



IN REPLY REFER TO:

# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Ely District Office  
HC 33 Box 33500  
Ely, Nevada 89301-9408



IN REPLY REFER TO:

4700 (NV-043)

AUG 30 1996

Dear Reader:

This letter is to inform you that the Ely District plans to remove wild horses from five herd management areas (HMAs) that are being severely impacted by drought conditions in Lincoln and Nye Counties. From field observations of available forage and water, as well as a review of monitoring data, it has been determined that the wild horses and their habitat are already being adversely impacted in these five HMAs. Forage production is extremely limited, as is available water, annual precipitation is less than 50% of normal, and forage utilization is already moderate to severe. Winter feed is already overutilized. Livestock closures are occurring in conjunction with the wild horse removals. The removals are scheduled to commence immediately and will continue through September until completed.

The five HMAs scheduled for emergency removals are Highland Peak, Miller Flat, White River, Seaman, and Dry Lake. It is proposed to remove approximately 175 wild horses from within and adjacent to the Highland Peak HMA. Approximately 70 wild horses will remain in the HMA upon completion of the removal. The Highland Peak HMA Emergency Gather Plan and Notice of Final Full Force and Effect Decision are enclosed (Enclosure 1).

There are approximately 100 wild horses proposed for the scheduled removal from the Miller Flat HMA, and approximately 60 wild horses will remain in the HMA after the removal is completed. The Miller Flat HMA Emergency Gather Plan and Notice of Final Full Force and Effect Decision are enclosed (Enclosure 2).

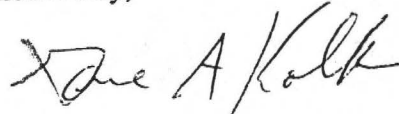
There are approximately 275 wild horses scheduled to be removed from the White River HMA during the emergency removal, and approximately 250 wild horses are proposed for removal from the Seaman HMA. Upon completion, the number of wild horses remaining in these two HMAs will be at the lower limits of their respective appropriate management levels (AMLs) as established through the allotment monitoring/evaluation process. The White River HMA will have 77 wild horses remaining and 136 will remain in the Seaman HMA. Enclosed you will find the DR/FONSI, Environmental Assessment (EA No. NV-040-96-05), and the Wild Horse Capture/Removal Plan for the Seaman and White River HMAs (Enclosure 3).

Approximately 200 wild horses are proposed for removal from the Dry Lake HMA, to reach the lower limits of the AML established for the HMA. There will be 80 horses remaining in the HMA after the removal. This removal is a continuation of the action addressed in the Wild Horse Removal Plan for Dry Lake/Wilson Creek HMA and the Patterson Seedings and

the associated EA No. NV-040-02-22, which were approved on May 28, 1993. This removal does not constitute a new decision, since current monitoring data show the established AML is still valid and the capture methods remain the same as stated in the Removal Plan/EA, even though the removal is driven by emergency drought conditions. Therefore, as stated in the Removal Plan and EA, a new DR/FONSI is not required to achieve or maintain the established AML through removal of excess animals.

If you have any questions regarding these emergency drought removals, contact Bob Brown, Ely District Wild Horse Specialist, at the above address or phone him at (702) 289-1843.

Sincerely,



Gene A. Kolkman  
District Manager

4 Enclosures

1. Highland Peak HMA Emergency Gather Plan and Notice of Decision (8pp)
2. Miller Flat HMA Emergency Gather Plan and Notice of Decision (7pp)
3. Wild Horse Capture/Removal Plan for the Seaman and White River HMAs, EA No. NV-040-96-05 and DR/FONSI (47pp)
4. Dry Lake maps (2pp)



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Ely District Office  
HC 33 Box 33500  
Ely, NV 89301-9408

In Reply Refer To:  
4700 (NV-043)

CERTIFIED MAIL #  
RETURN RECEIPT REQUESTED

DR/FONSI  
SEAMAN AND WHITE RIVER HMAS WILD HORSE REMOVAL PLAN  
EA NO. NV-040-96-05

DECISION: I have reviewed the 1996 environmental assessment (EA # NV-040-96-05) for the Seaman and White River Herd Management Areas (HMAs) Wild Horse Removal and I concur with the analysis for this decision. No mitigation is required beyond the Standard Operating Procedures which are considered part of the proposed action. The allotment evaluations and final multiple use decisions (FMUDs) for the allotments within both HMAs also suggest the proposed removal takes place. I concur with the recommendation to conduct a selective removal as described in the Wild Horse Capture/Removal Plan for Seaman HMA and White River HMA.

The non-selected alternatives analyzed in EA # NV-040-96-05 consist of water trapping wild horses, trapping wild horses by herding them on horseback, and no action.

This final decision is issued Full Force and Effect to allow for the immediate removal of excess wild horses from the Seaman and White River HMAs.

Severe drought conditions currently exist within and adjacent to the White River and Seaman HMAs. Forage production is extremely limited. Forage utilization is currently in moderate to severe use categories. From field observations of available forage and water, as well as a review of monitoring data, it has been determined that the wild horses (which are in poor to fair body condition) and their habitats are being adversely impacted.

Approximately 275 excess wild horses must be removed from the White River HMA and approximately 250 excess wild horses must be removed from the Seaman HMA. All wild horses that are removed will be placed into the adoption program regardless of age, during this initial drought related removal. The gather operation will be conducted by helicopter trapping and/or roping. The removal will reduce both HMAs to the lower limits of their respective AMLs, due to extreme drought conditions, which are 77 wild horses remaining in the White River HMA and 136 animals in the Seaman HMA.

Livestock closures will occur on those areas within both HMAs, in conjunction with the removal of wild horses, that are severely impacted by the drought.

Due to the emergency nature of these conditions, it is necessary to implement this action immediately, through a Full Force and Effect Decision. This decision will be implemented on or about September 2, 1996 and will continue until the action is completed.

Rationale: The proposed action will result in wild horses being managed at appropriate management levels (AMLs) within the allotments of the Seaman and White River HMAs, establishing a thriving natural ecological balance among all multiple users. The proposal is in conformance with the Wild Free-Roaming Horse and Burro Act of 1971 (P. L. 92-195), as amended. It also conforms with the Schell MFP and ROD, as well as the Egan RMP and ROD. In addition, it complies with the provisions of 43 CFR 4710.4 which states, "Management of wild horses and burros shall be undertaken with the objective of limiting the animals' distribution to herd areas."

Direct and indirect environmental benefits are anticipated for livestock and wildlife, as well as the remaining wild horses, with the adoption of the proposed action. The removal will result in improvement of the rangeland resources through decreased utilization of the forage and water resources within the HMAs, thus restoring the range to a thriving natural ecological balance.

The immediate removal of excess wild horses from the HMAs is necessary to avert the imminent degradation of the rangeland resources caused by overgrazing of wild horses and to restore the range to a thriving natural ecological balance. It is also necessary to comply with the provisions of 43 CFR 4710.4.

The rationale for placing this decision in Full Force and Effect are as follows:

1. Drought conditions have critically limited forage production and water availability for wild horses. Portions of both HMAs have already been severely overutilized, precipitation is less than 50% of normal, and current forage production is not enough to sustain the animals currently occupying the area.
2. Water availability for the wild horses' consumption is limited throughout both HMAs. Reservoirs are dry and spring flows are below normal, supplying only marginal amounts of water for the wild horses.
3. The animals are already below normal in body condition and will become more stressed as the drought continues, possibly to the point of death from lack of forage and water.

The authority for this decision is contained in Sec. 3 (a) and (b) and Sec. 4 of the Wild Free-Roaming Horse and Burro Act of 1971 (P. L. 92-195), as amended, and Title 43 of the

Code of Federal Regulations. The authority for the Full Force and Effect Decision is contained in the regulations at 43 CFR 4770.3 (c), which states:

"Notwithstanding the provisions of paragraph (a) of 4.21 of this title, the authorized officer may provide that decisions to remove wild horses or burros from public or private lands in situations where removal is required by applicable law or is necessary to preserve or maintain a thriving ecological balance and multiple use relationship shall be effective upon issuance or on a date established in the decision."

FONSI: There will not be a significant impact to the quality of the human environment resulting from the implementation of the proposed action. Therefore, an environmental impact statement is not required for this action.

