2)

Shelter and security are crucial elements in preserving herd condition. ^{Wilson Creek HMA contains 522,521 timbered acres.} Wild horses rely on timbered areas for protection from predators, adverse weather conditions, and man. Although there is no evidence, the use of pinyon-juniper zones for foaling areas is likely to occur. Each herd management area should contain a substantial number of acres of timber and dense brush. An abundance of cover fulfills one of the necessary requirements for herd survival.

Control of poisonous plants is yet another notable component towards improving population. There are numerous noxious and poisonous plants scattered throughout the region that are hazardous to grazing animals, halogeton (*Halogeton glomeratus*) and greasewood (*Sarcobatus vermiculatus*) being the most widespread in the Wilson Creek Herd Unit. As long as an adequate amount of desirable forage species are available to horses poisonous plants should not create a serious problem. (See Chart 4)

Protection is an increasingly important factor in preservation of wild horse herds. Laws protecting wild horses from harassment, unauthorized transporting, and slaughter, whether it be for consumptive purposes or intimidation, should be enforced to preserving the existing wild horse

population. The opportunity exists to assign aerial and ground personnel in those areas where illegal activity is taking place; not only in the field but also at livestock sales. Periodic checks might also be made at processing plants.

Protection for wild horses can be afforded by restricting aerial inventories during foaling season and until foals have developed enough adequate anatomical strength to evade oncoming aircraft without injury. Proper scheduling of aerial inventories will provide this necessary protection.

Continued research on the existence of wild horses on rangelands will reveal the problems they are confronted with enabling authorized agencies to manage them more efficiently and indirectly aid in their survival. Initially, studies can be conducted on an annual basis to determine

an accurate population census. Further studies should concentrate on population dynamics, including mortality and birth rates, age classes, migratory patterns, and overall herd condition. Habitat data can be obtained by analyzing foraging habitats, vegetative condition, seasonal use areas, soil structure, climate, topography, and any limiting physical and biotic factors in the environment. Opportunities for gathering this information are present with the manpower to conduct wild horse research, appropriate vehicles for aerial inventories, and knowledge of the methods utilized for developing

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management plans. ^{inject after ... factors in the environment pg. 10} Much of the information can be obtained by immobilization of the animals followed by a thorough examination and collaring before release. Certain behavioral characteristics can be studied through extensive observation. Documentation can be achieved with photography. Fecal analysis is an excellent means of acquiring data on utilization and forage preferences, as well as nutritional information. Dental inspection during the immobilization phase will aid in attaining knowledge on age class.

Dry Lake Herd Unit

(1) Habitat Improvement Areas

Wild horse habitat can be improved by implementation of specific land treatments. Through vegetal manipulation, forage can be increased substantially. Approximately 73,000 acres constitute potential sites for rehabilitation and introduction of new species. Application of these vegetative improvements will provide enough additional forage to support 486 horses (7,295 ^{AUM's}).

Habitat can also be improved by alternating the use of existing water sources. Strategic location of watering facilities will induce migration and create a more uniform distribution. This method will act as a modified rest-rotation system by allowing only a percentage of the vegetation to be utilized at any one time. Resting key species during critical growth periods will further enhance vegetative status within the herd unit.

Forage should be secured for wild horses in Dry Lake Herd Unit. Reservations of forage for existing numbers total an approximate 1,000 AUM's. An additional 4,300 AUM's are available to support another 286 horses. This surplus will maintain future increases and/or any horses redistributed into the Seaman Herd Management Area. Wild horses are an integral part of these rangelands and adequate amounts of forage are required. AUM's allocated to domestic livestock for grazing could be reduced in areas where severe competition for forage and water exists.

Dry Lake Herd Unit

(2) Water Development Potential

Several proposals have been made in the Dry Lake Herd Unit to develop additional water sources. One such development, if implemented, would occur at Mud Springs. Water will be piped from the spring source to a trough approximately 5 miles South. Installation of another pipeline at Garden Patch Spring would transport water roughly 9 miles Southwest through Muleshoe Valley. Another development has been requested in the Grassy Mountain Allotment. This facility would provide water by piping from Steward Spring to Muleshoe Reservoir. Troughs would be placed intermittently along a predetermined route between sources. These developments would provide additional water supplies necessary to meet demand. Increased quantities of water also improve existing habitat.

The importance of water to wild horses is evident. Water is vital to health and survival. Existing and future water sources should meet quality standards, requirements of wild horses utilizing watering sites preferably with a surplus, and should be maintained to ensure adequate supplies year-round.

Proper placement of watering locations will encourage horses to utilize specific areas of the Herd Unit. A more uniform distribution can be obtained as a result. Utilization of snow in the winter relieves pressure exerted on watering sites during the summer.

Dry Lake Herd Unit

(3) Wild Horse Facilities

Management facilities are needed for removing excess horses. Equipment used during roundups includes water and wing traps for capture, loading chutes, and corrals for containment. Only portable corrals should be used as holding facilities while gathering wild horses. This method of confinement can be strategically located, easily transported, and is very functional.

Abandoned corrals are not dependable due to the lack of maintenance and often unfavorable location. Permanent facilities invite illegal gathering activity; portable equipment discourages this practice.

Areas heavily used by wild horses need be inventoried to determine the best location of capture facilities in order to maximize the removal of excess animals.

