Wild Horse Management History and Current Conditions within the West Douglas Herd Area

Bureau of Land Management, White River Field Office

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Documentation of Changes From the Original January 2015 Version

Section	Revision	Date
4.1 (Table 3)	Corrected shading in table which incorrectly identified aerial inventories occurring in 2011 and 2013; the inventories actually occurred during 2010 and 2012.	4/3/2015

Table of Contents

1.0 Introduction 1

2.0 Federal Law and BLM Policy for Management of Wild Horses 1

2.1 Federal Laws Related to Management of Wild Horses 2

2.1.1 Wild Horse Annie Act of 1959 (Public Law 86-234) 2

2.1.2 Wild Free-Roaming Horses and Burros Act of 1971 (Public Law 92-195) 2

2.1.3 Federal Land Policy and Management Act of 1976 (Public Law 94-579) 2

2.1.4 Public Rangelands Improvement Act of 1978 (PRIA) (Public Law 95-514) 2

2.2 BLM Policy Related to Management of Wild Horses 3

2.2.1 BLM Manual 4700 and BLM Handbook 4700-1 3

3.0 WRFO Land Use Planning Decisions for Wild Horses 4

3.1 Identification of the Douglas Creek and Piceance Basin Herd Units (1974) 6

3.2 1975 Management Framework Plan 8

3.3 1980 Management Framework Plan Decisions 13

3.4 1981 White River Resource Area Grazing Management EIS. 17

3.5 1981 WRRA Herd Management Area Plan 18

3.6 1983-1986 Evolution of Herd Area Naming 19

3.7 1985 WRRA Piceance Basin RMP 21

3.8 1997 WRRA Resource Management Plan 21

3.9 2002 White River Field Office Begins Resource Management Plan Amendment 24

3.10 2005 West Douglas Herd Area Amendment 29

4.0 Population and Distribution of Wild Horses in West Douglas HA 30

4.1 Population Estimates 30

4.2 Genetic Variation within the West Douglas Herd 34

4.3 Distribution of Wild Horses within the West Douglas HA 34

4.4 Factors Influencing Wild Horse Distribution 42

4.5 Wild Horses Located in Areas Not Designated for Their Long-Term Maintenance 47

5.0 Range Conditions within the West Douglas Herd Area 47

5.1 Grazing Utilization and Distribution: 47
5.2 Actual Use 51
5.3 Climate (Weather) Data 54
5.4 Trend in Range Ecological Condition 56
5.4.1 Horse Draw Trend Plot 61
5.4.2 Cottonwood 1 Trend Plot 62
5.4.3 Texas Creek 1 Trend Plot 65
5.4.4 Texas Creek 2 Trend Plot 69
5.4.5 Texas Creek 3 Trend Plot 70
5.4.6 Texas Creek 4 Trend Plot 74
5.4.7 Red Wash 1 Trend Plot 75
5.4.8 Texas Mountain 1 Trend Plot 78
5.4.9 Texas Mountain 2 Trend Plot 80
5.4.10 Water Canyon 1 Trend Plot 83
5.4.11 Water Canyon 2 Trend Plot 85
5.4.12 Water Canyon 3 Trend Plot 88
5.4.13 Bull Draw Fire Trend Plot 89
5.4.14 Wild Rose Fire 92
5.4.15 Summary of Trend Plot Data 92
5.5 Spring Monitoring 93
6.0 Summary 99

Maps

Map 1. Herd Units within the White River Resource Area 5
Map 2. Original Wild Horse Inventory and Wild Horse Herd Units within the White River Resource Area, 1974 7
Map 3. Areas Identified for Continued Management or Removal per the 1975 MFP 12
Map 4. Selected Wild Horse Range and Original Wild Horse Inventory (1980) 16
Map 5. Wild Horse Habitat Naming Following 1986 Revision of Wild Horse and Burro Program Regulations 20
Map 6. Current Piceance-East Douglas HMA, North Piceance HA, and West Douglas HA Boundaries 23
Map 7. Active Oil and Gas Wells, Leases and Units, and Utility Corridors as Analyzed in CO-WRFO-03-050-EA 28
Map 8. Original 1974 Wild Horse Inventory 36
Map 9. 1982 Aerial Inventory of the Douglas Creek Unit 37
Map 10. 1985 Aerial Inventory Area West of Douglas Creek in the Douglas Creek Herd Unit . 38
Map 11. 1994 Aerial Inventory of the West Douglas Herd Area 39
Map 12. 2005 Aerial Inventory of the West Douglas Herd Area 40
Map 13. 2012 Aerial Inventory of the West Douglas Herd Area 41
Map 14. Oil and Gas Wells and Leases Effective Prior to 1971 within the West Douglas Herd Area 44
Map 15. West Douglas Herd Area with Digital Elevation Model 45
Map 16. West Douglas Herd Area with Digital Elevation Model and Shaded Winter Range 46

1.0 Introduction

The Bureau of Land Management (BLM) is responsible for the protection, management and control of wild free-roaming horses and burros (WH&B). Under the Wild Free-Roaming Horses and Burros Act (WFRHBA), WH&B are considered an integral part of the national system of public lands in the areas they were found in 1971. The BLM's goal is to manage healthy WH&B populations on healthy rangelands. To achieve this goal, the BLM also prescribes management to assure WH&B populations are in balance with other uses of the public lands and that a thriving natural ecological balance (TNEB) is achieved and maintained.

The purpose of this document is to review management actions prescribed by the White River Field Office through the land use planning process to maintain TNEB as well as analyze the current conditions within the West Douglas Herd Area (WDHA) to determine whether TNEB is being maintained or whether excess wild horses are present within the WDHA.

2.0 Federal Law and BLM Policy for Management of Wild Horses

It is the policy of the BLM, in accordance with the Wild Free-Roaming Horses and Burros Act (Public law 92-195, as amended), its implementing regulations at 43 CFR Part 4700, and other laws governing the administration of public land to protect and manage wild horses and burros on public lands in areas where they were found in 1971 at passage of the WFRHBA. The policy described below is an abbreviated summary of the BLM's current management policy for wild horses. For a full description of the BLM's policy for management of wild horses and burros, refer to BLM Manual 4700 (pages 5-6).

A. Protect wild horses and burros from unauthorized capture, branding, harassment or death.

B. Consider wild horses and burros in the areas where they were found in 1971 (Herd Areas or HAs) as an integral part of the national system of public lands. Maintain a permanent record of the HAs that existed in 1971.

C. Consider wild horses and burros comparably with other resource values for each HA in the formulation of land use plans (LUPs). Herd Management Areas shall be established in those HAs within which wild horses and burros can be managed for the long term. An HMA may be considered for designation as a wild horse or burro range to be managed principally, but not necessarily exclusively, for wild horses and burros when significant public value is present.

D. Manage wild horses and burros in a manner designed to achieve and maintain a TNEB and multiple-use relationships on the public lands. Management activities should be carried out at the minimum feasible level necessary to attain the objectives identified in approved LUPs and Herd Management Area Plans (HMAPs) and should also ensure the animals' free-roaming behavior is maintained.

2.1 Federal Laws Related to Management of Wild Horses

During the 1950s, documented abuses of wild horses led concerned individuals and national humane organizations to push for federal protections of wild horses. Subsequently, Congress passed the Wild Horse Annie Act in 1959 prohibiting the use of aircraft or motor vehicles to capture or kill wild horses or burros on public lands and polluting watering holes on public lands to trap, kill, wound, or maim wild horses or burros. Despite the 1959 act, wild horse exploitation continued. To protect wild horses and burros, Congress passed additional legislation in 1971 titled the Wild Free Roaming Horses and Burros Act of 1971 to require the protection and management of wild free-roaming horses and burros on public lands. The 1971 act was amended by the Federal Land Policy and Management Act of 1976 and the Public Rangelands Improvement Act of 1978.

2.1.1 Wild Horse Annie Act of 1959 (Public Law 86-234)

Establishes criminal penalties for using an aircraft or motor vehicle to hunt wild horses or burros on public lands for capturing or killing and for polluting watering holes on public lands to trap, kill, wound, or maim wild horse or burros.

2.1.2 Wild Free-Roaming Horses and Burros Act of 1971 Public Law 92-195)

Directs the Secretaries of the Interior and Agriculture to protect and manage wild horses and burros as components of the public lands to achieve and maintain a thriving natural ecological balance. Once information becomes available to the Secretary that an overpopulation of WH&B exists on a given area of the public lands, the Secretary "may order old, sick, or lame animals to be destroyed in the most humane manner possible, and he may cause additional excess wild free-roaming horses and burros to be captured and removed for private maintenance under humane conditions and care." (P.L 92-195 Sec. 3 (b)). The act also establishes criminal penalties for a number of offenses involving wild horses and burros.

2.1.3 Federal Land Policy and Management Act of 1976 (Public Law 94-579)

Directs the Secretary of the Interior to prepare and maintain an inventory of public lands and their resources and other values and with public involvement, to develop, maintain, and revise land use plans (LUP), which provide for the use of public lands. The Federal Land Policy and Management Act (FLPMA) also directs the Secretary to manage the public lands under principles of multiple use and sustained yield. This act also authorizes the Secretaries of the Interior and Agriculture to contract for the use of helicopters and for using motor vehicles to transport captured animals after a public hearing and in accordance with humane procedures.

2.1.4 Public Rangelands Improvement Act of 1978 (Public Law 95-514)

Directs the Secretaries of the Interior and Agriculture to maintain a current inventory of wild horses and burros on given areas of public lands to determine whether and where overpopulation exists and whether to remove excess animals, the appropriate management levels, and whether appropriate management levels could be achieved by removal or destruction of excess animals or through other options. Section 3 of the WFRHBA was amended to direct the Secretary that upon finding that an overpopulation exists and that action is necessary to remove excess wild horses and burros, "he shall immediately remove excess animal from the range" (P.L. 92-195 as

amended Sec. 3 (b) (2)) to restore a thriving natural ecological balance. Authorizes the Secretaries, upon application, to grant title to excess wild horses and burros which an individual provided humane conditions, treatment, and care for a period of 1 year. This act also provides that a wild horse or burro is no longer a wild horse and burro for purposes of the 1971 act once title has passed to an individual or in a number of other circumstances. The Public Rangelands Improvement Act (PRIA) also states that no wild horse and burro or its remains may be sold or transferred for consideration for processing into a commercial product.

2.2 BLM Policy Related to Management of Wild Horses

The BLM interprets laws through promulgation of regulations and provides guidance through policy contained in manuals, handbooks, and instruction memoranda. Regulations implementing laws relating to the protection, management, and control of wild horses and burros under the administration of the BLM are 43 C.F.R. 4700, subpart 4710 directs management considerations for implementation of those laws. Manuals contain the BLM policy and program direction. It provides policy, procedures, and instructions to manage programs. Handbooks are the source of detailed instructions for performing specialized procedures to carry out policy and direction described in the Manual Section. Handbooks provide specific detailed instructions, techniques, procedures, practices, and processes. Handbooks do not contain broad objectives, policies, assignment of responsibilities, or delegations needed primarily by line officials and principal staff officials to administer programs. Handbooks are considered part of the Manual and have the same force of authority as the Manual Section. Instruction Memoranda are temporary directives that supplement the Bureau Manual Sections; however, there are no current IMs relevant to making determinations of excess wild horse or burros.

2.2.1 BLM Manual 4700 and BLM Handbook 4700-1

The current versions of the BLM manual 4700 and BLM Handbook H-4700-1 released July 7, 2010 provide guidance for all aspects of wild horse and burro protection and management as well as define terms commonly used when describing wild horse and burro protection and management activities.

Two important terms describing wild horse habitat are Herd Area (HA) and Herd Management Area (HMA). Herd Area is defined in 43 CFR 4700.0-5 (d) and further explained in H4700-1 as the "Geographic areas of the public lands identified as habitat used by WH&B at the time the WFRHBA was enacted (12/15/1971)." Direction for establishment of an HMA is provided in 43 CFR 4710.3-1, Herd Management Area is defined in H4700-1 as "May be established in those HAs within which WH&B can be managed for the long term. HMAs are designated through the LUP process for the maintenance of WH&B herds. In delineating each HMA, the authorized officer shall consider the appropriate management level (AML) for the herd, habitat requirements of the animals, the relationships with other uses of the public and adjacent private lands, and the constraints contained in 43 CFR 4710.4." (H-4700-1 pg 57)

Guidance contained in the BLM Handbook 4700-1 states: "Where appropriate, the LUP may include decisions not to manage WH&B in all or a part of an HA." An example given in the handbook is "where essential habitat components (forage, water, cover and space) are unavailable or insufficient to sustain healthy WH&B and healthy rangelands over the long term." (H-4700-1 2.1.4)

Where LUPs include decisions to designate HMAs within all or a portion of a HA, wild horses must be managed to achieve and maintain a thriving natural ecological balance (TNEB) and multiple use relationships on the public lands. TNEB means "WH&B are managed in a manner that assures significant progress is made toward achieving the Land Health Standards for upland vegetation and riparian plant communities, watershed function, and habitat quality for animal populations…" Before issuing a decision to gather and remove animals, the authorized officer will analyze multiple factors to determine whether excess animals are present and removal is necessary to restore or maintain the range in a TNEB.

The Act defines excess animals as: "wild free-roaming horses or burros (1) which have been removed from an area by the Secretary pursuant to applicable law or, (2) which must be removed from an area in order to preserve and maintain a thriving natural ecological balance and multiple –use relationship in that area." The term excess animals is further defined in BLM Manual Section 4720.1 as: "those animals which must be removed from an area to preserve and maintain a thriving natural ecological balance (TNEB) and multiple-use relationship in that area. This definition includes wild horses or burros located outside the HMA in areas not designated for their long-term maintenance."

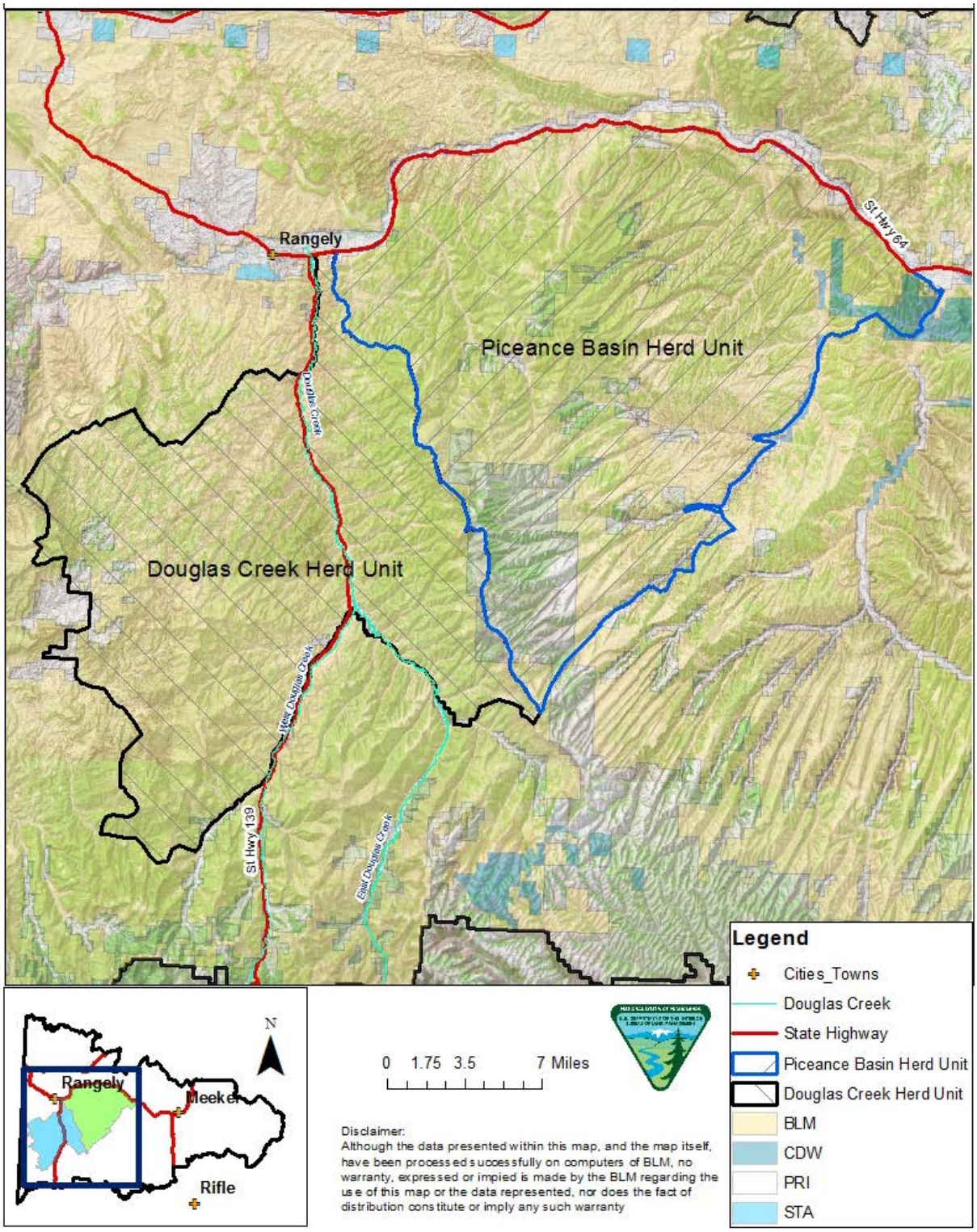
3.0 WRFO Land Use Planning Decisions for Wild Horses

This summary presents an overview of the analysis and subsequent land use planning decisions that the BLM White River Field Office (WRFO) have made regarding the West Douglas Herd Area (WDHA). Since the passage of the Wild Free Roaming Horses and Burros Act (The Act) of 1971, this area has been analyzed multiple times for the feasibility of designating this area as a Herd Management Area for long term maintenance of wild horses. The WDHA has not been designated as an area for long term maintenance of wild horses.

Since passage of The Act, the WRFO has completed six land use planning documents which direct management of the multiple uses including wild horses within the resource area. The first plan called the White River Management Framework Plan was completed in 1975, during preparation of this plan two herd units were identified as the habitat used by wild horses in the resource area in 1971. The WRFO identified two herd units the Piceance Basin Herd Unit and the Douglas Creek Herd Unit, which shared a common boundary along the Cathedral Bluffs (Map 1).

Through analysis and decisions of the various land use planning documents, the requirement to manage wild horses within areas they were found in 1971 (43CFR 4710.4) and evolution of naming conventions for the areas where wild horses where found at passage of The Act (See Section 3.6), the WRFO has designated one HMA for long term maintenance of wild horses and given titles to two HAs for those areas within the original herd units which have not been designated for long term maintenance of wild horses. The Piceance-East Douglas HMA includes the portion of the Douglas Creek Herd Unit east of Douglas Creek and the southern and eastern portion of the Piceance Basin Herd Unit. The North Piceance HA (NPHA) includes the portion of the Piceance Basin Herd Unit not designated for long-term maintenance of wild horses, and the West Douglas HA includes the portion of the Douglas Creek Herd Unit not designated for long term maintenance of wild horses (Map 6).