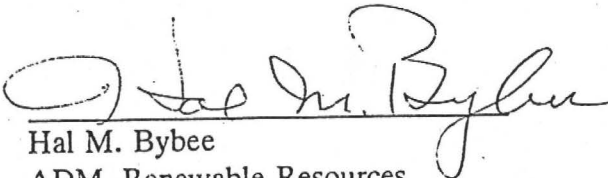
Rationale: Analysis of impacts did not identify any unique or unknown risks, impacts to public health or safety, high levels of public controversy, or impacts to threatened or endangered species. The standard operating procedures will minimize negative impacts and ensure humane treatment of the captured wild horses.

APPEALS: Within 30 days of receipt of this decision, you have the right of appeal to the Board of Land Appeals, Office of the Secretary, in accordance with the regulations at 43 CFR, Part 4, Subpart E and 43 CFR 4770.3 (a) and (c). Within 30 days after filing a Notice of Appeal, you are required to provide a complete statement of the reasons why you are appealing. The appellant has the burden of showing that the decision appealed from is in error. If you wish to file an appeal and petition for a stay, the petition for a stay must accompany your notice of appeal and be in accordance with 43 CFR, Part 4, Subpart E and 43 CFR 4770.3 (c). Copies of the Notice of Appeal and Petition for a Stay must be submitted to (1) the Interior Board of Land Appeals, Office of Hearings and Appeals, 4015 Wilson Boulevard, Arlington, VA 22203, (2) the Regional Solicitor's Office, Pacific Southwest Region, U.S. Department of the Interior, 2800 Cottage Way, Room E-2753, Sacramento, CA 95825-1890, and (3) the Ely District Office, HC33 Box 33500, Ely, NV 89301-9408. The original files should be filed with this office.


If you request a stay, you have the burden of proof to demonstrate that a stay should be granted. A petition for a stay of decision pending appeals shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied,
2. The likelihood of the appellant's success on the merits,
3. The likelihood of immediate and irreparable harm if the stay is not granted, and
4. Whether the public interest favors granting the stay.

ADDITIONAL INFORMATION: Contact Robert E. Brown of my staff at (702) 289-1843, or write him at the above address.

Concurrence:   
Hal M. Bybee  
ADM, Renewable Resources  
Ely District

8/26/96  
Date

Approval:   
Gene A. Kolkman *Acting for*  
District Manager  
Ely District

8/26/96  
Date

2 Enclosures

1. EA # NV-040-96-05 (18 pp)
2. Capture/Removal Plan (17 pp)



IN REPLY REFER TO:

# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Ely District Office:  
HC 33 Box 33500  
Ely, Nevada 89301-9408

TAKE  
PRIDE IN  
AMERICA  
IN REPLY REFER TO:  
4700/9233  
(NV-043)

### NOTICE OF INTENT TO IMPOUND

This notice is to inform owners of unauthorized domestic horses on lands administered by the Bureau of Land Management of our intent to impound said animals in conjunction with the Seaman/White River HMAs Wild Horse Removal and the Lincoln County emergency wild horse removals due to extreme drought conditions. Specifically, these areas may include the following herd management areas (HMAs) and adjacent horse free areas within the Ely District in Lincoln and Nye Counties, Nevada:

HMA Name (No.)

White River (409)  
Dry Lake (410)  
Mormon Mountains (512)  
Blue Nose Peak (514)  
Clover Mountains (516)  
Applewhite (518)  
Miller Flat (520)  
Highland Peak (522)

HMA Name (No.)

Seaman (411)  
Wilson Creek (404)  
Meadow Valley Mountains (513)  
Delamar Mountains (515)  
Clover Creek (517)  
Little Mountain (519)  
Deer Lodge Canyon (521)  
Rattlesnake (523)

~~The HMAs and adjacent horse free areas are located within the BLM~~  
Ely District in Lincoln and Nye Counties, Nevada. Maps of the area may be obtained at the BLM Ely District Office, Ely, Nevada and the BLM Caliente Field Station Office, Caliente, Nevada.

Unauthorized domestic horses may be impounded any time after five (5) days from publication and posting of this notice, and may be impounded without further notice within a 12 month period.

Since the impoundment area is located within an area occupied by wild free-roaming horses, as defined in 43 CFR 4700.0-5, persons who own branded or unbranded horses within the area should file a claim of ownership containing the following information with the Ely District Manager in accordance with 43 CFR 4710.6:

1. A complete description of the animals claimed including age, sex, brands, coloration, and other identifying characteristics.
2. A description of circumstances under which the animals entered onto public lands including dates, specific reasons why the animals were allowed to enter public lands, and what attempts, if any, have been made to remove the animals from public lands.

3. A complete listing of the notification you have provided to the BLM concerning the circumstances identified in #2 above.

4. A complete record of your sightings of the animals including dates, numbers, and locations beginning from the date the animals entered public lands to the present.

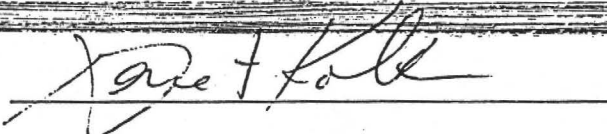
5. A specific gathering proposal detailing the methods of capture, capture locations, and the dates you would propose to recapture the horses.

6. Based on the above supplied information, a specific written agreement as to the settlement of any unauthorized grazing fees incurred will be signed between yourself and the BLM prior to authorizing a roundup of the animals.

In accordance with 43 CFR 4710.6, no horses may be removed from lands within the impoundment area without written authorization from the Ely District Manager.

This notice is issued in accordance with 43 CFR 4150.4. Any impounded unauthorized domestic horses will be deemed to be in trespass. Fees/proportionate share of the impoundment costs and the disposal of the unauthorized animals will be in accordance with 43 CFR 4710.6 and 4150.