Dry Lake Herd Unit

(4) Living Space

The Dry Lake Herd Management Area encompasses 497,000 acres. Living space does not appear to be a limiting factor; however, the existence of specific fencing projects impede and/or restrict movement into enclosed areas. The presence of these fences interrupts the wild and free-roaming nature of wild horses and block access into additional living space. (See Part 5-Conflicts)

Dry Lake Herd Unit

(5) Conflicts

The major external influence affecting horses in the Dry Lake Herd Unit is the presence of fences. Several fencing projects could be removed to restore wild and free-roaming behavior and provide access into areas containing forage and water. Specific fences blocking movement are: Muleshoe Drift Fence, Steward Allotment Fence, and Grassy Fence. Approximately 14.5 miles of fence line needs to be removed.

Access through the Lake Valley Unit Fence and Dutch John Fence could be granted to allow passage into ^{presently} inaccessible regions.

Portions of Dry Lake Herd Management Area are grazed yearlong by domestic livestock. Foraging by these animals creates conflicts when utilization occurs in key seasonal use areas grazed by wild horses. To resolve this conflict, the grazing

schedule could be shortened and a percentage of the AUM's allocated to domestic livestock reduced. This action would provide more forage so that the requirements of wild horses could be met.

Dry Lake Herd Unit
(6) Population Improvement

reference
Antelope
Herd

Several opportunities exist to improve the wild horse population in the Antelope Herd Management Area.

Increasing the current rate of forage production is one of the best methods towards improving herd condition. Providing an abundance of vegetation insures continued survival and well-being of wild horse herds. In areas of high concentrations of horses, a percentage can be redistributed. (See Part I - Habitat Improvement Areas)

Another method of improving wild horse populations is the introduction of young, viable stallions and mares to replace the old, debilitated, lame, and/or diseased animals unable to reproduce strong, healthy offspring. This action would also aid in upgrading the herd thus enhancing adaptability potential. The injection of healthy, viable horses would also aid in preventing or decreasing the occurrence of genetic defects. Mares who have contracted diseases, such as, Rhinopneumonitis, tend to have a higher abortion rate. Weak, old mares who give birth

to foals may be unable to support the needs of their young. Those animals determined to be unfit for survival in the herd unit would have to be removed and destroyed in the most humane manner, unless suitable for adoption.

Herd condition could also be improved by introducing a sterilization program. Castration of stallions would lower conception rates thus

reduce substantial substantial increase in numbers in regions where available water, forage, and cover require carrying capacity to be kept in check.

Providing dependable, year-round water sources is required to maintain a healthy herd. Shortages of water can severely debilitate herd condition if not kill, therefore is of utmost importance in all herd units. (See Water Development Potential - Part 2)

Shelter and security are crucial elements in preserving herd condition. ^{Dry Lake HUB contains 222,600 timbered acres.} Wild horses rely on timbered areas for protection from predators, adverse weather conditions, and man. Although there is no evidence, the use of pinyon-juniper zones for foaling areas is likely to occur. Each herd management area should contain a substantial number of acres of timber and dense brush. An abundance of cover fulfills one of the necessary requirements for herd survival.

Control of poisonous plants is yet another notable component towards improving population. There are numerous noxious and poisonous plants scattered throughout the region that are hazardous to grazing animals, halogeton (*Halogeton glomeratus*) and greasewood (*Sarcobatus vermiculatus*) being the most widespread in the Dry Lake Herd Unit. As long

as an adequate amount of desirable forage species are available to horses poisonous plants should not create a serious problem. (See Chart 4)

Protection is an increasingly important factor in preservation of wild horse herds. Laws protecting wild horses from harassment, unauthorized transporting, and slaughter, whether it be for consumptive purposes or intimidation, should be enforced to preserving the existing wild horse

population. The opportunity exists to assign aerial and ground personnel in those areas where illegal activity is taking place, not only in the field but also at livestock sales. Periodic checks might also be made at processing plants.

Protection for wild horses can be afforded by restricting aerial inventories during foaling season and until foals have developed enough adequate anatomical strength to evade oncoming aircraft without injury. Proper scheduling of aerial inventories will provide this necessary protection.

Continued research on the existence of wild horses on rangelands will reveal the problems they are confronted with enabling authorized agencies to manage them more efficiently and indirectly aid in their survival. Initially, studies can be conducted on an annual basis to determine

an accurate population census. Further studies should concentrate on population dynamics, including mortality and birth rates, age classes, migratory

patterns, and overall herd condition. Habitat data can be obtained by analyzing foraging habitats, vegetative condition, seasonal use areas, soil structure, climate, topography, and any limiting physical and biotic factors in the environment. Opportunities for gathering this information are present with the manpower to conduct wild horse research, appropriate vehicles for aerial inventories, and knowledge of the methods utilized for developing

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management plans. ^{inject after ... factors in the environment pg. 10} Much of the information can be obtained by immobilization of the animals followed by a thorough examination and collaring before release. Certain behavioral characteristics can be studied through extensive observation. Documentation can be achieved with photography. Fecal analysis is an excellent means of acquiring data on utilization and forage preferences, as well as nutritional information. Dental inspection during the immobilization phase will aid in attaining knowledge on age class.