Map 1. Herd Units within the White River Resource Area

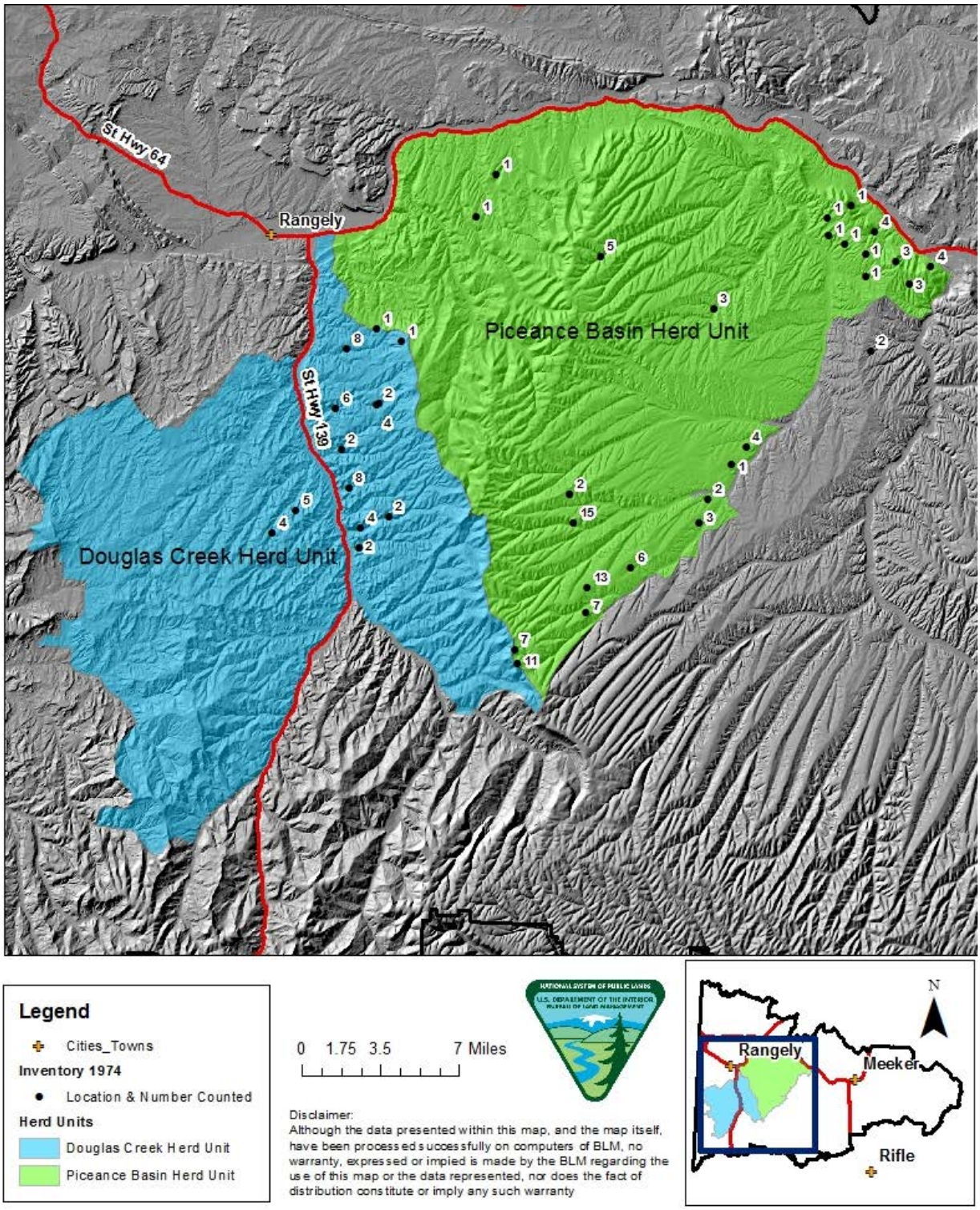


3.1 Identification of the Douglas Creek and Piceance Basin Herd Units (1974)

The White River Resource Area (WRRA) completed its first land use plan in 1975. In the Wild Free Roaming Horses and Burros Act (The Act) of 1971 each area that horses and burros were found in 1971 received the designation as Herd Units. Each HU was to be analyzed for the components of habitat required for the long term suitability for self-sustaining wild horse herds; the components analyzed are: water, feed, cover, and space. Within the WRRA two areas were analyzed: Douglas Creek Herd Unit and Piceance Basin Herd Unit. One Herd Management Area was designated from a portion of both herd units that met all requirements for self-sustaining herds. The portions of each unit that remained in HA status were renamed West Douglas HA and North Piceance HA.

The BLM WRFO completed its first inventory of wild horses within the WRRA from February 26 – March 6, 1974, and a second inventory was completed August 12-16, 1974. Information regarding the number and distribution of wild horses collected during these inventories was used to identify the habitat used by wild horses at passage of The Act and establish the two herd units. The Piceance Basin Herd Unit included 247,615 acres of public, private and state lands. The Douglas Creek Herd Unit included 188,142 acres of public and private lands, although no wild horses were observed in the southern and western portion of this herd unit during the aerial inventory, the boundary was delineated based on barriers existing in 1971 that would restrict wild horse movement throughout this area. The two herd units shared a common boundary along the Cathedral Bluffs, which was also the boundary of the planning units. Map 2 shows the location and number of wild horses counted during the original 1974 inventory as well as the two herd units identified through this effort.

Map 2. Original Wild Horse Inventory and Wild Horse Herd Units within the White River Resource Area, 1974



3.2 1975 Management Framework Plan

The first land use plan completed in 1975 was developed in two phases which began in early 1974. This plan established objectives and constraints for each resource and support activity throughout the WRRA. The first phase was called the Unit Resource Analysis (URA) which included internal and external scoping on the values, resources, and uses present on the public land, as well as, opportunities for developing and/or protecting these values and uses. The URA was completed for three planning units within the WRRA which were Rangely, Piceance Basin, and Meeker.

Following the completion of the URA portion of the land use plan, management alternatives were developed in the Management Framework Plan (MFP). The first step of the MFP was a single resource or use approach to developing management alternatives which maximized and/or optimized that resource regardless of conflicts with other resources or uses. The single resource objectives developed for wild horses in 1975 were:

- WH-A- Establishment of a wild horse range consisting of parts of the Piceance Basin Herd Unit and parts of the Douglas Creek Herd Unit, consisting of 107,000 acres and capable of supporting 430 wild horses.

- WH-B- Establish a wild horse range of 462,812 acres which would include all of the Douglas Creek herd unit (Rangely Planning Unit) and all of the Piceance Basin herd unit.

- WH-C- Manage wild horses on all wild horse ranges in combination with livestock and other uses. (WRMFP, Vol. II, Wild Horses, 1975)

The next step in the process was to identify conflicts with other resources or uses in a Multiple-Use Analysis and develop a multiple use recommendation (or alternative). These multiple-use recommendations were presented to external publics and internally within the BLM before multiple use decisions were made. Multiple-Use Decisions were completed by the Craig District Manager following public review and comment. The Colorado State Director approved the Multiple Use Decisions on June 30, 1975. Table 1 includes multiple use recommendations and rationale directly from the 1975 MFP.

Table 1. Summary of 1975 Multiple Use Decisions

Multiple Use Recommendation	Rationale
That at the present time, the wild horses east of Douglas Creek be left where they presently are located	This is their natural habitat, and the degree of disturbance by other activities needs further study
Update forage surveys in the wild horse area east of Douglas Creek	These studies are needed to determine the carrying capacity for wild horses and livestock
After completion of the forage surveys, and determination is made on the maximum and minimum number of horse to maintain, forage will be allocated for these horses and for livestock	The Wild Horse and Burro Act states that forage will be allocated for wild horses, and by law and BLM policy, forage will be allocated for livestock

Multiple Use Recommendation	Rationale
That the horses west of Douglas Creek be removed from the entire resource area	The increase in oil and gas activities in this area warrants removal of the horses. Without forage surveys completed east of Douglas Creek to determine the carrying capacity, the area should not be burdened. Gas development activity is causing horses to disperse into areas where they did not exist prior to 1971. The Wild Horse and Burro Act states that horse range or habitat will not expand beyond the area occupied when the law was passed.
Construct a fence along the East Douglas Creek and Main Douglas Creek road	This fence would keep the horses off the highway and out of the active oil and gas field
Do not construct any new fences in the wild horse area east of Douglas Creek until studies and a joint management plan for wild horses, livestock and wildlife has been completed and approved and the need for these fences identified	Sufficient livestock boundary fences exist and additional fences would hinder wild horse management. Fence construction should be based upon need
Do not construct any new roads in area 4759 except as needed for mineral exploration and development	Additional roads would reduce the naturalness of this area and the wild horse habitat
Allow oil and gas exploration and development, oil shale development and saline minerals development with sufficient stipulations to protect the wild horse habitat	This would help meet the energy needs of the nation and aid in becoming energy self-sufficient by 1980. It is not presently know the degree of impact that the minerals program has on wild horses in this area.
That studies be initiated to determine the impacts of the existing fences on wild horses	These studies are needed to formulate an effective management plan that would improve the habitat for both livestock and wild horses
Initiate studies to determine feasibility of consolidating grazing allotments, relocation of fences and removal of some of the existing fences	These studies are needed to aid in determining impacts and to formulate an effective management plan for the area
That after forage surveys and studies are completed, a management plan for the horses and wildlife and cattle be completed. Livestock and horse numbers will be determined from the studies and management plan.	The management plan for wild horses should be correlated with movement of livestock. The management plan is needed to properly manage the horses and to comply with the Wild Horse and Burro Act.
That vegetative manipulation and other land treatment practices be allowed on areas not within the intensive mineral activity areas and not in conflict with other identified resource values	This would ass forage for horses which has been lost to mineral activities
Do not acquire private lands for wild horse management	The Wild Horse and Burro act provides for management on private lands. The cost of these lands would outweigh the benefits received
No vegetative manipulation will be allowed between Douglas Creek and Cathedral Bluffs, known as the Philadelphia Creek Area	This area should remain in its present state at the present time. Vegetative manipulation should not be initiated until a forage survey has been completed to determine if additional forage is needed in this locale
As energy development intensifies in Piceance Basin and forage is reduced, all present herbivore animals should be reduced proportionately	At the present time, the horses are compatible with the minerals activities, and to move them is not warranted. The public expressed the desire that livestock use be reduced proportionate to reduction in horse use, if any reduction is imposed
Continue studies to determine migration, feeding habits, sex, age ratio, and production	These studies are needed to effectively manage the horses and to formulate a management plan
Continue surveillance for unlawful human acts	This is BLM policy and is necessary to protect the horses as per the Wild Horse and Burro Act

Multiple Use Recommendation	Rationale
Prior to formulation and execution of a management plan, all gates in the vicinity of where horses exist will be loft open at the end of the livestock grazing season	This would allow for more wild horse movement during the winter months and is necessary for better habitat management by reducing concentration of use
That all ORV use not be allowed anywhere during the winter and spring months and vehicles be restricted to the existing roads and trails all year, with the exception to allow that ORV use necessary for oil and gas and mineral exploration and development	This would avoid disturbance of wild horses during critical winter and spring months when forage conditions of horses are very important. It would allow for oil and gas and mineral exploration and development to help meet the self-sufficiency needs of the nation. Expected ORV use will increase dramatically as industrial development occurs
That no use by livestock, wildlife, or horses be discontinued or reduced to increase forage available for wild horses until forage surveys are conducted, forage allocated for horses and the need for an adjustment in grazing use is identified	The need for adjustment in grazing use has not been identified for the present horse numbers. Forage data is unsufficient at the present time to determine any grazing use adjustments that may be needed
That big game hunting be considered on hunting unit basis, and to reject the specified hunting recommendation WH-B.5	Proper harvest of wildlife must be by hunting units already established. The Division of Wildlife controls the type of hunting allowed
Construct only those corrals and traps as defined in the management plan or need is identified	These traps and corrals will be required for management of the horse herd. Also, see analysis and recommendation for RC-1
Reject recommendation WH-B.15 to construct a permanent field camp in the wild horse range	This camp is not needed to manage wild horses. Protection of these facilities in remote areas would be very difficult. It would distract from the naturalness of the area
Do not acquire private lands for wild horse management only. Initiate land acquisition studies in the vicinity of the C-a oil shale prototype lease tract for mineral development and wild horse use. This study should be done in conjunction with the wild horse management plan	These lands are located in a highly mineralized area. Industry has indicated the desire to acquire some of these lands for mineral development (see M-7 analysis). Increasing minerals activities could negate the horse use and land acquisition, but wild horses could use these lands until such activities occur. These studies are needed to determine the need for federal ownership of these lands
Disallow any land treatment practices or minerals surface occupancy on the ecologically unique area	To protect pinyon-juniper and ponderosa pine relic areas. (Refer to F-3.8, F-3.9, and R-14.6)
Management and removal of excess wild horses included in the management plan will be consistent with the present regulations and recommendations of the National Wild Horse Advisory Board. Recommendations will be obtained from wild horse groups for removal and disposal. Recommend that the removal will be every second year by experienced and qualified people by means of water traps and corrals	This will comply with the law. It will provide for control, orderly management, and sustained long term use
Establish an observation area only after the management plan has been completed and the need identified	The need for and location of an observation area cannot be determined until studies and management plan have been completed

Along with the decisions and reasons of the MFP, the Unit Resource Analysis (Current Situation) also provided background information for the decisions.

- URA- Step III Page WH-4 -Identified one "herd unit" in the Rangely area, this was the Douglas Herd Unit containing 187,970 acres.

- URA- Step III Page WH-4 -Identified that there was likely interchange between the Piceance Herd Unit and the east side of Douglas Creek.

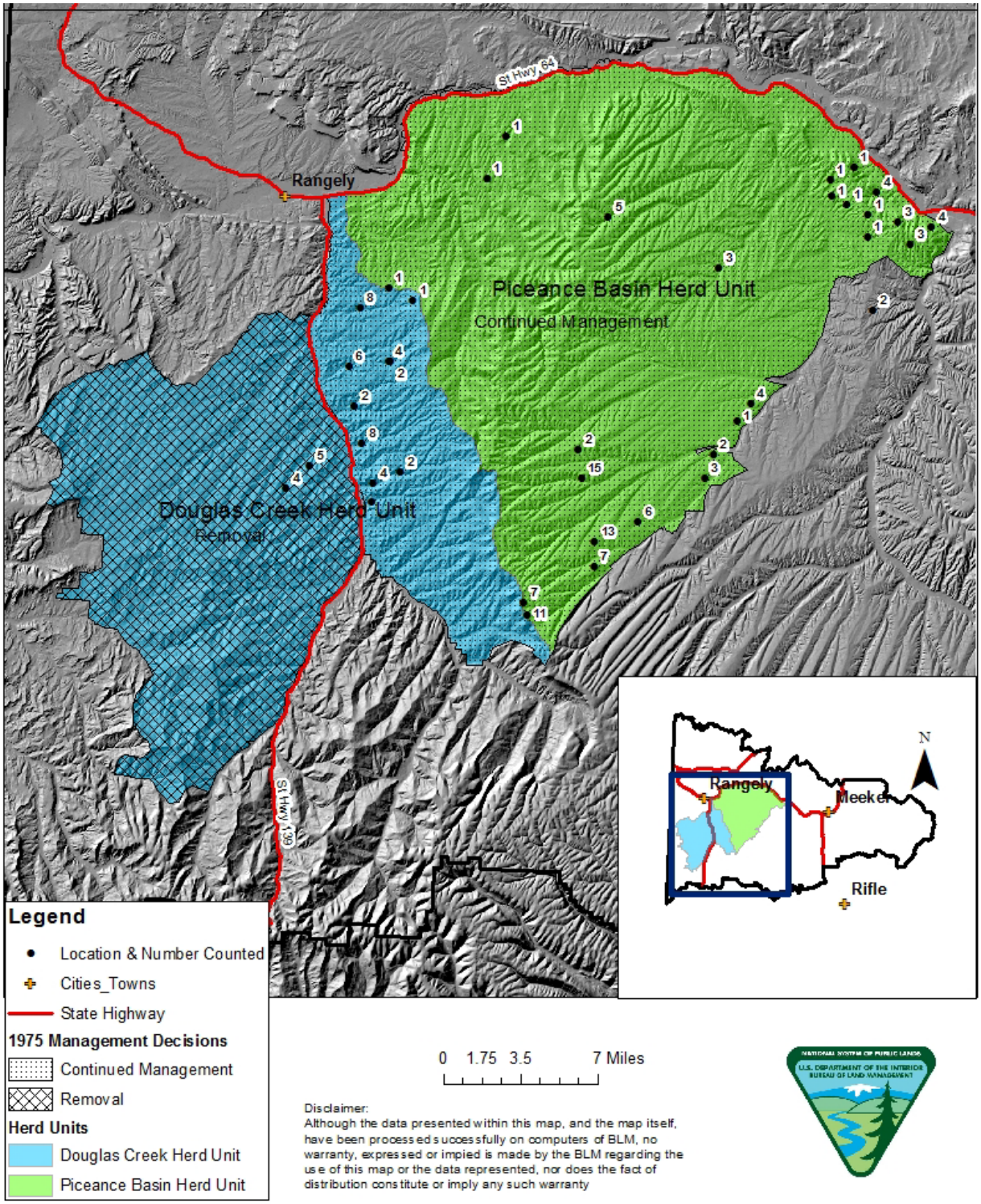
- URA- Step III Page WH-10 -Identified conflicts between wild horses and oil and gas development. "Currently, the greatest activity concerning oil and gas production in the Craig District is taking place within the Rangely Planning Unit."

- URA- Step III Page WH-13 -Identified Utilization/distribution problems resulting from energy development and human population increases projected for the future. "There are three actions that one can expect: The horses will migrate into other areas of the range that are not as accessible to the human population. The areas they will migrate into will probably be less desirable than the areas presently occupied. These areas would have less forage and could eventually be overused. The second action that may take place is that horses will migrate into areas already used by horses. This would result in overuse of the range and possibly increased conflict between horses. The third action is that the horses will remain within the disturbed area. This would result in horse behavior that would resemble the behavior of black bears in Yellowstone National Park."

The final decision in this MFP regarding wild horse management was a collection of the three objectives recommended in step 1 of the MFP. The decision was made to “manage wild horses with wildlife and livestock. The wild horses will be managed on their present range with the exception of that portion of the horse range lying west of Douglas Creek.” (WRMFP, Vol. II, Wild Horses, 1975). The decision was also made to update 244,000 acres of forage survey to determine carrying capacity for numbers of wild horses, livestock and wildlife that can be supported in this area.

Map 3 shows the Herd Units identified during the URA stage of the planning process, as well as the areas selected for continued management of wild horses, forage analysis update, and the area west of Douglas Creek selected for removal of all wild horses. The stippled area within the Piceance Basin Herd Unit and the portion of the Douglas Creek Herd Unit east of Douglas creek is the area chosen to continue to manage wild horses and update forage surveys, the cross hatched area within the portion of the Douglas Creek Herd Unit west of Douglas Creek is the area that was chosen for removal of wild horses.

Map 3. Areas Identified for Continued Management or Removal per the 1975 MFP



3.3 1980 Management Framework Plan Decisions

In 1978 through 1980, another planning effort was undertaken to update the 1975 MFP. This update was driven by the court ordered environmental impact statements for the livestock grazing program. This update included a forage allocation for livestock, wild horses, and big game wildlife.

As in the 1975 MFP, the BLM conducted internal and external scoping meetings in development of the Unit Resource Analysis (present situation and opportunities for enhancement). Again, the URA identified two wild horse herd units, the Douglas Creek Herd Unit and the Piceance Basin Herd Unit.