---



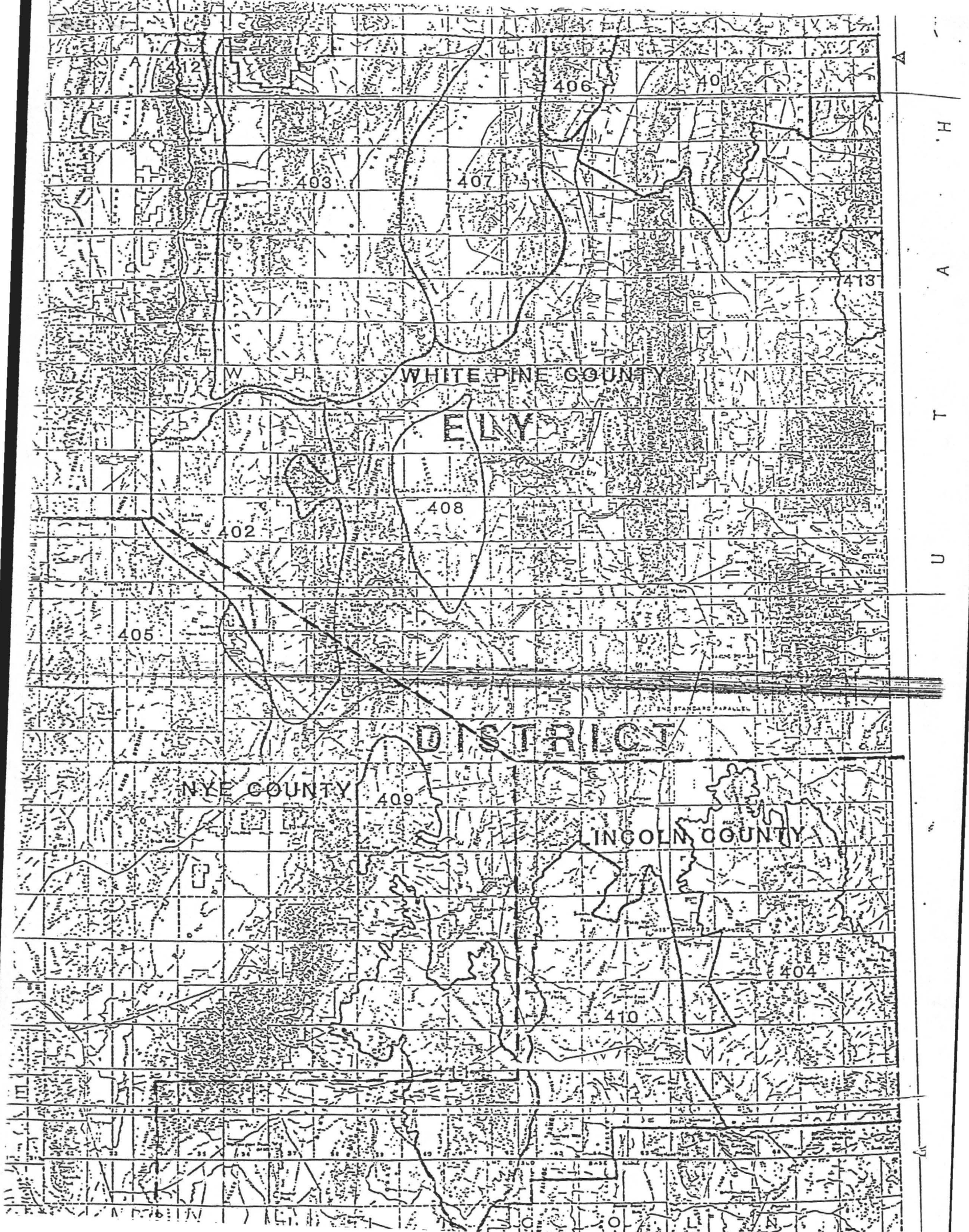
Gene A. Kolkman  
Ely District Manager

---

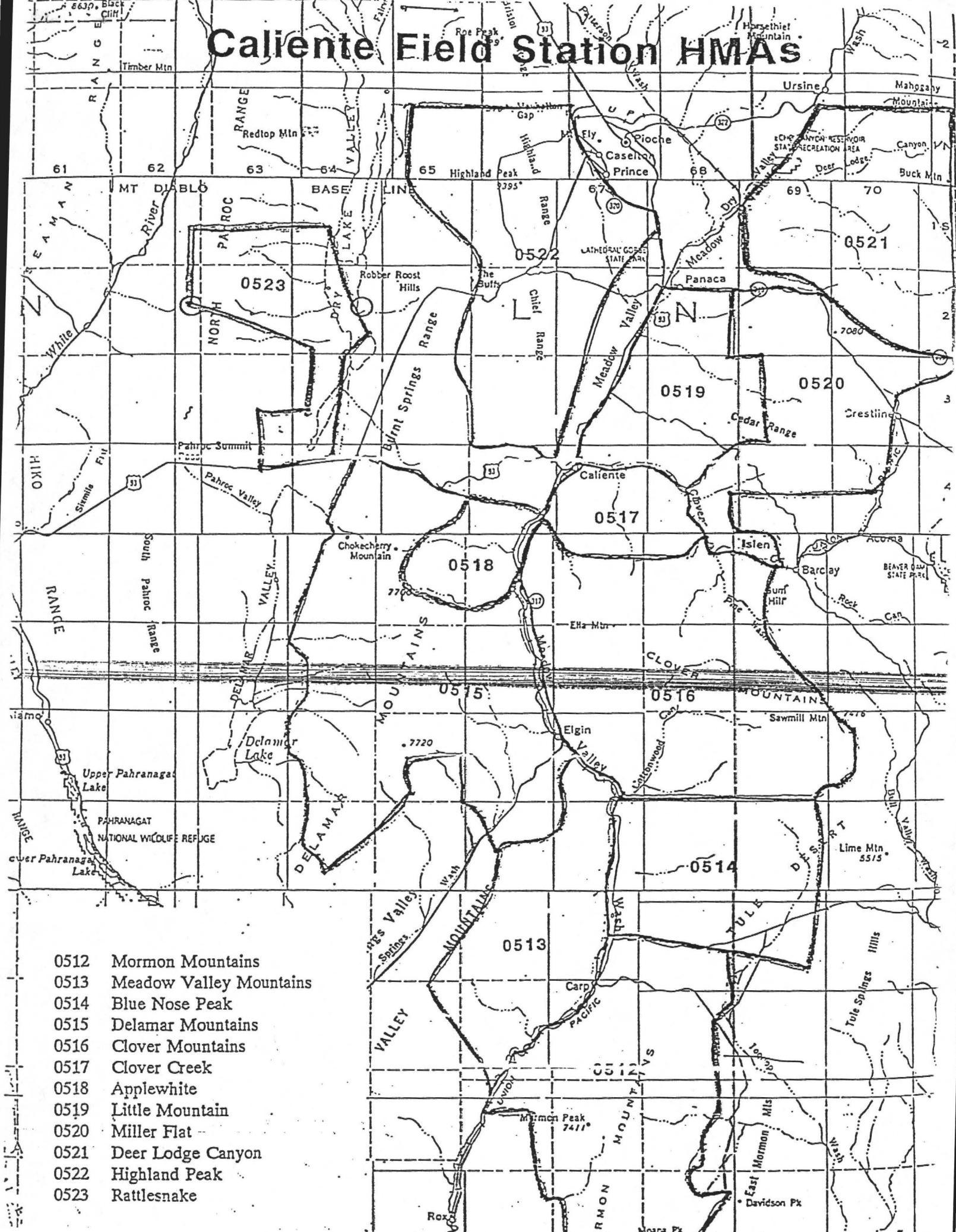
8/12/94

Date





# Caliente Field Station HMA's



- 0512 Mormon Mountains
- 0513 Meadow Valley Mountains
- 0514 Blue Nose Peak
- 0515 Delamar Mountains
- 0516 Clover Mountains
- 0517 Clover Creek
- 0518 Applewhite
- 0519 Little Mountain
- 0520 Miller Flat
- 0521 Deer Lodge Canyon
- 0522 Highland Peak
- 0523 Rattlesnake

August 23, 1996

Wild horse and Burro Emergency Review Team Request For Information  
Ely District Response:

A. What is your best estimate of the probability of additional closures to livestock grazing and potential for emergency wild horse gathers ?

Based on forage and water availability and field conditions observed to date as a result of drought monitoring and documentation, if drought continues, the probability is very good that the Ely District will continue to close allotments or portions of allotments to livestock grazing. In addition based on forage and water availability and the poor nutritional value of the forage particularly where last years forage is the only forage available, emergency wild horse gathers will also continue. We will continue to field check allotments and herd management areas throughout the remainder of the 1996 grazing year. As of August 23, 1996, approximately 30 allotments and 14 herd management areas have been visited and monitored for drought conditions. Field inspections of herd management areas and allotments will be conducted for the purposes of continually monitoring the condition of wild horses for signs of stress related to drought conditions, in addition to forage and water availability.

The emphasis for field inspections for the remainder of the grazing year will include the following:

1. Herd Management Areas
2. Fall turnout areas
3. Areas previously checked where it is anticipated that forage and water availability will dictate the need for further closures and/or emergency wild horse gathers.
4. Grazing year 1997 turnout.

Following are the Ely District additional herd management areas potentially needing to be gathered under the Drought Emergency Removal effort:

Mormon Mountains	Wilson Creek
Blue Nose Peak	Sand Springs East
Clover Creek	Monte Cristo
Applewhite	Jakes Wash
Litte Mountain	
Deer Lodge Canyon	
Rattlesnake	

This is not necessarily a priority listing . Priorities for gathers may be dictated by the extent of drought conditions. Priorities and schedules may or may not change based on the extent of drought conditions.