In the 1980 MFP, two objectives (alternatives) were advanced by the wild horse specialist to enhance or optimize opportunities for management of a viable wild horse population (WRMFP, Wild Horse, 1980):

- Objective WH-1: Maintain 462,812 acres of wild horse habitat, capable of supporting a minimum of 200 wild horses and a maximum of 450 wild horses, within the 1971 wild horse range boundaries which include the Piceance Basin wild horse Herd Unit and the Douglas Creek Herd Unit.

- Objective WH-2: Maintain 107,000 acres of wild horse habitat capable of supporting 100 to 250 wild horses. This area will consist of Tommy's Draw, Philadelphia Creek, and Hogan Draw allotments in the Rangely Planning Unit (east of Douglas Creek) and part of the Boxelder and Square S allotments in the Piceance Basin Planning Unit.

In the next step, a multiple use conflict analysis was conducted for each Objective and a Multiple-Use Recommendation advanced by the Area Manager in February, 1979. Multiple-Use Decisions were completed by the Craig District Manager following public review and comment. The Colorado State Director approved the Multiple Use Decisions April 1981. Table 2 includes multiple use recommendations and rationale directly from the 1980 MFP.

Table 2 Summary of 1980 Multiple Use Decisions

Multiple Use Recommendation	Rationale
All horses west of Douglas Creek be removed.	The increase in oil and gas activities in this area warrants removal of the horses. Gas development activity is causing horses to disperse into areas where they did not exist prior to 1971. The Wild Horse and Burro Act states that horse range or habitat will not expand beyond the area occupied when the law was passed
Reduce the horse herd to 30 head in the Cathedral Bluff Allotment (Hogan Draw, Philadelphia Draw and Tommy's Draw Area) and maintain that level	This area is their natural habitat; however, the herd has increased substantially since passage of the Act in 1971. Reducing the herd to approximately 30 head will bring it down to approximately what it was in 1971. There is presently substantial conflict between horse and livestock
Reduce the horse numbers in the C pasture of the Square S Allotment to 25 head and maintain at that level	Same as #2

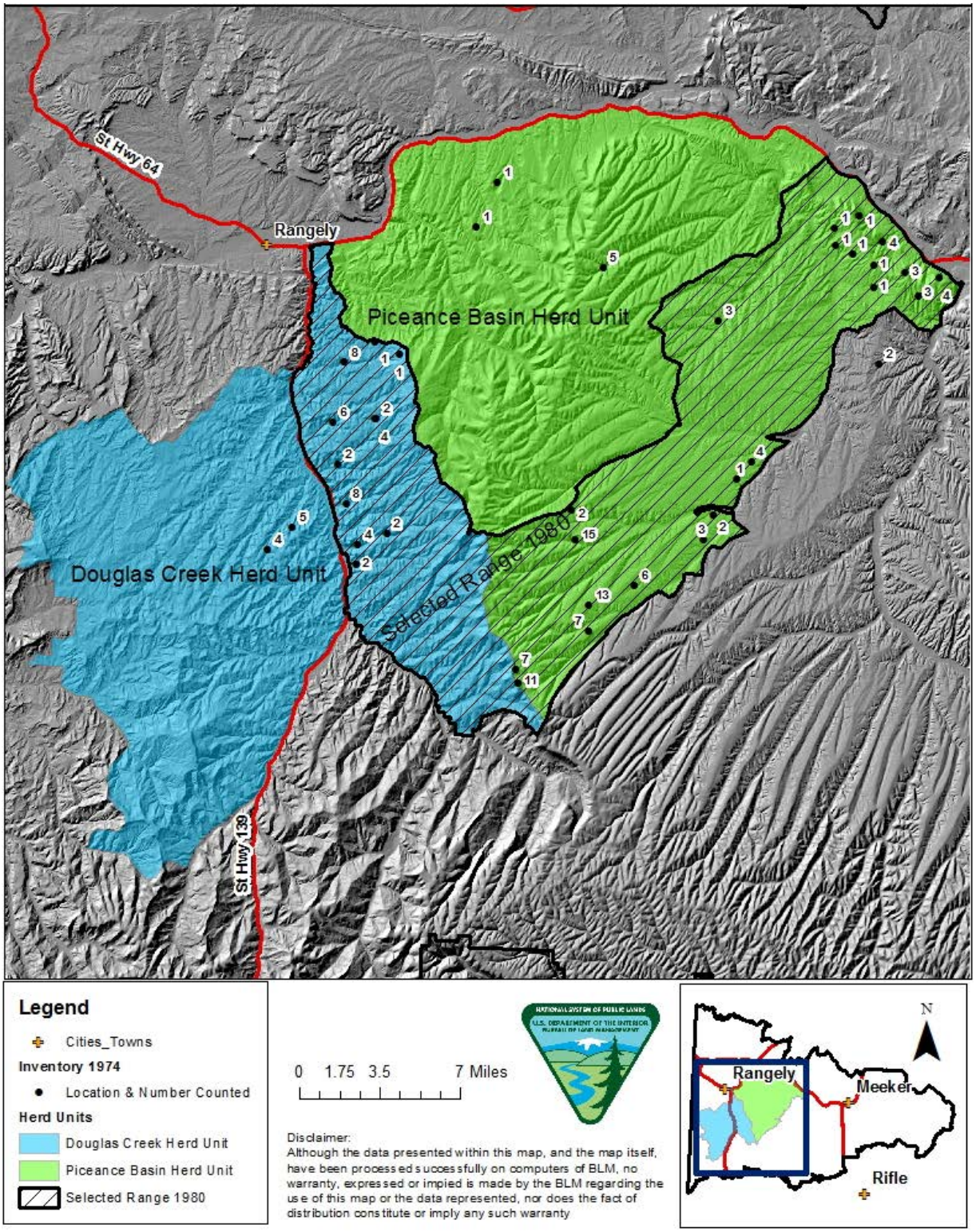
Reduce the horse numbers in the Box Elder pasture of Yellow Cr. Allotment to 25 head and in the Barcus Pinto Gulch area to 15 and maintain at that level	Same as #2
Remove all horses from the rest of the Square S Allotment as well as from the following allotments: Yellow Creek, Spring Creek, Greasewood, Hammond Draw, Upper Fletcher, Lower Fletcher, Boise Creek, Little Spring Creek, and Rocky Ridge	Wild horses in these areas are in direct competition with wildlife and livestock. Also refer to #1
Construct a fence along the East Douglas Creek and Main Douglas Creek road (approximately 12 miles)	This fence would keep the horses off the highway and out of the active oil and gas field
Construct approximately 3-1/2 miles of boundary fence on the Big Ridge between Spring Creek and Cathedral Bluffs Allotments	This will prevent drift from Cathedral Bluffs into Spring Creek Allotment
Complete the boundary fence around Yellow Creek Allotment	Prevent horses from drifting into the adjoining allotments which are being recommended for complete removal
Accept Step II Multiple Use Recommendation RM-14 on fencing in the Cathedral Bluffs and Spring Creek Allotments	This will insure free movement of horses
Reserve 1400 AUMs of forage for between 95 and 120 head of wild horses	This is the amount of forage necessary to sustain approximately 120 head of horses which will be the maximum number allowed in the horse range
Complete a management Plan for wild horses by the end of FY81	Management plan is needed to properly manage the horses and comply with the Wild Horse and Burro Act
Vegetative manipulation will be conducted in accordance with Step II multiple use recommendation RM-1	Same as RM-1.14
Update forage surveys in the Cathedral Bluffs and Yellow Creek Allotments in FY81	These surveys are needed to determine carrying capacities for wild horse, wildlife and livestock
Accept Step II multiple use recommendation RM-1.4 on water developments	Same as RM-1.4
Do not acquire private land for wild horse management	The wild horse and burro act provides for management on private lands. The cost of these lands would outweigh the benefits received
Construct a small holding corral centrally located so it can be utilized for both the Douglas Creek and Piceance areas	Horses must be held for several days for brand inspections and claiming procedures
That all ORV use not be allowed anywhere during the winter and spring months and vehicles be restricted to the existing roads and trails all year, with the exception to allow that ORV use necessary for oil and gas and mineral exploration and development	This would avoid disturbance of wild horses during critical winter and spring months when forage conditions of horses are very important. It would allow for oil and gas and mineral exploration and development to help meet the self-sufficiency needs of the nation. Expected ORV use will increase dramatically as industry development occurs
Accept Step II multiple use recommendation F-1.2, F-2.2, and RM-1.14	Same as F-1.2, F-2.2 and RM1.14
Establish an observation area only after the management plan has been completed and the need identified	The need for and location of an observation area cannot be determined until studies and management plan have been completed
Construct 3 water traps in the south ½ of the Rangely Planning Unit, west of State Highway #139	This area has a limited supply of water which will make water trapping an effective means of removing wild horses from this area

Construct a minimum of 2 water traps in Cathedral Bluffs	Same as above
Set up cooperative agreement with the Colorado Division of Wildlife	Cooperative agreements are necessary for management of wild horses on state owned land and is also necessary for compliance with the wild horse law 92-915
Accept Step II multiple use recommendation RM-1.7 on interior fences	Same as RM-1.7
Accept Step II multiple use recommendation RM-1.2 on restricting livestock use during spring grazing season	Same as RM-1.2
No limitation on wildlife use be implemented until forage surveys are conducted and the need for restriction are identified	The need for Adjustment in grazing use has not been identified for the present horse numbers. Forage data is unsufficient at the present time to determine any grazing use adjustments that may needed
Where determined necessary by the area manager, gates will be left open or fence segments let down during periods of non-use by livestock, to allow horse movement	So as not to restrict horse movement between and within allotments

The final decision in this MFP regarding wild horse management was to reserve 2,101 AUMs of forage for between 95 to 140 wild horses within the 161,300 acre (148,153 acres public land) selected range. Wild horses would be removed from areas outside the selected range including those wild horses west of Douglas Creek. At this time the portions of the herd units outside of the selected range were known only as adjacent areas and did not have HA titles as there was no regulation or policy at this time which provided the description of Herd Areas.

Map 4 shows the selected range for wild horse management within the White River Resource Area following completion of the MFP update in 1980. This map also includes the original wild horse inventory completed in 1974. The selected range was chosen “because it has the most concentrated wild horse population (their preferred habitat), has reliable sources of water during late summer, and has a balance between summer and winter range.” This area would support a high quality herd representative of the situation in effect at the passage of The Act.

Map 4. Selected Wild Horse Range and Original Wild Horse Inventory (1980)



3.4 1981 White River Resource Area Grazing Management EIS.

The recommendations of the 1980 MFP were again presented to the BLM's internal and external publics along with the scoping process for the court ordered grazing EIS. The Multiple-Use Recommendations from the MFP became the proposed action for the 1981 Grazing EIS.

In addition to the proposed action, the Grazing EIS evaluated five other alternatives, some of which were developed from opportunities or objectives identified in the URA/MFP. As relates to wild horses, the grazing EIS evaluated the following alternatives in detail:

- Alternative A (Proposed Action)
  - Manage 90 to 140 horses on 148,153 acres public land (161,300 total acres) which includes parts of both herd units.
  - Allocate 2,101 AUMs of forage for wild horse use within the area described.
  - Remove all horses west of Douglas Creek and from all other allotments in the Piceance Basin not designated for management of wild horses.

- Alternative B (No Action)
  - Manage present herd of 625 horses on 443,979 acres public land recognized as the area occupied by wild horses in 1971.
  - Allocate 9,364 AUMs of forage for horse use within the area described.

- Alternative C (Eliminate all Livestock Grazing)
  - Manage 500 to 750 head of wild horses on 443,979 acres public land.
  - Allocate 9,364 AUMs of forage for horse use within the area described.

- Alternative D (Optimize Livestock Grazing)
  - Manage 52 wild horses on 148,153 acres public land (161,300 total acres).
  - Allocate 797 AUMs of forage for horse use within the area described.
  - Remove all horses west of Douglas Creek and from all other allotments in the Piceance Basin not designated for management of wild horses.

- Alternative E (Emphasis on Other Resource Uses)
  - Manage 280 to 450 head of wild horses on 148,153 acres public land (161,300 total acres).
  - Allocate 4,200 AUMs of forage for horse use within the area described.
  - Remove all horses west of Douglas Creek and from all other allotments in the Piceance Basin not designated for management of wild horses.

- Alternative F (Optimize Wild Horses)
  - Manage 700 to 1,125 head of wild horses on 443,979 acres public land.
  - Allocate 16,865 AUMs of forage for horse use within the area described.

During public review of the Draft Grazing EIS, responses indicated concern regarding proposals for managing wild horses. Major areas of concern included: 1) the need for reducing the size of the wild horse range; 2) the proposed population levels; and 3) the possibility of the proposals violating the mandates of the Act.

These issues were addressed in the Final Grazing EIS and again emphasized the principal considerations used in reducing the size of the wild horse range including:

- The designated range (161,300 acres) is considered their preferred habitat and has been allocated for continued wild horse use;
- The amount of habitat already lost from oil and gas development and associated human disturbance and the projected new disturbance west of Douglas Creek;
- The amount of critical deer winter range, the number of existing fences restricting horse movement, the lack of dependable watering areas and the lack of sufficient summer forage in the non-designated ranges in the Piceance Basin.

In April 1981 the State Director approved both the Rangeland Program Summary (the Record of Decision for the Grazing EIS) and the Multiple-Use Decisions for the WRRA MFP. The decisions for wild horse management were:

1. Allocate 2,101 AUMs of forage for 95 to 140 wild horses to be managed on an area of 148,153 acres of public land (161,300 total acres); and
2. Remove horses from 295,826 acres which includes all horses west of Douglas Creek and all horses from those allotments in the Piceance Basin which are not part of the designated management area.

The rationale noted in the Rangeland Program Summary: "The proposed wild horse use area was chosen because it has the most concentrated wild horse population (their preferred habitat), has reliable sources of water during summer, and has a balance between summer and winter range." and, "Decisions for wild horse management are aimed at maintaining a viable wild horse population within the best habitat of their present range, while simultaneously satisfying the needs for various other resource considerations." (Rangeland Program Summary White River Resource Area, page 7). The decisions for wild horse management made through this EIS were the same as those made in the 1980 MFP; the selected range and forage allocations did not change.

3.5 1981 WRRA Herd Management Area Plan

The herd management area plan (HMAP) was an activity plan developed to implement the land use decisions made in the 1980 MFP and 1981 EIS. This plan reiterated the land use decisions of managing a viable wild horse population within a Herd Management Area consisting of 148,153 acres of public land (161,300 total acres).

The HMAP developed specific objectives, following public input, for managing a viable wild horse herd. Objectives with detailed planned actions to achieve each objective developed in the HMAP include:

A. Maintain wild horse herds at a level consistent with the carrying capacity for the area while providing adequate forage for livestock and wildlife.

B. Improve the range condition in the herd management area within 15 years.

C. Maintain levels of utilization on key forage by limiting the maximum allowable utilization to 40 percent on ranges used on a continuous yearlong basis, and 50 percent on ranges used on a continual seasonal basis.

D. Maintain the free roaming behavior of wild horses.

E. Maintain a healthy, viable breeding population of wild horses.

F. Provide for the protection of wild horses from harassment and unauthorized capture.

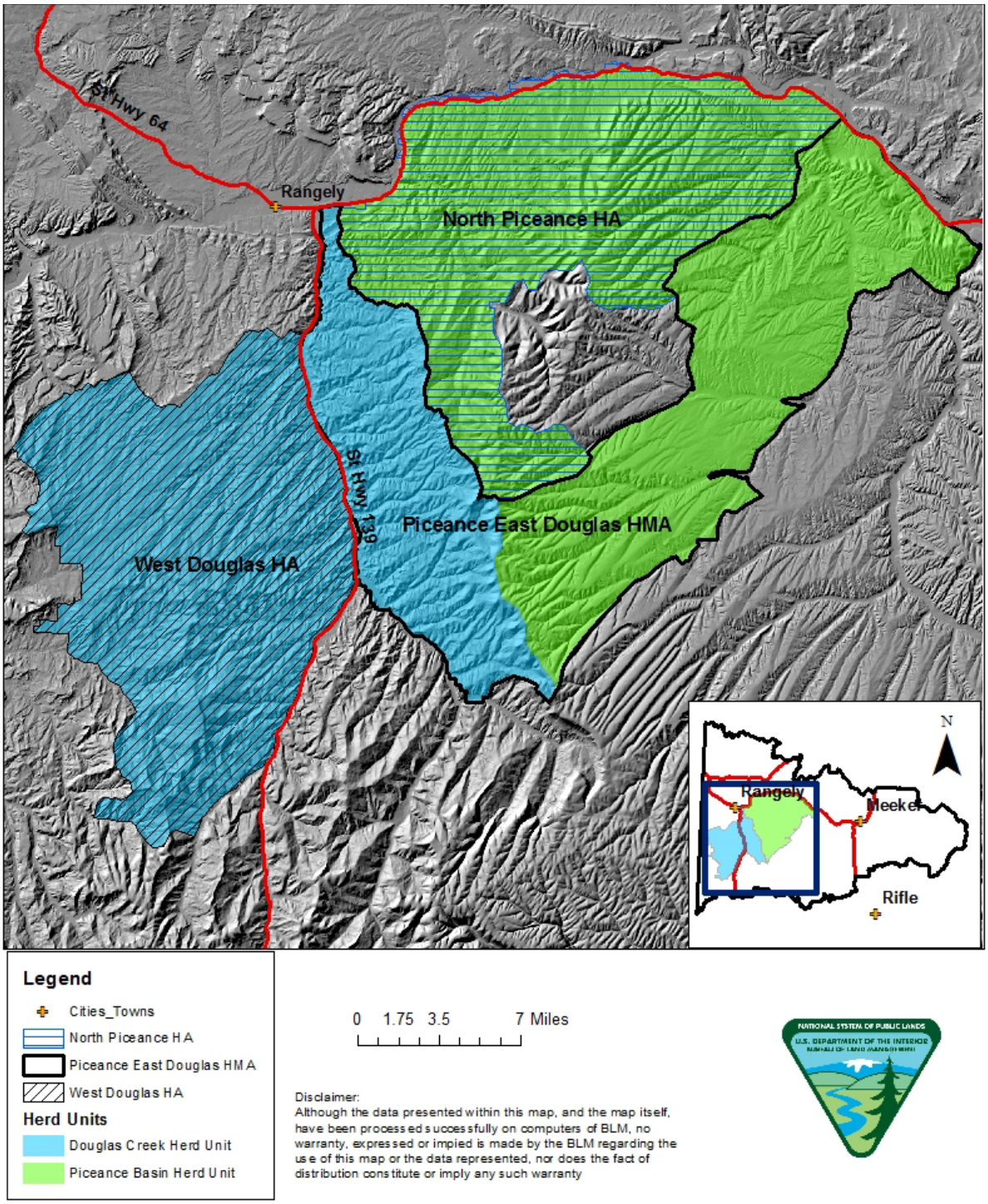
The objectives developed in the HMAP were designed to protect, manage, and control wild horses on a long term continuing basis within the herd management area established through the land use planning process. This plan was specific to the selected range for wild horse management as all wild horses outside of the selected range were to be removed in accordance with the land use plan.

3.6 1983-1986 Evolution of Herd Area Identification

Within early planning documents, the areas occupied by wild horses were known as the horse range, which was separated into two herd units within the separate planning areas. Following completion of the 1980 MFP update and the 1981 herd management area plan, the "selected range" became known as the White River Herd Management Area. Areas outside of the herd management area but within the herd units were commonly referred to by geographic reference, or the grazing allotment name (i.e., Texas Mountain or Twin Buttes). National BLM Wild Horse and Burro Program guidance in 1983 identifies Herd Areas as areas that "Collectively represent the maximum distribution of horses in a planning area." The term Herd Area therefore evolved as a way to differentiate between the areas within the herd units that were selected for management of wild horses, which was the Herd Management Area, and areas within the herd units not selected for management became known as Herd Areas.

In 1986, wild horse and burro regulations (43CFR part 4700) were revised, the definition of Herd Areas changed to "the geographic area identified as having been used by a herd as its habitat in 1971". The first known White River reference to the term Herd Area was August 1986 in the 6th report to Congress. At this time, the portions of the Piceance Basin and Douglas Creek Herd Units selected for management were known as the Piceance-East Douglas Herd Management Area (PEDHMA), the portion of the Douglas Creek Herd Unit not chosen for long term management becomes known as the West Douglas Herd Area, and the portion of the Piceance Basin Herd Unit not chosen for management becomes known as the North Piceance Herd Area (NPHA). Although now given three distinct names, these areas collectively include the original herd units identified in the 1974 MFP. Map 5. Wild Horse Habitat Naming Following 1986 Revision of Wild Horse and Burro Program Regulations shows the location of the herd areas, the herd management area, and the name of each area as well as the original herd areas identified in 1974. The area between the NPHA and the PEDHMA originally identified as part of the Piceance Basin Herd Unit was not included in either the NPHA or PEDHMA as this area was completely fenced and no wild horses were observed in that region during the original inventory in 1974.

Map 5. Wild Horse Habitat Naming Following 1986 Revision of Wild Horse and Burro Program Regulations



3.7 1985 WRRA Piceance Basin RMP

In 1985 the BLM WRFO developed another land use plan specific to the Piceance Basin with appropriate scoping and public review, this plan was driven by mineral resources in the Piceance Basin. In this plan, the 1981 Grazing EIS decisions concerning wild horse management in the Piceance Basin planning unit were incorporated and carried forward in the 1985 RMP. In addition, some of the objectives covering the Piceance Basin developed in the Herd Management Area Plan for managing a viable herd in a free roaming habitat were incorporated into the RMP as land use decisions. This plan did not change any decisions made in the 1980 MFP, 1981 Grazing EIS, or the HMAP, no alternatives to wild horse management decisions from earlier planning documents were considered.

3.8 1997 WRRA Resource Management Plan

The next land use plan decision is the Record of Decision for the White River Resource Area, Resource Management Plan which was approved by the State Director on July 1, 1997.

The Draft Resource Management Plan evaluated four alternatives for wild horse management developed through the public scoping process.

- Alternative A.
  - A total of 2,100 AUMs of forage would be provided to support 60-140 wild horses.
  - The boundary of the Piceance-East Douglas Herd Area, containing 161,300 acres would be unchanged.
  - Wild Horses would be removed from the North Piceance (107,590 acres) and the West Douglas (190,870 acres) Herd Areas.
  - The HMA would be open to motorized vehicles with no restrictions.

- Alternative B.
  - A total of 1,050 AUMs of forage would be provided to support 60-70 wild horses.
  - The Piceance-East Douglas HMA would be adjusted to exclude the upper part of the Boxelder Allotment (6,080 acres) and Pasture C of the Square S Allotment (12,460 acres), which were patented in 1987.
  - The adjusted Piceance-East Douglas HMA, totaling 146,200 acres, would be managed to provide 900 to 1,050 AUMs of forage for 60 to 70 horses.
  - Wild horses would be removed from the excluded portion of the Boxelder Allotment and Pasture C of the Square S Allotment in the Piceance-East Douglas HMA. Wild horses would also be removed from the North Piceance HA and the West Douglas HA.
  - Motorized vehicles would be allowed only on existing roads and trails.

- Alternative C.
  - A total of 4,800 AUMs would be provided to support 320 wild horses. The Piceance-East Douglas HMA would be managed to provide 2,100 AUMs of forage for 90-140 horses.
  - The North Piceance HA would be designated as the North Piceance HMA. The North Piceance HMA would be managed to provide 600-900 AUMs of forage for 40-60 wild horses.

- A portion of the West Douglas HA would be designated as the Texas Creek HMA; 1,050 AUMs of forage would be allocated for 60-70 wild horses Texas Creek HMA and the remainder of the existing West Douglas HA would also serve as a permanent relocation area for older, predominantly male, unadoptable horses which are gathered from within the White River Resource Area.
- The Texas Creek HMA (41,370 acres) and the remainder of the West Douglas HA (149,500 acres) would also support a population of younger age-class animals. These horses might be used for introduction into the North Piceance and Piceance-East Douglas HMA for increased genetic diversity in those herds.
- The remainder of the West Douglas HA (149,500 acres) would be allocated 750 AUMs of forage to support a population of 0 to 50 horses.
- Motorized vehicles would be allowed only on existing roads and trails.

- Alternative D.
  - A total of 2,100 AUMs would be provided to support 95-140 horses.
  - The boundary of the Piceance-East Douglas HMA would be expanded to include the Greasewood Allotment (28,830 acres) portion of the North Piceance HA. The expanded Piceance-East Douglas HMA, totaling 190,130 acres, would be managed to provide 1,430 to 2,100 AUMs of forage for 95-140 horses.
  - The remainder of the North Piceance HA (78,760 acres) and the West Douglas HA (190,870 acres) would be managed in the short term (0-10 years) to provide 750 AUMs of forage for population of 0 to 50 horses in each area (a total of 1,500 AUMs). The long-term objective would be to remove all wild horses in both areas.
  - A cooperative management agreement for the Boxelder Allotment and Square S Pasture C would be pursued with Shell Minerals, holder of 13,900 acres.
  - Motorized vehicles would be allowed on designated roads and trails.

The decision for horse management (WRROD/RMP pg2-26) was to implement Alternative D:

- "Manage for a wild horse herd of 95-140 animals on 190,130 acres within the Piceance-East Douglas Herd Management Area (HMA) so that a thriving ecological balance is maintained for plant and animal species on that range."

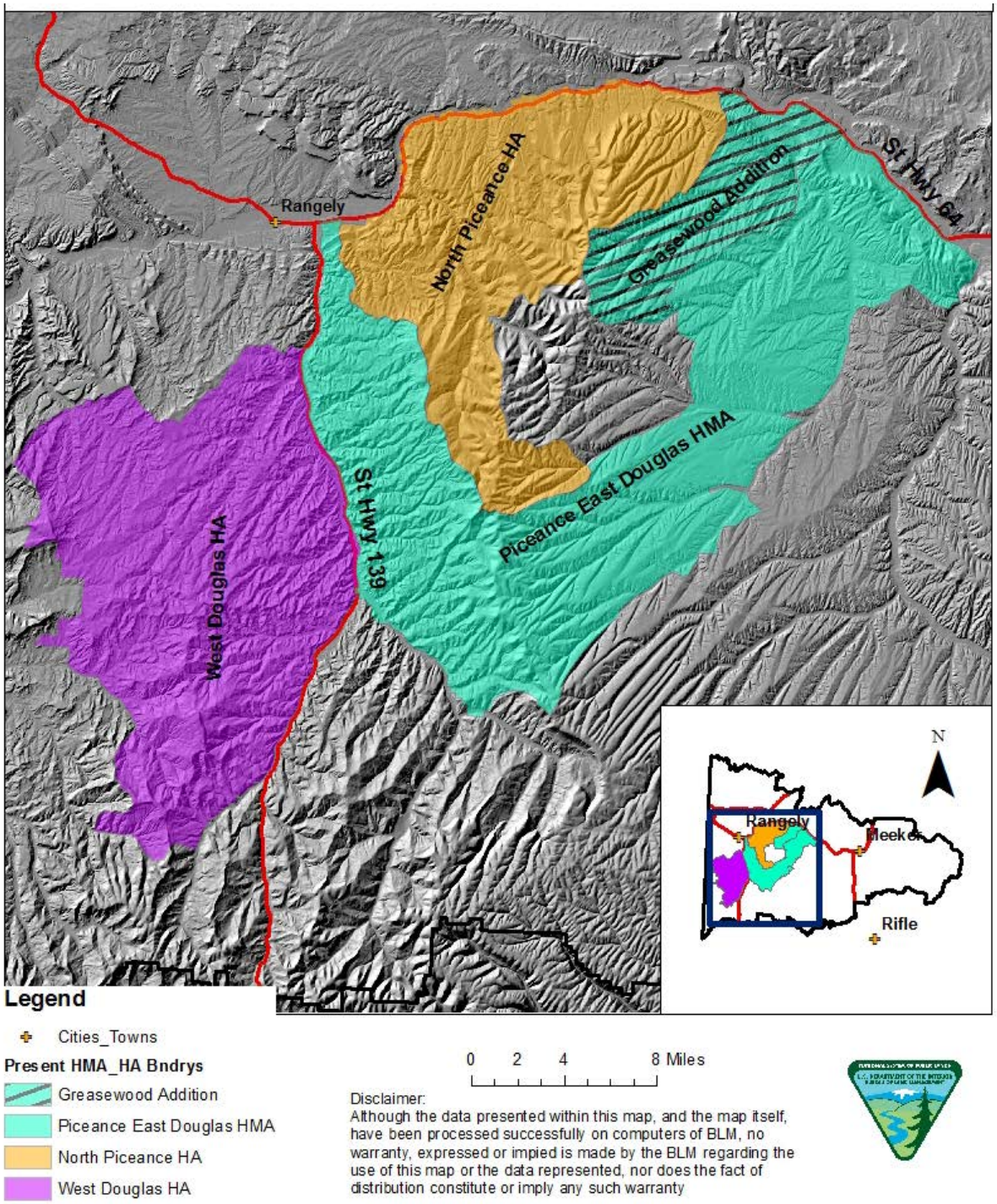
- "The North Piceance and West Douglas Herd Areas will be managed in the short-term (0-10) years) to provide forage for a herd of 0 to 50 horses in each herd area. The long term objective (+10 years) will be to remove all wild horses from these areas.

- "The boundary of the Piceance-East Douglas HMA will be expanded to include the Greasewood allotment (presently a part of the North Piceance Herd Area).

- "Monitoring studies will be conducted and the long term appropriate management level (AML) for the Herd Management Area will be adjusted based on the results of this monitoring."

The AML for the PEDHMA was increased in 2002 from 95-140 to 135-235 wild horses, a 58% increase of median population from 117 to 185. Map 6 shows the present day Piceance-East Douglas Herd Management Area including the 28,830 acre Greasewood Addition to the HMA, the map also shows the current herd area boundaries.

Map 6. Current Piceance-East Douglas HMA, North Piceance HA, and West Douglas HA Boundaries



3.9 2002 White River Field Office Begins Resource Management Plan Amendment

On June 25, 2002 a Notice of Intent (NOI) to prepare an Environmental Assessment and resource management plan amendment is published in the Federal Register. This NOI stated "The Bureau of Land Management (BLM), White River Field Office proposes to prepare an EA and consider an amendment to the White River RMP regarding management of wild horses in the West Douglas Herd Area. The purpose of this planning process is to identify the most appropriate strategy for management of wild horses in the West Douglas Herd Area of the White River Resource Area, while protecting resource values, providing for multiple uses, and improving the health of public lands. The planning process will allow the BLM, with integrated public involvement, to develop and conduct detailed analysis of a full range of alternatives specifically focused on wild horses and other resources within this herd area." The BLM had determined that such detail and focus may not have been sufficiently addressed and documented in the 1997 RMP, which has a resource area-wide scope.

In July 2004, the WRFO completed a draft resource management plan amendment. Through internal scoping, comments received during three public scoping meetings, and comment letters received, the BLM identified issues and concerns. The BLM WRFO then developed eight alternatives to achieve the purpose and need as well as address issues and concerns that were identified. A summary of each alternative is included below (each alternative is described in detail in CO-WRFO-03-050-EA pages 7-11):

- Alternative A (Continue Current Situation)
    - As described in the current RMP decisions, the wild horse population would be limited to a range between 0 and 50 animals. The BLM would remove all wild horses from the West Douglas Herd Area and from areas where horses have relocated outside the Herd Area by 2007.
    - Under this alternative there would be no long term forage allocation to wild horses.

- Alternative B (Remove all Wild Horses)
    - The BLM would remove all wild horses from the West Douglas Herd Area as soon as possible. This alternative included an accelerated removal timeline as well as adjustments in forage allocation.
    - Under this alternative total forage allocation would be reduced approximately 20 percent within the herd area.

- Alternative C (Small Herd in Unfenced Preferred Habitat)
    - Wild horses would be managed within the Texas Mountain preferred habitat with an initial appropriate management level (AML) range between 29 and 60 head.
    - Periodic introduction of wild horses into the herd from other HMAs would be used to increase herd genetic variability. The herd would primarily be managed within their preferred habitat surrounding Texas Mountain.
    - A yearly average of 648 AUMs would be allocated to wild horses.
    - To achieve this alternative, and maintain the basic requirements which make the Texas Mountain area the preferred wild horse habitat, there would be stipulations

imposed on new oil and gas leases to protect key wild horse habitats and functions (CSU-9, CSU-10, TL-12, TL-13, and LN-1).

- Alternative D (Mid-Sized Herd in Unfenced Herd Area)
  - The wild horse AML would range between 100 and 207 animals, an average of 2,232 AUMs would be allocated to wild horses.
  - No new fences would be built. Under this alternative there is a high probability that wild horses would continue to move outside of the herd area, especially to the unfenced southwest. It would not be practical for BLM to attempt to continuously remove horses from outside the herd area and from private lands; therefore this alternative was eliminated from further consideration.

- Alternative E (Mid-Sized Herd with WSA Excluded)
  - The initial wild horse AML would range between 100 and 207 horses.
  - Periodic introduction of wild horses into the herd from other HMAs would be used as a means to increase herd genetic variability.
  - Wild horses would not be managed within the Oil Spring Mountain Wilderness Study Area (WSA). Wild horses would be fenced out of the WSA with 9.4 miles of fence. The BLM would also encourage horse movement into the northern part of the herd area by establishing a corridor approach.
  - The BLM would allocate an average of 2,232 AUMs to wild horses.
  - There would be additional stipulations on new oil and gas leases to maintain preferred horse habitat (CSU-9, CSU-10, CSU-11, TL-12, TL-13, and LN-1).

- Alternative F (Mid-Sized Herd in Texas Mountain Preferred Habitat with Fences)
  - The initial AML would range between 100 and 207 horses.
  - Periodic introduction of wild horses into the herd from other HMAs would be used as a means to increase herd genetic variability.
  - In this alternative, wild horses would be managed only in the southern portion of the herd area. The BLM would build and maintain a fence along the southern boundary of the herd area, through the WSA (18.2 miles). The BLM would also establish a northern boundary by building and maintaining another fence (14 miles).
  - The BLM would allocate an average of 2,232 AUMs to wild horses. Only trailing and incidental livestock use would be allowed in this horse habitat area. There would be additional stipulations to new oil and gas leases within the horse habitat area (CSU-9, CSU-10, TL-12, TL-13, and LN-1).

- Alternative G (Maximum Sized Herd in Fenced Herd Area)
  - The initial AML for wild horses would range between 310 and 643 animals.
  - Introduction of wild horses into the herd from other HMAs would be used initially as a means to increase herd genetic variability. The entire boundary of the herd area would be fenced.
  - An average of 6,914 AUMs would be allocated to wild horses. No forage would be allocated to livestock.
  - The BLM would build and maintain 32.5 miles of new fence to completely enclose the herd area. This would include 18.2 miles on Oil Springs Mountain, through the WSA. The BLM would also be responsible for maintaining approximately 61 miles of existing boundary fence, and all water sources within

the herd area. The BLM would identify preferred horse habitat. To maintain this habitat, stipulations would be placed on new oil and gas leases (CSU-9, CSU-10, and LN-1).

- Alternative H (Maximum Sized Herd in Unfenced Herd Area)
    - The wild horse AML would be between 300 and 622 horses. An average of 6,914 AUMs would be allocated to wild horses.
    - There would be no new fences. The BLM would maintain existing fences and waters within and along the boundary of the herd area. The BLM would not use fertility control, or introduce horses for increased genetic variability. There would be no new stipulations on oil and gas leases. The AML for this alternative would definitely exacerbate the problem with migration of wild horses to the southwest, out of the herd area and onto private land. It would be impractical and fiscally impossible for the BLM to continuously gather the large number of horses that would move outside the herd area under this alternative. Therefore, this alternative was eliminated from further consideration.

The WRFO also identified oil and gas lease stipulations briefly described below that would be necessary to implement the various alternatives, with the exception of Lease Notice 1 already in the White River ROD/RMP, these surface stipulations were new and would be added to the White River ROD/RMP (for detailed description of these stipulations refer to CO-WRFO-03-050-EA, Appendix B):

- **Controlled Surface Use 9 (CSU-9): Key Wild Horse Habitat**. Only short-term development activity will be allowed

- **Controlled Surface Use 10 (CSU-10): Preferred Wild Horse Habitat**. Density of development will be limited, well pads will be limited to four sites per section, road density would be limited to 1.5 miles of road per section

- **Controlled Surface Use 11 (CSU-11): Wild Horse Migration Corridor**. Density of development activity will be limited, well pads will be limited to two sites per section, road density will be limited 3 miles of road per section.

- **Timing limitation 12 (TL-12): Wild Horse Summer Range**. Activities which displace horses from important summer range may only occur between September 1 and May 30.