Ely District  
Wild Horse Herd Management Areas

<u>Herd Area Number</u>	<u>Herd Area Name</u>	<u>Appropriate Management Level*</u>	<u>Censused Population Numbers</u>	<u>Date</u>	<u>Total Acres</u>	<u>1996 Current Estimate Population</u>
01	Antelope (HMAP)	233 (78)	250	12/94	400,335	348
02	Monte Cristo (HMAP)	236 (0)	197***	8/95	228,940	232
03	Buck and Bald	346 (80)	676	9/95	627,030	798
04	Wilson Creek	150 (21)	123	7/94	689,185	171
05	Sand Springs East	257	262***	8/95	386,776	309
06	Cherry Creek	0 (11)	0	9/94	44,269	0
07	Butte (HMAP)	76 (40)	91**	9/94	436,500	127
08	Jakes Wash	6 (29)	42	9/94	67,045	58
09	White River	<del>          </del> 90	300	9/95	98,534	356
10	Dry Lake	94 (0)	241	5/95	494,335	284
<del>11</del>	<del>Seaman</del>	<del>          </del> 159	<del>377</del>	<del>9/95</del>	<del>361,318</del>	<del>386</del>
12	Diamond Hills South	22	93***	2/96	10,500	110
13	Moriah	0 (61)	109	8/94	83,673	152
District Total		1,442 (474)	2,711		3,928,440	3,326

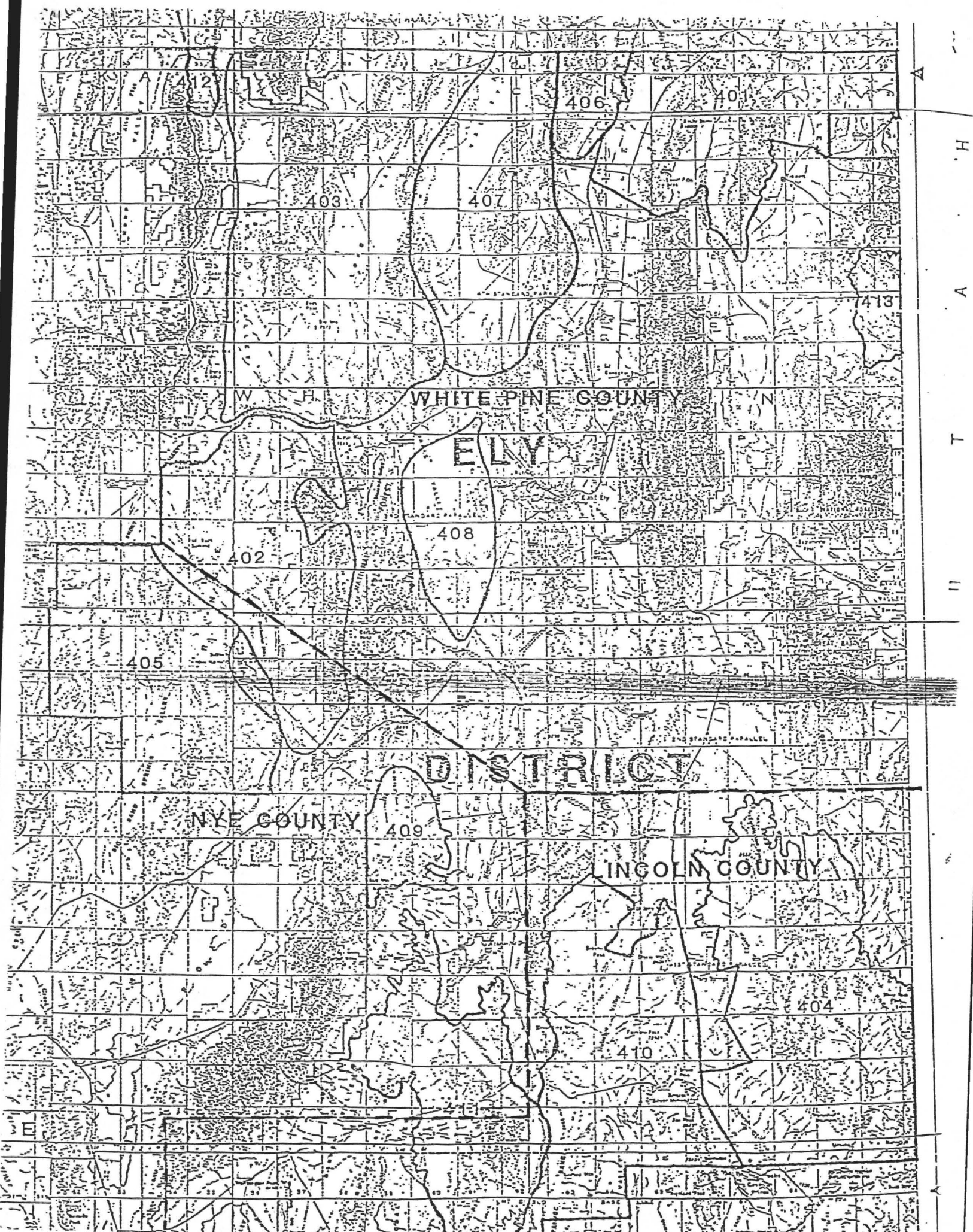
AMLs that are not in parentheses are actual AMLs established in FMUDs as issued for allotments within the HMA. If no number follows in parentheses, the AML is fully established for that HMA. If a number follows in parentheses, it is an additional estimate to the established AML for those allotments that do not yet have an FMUD issued. All established AMLs have  $\pm 15\%$  range for management of the herd.

\*These population numbers are based on actual census data, reduced by the number of animals removed during a subsequent removal.

\*\*These population numbers are not based on census, but are the actual number of animals released back into the HMA after the 1995/1996 capture/removal. These population numbers assume all animals were captured during the removal operation. HMA No. 412 population numbers include 12 animals outside the HMA that were not captured.

Updated April 29, 1996

*Current estimated population is based on 18% increase per year since last actual census.*



A  
H  
A  
T  
II

Ely District  
Wild Horse Herd Management Areas

<u>Herd Area Number</u>	<u>Herd Area Name</u>	<u>Appropriate Management Level*</u>	<u>Censused Population Numbers</u>	<u>Date</u>	<u>Total Acres</u>
401	Antelope (HMAP)	233 (78)	250	12/94	400,335
402	Monte Cristo (HMAP)	236 (0)	197***	8/95	228,940
403	Buck and Bald	346 (80)	676	9/95	627,030
404	Wilson Creek	150 (21)	123	7/94	689,185
405	Sand Springs East	257	262***	8/95	386,776
406	Cherry Creek	0 (11)	0	9/94	44,269
407	Butte (HMAP)	76 (40)	91**	9/94	436,500
408	Jakes Wash	6 (29)	42	9/94	67,045
409	White River	10 (82)	300	9/95	98,534
410	Dry Lake	94 (0)	241	5/95	494,335
<del>411</del>	<del>Seaman</del>	<del>12 (72)</del>	<del>327</del>	<del>9/95</del>	<del>361,318</del>
412	Diamond Hills South	22	93***	2/96	10,500
413	Moriah	0 (61)	109	8/94	83,673
District Total		1,442 (474)	2,711		3,928,440

\*AMLs that are not in parentheses are actual AMLs established in FMUDs as issued for allotments within the HMA. If no number follows in parentheses, the AML is fully established for that HMA. If a number follows in parentheses, it is an additional estimate to the established AML for those allotments that do not yet have an FMUD issued. All established AMLs have a  $\pm$  15% range for management of the herd.

\*\*These population numbers are based on actual census data, reduced by the number of animals removed during a subsequent removal.

\*\*\*These population numbers are not based on census, but are the actual number of animals released back into the HMA after the 1995/1996 capture/removal. These population numbers assume all animals were captured during the removal operation. HMA No. 412 population numbers include 12 animals outside the HMA that were not captured.