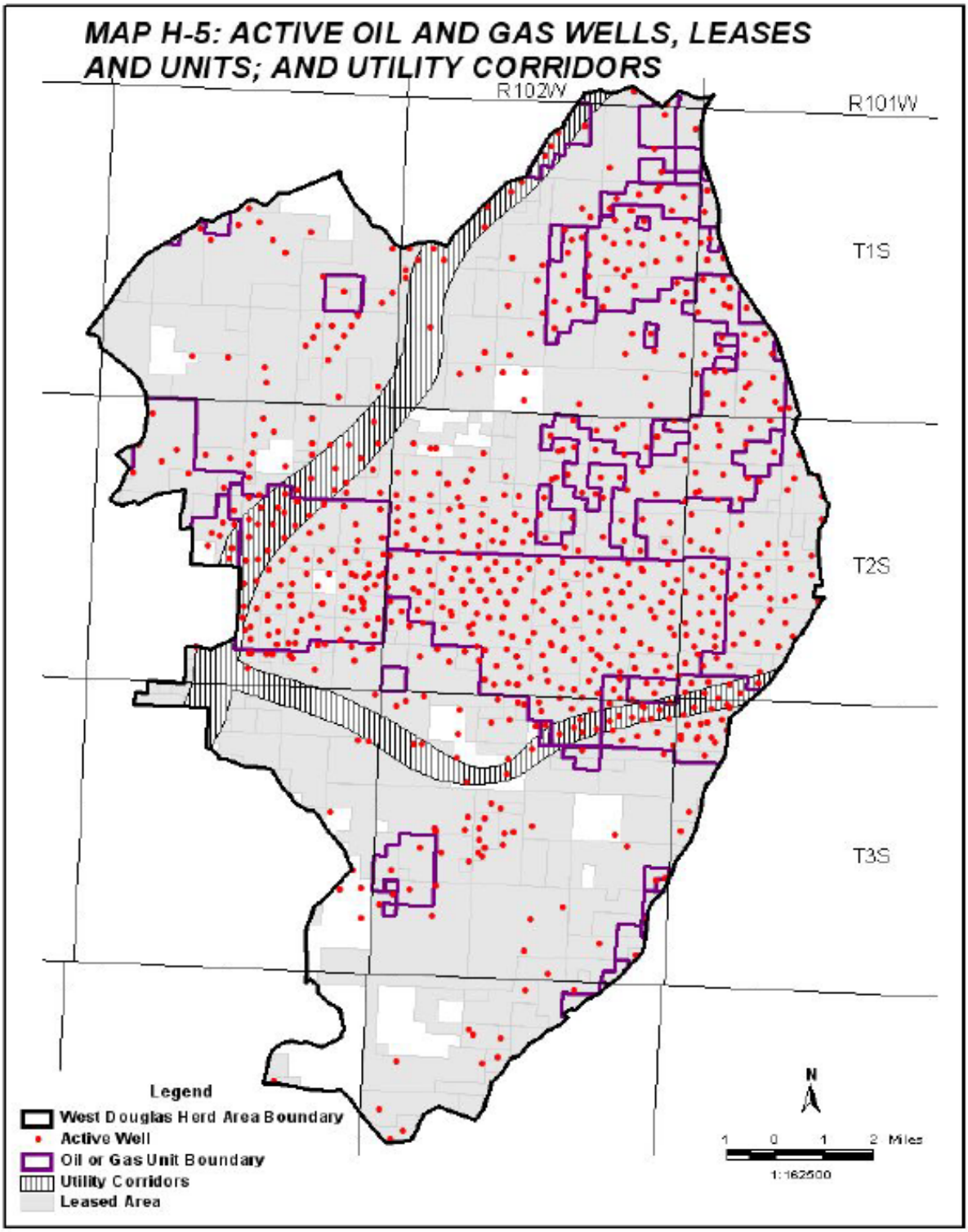
- **Timing Limitation 13 (TL-13): Wild Horse Winter Range**. Activities which displace horses from important winter range may only occur between May 1 and November 15

- **Lease Notice 1 (LN-1): Wild Horse Habitat**. Notice that the lease parcel is within a herd management area, intensive development may be delayed for a 60 day period between March 1 and June 15, the lessee may also be required to perform special conservation measures within this area.

Following completion of detailed impact analysis for each of the six alternatives that were carried forward, the recommended decision was to amend the White River RMP as described in Alternative B of Environmental Assessment CO-WRFO-03-050-EA. Rationale for choosing Alternative B was: The Wild and Free Roaming Horse and Burro Act requires a “thriving natural

ecological balance" be maintained on all wild horse ranges. All of the alternatives for retention of horses rely on "Oil and Gas lease stipulations" to maintain key habitat for horses. Currently 93 percent of the area is leased and there is no opportunity to place new stipulations on these leases, until they expire. Of the 7 percent that are not leased, 4 percent are within the currently preferred horse habitat (Texas Mountain). These currently un-leased parcels, if leased with the proposed stipulations, would not protect enough of the key wild horse habitat to maintain a balance of seasonal ranges. Application of well specific mitigation will not maintain habitat or protect horses during critical periods such as foaling. Without lease stipulations the BLM cannot protect the habitat needed for wild horses, requisite to the requirement of maintaining a "thriving natural ecological balance." This area will retain "Herd Area" status, and future Land Use Plans will monitor the changes in oil and gas development and make a determination of suitability for wild horses. Until such time as this oil and gas field is depleted/abandoned retention of horses is not reasonable. Map 7 shows the areas that had been leased within the herd area, active wells in the herd area, and designated utility corridor as shown in an appendix ;l to CO-WRFO-03-050-EA.

Map 7. Active Oil and Gas Wells, Leases and Units, and Utility Corridors as Analyzed in CO-WRFO-03-050-EA



3.10 **2005 West Douglas Herd Area Amendment**

Following completion of the previous draft amendment and the public and internal comments received on the draft, the BLM continued the RMP amendment process by developing two new alternatives based on comments received regarding the proposed decision for CO-WRFO-03-050-EA and preparing another Environmental Assessment to determine whether it is feasible to manage wild horses in the West Douglas Herd Area, while protecting resource values, providing for multiple uses, and improving the health of public lands.

The previous draft amendment (2004) examined eight alternatives. Six alternatives addressed managing a varying range of wild horses were analyzed in detail. Alternative C, of the previous draft amendment, proposed managing a herd of between 29-60 wild horses within their preferred habitat surrounding Texas Mountain. This alternative proposed oil and gas lease stipulations on human development in an effort to protect key and preferred wild horse habitat. Human development in the 2005 EA is defined as "any impacts to the public lands related to human use. These uses can include oil and gas development, livestock management, and recreational use". As 93 percent of the herd area is currently leased, new lease stipulations could not be added to provide protection to horse habitat (43 CFR 3101.1-3 & 3101.1-4). Public and internal BLM comments questioned whether this alternative could be modified to allow a herd of horses to be managed without stipulations, using the entire herd area.

Considering the planning criteria, issues, and concerns, the BLM developed two alternatives (Alternatives A and B). Alternative A carries out the White River ROD/RMP for removal of horses by 2007. Alternative B addresses the above comments and proposes the creation of a Herd Management Area, to manage a herd of 29-60 wild horses. Both alternatives as written in CO-WRFO-05-083-EA are:

- Alternative A (Implement Existing RMP Direction):

  As described in the 1997 RMP decisions, the wild horse population would be limited to a range between 0 and 50 wild horses. The BLM would remove all wild horses from the Herd Area and from areas where horses have relocated outside the Herd Area by 2007. Activity plans would be prepared for all wild horse removals. The 1997 RMP further specifies allocation of up to 750 AUMs of forage until removal of wild horses is completed. There would be no need for long-term forage allocation for wild horses. The current permitted use for livestock within the herd area is approximately 9,080 animal unit months (AUMs). All other resources would be managed in accordance with the existing situation (current Land Use Plan).

- Alternative B (Wild Horse Herd within the entire Herd Area)

  Wild horses would be managed within the entire West Douglas Herd Area encompassing 123,387 acres. The entire Herd Area would be designated a Herd Management Area (HMA). The herd would be managed with an initial Appropriate Management Level (AML) range between 29 and 60 wild horses. When the population increases to 60 or more adult horses BLM will reduce the herd to the lower AML range of 29 horses. Wild horses would be allocated 750 AUMs of forage. Herd genetics would be strengthened with the periodic, scheduled introduction of wild horse mares from other HMAs. Mares introduced into the herd would be selected from locations with similar climate, topography

and habitat to encourage successful integration into the herd. DNA analysis would be conducted during scheduled gathers, or as needed to monitor genetics until such time as the herd exhibits long-term, desirable genetic viability. Recognizing the herd's low genetic variability and relatively small herd size, immunocontraception would not be applied to the West Douglas herd. There would be no new stipulations for human development.

Through this process, consideration of nine alternatives covering a wide range of management options within the West Douglas Herd Area including various herd sizes of zero, 29-60 wild horses, 100-207 wild horses, and 310-643 wild horses was conducted. Following completion of detailed analysis which included public involvement throughout, the proposed decision recommended for approval was to implement Alternative A, of EA CO-WRFO-05-083-EA. This alternative calls for implementing the current Record of Decision for the 1997 White River Resource Management Plan/Environmental Impact Statement (EIS) for the total removal of wild horses from the West Douglas Herd Area by 2007.

The proposed decision was protested by five parties, following resolution of the protests by the Assistant Director for Renewable Resources and Planning, the proposed decision was approved by the Colorado State Director in October 2007. The Decision Record for CO-WRFO-05-083-EA states "After extensive analysis and public input, the BLM concluded that a self-sustaining population of healthy wild horses could not be maintained within the West Douglas Herd Area in balance with their habitat and other uses, within the bounds of where wild horses existed in 1971, and with the minimum level of management needed to achieve land use plan objectives." To date this decision has not been implemented. The only gather since 2007 was in 2012 when 20 wild horses were captured and removed as an emergency action due to a lack of adequate water.

4.0 Population and Distribution of Wild Horses in West Douglas HA

During the first aerial inventory of wild horses in 1974, 9 wild horses were documented within the West Douglas Herd Area, the current population estimate based on an aerial inventory conducted in 2012 is approximately 300 wild horses.

Boundary fencing has isolated the population of wild horses within the herd area from the population located within the herd management area. Gather and removal operations to remove all wild horses west of Douglas Creek in conformance with land use plan decisions have been conducted however, these operations were not successful in fully implementing decisions to remove all horses west of Douglas Creek. Due to isolation and periodic reductions of the population, genetic variation of the wild horses in the WDHA is very low.

Since 1974 distribution of wild horses within the WDHA has shifted to the southern portion of the herd area. The change of distribution has led to concentrated use within approximately 40 percent of the herd area and minimal or no use in the remainder of the herd area.

4.1 **Population Estimates**

Since passage of the Wild Free Roaming Horses and Burros act in 1971 (The Act), the population of wild horses west of Douglas Creek in the area presently known as the West Douglas Herd Area (WDHA) has been aerially inventoried 14 times. The first inventory of wild

horses was completed February 26th through March 6th, 1974. During this inventory, 152 wild horses were counted in two herd units within the White River Resource area; 103 were located in the Piceance Basin Herd Unit and 49 were located within the Douglas Creek Herd Unit. Of the 49 wild horses observed in the Douglas Creek Herd Unit, 9 were located west of Douglas Creek in the present herd area.

Since passage of The Act, nine gather and removal operations have occurred within the West Douglas Herd Area. The first gather operation occurred September 2nd through September 11th, 1981; during this action, 74 wild horses were gathered and removed from the range west of Douglas Creek.

Table 3 illustrates the population of wild horses west of Douglas Creek since the first inventory in 1974. Shaded boxes in the table identify the years which an aerial inventory was conducted, population estimates not obtained by actual count are based on a 20 percent annual growth calculation. There were two inventories done in 1974 however only the first inventory completed during the winter is shown in this table. Before 1983, there were no barriers restricting intermixing of the wild horses within the Douglas Creek Unit, there are two numbers for the inventories conducted between 1974 and 1983, the first is the number of wild horses observed west of Douglas Creek, and the second number in parenthesis is the total estimated population within the herd unit. Fencing along State Highway 139 completed in 1983 isolated the wild horses west of Douglas Creek from the population within the herd management area east of Douglas creek.

Wild horse inventories were conducted using a helicopter with the exception of the 2010 inventory which was done with a fixed wing aircraft. Inventory flights included multiple observers to locate and document wild horses during the flight. The 1992 and 1994 flights were conducted in August and June respectively; all other inventories were completed in late winter prior to peak foaling season. Table 3 includes the percent of the expected population that was inventoried the expected population is based on a 20 percent annual growth rate and any wild horses removed between inventories. When reviewing the percent of the expected population inventoried following completion of fencing along SH 139, a 20 percent annual recruitment rate seems to be an accurate figure to estimate the wild horse population. Inventories between 1985 and 2005 ranged from 31 percent above to 27 percent below the expected population with 4 inventories resulting in a population below expected and 3 inventories resulting in a population above expected. The low percentage of the expected population of wild horses observed during the 2010 inventory is likely due to the difficulty in locating wild horses in the WDHA from a fixed wing aircraft due to the high elevation and speeds required to safely fly the area which also likely skewed the expected population in 2012.

Table 3. Population of Wild Horses West of Douglas Creek Since the First Inventory in 1974

Year	Pre Foal[1] Population	Post Foal[2] Population	Number[3] Horses Removed	Census[4] Expected @ 20 percent	Percent[5] of Expected	Year	Pre Foal Population	Post Foal Population	Number Horses Removed	Census Expected @ 20 percent	Percent of Expected
1974	9 (49)	11 (59)				1995	122	147			
1975	30	36				1996	147	176	61		
1976	40	48				1997	95	114		115	83
1977	53 (107)	64 (128)				1998	114	137	72		
1978	68	82				1999	65	78			
1979	85	102				2000	78	93			
1980	106	127				2001	93	112	53		
1981	97 (133)	116 (160)	74	127	76	2002	77	92		59	131
1982	63 (133)	76 (160)		42	150	2003	92	111			
1983	76	91				2004	111	133			
1984	91	109	45			2005	97	116		133	73
1985	59	71	45	64	92	2006	116	140	37		
1986	32	38				2007	103	123			
1987	38	46				2008	123	148			
1988	46	55				2009	148	177			
1989	55	66	23			2010	86	103		177	49
1990	43	52				2011	103	124			
1991	61	73		52	117	2012	190	228	20	124	153
1992	67	80		73	92	2013	208	250			
1993	80	96				2014	250	300			
1994	102	122		96	106	2015	300	360			
Total Horses Removed:									430		

[1] Population of adult wild horses inventoried or population estimate based on 20 percent annual increase and number of wild horses gathered and removed during the previous year if any.

[2] Population of wild horses including that years foals.

[3] Number of wild horses gathered and removed.

[4] Number of wild horses expected to be observed during inventory based on 20 percent annual increase.

[5] Percent of the expected population that was observed during inventory.

Tan shaded boxes show population based on aerial inventory

Blue shaded boxes show the lowest population of wild horses within the WDHA following completion of fencing along State Highway 139.

4.2 Genetic Variation within the West Douglas Herd

During July and August 1985, 45 wild horses were gathered and removed from the area west of Douglas Creek, leaving an estimated population of 32 wild horses. It is believed the estimated current population of 300 wild horses are descendants of the 32 wild horses remaining following the 1985 gather operation. Genetic analysis of the West Douglas wild horse population in 2002 indicated that genetic variation within the herd was extremely low (*Ho*[1] = 0.269). "This is the lowest variation seen in any of the Colorado herds and among the lowest observed in any horse population. *He*[2] also is low but is somewhat higher than *Ho* indicating some inbreeding. There is a high degree of allelic diversity however as indicated above, much of the diversity is due to variants present only at very low frequency. The overall pattern of variability suggest a large population that has been reduced in size and has experienced a loss of genetic variation due to both genetic drift and inbreeding." (Cothran, 2002)

4.3 Distribution of Wild Horses within the West Douglas HA

Map 8 shows the location and number of wild horses observed during the first wild horse inventory conducted in 1974. As shown on this map, the majority of wild horses observed within the Douglas Creek Herd Unit were located east of Douglas Creek. At the time of this inventory, State Highway (SH) 139 along Douglas Creek was not fenced, allowing the wild horses to freely travel and interact east or west of Douglas Creek.

As the population of wild horses within the resource area increased, wild horses west of Douglas Creek began to move south and west as well as outside of the herd unit. Map 9 shows the location and number of wild horses observed during an inventory conducted February 1982. At this time, fencing along SH 139 was not complete; therefore wild horses could freely move east or west of Douglas creek within the herd unit. During this inventory, of the 47 percent of the population located in the portion of the herd unit west of Douglas Creek, 33 (52 percent) were observed in the southern portion, 25 (40 percent) were observed in the northern portion, and 5 (8 percent) were observed outside the boundary of the herd unit.

The southern portion of the WDHA includes the area south of the ridge on the north side of Little Horse Draw and the ridgeline at the head of the North Fork of Texas Creek as shown on Map 8-13. This is not a physical boundary but a topographical feature at the northern edge of the wild horses preferred habitat.

Even though the population had been reduced through removal operations, wild horses continued to move south. Map 10 shows the location and number of wild horses observed during the 1985 inventory; 34 (58 percent) of the wild horses were observed in the southern portion of this area, 7 (12 percent) were observed outside the herd unit boundary, and 18 (30 percent) were located in the northern portion. The population of wild horses observed during this inventory where now isolated from the population within the HMA due to completion of fencing along SH 139 in 1983.

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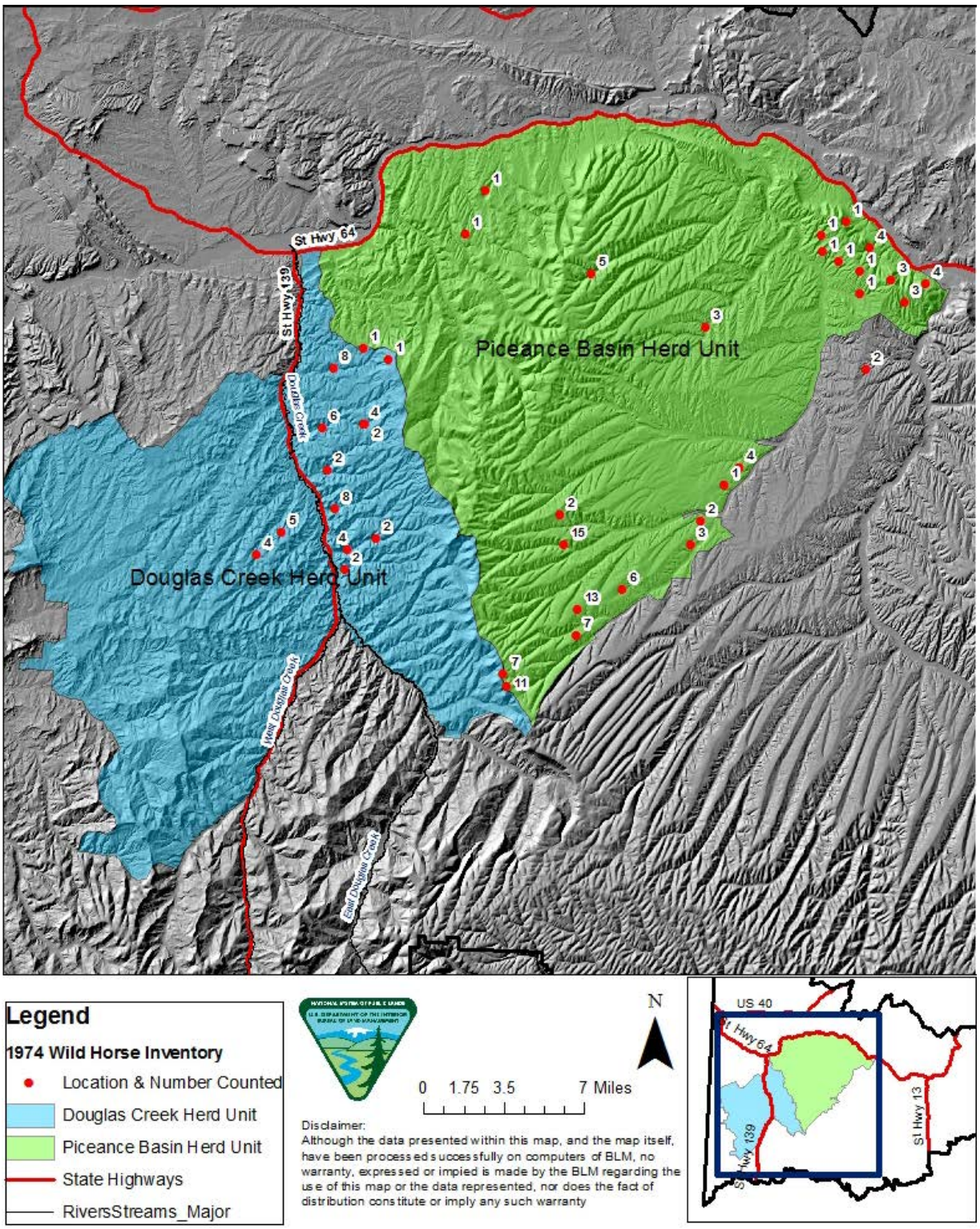
[1] Observed heterozygosity, the actual number of loci heterozygous per individual based on chemical loci.
[2] Expected heterozygosity, the predicted number of heterozygous loci based on gene frequencies calculated for biochemical loci and all marker systems.