Updated April 29, 1996

ELY DISTRICT WILD HORSE REMOVAL SUMMARY

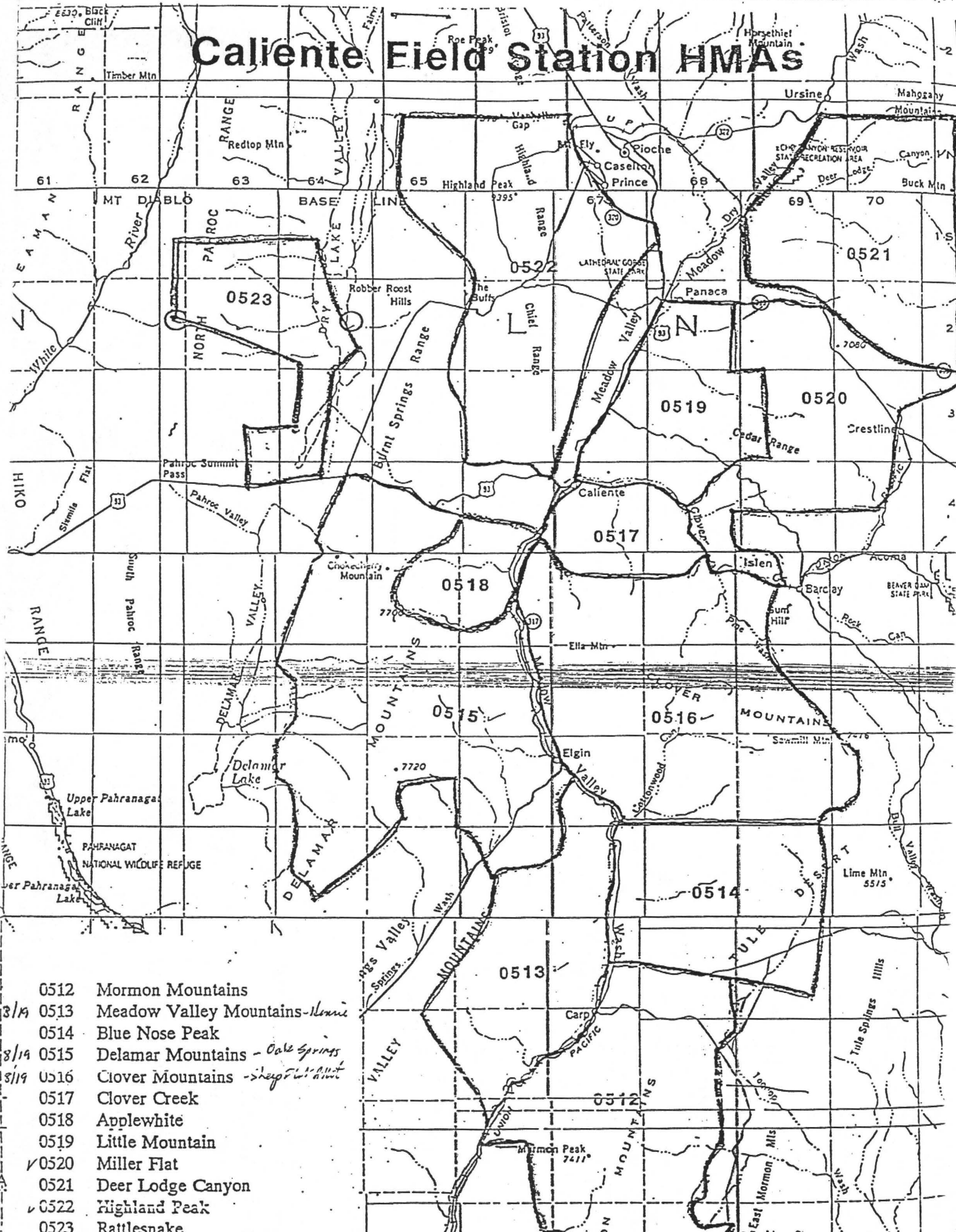
Pre-FMUD Removals Since 1985

<u>Date</u>	<u>HMA</u>	<u>Animals Removed</u>
7/85	Monte Cristo	185
2/86	Buck and Bald	347
9/86	Antelope	107
2/87	Antelope	58
7/87	Sand Springs East	408
2/88	Antelope	526
7/88	Jakes Wash (emergency)	60 (includes 19 dead)
8/89	Buck and Bald	338
11/89	Diamond Horse Free Area	66

Post-FMUD Removals

<u>Date</u>	<u>HMA</u>	<u>Animals Removed</u>
9/90	Antelope	412
2/91	Antelope	225
12/92	Antelope (fertility mgmt. project)	270
7/93	Butte	195
8/93	Dry Lake	232
8/93	Wilson Creek	16
8/93	Patterson Horse Free Area	70
<del>8/94</del>	<del>Buck and Bald</del>	<del>562</del>
8/94	Diamond Horse Free Area	248
9/94	Monte Cristo	118
11/94	Butte	70
11/94	Antelope	85
7/95	Sand Springs East	701
8/95	Monte Cristo	749
2/96	Diamond Hills South	89

# Caliente Field Station HMA's



- 0512 Mormon Mountains
- 3/19 0513 Meadow Valley Mountains - *Horn*
- 0514 Blue Nose Peak
- 8/19 0515 Delamar Mountains - *Oak Springs*
- 8/19 0516 Clover Mountains - *Sheep Mountain*
- 0517 Clover Creek
- 0518 Applegate
- 0519 Little Mountain
- ✓ 0520 Miller Flat
- 0521 Deer Lodge Canyon
- ✓ 0522 Highland Peak
- 0523 Rattlesnake



HMA Name (HMA #)	Last Census Count (year)	Reprod Rate,	Pop. Est for 1995 <sub>2</sub>
Applewhite (0518)	21 (94)	0.0%	30
Blue Nose Peak (0514)	11 (94)	10%	15
Clover Creek (0517)	27 (94)	12.5%	41
Clover Mountains (0516)	49 (94)	9%	74
Deer Lodge Canyon (0521)	85 (94)	5%	125
Delamar Mountains (0515)	147 (94)	6.6%	217
Highland Peak (0522)	124 (94)	27.8%	183
Little Mountain (0519)	124 (94)	26.5%	183
Meadow Valley Mountains (0513)	25 (94)	19%	41
Miller Flat (0520)	72 (94)	28.6%	106
Mormon Mountains (0512)	0** (94)		15
NWHR-Nellis	5219 (91)		1500,
Rattlesnake (0523)	8 (89)		15

1996<sub>2</sub>

35  
18  
59  
87  
148  
256  
216  
216  
48  
125  
18  


---

18

1,244

NOTES:

- \* Rattlesnake & NWHR were not censused in 1994 due to time limits
- \*\* Entire Mormon Mtn HMA was not censused due to time limits.
- 1 NWHR population estimate based on winter horse gather results.
- 2 Based on actual census count multiplied by yearly estimated increase of 18%.
- 3 Based on number of foals divided by total number of adult horses.

Form 1510-5  
(July 1987)

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
PROCUREMENT REQUEST**

Solicitation number	1422-N660-C96-3004
State/County	NV Lincoln
District	Ely NV040

TO:	LaVonna L. Hughes, SC651B	Solicitation title and location	Lincoln Co Emergency Gathers, Lincoln Co. NV
Recommended COR and PI	Alan B Shepherd, Robert Brown	Award basis	<input type="checkbox"/> Schedule <input type="checkbox"/> All or none <input type="checkbox"/> Item

PROCUREMENT PLAN NUMBER	PROJECT NAME	FUNDING		REQUESTED START DATE	PERFORMANCE TIME*	DAMAGES
		ESTIMATED COST	ACTIVITY/CJC/PROJECT NO.			
	<u>Sheep Flat - Clover Mtns HMA</u>					
A1	50 head X \$303	\$15,150	NV960/1060-04	8/15/96	3 days	
A3	250 days X 7	1,750				
A4	35 head X 2	70				
		16,970				
	<u>Oak Springs - Delamar Mtns HMA</u>					
A1	75 head X \$303	22,725	NV960/1060-04	8/18/96	3 days	
A3	400 days X 7	2,800				
A4	55 head X 2	110				
		25,635				
	<u>Meadow Valley Mtns HMA</u>					
A1	50 head X \$303	15,150	NV960/1060-04	8/21/96	5 days	
A3	400 days X 7	2,800				
A4	25 head X 2	50				
		18,000				

If contributed funds (collected and deposited) are involved, complete the following

NAME OF CONTRIBUTOR	AMOUNT	FORM 1370-41 NUMBER	DATE OF CONTRIBUTION

Hour and meeting place for inspection tour	Number of solicitations for local distribution
	Number of days after "Notice to Proceed" to start work
	same day

Attachments  
 Maps of emergency gather areas  
 List of pertinent gather information to be supplied to the contractor

Remarks

Name of contact for technical purposes during solicitation phase (include office, phone, and title)  
 Alan B. Shepherd, WH&B Specialist  
 Caliente Field Station, Caliente, NV  
 (702) 725-8100

District Office Approval (include title)	Date	State Office Approval (include title)	Date

\*If multiple awards are to be allowed, show completion time for each project or group which may be awarded separately. If only one award is contemplated, make only one entry showing completion time and liquidated damages for the entire job.