Over the next 10 years, two gather operations were conducted in 1985 and 1989; through these two operations a total of 68 wild horses were gathered and removed. Wild horses continued to concentrate in the southern portion of the herd area and in 1994, 80 of the wild horses observed (78 percent) were located in the southern portion of the herd area, 10 horses (10 percent) were located outside the herd area boundary, and 12 horses (12 percent) were located in the northern portion as shown Map 11**.**

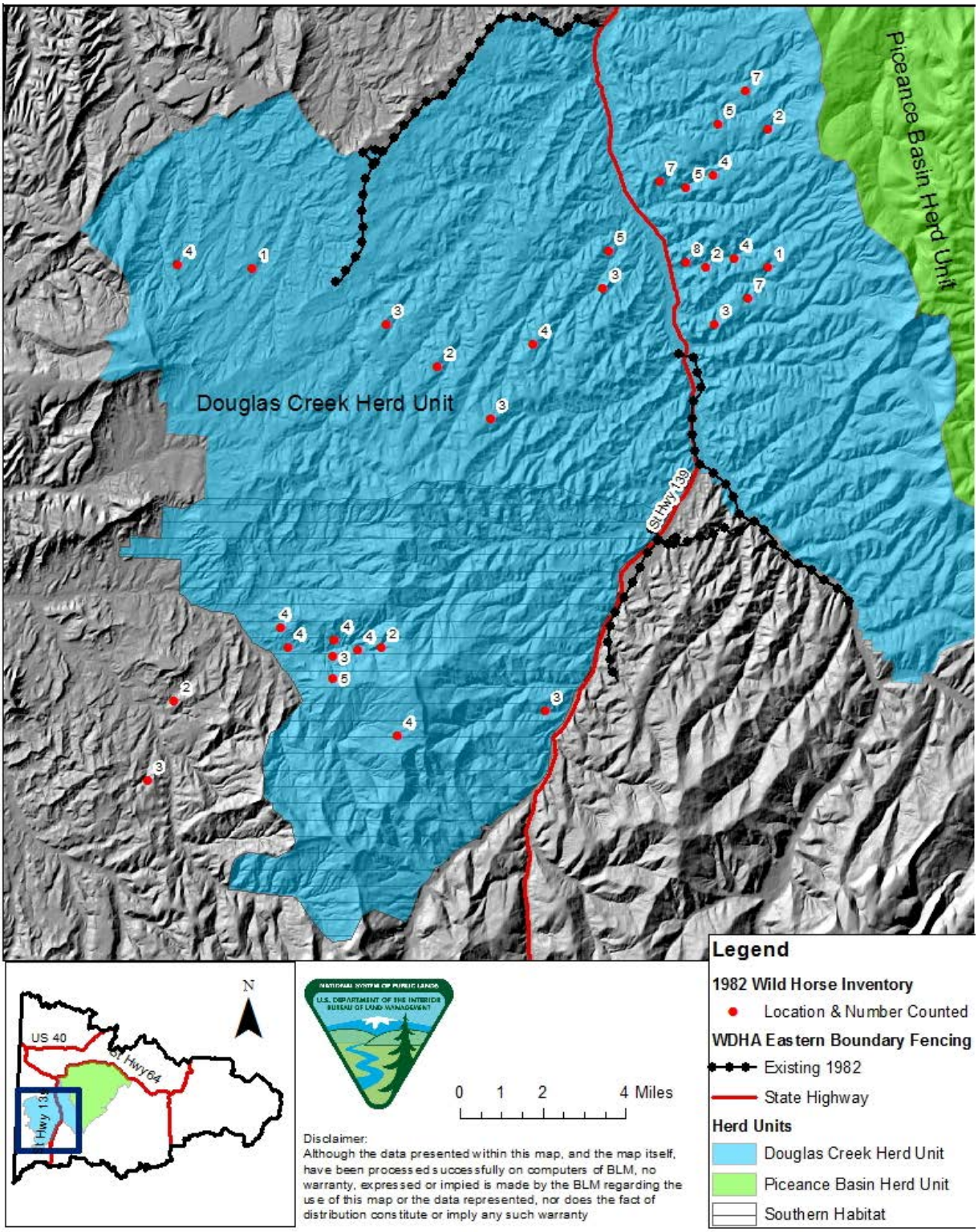
Map 12 shows the number and location of wild horses observed during 2005 inventory, 84 of the wild horses (87 percent) were observed in southern portion of the herd area, 6 horses (6 percent) were located outside the herd area boundary, and 7 horses (7 percent) were located in the northern portion.

Map 13 is the most recent aerial population inventory of the WDHA completed February 16 and 17, 2012. During this inventory 190 wild horses were observed West of Douglas Creek; 122 horses (64 percent) were observed in the southern portion of the herd area, 36 horses (19 percent) where located outside of the herd area boundary, and 32 horses (17 percent) were located in the northern portion. During the inventory the number of yearling wild horses within each band was recorded; 153 were adult horses and 37 were yearlings (approximately 24 percent of the population). This inventory was conducted before the 2012 foaling season; after including a 20 percent increase to account for foals the estimated population would be 228 wild horses (190 adults and 38 foals). An emergency gather was conducted July 2012 resulting in 20 wild horses gathered and removed leaving an approximate population of 208 wild horses in fall 2012. Based on a 20 percent annual increase, the estimated population in January 2015 within and adjacent to the WDHA is approximately 300 adult wild horses. The population of wild horses observed during this inventory is the largest population that has been observed within and adjacent to the WDHA, including the highest number of wild horses located outside of the herd area boundary to the south and west since passage of The Act.

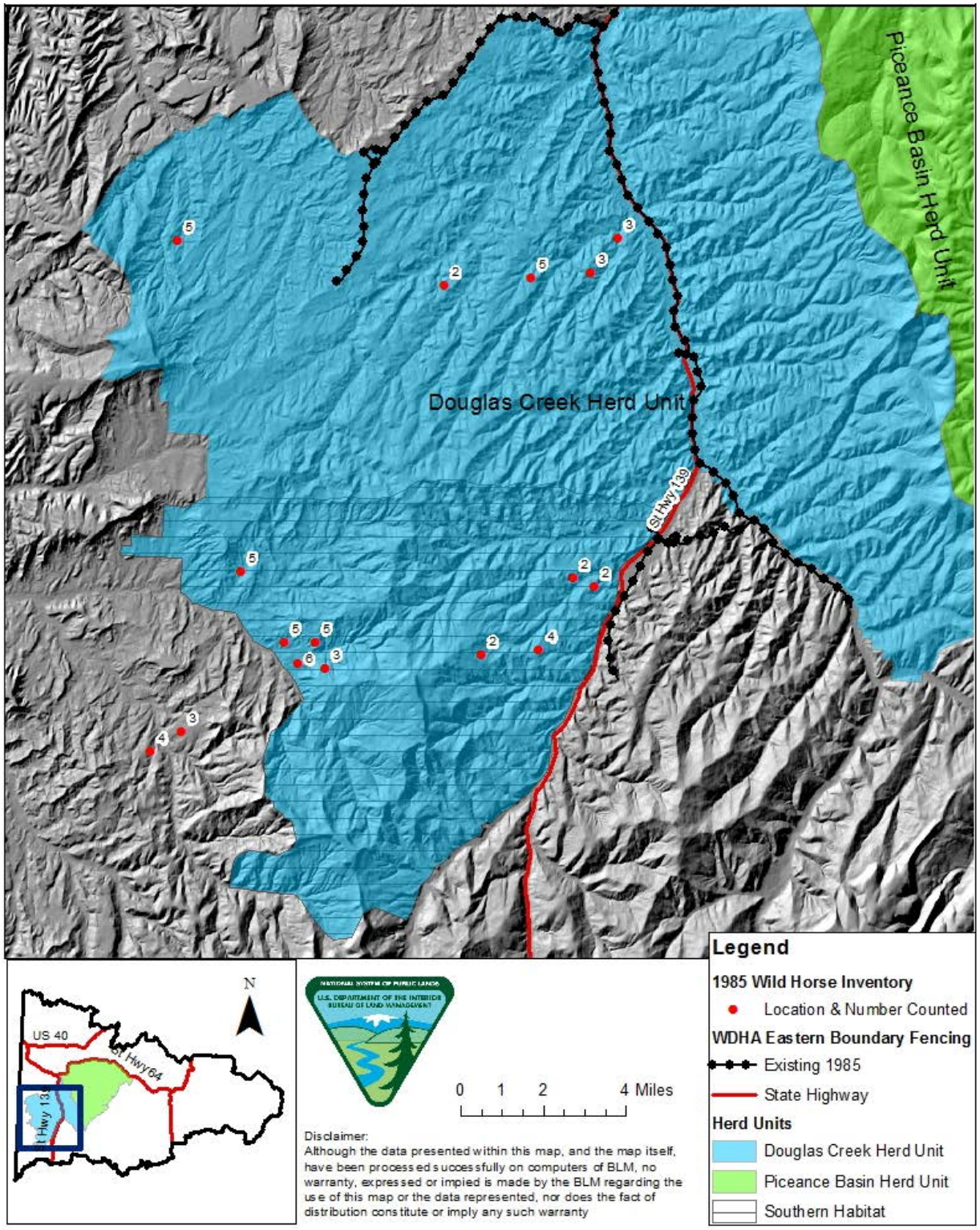
Map 8. Original 1974 Wild Horse Inventory



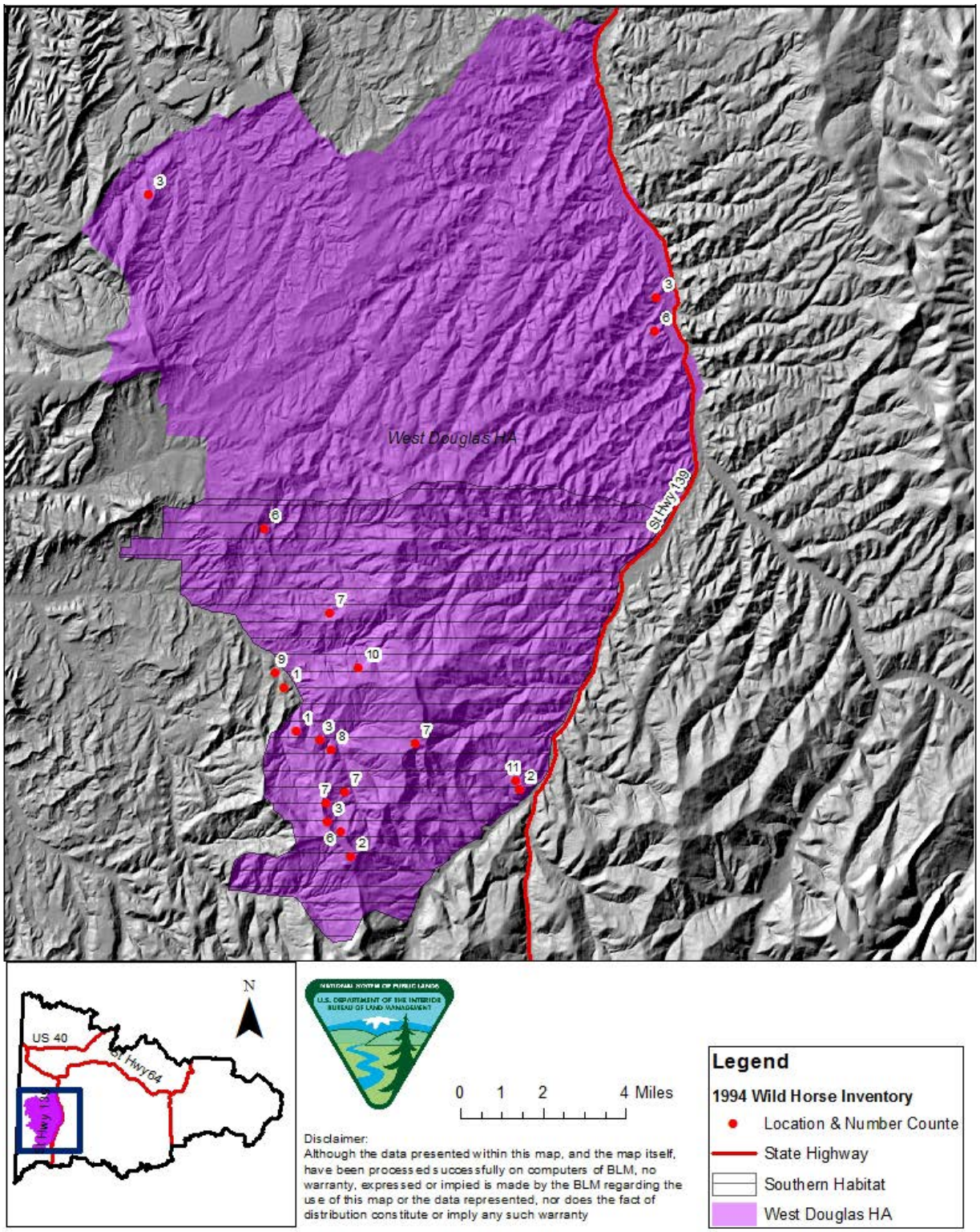
Map 9. 1982 Aerial Inventory of the Douglas Creek Unit



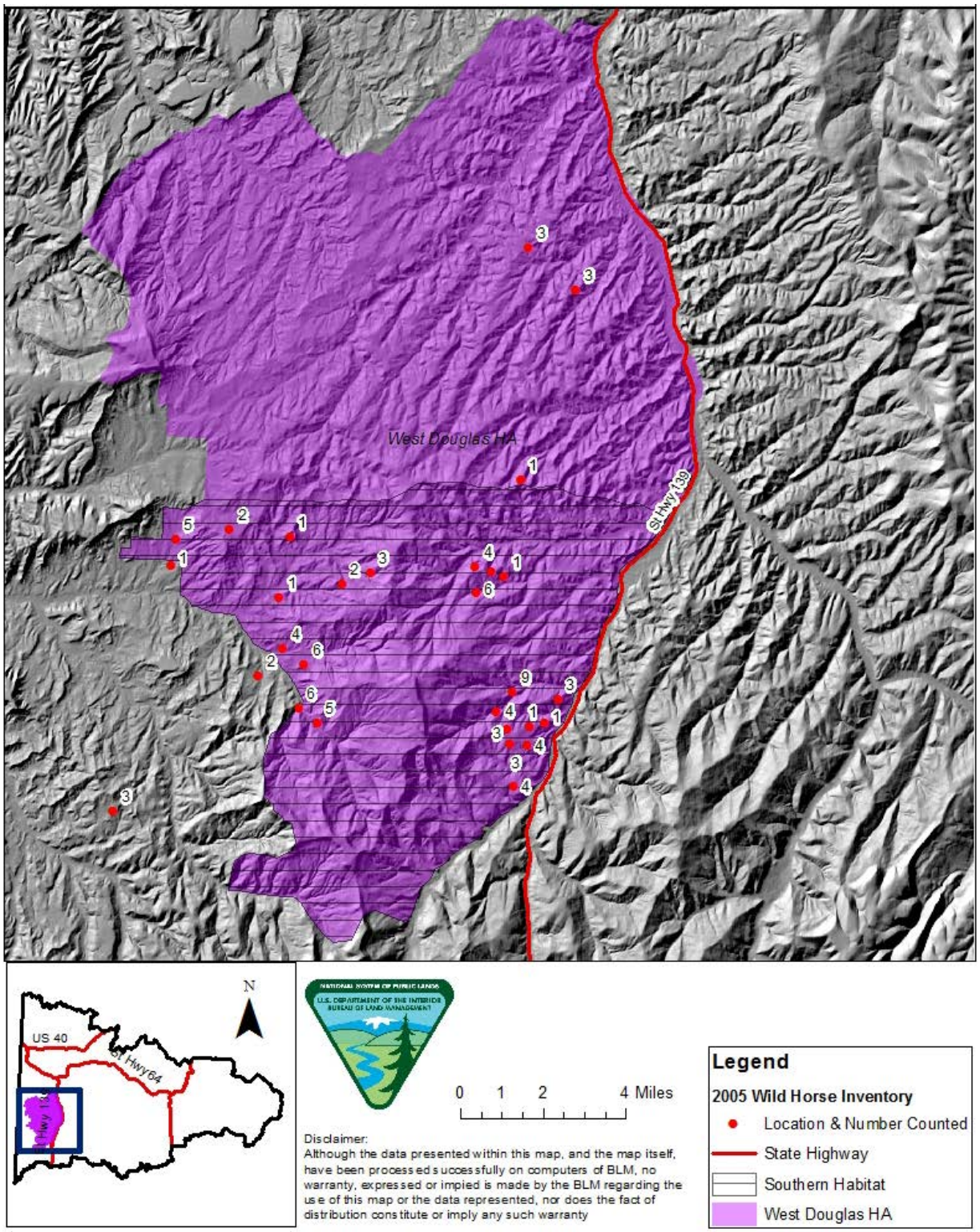
Map 10. 1985 Aerial Inventory Area West of Douglas Creek in the Douglas Creek Herd Unit



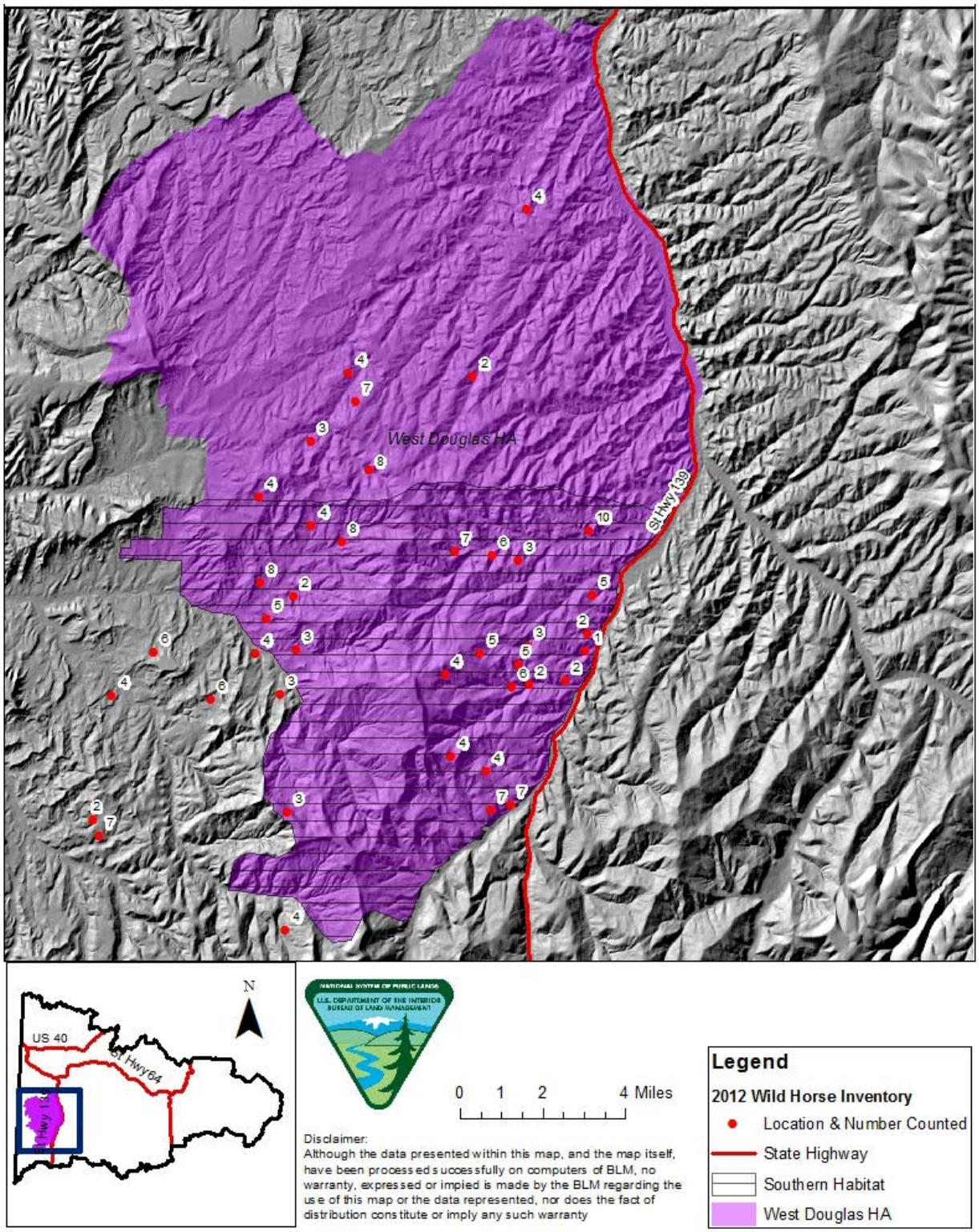
Map 11. 1994 Aerial Inventory of the West Douglas Herd Area



Map 12. 2005 Aerial Inventory of the West Douglas Herd Area



Map 13. 2012 Aerial Inventory of the West Douglas Herd Area



4.4 Factors Influencing Wild Horse Distribution

As shown in Maps 8-13, since 1974, the concentration of wild horses has shifted to the southern portion of the herd area and to the west outside of the herd area. During the 2012 inventory, 19 percent of the population was observed outside of the herd area, 64 percent of the population was observed concentrated in the southern 40 percent of the herd area, and 17 percent were observed in the remaining 60 percent of the herd area. The southern portion of the herd area contains the summer range and preferred habitat of the wild horses therefore the majority of the wild horse use within the herd area is concentrated in this area. As the population has increased more wild horses have moved outside of the herd area boundary in search of forage and space. Although wild horses have moved into the northern portion of the herd area, since the 2005 inventory a higher percentage of the population has moved outside of the herd area boundary than have moved into the northern portion of the herd area as there is very little summer range in the northern portion.

In early planning documents, the BLM concluded that this area was not suitable for long term management of a viable wild horse herd, it was predicted that wild horses would begin to move to the south, and the population would be concentrated in the southern portion of the herd unit west of Douglas Creek, as well as horses would move outside of the herd unit to areas that they were not located in 1971 at the passage of The Act. As disclosed in early planning documents, the area west of Douglas Creek was the site of intense oil and gas exploration and development prior to and following passage of The Act. By December 15, 1971, leases for oil and gas development which currently remain effective encompassed 64 percent of the present WDHA. There are currently 882 wells in the present herd area boundary, of these 706 (80 percent) are located within areas leased prior to passage of The Act and 480 of these wells remain active. Map 14 shows effective leases issued prior to passage of The Act, effective leases issued after passage of The Act (1972-2012), and the location and status of wells within the WDHA. Table 4 includes a breakdown of the number and acres of effective leases issued within the WDHA before passage of The Act, and the periods between development of planning documents.

Table 4 Currently Effective Leases Issued Within WDHA 1940-2012

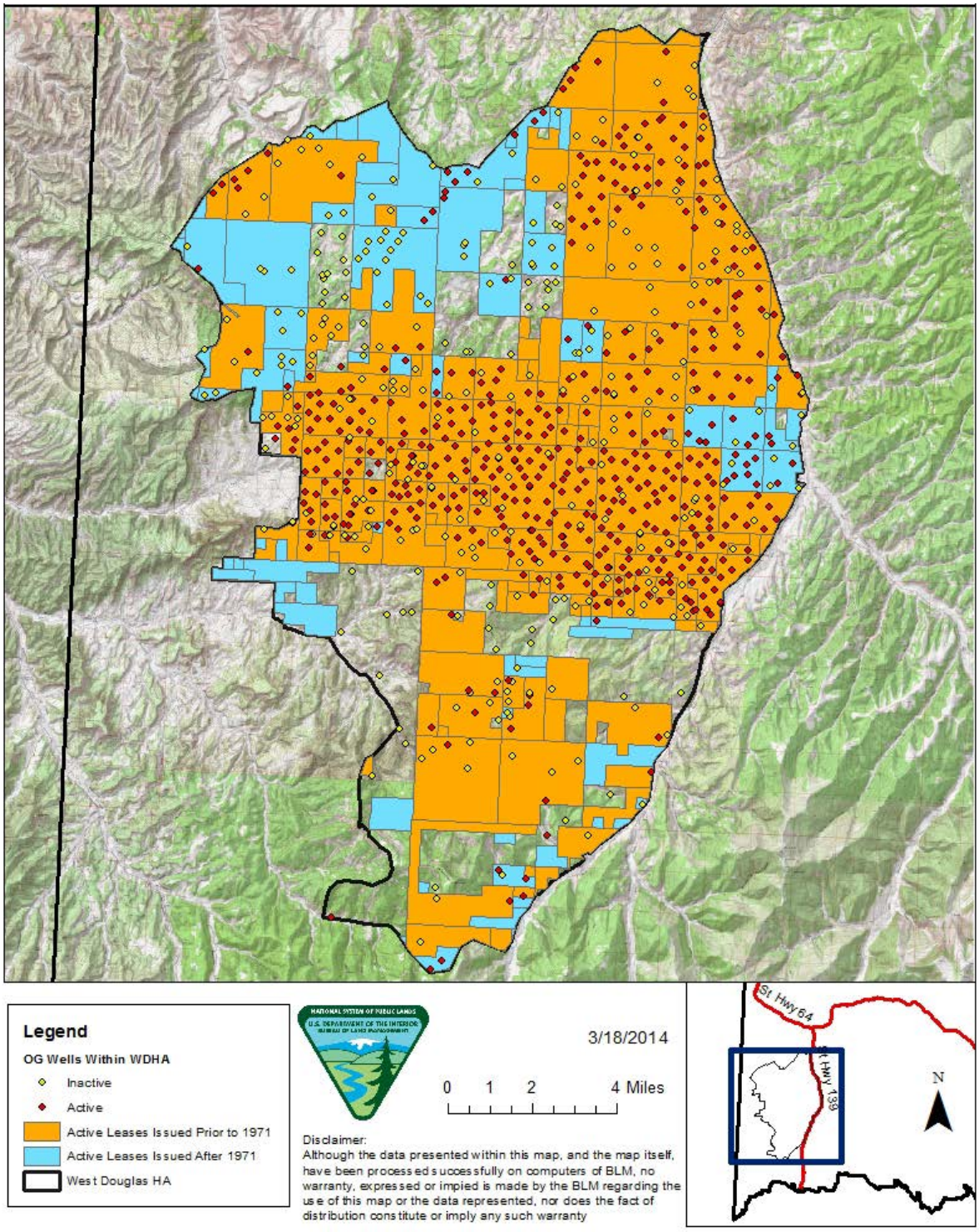
Year	Number of Leases	Percent of Total	Acres	Percent of Total
1940-1971	143	72%	82,004	77%
1972-7974	23	12%	6,826	6%
1976-1980	15	8%	5,047	5%
1985-1994	9	5%	4,951	5%
1998-2004	5	3%	1,749	2%
2006-2012	3	2%	5,379	5%
Total	198	100%	105,956	100%

Although the presence of extensive oil and gas development within this portion of the herd unit likely influenced wild horses to begin to concentrate to the south, and avoid the areas of development, the principal factor influencing the preferred habitat of wild horses within the WDHA is the location of summer range. This is the area that is used as habitat by grazing animals during the summer months, the herd area is composed primarily of winter range, or transitional range used during the spring and fall. This herd area contains little summer range

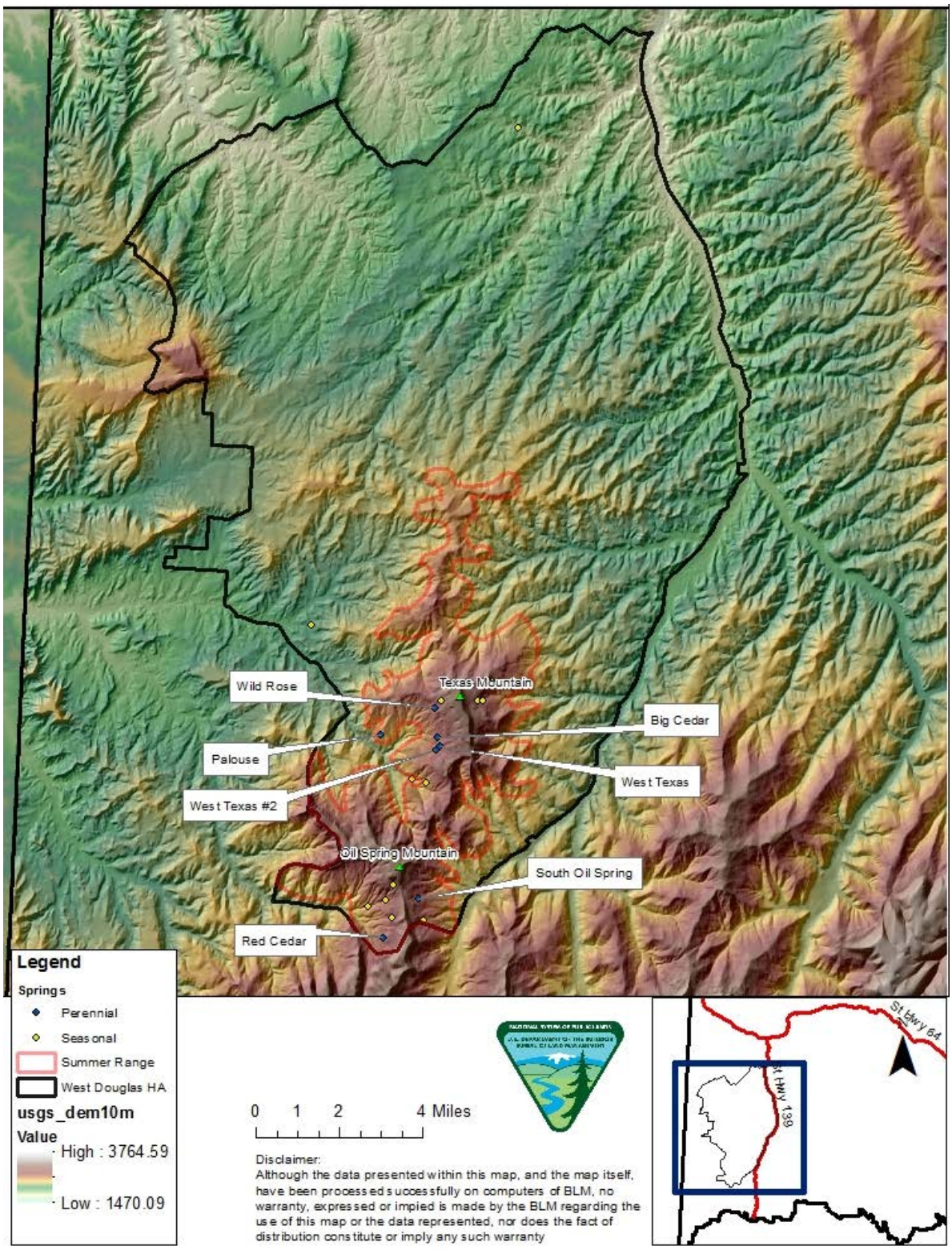
with adequate water sources capable of supporting a viable wild horse herd. Approximately 14 percent of the herd area is considered a seasonal use area that may be utilized by grazing animals in the summer months; the remainder of the herd area consists primarily of winter range or mid elevation transitional range. Map 15 shows satellite relief imagery overlaid with a 10 meter digital elevation model, showing the higher elevation summer range in the southern portion of the herd area as well as perennial springs within the herd area. Map 16 highlights the summer range, with the winter and transitional habitat within the herd area shaded.

During the development of the various planning documents for the WRFO, it was known that much of the summer range had been leased for oil and gas development prior to passage of The Act. Effective leases within the herd area issued prior to passage of The Act include approximately 12,051 acres within the summer range which is approximately 66 percent of the summer range.

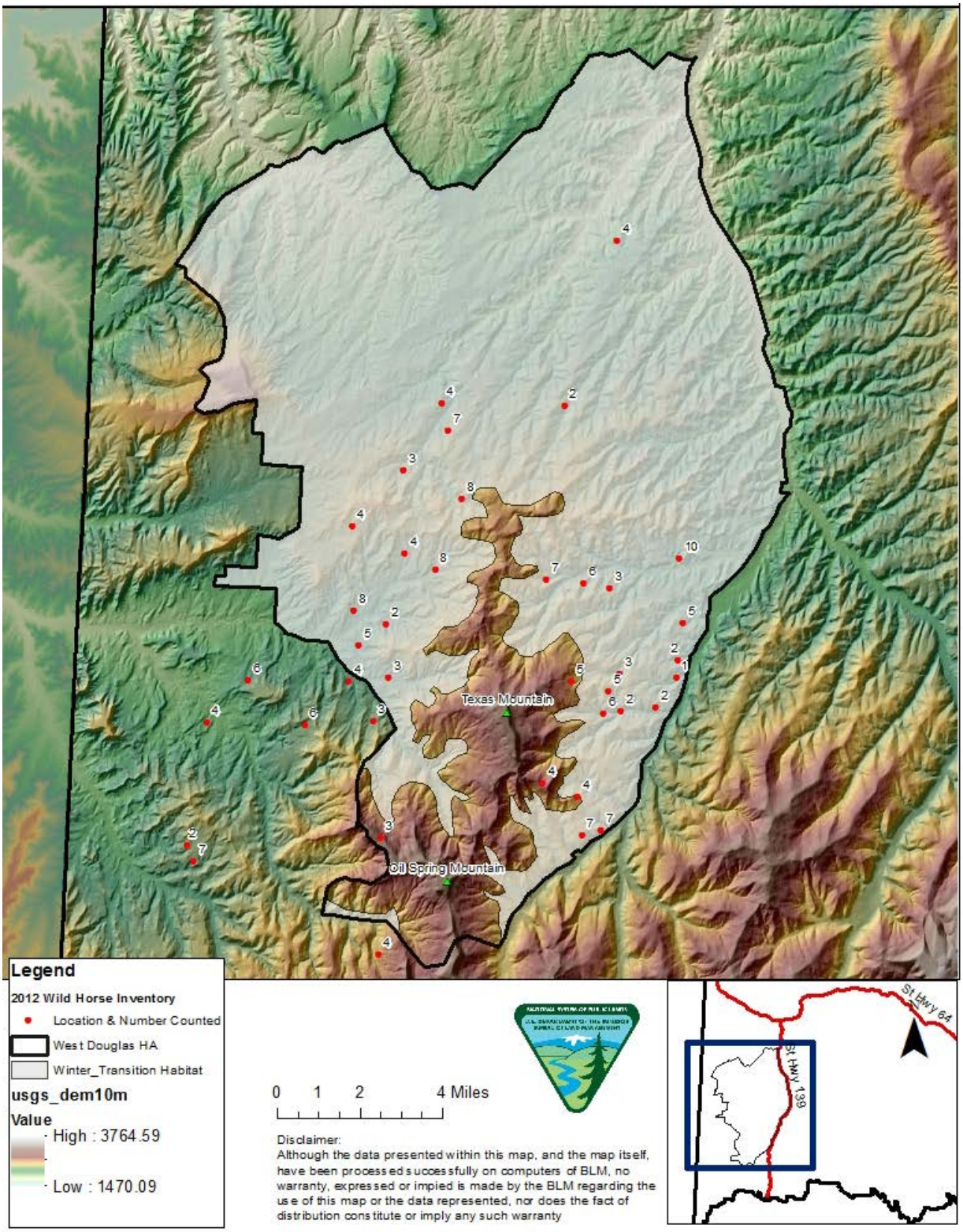
Map 14. Oil and Gas Wells and Leases Effective Prior to 1971 within the West Douglas Herd Area



Map 15. West Douglas Herd Area with Digital Elevation Model and Spring Locations



Map 16. West Douglas Herd Area with Digital Elevation Model and Shaded Winter Range



4.5 Wild Horses Located in Areas Not Designated for Their Long-Term Maintenance

The current estimated population of approximately 300 wild horses west of Douglas Creek are located either within the WDHA which has not been designated for long term maintenance of wild horses or outside of the area they were found in 1971. Due to limited summer range and forage conditions within the WDHA, it is expected that further increases in population will result in additional wild horses moving outside of the HA boundary in search of habitat, which is outside the area they were found in 1971.

5.0 Range Conditions within the West Douglas Herd Area

In order to determine whether excess wild horses are present and must be removed in order to maintain a Thriving Natural Ecological Balance (TNEB), the Authorized Officer must consider the condition of multiple components of the animal's habitat. The BLM Handbook H-4700-1 defines TNEB as "WH&B are managed in a manner that assures significant progress is made toward achieving the Land Health Standards[3] for upland vegetation, riparian plant communities, watershed function, and habitat quality for animal populations, as well as other site-specific or landscape-level objectives, including those necessary to protect and manage Threatened, Endangered, and Sensitive Species" (H-4700-1 pg59). The BLM Manual 4700 defines excess animals as "those animals which must be removed from an area to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area. This definition includes wild horses or burros located outside the HMA in areas not designated for their long-term maintenance" (BLM Manual Section 4720 pg3).

The BLM Manual Section 4720.11 provides guidance on elements to consider in making a determination that excess wild horses and burros are present and require removal. "The authorized officer shall analyze current information for the following elements: grazing utilization and distribution; trend in range ecological condition; actual use; climate (weather) data; current population inventory; wild horses and burros located outside the HMA, or in herd areas (HAs) not designated for their long-term maintenance; and other factors such as the results of land health assessments which demonstrate removal is needed to restore or maintain the range." The following analysis of information and data collected within the West Douglas Herd Area (WDHA) provides necessary information to determine whether current management of wild horses is allowing rangelands to meet or make significant progress toward meeting land health standards, or whether current management does not allow conditions necessary to sustain public land health.

5.1 Grazing Utilization and Distribution:

Heavy utilization of forage species leaves desirable vegetation communities susceptible to impairment; repeated overutilization increases the risk of damaging the vegetation community as plants are unable to replace photosynthetic material necessary for the plants survival. Two indicators of rangeland health directly correlated to utilization include 1) photosynthetic activity is evident throughout the growing season and 2) appropriate plant litter accumulates and is

[3] Colorado Standards for Public Land Health
http://www.blm.gov/co/st/en/BLM_Programs/grazing/rm_stds_guidelines.html

evenly distributed across the landscape. These two indicators are directly related to the amount of plant which is physically removed by grazing. At unacceptable utilization levels throughout the growing season, rangeland plants will have little opportunity for regrowth to produce photosynthetic material in order to maintain photosynthetic activity and complete their annual growth cycle, which will also reduce plant vigor. In general, utilization of 30 percent-50 percent of plant material is considered the acceptable level of defoliation necessary to allow plant maintenance and recovery. Plant litter accumulation serves important ecological functions including decreasing runoff and increasing infiltration. At repeated unacceptable use levels, plant parts are grazed before they can break off and accumulate as litter. Without litter accumulating on the soil surface, water is not slowed down in plant interspaces and runoff increases. Heavy to severe utilization has been observed in the WDHA, this level of utilization is unsuitable to meeting land health standards. Areas which are receiving high utilization levels occur primarily in the southern portion of the HA.