Form 1510-5  
(July 1987)

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
PROCUREMENT REQUEST**

Solicitation number  
**1422-N660-C96-3004**

State/County  
**NV/Lincoln**

District  
**Ely NV-040**

TO: \_\_\_\_\_ Solicitation title and location  
**Lincoln Co. Emergency Gathers, Lincoln Co. NV**

Recommended COR and PI \_\_\_\_\_ Award basis  Schedule  All or none  Item

PROCUREMENT PLAN NUMBER	PROJECT NAME	FUNDING		REQUESTED START DATE	PERFORMANCE TIME*	DAMAGES
		ESTIMATED COST	ACTIVITY/UC/PROJECT NO.			
	<u>Non-HMA Areas - Lincoln Co. NV</u>					
A1	80 head X \$303	\$24,240	NV960/1060-04	8/15/96	10 days	
A3	400 days X 7	2,800				
A4	55 head X 2	110				
		<u>27,150</u>				

If contributed funds (collected and deposited) are involved, complete the following

NAME OF CONTRIBUTOR	AMOUNT	FORM 1370-41 NUMBER	DATE OF CONTRIBUTION

Hour and meeting place for inspection tour \_\_\_\_\_

Number of solicitations for local distribution \_\_\_\_\_

Number of days after "Notice to Proceed" to start work \_\_\_\_\_

Attachments \_\_\_\_\_

Remarks \_\_\_\_\_

Name of contact for technical purposes during solicitation phase (include office, phone, and title) \_\_\_\_\_

District Office Approval (include title)	Date	State Office Approval (include title)	Date

\*If multiple awards are to be allowed, show completion time for each project or group which may be awarded separately. If only one award is contemplated, make only one entry showing completion time and liquidated damages for the entire job.

Form 1510-5  
(July 1987)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Solicitation number  
1422-N660-C96-3004

State/County Nevada/Nye & Lincoln

District Ely (NV-040)

PROCUREMENT REQUEST

TO: State Director, Nevada (NPO-960/NV-951)  
LaVonna Hughes (BC-660A)

Solicitation title and location  
Nye/Lincoln Co. Emergency Gatherers

Recommended COR and PI  
Robert E. Brown, Alan B. Shepherd

Award basis  Schedule  All or none  Item

PROCUREMENT PLAN NUMBER	PROJECT NAME	FUNDING		REQUESTED START DATE	PERFORMANCE TIME*	DAMAGES
		ESTIMATED COST	ACTIVITY/CJC/PROJECT NO.			
A.1	White River HMA 350 head X \$189	\$66,150	NV-960-1060-04-2519	9/2/96	9 days	
A.3	1050 days X 7	7,350				
A.4	275 head X 2	550				
A.5	5 hour X 350	1,750				
		\$75,800				
A.1	Séaman HMA 350 head X \$189	\$66,150	NV-960-1060-04-2519	9/11/96	9 days	
A.3	1050 days X 7	7,350				
A.4	250 head X 2	500				
A.5	5 hour X 350	1,750				
		\$75,750				

If contributed funds (collected and deposited) are involved, complete the following

NAME OF CONTRIBUTOR	AMOUNT	FORM 1370-41 NUMBER	DATE OF CONTRIBUTION

Hour and meeting place for inspection tour

Number of solicitations for local distribution

Number of days after "Notice to Proceed" to start work

Same day

Attachments

Maps of gather areas to be supplied to the contractor

Pertinent gather information to be supplied to the contractor

Remarks

Name of contact for technical purposes during solicitation phase (include office, phone, and title)

Robert E. Brown, Wild Horse Specialist  
Ely District Office, Ely, Nevada 89301  
Phone: (702) 289-1843

District Office Approval (include title) <i>Robert E. Brown</i> Ely District Manager	Date 8/22/96	State Office Approval (include title)	Date
--	-----------------	---------------------------------------	------

\*If multiple awards are to be allowed, show completion time for each project or group which may be awarded separately. If only one award is contemplated, make only

Form 1510-5  
(July 1987)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

PROCUREMENT REQUEST

Solicitation number  
1422-N660-C96-3004  
State/County Nevada/Nye & Lincoln  
District Ely (NV-040)

TO: State Director, Nevada (NPO-960/NV-951)  
LaVonna Hughes (BC-660A)

Solicitation title and location  
Nye/Lincoln Co. Emergency Gathers

Recommended COR and PI  
Robert E. Brown, Alan B. Shepherd

Award basis  Schedule  All or none  Item

PROCUREMENT PLAN NUMBER	PROJECT NAME	FUNDING		REQUESTED START DATE	PERFORMANCE TIME*	DAMAGES
		ESTIMATED COST	ACTIVITY/CJC/PROJECT NO.			
A.1	Dry Lake HMA 250 head X \$197	\$49,250	NV-960-1060-04-2519	9/20/96	7 days	
A.3	750 days X 7	5,250				
A.4	200 head X 2	400				
A.5	5 hour X 350	1,750				
		\$56,650				
A.1	Highland Peak HMA 200 head X \$202	\$40,400	NV-960-1060-04-2519	9/27/96	5 days	
A.3	1000 days X 7	7,000				
A.4	150 head X 2	300				
A.5	2 hour X 350	700				
		\$48,400				

If contributed funds (collected and deposited) are involved, complete the following

NAME OF CONTRIBUTOR	AMOUNT	FORM 1370-41 NUMBER	DATE OF CONTRIBUTION

Hour and meeting place for inspection tour

Number of solicitations for local distribution

Number of days after "Notice to Proceed" to start work

Same day

Attachments

Maps of gather areas to be supplied to the contractor

Pertinent gather information to be supplied to the contractor

Remarks

Name of contact for technical purposes during solicitation phase (include office, phone, and title)

Robert E. Brown, Wild Horse Specialist  
Ely District Office, Ely, Nevada 89301  
Phone: (702) 289-1843

District Office Approval (include title) <i>Robert E. Brown</i> Ely District Manager	Date 8/22/96	State Office Approval (include title)	Date
--	-----------------	---------------------------------------	------

\*If multiple awards are to be allowed, show completion time for each project or group which may be awarded separately. If only one award is contemplated, make only one showing completion time and liquidated damages for the entire job.

Form 1510-5  
(July 1987)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

PROCUREMENT REQUEST

Solicitation number  
1422-N660-C96-3004

State/County Nevada/Nye & Lincoln

District Ely (NV-040)

TO: State Director, Nevada (NPO-960/NV-951)  
LaVonna Hughes (BC-660A)

Solicitation title and location  
Nye/Lincoln Co. Emergency Gathers

Recommended COR and PI  
Robert E. Brown, Alan B. Shepherd

Award basis  Schedule  All or none  Item

PROCUREMENT PLAN NUMBER	PROJECT NAME	FUNDING		REQUESTED START DATE	PERFORMANCE TIME*	DAMAGES
		ESTIMATED COST	ACTIVITY/CJC/PROJECT NO.			
A.1	Miller Flat HMA 155 head X \$202	\$31,310	NV-960-1060-04-2519	10/2/96	5 days	
A.3	1000 days X 7	7,000				
A.4	100 head X 2	200				
A.5	2 hour X 350	700				
		\$39,210				

If contributed funds (collected and deposited) are involved, complete the following

NAME OF CONTRIBUTOR	AMOUNT	FORM 1370-41 NUMBER	DATE OF CONTRIBUTION

Hour and meeting place for inspection tour

Number of solicitations for local distribution

Number of days after "Notice to Proceed" to start work

Same day

Attachments

- Maps of gather areas to be supplied to the contractor
- Pertinent gather information to be supplied to the contractor

Remarks

Name of contact for technical purposes during solicitation phase (include office, phone, and title)

Robert E. Brown, Wild Horse Specialist  
Ely District Office, Ely, Nevada 89301  
Phone: (702) 289-1843

District Office Approval (include title)

Date

State Office Approval (include title)

Date

*Robert E. Brown*  
Acting Ely District Manager

8/22/96

\*If multiple awards are to be allowed, show completion time for each project or group which may be awarded separately. If only one award is contemplated, make only one award.

Form 1510-5  
(July 1987)

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
PROCUREMENT REQUEST**

Solicitation number  
1422-N660-C96-3004

---

State/County Nevada/Nye & Lincoln

---

District Ely (NV-040)

TO: State Director, Nevada (NPO-960/NV-951)  
LaVonna Hughes (BC-660A)

Solicitation title and location  
Nye/Lincoln Co. Emergency Gatherers

Recommended COR and PI  
Robert E. Brown, Alan B. Shepherd

Award basis  Schedule  All or none  Item

PROCUREMENT PLAN NUMBER	PROJECT NAME	FUNDING		REQUESTED START DATE	PERFORMANCE TIME*	DAMAGES
		ESTIMATED COST	ACTIVITY/CJC/PROJECT NO.			
A.1	White River HMA 350 head X \$189	\$66,150	NV-960-1060-04-2519	9/2/96	9 days	
A.3	1050 days X 7	7,350				
A.4	275 head X 2	550				
A.5	5 hour X 350	1,750				
		\$75,800				
A.1	Seaman HMA 350 head X \$189	\$66,150	NV-960-1060-04-2519	9/11/96	9 days	
A.3	1050 days X 7	7,350				
A.4	250 head X 2	500				
A.5	5 hour X 350	1,750				
		\$75,750				

If contributed funds (collected and deposited) are involved, complete the following

NAME OF CONTRIBUTOR	AMOUNT	FORM 1370-41 NUMBER	DATE OF CONTRIBUTION

Hour and meeting place for inspection tour

Number of solicitations for local distribution

Number of days after "Notice to Proceed" to start work

Same day

Attachments

Maps of gather areas to be supplied to the contractor

Pertinent gather information to be supplied to the contractor

Remarks

Name of contact for technical purposes during solicitation phase (include office, phone, and title)

Robert E. Brown, Wild Horse Specialist  
Ely District Office, Ely, Nevada 89301  
Phone: (702) 289-1843

District Office Approval (include title) <i>Robert E. Brown</i> Ely District Manager	Date 8/22/96	State Office Approval (include title)	Date
--	-----------------	---------------------------------------	------

\*If multiple awards are to be allowed, show completion time for each project or group which may be awarded separately. If only one award is contemplated, make only one entry showing completion time and liquidated damages for the entire job.

Form 1510-5  
(July 1987)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

PROCUREMENT REQUEST

Solicitation number  
1422-N660-C96-3004  
State/County Nevada/Nye & Lincoln  
District Ely (NV-040)

TO: State Director, Nevada (NPO-960/NV-951)  
LaVonna Hughes (BC-660A)

Solicitation title and location  
Nye/Lincoln Co. Emergency Gathers

Recommended COR and PI

Robert E. Brown, Alan B. Shepherd

Award basis  Schedule  All or none  Item

PROCUREMENT PLAN NUMBER	PROJECT NAME	FUNDING		REQUESTED START DATE	PERFORMANCE TIME*	DAMAGES
		ESTIMATED COST	ACTIVITY/CJC/PROJECT NO.			
A.1	Dry Lake HMA 250 head X \$197	\$49,250	NV-960-1060-04-2519	9/20/96	7 days	
A.3	750 days X 7	5,250				
A.4	200 head X 2	400				
A.5	5 hour X 350	1,750				
		\$56,650				
A.1	Highland Peak HMA 200 head X \$202	\$40,400	NV-960-1060-04-2519	9/27/96	5 days	
A.3	1000 days X 7	7,000				
A.4	150 head X 2	300				
A.5	2 hour X 350	700				
		\$48,400				

If contributed funds (collected and deposited) are involved, complete the following

NAME OF CONTRIBUTOR	AMOUNT	FORM 1370-41 NUMBER	DATE OF CONTRIBUTION

Hour and meeting place for inspection tour

Number of solicitations for local distribution

Number of days after "Notice to Proceed" to start work

Same day

Attachments

- Maps of gather areas to be supplied to the contractor
- Pertinent gather information to be supplied to the contractor

Remarks

Name of contact for technical purposes during solicitation phase (include office, phone, and title)

Robert E. Brown, Wild Horse Specialist  
Ely District Office, Ely, Nevada 89301  
Phone: (702) 289-1843

District Office Approval (include title)	Date	State Office Approval (include title)	Date
<i>Robert E. Brown</i> Ely District Manager	8/22/96		

\*If multiple awards are to be allowed, show completion time for each project or group which may be awarded separately. If only one award is contemplated, make only one award and liquidated damages for the entire job.



Form 1510-5  
(July 1987)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

PROCUREMENT REQUEST

Solicitation number  
1422-N660-C96-3004

State/County Nevada/Nye & Lincoln

District Ely (NV-040)

TO: State Director, Nevada (NPO-960/NV-951)  
LaVonna Hughes (BC-660A)

Solicitation title and location  
Nye/Lincoln Co. Emergency Gathers

Recommended COR and PI  
Robert E. Brown, Alan B. Shepherd

Award basis  Schedule  All or none  Item

PROCUREMENT PLAN NUMBER	PROJECT NAME	FUNDING		REQUESTED START DATE	PERFORMANCE TIME*	DAMAGES
		ESTIMATED COST	ACTIVITY/CJC/PROJECT NO.			
A.1	Miller Flat HMA 155 head X \$202	\$31,310	NV-960-1060-04-2519	10/2/96	5 days	
A.3	1000 days X 7	7,000				
A.4	100 head X 2	200				
A.5	2 hour X 350	700				
		\$39,210				

If contributed funds (collected and deposited) are involved, complete the following

NAME OF CONTRIBUTOR	AMOUNT	FORM 1370-41 NUMBER	DATE OF CONTRIBUTION

Hour and meeting place for inspection tour	Number of solicitations for local distribution
	Number of days after "Notice to Proceed" to start work
	Sama day

Attachments

Maps of gather areas to be supplied to the contractor  
Pertinent gather information to be supplied to the contractor

Remarks

Name of contact for technical purposes during solicitation phase (include office, phone, and title)

Robert E. Brown, Wild Horse Specialist  
Ely District Office, Ely, Nevada 89301  
Phone: (702) 289-1843

District Office Approval (include title) <i>Robert E. Brown</i> Ely District Manager	Date 8/22/96	State Office Approval (include title)	Date
--	-----------------	---------------------------------------	------

\*If multiple awards are to be allowed, show completion time for each project or group which may be awarded separately. If only one award is contemplated, make only

UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
Ely District Office  
HC 33 Box 33500  
Ely, NV 89301

In reply refer to:  
4100 (NV-043)

July 8, 1996

Instruction Memorandum No. NV-040-96- 04  
Expires: 09/30/97

To: Renewable Resources Staff  
From: District Manager, Ely  
Subject: Ely District Drought Policy and Guidance

This Instruction Memorandum is a supplement to the direction provided in Instruction Memorandum No. NV-91-116, Nevada Drought Policy and Guidance, which still applies.

The purpose of this policy is to provide further guidance and procedures for evaluating and ~~documenting drought conditions and for modifying and authorizing grazing use associated with~~ drought. When range conditions and precipitation amounts indicate drought conditions or it is suspected that drought conditions exist, allotment inspections should be conducted to assess range conditions and suitability. This should be conducted preferably prior to authorizing livestock to graze or enter an allotment or use area. When drought conditions surpass vegetation tolerance thresholds such as soil moisture availability and forage production, livestock grazing may have to be modified or allotments closed to grazing use. Allotment inspections and thorough documentation must be completed before modifying authorized grazing use or closing allotments or portions of allotments to grazing use.

A. Drought Event Record Documentation

The following indicators allow for a rapid assessment of drought conditions. These indicators must be evaluated and the attached Drought Indicator Checklist completed prior to modifying authorized grazing use or closing allotments or portions of allotments to grazing use.

1. Forage Availability and Condition

Determine growing season conditions and forage conditions. Determination criteria should include;

a.) Amount of Current Years Growth

Estimate and document current year's growth and forage availability for grasses and

shrubs based on appearance of the rangeland in the use area or allotment. Estimate plant height supported by actual measurements. Conduct actual plant height measurements (in inches) for calibration purposes and to obtain accurate estimations.

Determine production of grasses and shrubs based on the SCS ecological condition double sampling method. Conduct ocular estimates of current year's forage production and document the results. Support ocular estimates by clipping plots for calibration purposes and to establish accurate estimations. Where Range Site Descriptions are available, compare production to the Vegetation Factors Section for the purposes of determining a favorable, normal or unfavorable production year. This method is optional and should be conducted if needed to support the closure recommendation.

b.) Plant Phenology

Determine the phenological stage of plant development of the key forage species (grasses and shrubs) in the plant community. Are grasses in the "cured or dried" stage? Are the leaves of deciduous shrubs lost, dry or dead?

c.) Plant Stress and Vigor

Are plants productive and alive? Determine by visual observation, the general appearance of the rangeland and plant community. For example, desirable grasses, forbs and shrubs have low vigor if they appear unhealthy with small size and poor color. Portions or clumps of entire plants may be dead or are dying. Seed stalks and seedheads are almost nonexistent.

---

d.) Utilization of Current and Previous Year's Growth

Determine utilization of previous year's growth if possible. Visually estimate utilization of previous year and current year for grasses and shrubs based on using the Key Forage Plant Method and the use class criteria. Use utilization cages where available to judge current and previous year's growth and to calibrate ocular estimates.

2. Annual Precipitation

- a.) Determine soil moisture availability. Measure and record soil moisture depth. Determine depth with a tape measure or ruler. Obtain a representative sample of soil moisture depth data.
- b.) Describe the precipitation for the current growth year; ie, below average, last date of significant precipitation. Reference the Nevada Climate Summary publication and any other NOAA or rain can information to cite and support precipitation conditions.
- c.) Water availability and access. Determine water availability for livestock, wild horses and wildlife in the area; ie, (flow rate, gallons/minute). Identify type and number of water sources. What is forage availability in relation to distance from water? Describe conflicts occurring, if any.

3. Animal condition.

- a.) What is the physical condition of wild horses, wildlife and livestock in the area? Is physical stress evident and is it caused or influenced by drought conditions? What is the number of animals in the area?

4. Other

- a.) Photographs - Color photographs should be taken to demonstrate drought conditions such as forage production and availability and plant vigor, animal stress and water availability.
- b.) Complete the Drought Indicator Checklist.
- c.) Upon completing the Drought Indicator Checklist, if it is determined that drought conditions exist and adjustment(s) in use are necessary, interested publics should be provided an opportunity to attend an allotment tour for the purposes of observing and discussing drought conditions in the field.

B. Criteria Used to Lift Closures

1. The closure will be lifted based on meeting all of the following criteria;

- a.) The key perennial species all show good vigor.
- b.) Growth starts and can support grazing use; ie, a sufficient amount of precipitation and growing season remains to allow for forage production that can support grazing use.
- c.) Ground cover is present to protect the watershed. Identify the kind of cover, Basal, Canopy, etc. What is the percent cover in relation to any documented cover data and/or Range Site cover where applicable?
- d.) A minimum average of 25% of the perennial vegetation demonstrates new growth.

C. Closure Goals

1. In the event it is determined that allotment closures are needed, the primary goals to be accomplished through closure are:
- a.) Provide sufficient rest for surviving perennial grass species, seeded species and deciduous shrubs to regain vigor and recover and to be able to take advantage of precipitation when it continues.
- b.) Provide sustained grazable forage for livestock, wild horses and wildlife.
- c.) Provide watershed protection and stabilization.

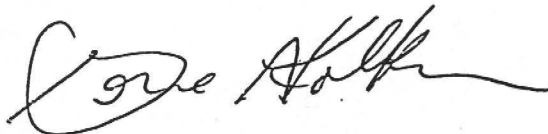
D. Procedures for Modifying and Authorizing Grazing Use Associated With Drought

The following actions or criteria will apply when determining if grazing use should be authorized or modified when associated with drought:

1. Coordinate with livestock permittees to develop alternative management practices. Consider alternatives such as:
  - a.) Use of rested or deferred pastures. Consider areas which would benefit from grazing use such as areas of wolf plants in seedings, etc.
  - b.) Opportunities to use areas not affected by drought.
  - c.) Temporary adjustments in period of use or season of use.
  - d.) Reductions in herd size and/or early removal of livestock to prevent longterm damage to the vegetative resource.
  - e.) Water hauling to areas that receive no use or receive slight to light use.
  - f.) Work with the County Emergency Boards.
2. Conduct allotment inspections to:
  - a.) Assess range suitability and forage availability.
  - b.) ~~Evaluate range readiness.~~
  - c.) Consider grazing impacts in relation to wild horse herd management areas, wildlife use, riparian areas, water availability and location of waters, etc.
3. Consult with interested publics prior to issuance of a grazing authorization.
4. Interested publics should be provided an opportunity to attend a task force where appropriate. A task force should be assembled based on issues or where interested publics have indicated an interest in being involved in an allotment inspection. Topics of discussion should include the alternative management practices identified above, the allotment inspection criteria identified in (2.) above, in addition to actual use which has occurred in the area.
5. Stocking levels may have to be determined. Methods could include:
  - a.) Stocking level calculations as done for allotment evaluations.
  - b.) The SCS double sampling method for determining production based calculations could be used as with seedings where stocking levels have not been determined.
  - c.) Range survey information may also be useful in determining a stocking rate particularly in areas that may require water hauling or in areas that are not grazed due to distance from water.

- d.) An evaluation of actual use and use patterns.
6. The following criteria will apply when authorizing grazing use associated with drought:
- a.) Grazing use should be in accordance with the terms and conditions of the term permit.
  - b.) Grazing use should be consistent with multiple-use objectives or land use plan objectives and other decisions.
  - c.) Grazing use should not interfere with the existing livestock operation(s).
  - d.) Grazing use will be considered a part of the total permitted use for the allotment on which the use occurred. Grazing use will also be considered a part of the total permitted use for the grazing year in which the use occurred.
  - e.) Grazing use will be authorized as Temporary Non-Renewable (TNR) at the normal rate of \$1.35/AUM.
  - f.) The grazing authorization should include any appropriate terms and conditions on a case by case basis.
7. Where permit holders would allow grazing use to be made by a permittee who holds a term permit in another allotment, stocking levels and grazing use should be agreed to between the livestock operators and must be consistent with (6.) above.

~~Should you have any questions please refer them to Chris Mayer, District Rangeland Management Specialist.~~



Gene A. Kolkman  
District Manager

2 Attachments

- 1. Drought Indicator Checklist
- 2. Plant Phenology Stages Table

Distribution	
Director (WO330)	-1 204LS
BC (BC-600)	-1
NSO (NV-931.1)	-1
DM's (NV)	-1 ea.

## DROUGHT INDICATOR CHECKLIST

Name of Allotment \_\_\_\_\_

Use Area/Pasture \_\_\_\_\_

Name of Observer \_\_\_\_\_

Date \_\_\_\_\_

### INDICATOR

### OBSERVATION

<p>Forage Vigor (Does plant height, leaf length and color indicate strong vigor?)</p> <p>Does leader growth of shrubs indicate strong vigor?</p> <p>What is the average height of current year's growth?</p> <p>Are leaves of deciduous shrubs lost or dead?</p> <p>Phenological stage of key species in plant community? (Refer to attached Plant Phenology Stages Table)</p> <p><del>Utilization of previous year's growth (if possible)</del></p> <p>Soil Moisture Depth</p> <p>Rainfall for Current Year</p> <p>Last Date of Measurable Precipitation</p> <p>Physical Condition of Wild horses, Wildlife, Livestock</p> <p>Water Source Availability</p> <p>Recommendation for Allotment Closure or Alternative Management Practices</p> <p>Other Comments:</p>	<p>below avg.____ average____ above avg.____</p> <p>below avg.____ average____ above avg.____</p> <p>_____ inches</p> <p>below avg.____ average____ above avg.____</p> <p>_____</p> <p>_____ inches</p> <p>below normal____ normal____</p> <p>_____</p> <p>normal____ stressed____</p> <p>below normal____ normal____</p> <p>_____</p> <p>_____</p> <p>_____</p>
---	--

**PLANT PHENOLOGY STAGES**

<b>Trees &amp; Shrubs</b>	<b>Grasses</b>	<b>Forbs</b>
Dormant	Dormant	Dormant
Leaf Growth Starts	Growth Starts	Growth Starts
Twig Growth	1/2 Vegetative Growth	Flower Stalks Appear
Flower Buds First Visible	Flower Stalks Appear	First Bloom
Leaves Full Grown	Heads Out Fully	Full Bloom (3/4 Blossom)
First Bloom	Anthesis	Bloom Over (3/4 Blossoms Dry)
Full Bloom (3/4 Bloom)	Dough Seed Set	Seeds Ripe (3/4 Dry)
Bloom Over	Hard Seeds	Dissemination
Seed Ripe	Dissemination	Plants Begin to Dry
Dissemination	Plants Begin to Dry	Plants Dry, Summer, Fall
Leaves Turn Yellow or Brown	Plants Dry, Summer, Fall	
Leaves Dry & Begin to Drop		