Photos 1 thru 4 were taken within the WDHA in T3S R102W Sec 21 in the Texas Mountain area on June 14th 2012. The photos show severe utilization of grass species in this area due to the presence of wild horses. The wild horse population is concentrated within approximately 40 percent of the HA within the limited summer range centered around Texas Mountain. Livestock grazing has been deferred within this area of the grazing allotment since 2005 in an effort to avoid overutilization and degradation of the forage community (Maps 17 and 18). The portion of the grazing allotment that has been deferred includes approximately 12,000 acres (65 percent) of the summer range habitat within the HA. Through a Memorandum of Understanding (MOU) with the livestock grazing permittee, this area will continue to be deferred from livestock grazing until rangeland conditions improve to a level necessary to ensure rangeland health can be sustained.

Despite deferring this area from livestock grazing, overutilization has occurred. Overutilization of a plant reduces the amount of photosynthetic material necessary to sustain the plant. Continued overutilization particularly during the growing season (April 1st to June 30th) essentially “starves” the plant by interrupting the ability to complete photosynthesis. This process reduces the overall vigor and reproductive capability of the plant, if overutilization occurs on a continuous basis, plant mortality occurs. As the density, composition, and frequency of desirable species within a vegetation community are reduced through overutilization, undesirable species begin to colonize the site. Undesirable species are generally less palatable, less productive, and unable to provide adequate forage to meet nutritional requirements of animals within the area. Following loss of desirable species from a vegetation community, conditions necessary to sustain healthy rangeland cannot be met without intervention.

Photo 1

Overutilization of grass species, excessive bare ground vulnerable to erosion, minimal litter accumulation, inadequate residual leaf material of grass species.

Photo 2

Severe utilization of grass species, trampling of forb species, excessive bare ground, uprooted plants (circled), little litter accumulation, inadequate residual leaf material of grass species.

Photo 3

Severe utilization of grass species leaving inadequate leaf material necessary to complete photosynthesis, initiate regrowth, and restore nutrient reserves within the roots.

Photo 4

Overutilization of grass species, excessive bare ground vulnerable to erosion, minimal litter accumulation litter present primarily originating from shrub species, inadequate residual leaf material of grass species.

5.2 **Actual Use**

Table 5 contains the actual livestock grazing use in animal unit months (AUMs) made within the WDHA by grazing year (3/1-2/28). There are three livestock operators authorized to graze within allotments or pastures located within the boundary of the WDHA. The four pastures which lie inside the WDHA boundary are the Winter/Spring and Park Canyon pastures and a portion of the West Creek pasture of the Twin Buttes allotment and the Bull Draw pasture of the East Douglas Creek allotment. As shown in Tables 5 and 6 livestock use within the Winter/Spring pasture, which covers the majority of the HA (86%), has been well below the authorized use of 8,932 AUMs. All long-term trend sites within the HA are located within the Winter/Spring pasture.

Table 5. Actual Livestock Grazing Use within the West Douglas Herd Area

Year	Pasture	Winter/Spring Pasture	West Creek Pasture	Park Canyon Pasture	Bull Draw Pasture	Total
	Authorized Use (AUMs)	8,932	1,289	98	268	10,587
2006	Actual Use (AUMs)	2,085	907	0	268	3,376
	Percent of Authorized Used	23%	70%	0%	100%	32%
2007	Actual Use (AUMs)	1,722	1,121	45	205	3,165
	Percent of Authorized Used	19%	87%	46%	76%	30%
2008	Actual Use (AUMs)	4,406	1,083	82	221	5,792
	Percent of Authorized Used	49%	84%	84%	82%	55%
2009	Actual Use (AUMs)	6,499	1,068	42	272	7,881
	Percent of Authorized Used	73%	83%	43%	101%	74%
2010	Actual Use (AUMs)	5,533	1,159	29	26	6,747
	Percent of Authorized Used	62%	90%	30%	10%	64%
2011	Actual Use (AUMs)	5,731	1,050	70	22	6,873
	Percent of Authorized Used	64%	81%	71%	8%	65%
2012	Actual Use (AUMs)	3,654	957	0	135	4,746
	Percent of Authorized Used	41%	74%	0%	50%	45%
2013	Actual Use (AUMs)	3,584	963	73	77	4697
	Percent of Authorized Used	40%	75%	74%	29%	44%

Table 6 includes the amount of forage allocated to livestock within the WDHA that was unused by livestock, this table does not include the West Creek pasture as only a portion of the pasture lies within the WDHA, because actual use is reported for the entire pasture, the amount of unused forage in the portion of the pasture within the HA cannot be determined. The range of unused AUMs below the permitted level ranges from 2,489 in 2009 to 7,326 during the 2007 grazing year. The level of reduced use by the grazing permittees has been beneficial and necessary to prevent widespread degradation to the rangeland resources within the WDHA as the wild horse population within the WDHA has continued to grow since the most recent gather and removal operations in 2006 and 2012. During the 2006 operation, the BLM planned to gather and remove 89 wild horses, however only 37 wild horses and 1 escaped domestic horse were removed, 20 wild horses were removed July 2012 during an emergency gather operation.

Table 6. Forage Allocated to Livestock within the WDHA that was Unused by Livestock (3/1/2006-2/28/2013)

Pasture	Authorized Use (AUMs)	Unused AUMs							
		2006	2007	2008	2009	2010	2011	2012	2013
Winter/Spring	8,932	6,847	7,210	4,526	2,433	3,399	3,201	5,278	5,348
Park Canyon	98	98	53	16	56	69	28	98	25
Bull Draw	268	0	63	47	0	242	246	133	191
Total	9,298	6,945	7,326	4,589	2,489	3,710	3,475	5,509	5,564

Actual grazing use by livestock for the 1987 through 2013 grazing years within the Winter/Spring pasture of the Twin Buttes allotment is shown in Figure 1. The Winter/Spring pasture includes 86% of the HA, grazing use within this pasture is authorized 11/1 to 6/12 annually. As shown in Figure 1, livestock use has fluctuated greatly during the 27 years shown with an overall decline in use from 1987. The grazing permittees authorized to graze within this pasture have made voluntary reductions particularly in response to drought and elevated wild horse use, the reductions have been made in an effort to sustain rangeland health. Figure 2 shows the amount of forage utilized by wild horses within the HA from 1987 to 2013 based on the estimated population, wild horse use has also fluctuated primarily as a result of gather and removal operations, with an overall increase in wild horse use from 1987. Although livestock use decreased 40% from 6,033 AUMs in 1987 to 3,654 in 2012, wild horse use has increased 500% from 456 AUMs in 1987 to 2280 AUMs in 2012. As discussed in the analysis of trend data, all trend sites read in 1987 and again in 2012 have shown a decrease in desirable species.

Figure 1. Livestock Actual Use in the Winter/Spring Pasture from 1987-2013

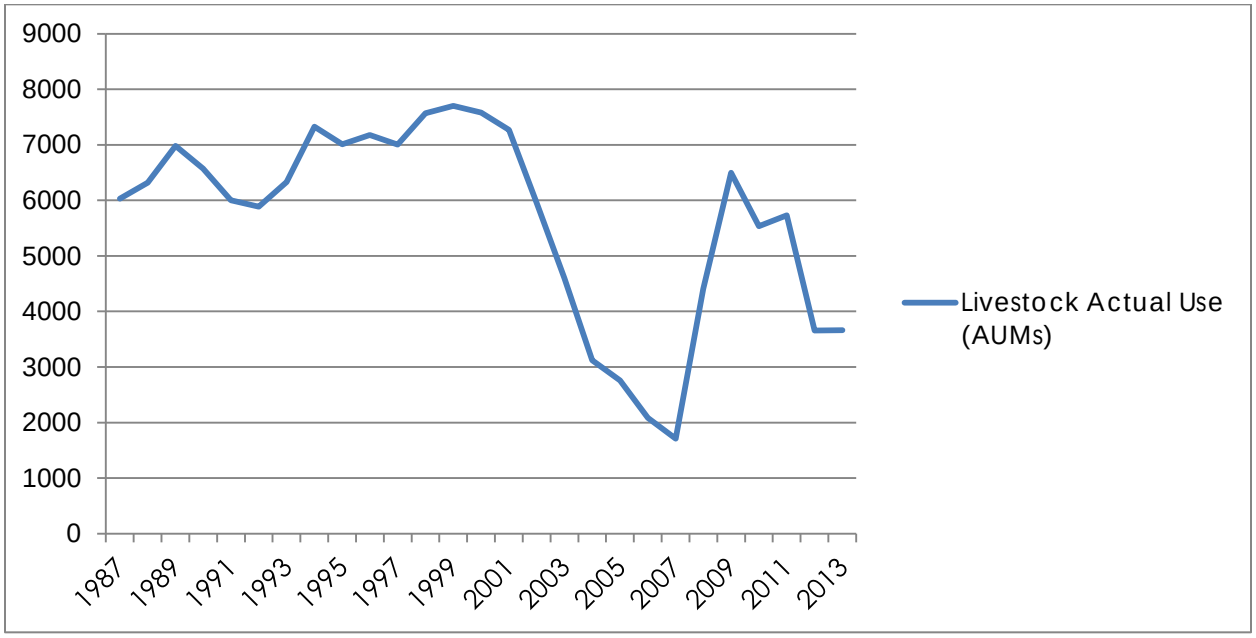
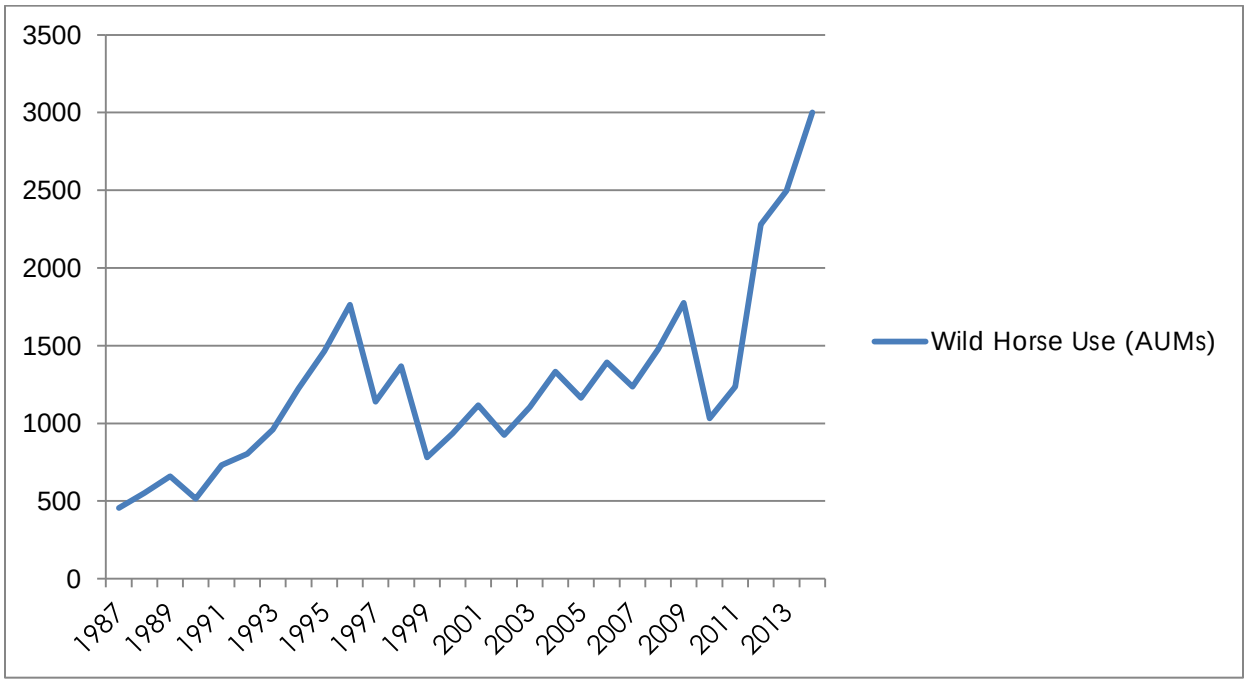


Figure 2. West Douglas Herd Area Wild Horse Use Based on Estimated Population



Although the actual amount of available forage for each year shown may be less due to environmental factors such as drought, the forage allocation unused by livestock would likely be enough to support the wild horse population within the WDHA. However, this available forage is for the entire WDHA, population inventories and on the ground observation of wild horse distribution have shown that wild horse use is concentrated within their preferred habitat centered around the limited summer range in the southern portion of the WDHA and their use does not occur uniformly across the entire WDHA. Trend data shows that despite livestock grazing use below that authorized, particularly within the Winter/Spring pasture, concentrated use has led to overutilization and impairment of the rangeland resources in some areas of the HA. Comparison of actual use and trend data reconfirms that summer range habitat is not present in sufficient amounts to sustain a healthy wild horse population on healthy rangelands within the WDHA over the long term. The H-4700-1 Handbook recommends 150-200 animals as the minimum amount needed to maintain a genetically viable herd; this would require 1,800 to 2,400 AUMs. The data shows that if forage were allocated to wild horses within the HA to maintain a genetically viable herd, this herd could not be managed to maintain TNEB and sustain healthy rangelands.

5.3 Climate (Weather) Data

Precipitation was well below average in 2012. The U.S. Drought Monitor produces weekly maps showing drought conditions across the United States over the past year, these maps have shown Rio Blanco County experiencing some level of drought conditions beginning with moderate drought early in 2012 and escalating to extreme drought by May 2012. Precipitation across the county improved in 2013 with many months receiving at or above average precipitation resulting in improved drought conditions beginning late January 2013 as classification moved from

extreme to severe through September 2013. Conditions improved further from severe to moderate until early November 2013 when the classification improved to abnormally dry. Between January 2012 and December 2013, Rio Blanco County experienced three months of abnormally dry conditions, four months of moderate drought, nine months of severe drought, and eight months of extreme drought conditions. The U.S. drought monitor shows that conditions improved from abnormally dry to normal during the week of May 13, 2014. Table 7 includes precipitation data collected at the Dragon Road Remote Access Weather Station (RAWS) located within the WDHA (Map 17). This RAWS site has been in operation since July of 1998, the average yearly precipitation for the period of record is 9.71 inches. Precipitation levels during 2012 were well below average and no precipitation was received in this area during May and June during the critical growing season for vegetation. The drought conditions coupled with the heightened population of wild horses in the area has made many rangeland sites across the HA vulnerable to degradation which without reducing grazing pressure will likely result in a transition to less productive vegetation communities which do not meet land health standards. As shown in the actual use data above, livestock grazing has been reduced or deferred throughout the WDHA in an effort to avoid damage to drought stressed rangelands. Precipitation recorded in 2002-2003 was also well below average, however the population of wild horses during this period was less than half of the population observed in 2012.

Table 7. Dragon Road RAWS Precipitation Data (inches)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
2000	0.5	1.12	0.81	0.5	0.59	1.4	0.49	0.76	1.5	1.06	0.1	0.06	8.89
2001	0.11	0.72	0.8	1.16	1.06	0.11	0.6	2.66	1.1	1.18	0.8	0.21	10.51
2002	0.24	0.12	0.92	0.39	0.02	0.25	0.99	0.92	1.85	1.1	0.4	0.15	7.35
2003	0.29	0.62	0.9	0.45	1.07	0.44	0.07	0.26	0.53	0	1.49	0.83	6.95
2004	0.18	0.7	1.55	1.7	0.22	0.46	0.24	0.44	1.57	1.16	0.81	0.34	9.37
2005	0.85	0.45	1.31	0.88	1.57	3.31	1.15	0.74	0.67	1.2	0.43	0.08	12.64
2006	0.43	0.08	0.6	0.41	0.18	0.13	0.66	2.13	1.43	3.88	0.31	0.12	10.36
2007	0.03	0.43	0.74	0.31	0.88	0.21	0.79	2.1	2.14	0.77	0	1.26	9.66
2008	0.05	0.15	0.44	1.42	1.31	0.82	0.77	1.55	1.8	0.82	0.71	0.03	9.87
2009	0.39	0.05	0.29	1.65	1.4	1.53	0.5	0.7	1.95	0.51	0.31	0.06	9.34
2010	0.25	0.25	0.97	1.45	0.64	1.12	0.31	1	0.36	1.55	1.1	1.36	10.36
2011	0.4	0.27	0.72	1.52	1.72	0.88	2.24	1.09	1.13	1.36	0.65	0	11.98
2012	0.03	0.8	0.1	1.03	0	0	1.75	1.88	1.52	0.25	0.43	0.05	7.84
2013	0.96	0.26	0.33	1.27	0.56	0.07	1.41	0.46	3.6	2.09	0.4	0.19	11.6
Avg 2000-2013	0.34	0.43	0.75	1.01	0.80	0.77	0.86	1.19	1.51	1.21	0.57	0.34	9.77

Drought stressed vegetation is especially vulnerable to mortality when overuse occurs. Although conditions improved in 2013, much of the vegetation particularly within the preferred habitat of the herd area has likely not received adequate relief from grazing pressure to complete growth cycles, replenish root reserves, and improve in vigor. Although much of the native rangeland species within the arid west are resilient to fluctuations in climate patterns, elevated disturbance from herbivory during drought periods increases the likelihood that desirable species will be lost.

5.4 Trend in Range Ecological Condition

The following tables include long term trend data collected August 2 – September 18, 2012 within the WDHA compared to historical data. This data was collected using the Daubenmire Canopy Coverage Transect method. The Daubenmire method estimates frequency and canopy cover (including litter) of key vegetation species along a transect representative of a key area within a landscape. This data is used to determine whether desirable healthy plant communities are being maintained or if vegetation communities are transitioning to less desirable states incapable of meeting land health standards. The percent canopy cover is a measure of how much each particular species contributes to the total canopy cover. Percent frequency is a measure of how often a species is observed within a plot along a transect, 20 plots per 100 feet of transect are recorded. Frequency does not measure the amount of each species within each plot rather if and how often a species is observed.

Rangelands can transition between varying states occupied by various plant communities[4], the desired plant community of a site generally yields higher forage production, provides structure and function to protect soil resources, provides habitat for large and small animals, and is capable of supporting and maintaining land health standards. Factors such as overutilization, no grazing, and fire can influence transitions[5]. As a result of heavy continuous use, vegetation communities begin to be dominated by less productive grazing tolerant species[6]. Although rangelands can transition back to the desired community, this often involves human intervention and may take decades to fully recover if action is not taken early in the transition process to avoid loss of desirable species and soil resources[6].

The desired plant community (DPC) for many sites within the HA is a mixed grass/Wyoming big sagebrush community, this community is dominated by cool season bunch grasses such as needle and thread, with a subdominant component of the cool season rhizomatous grass, western wheatgrass, and the dominate shrub species Wyoming Big Sagebrush. This community is desirable for grazing animals as it provides higher forage production and consists of plants with high nutritional value; this community is also capable of meeting and sustaining rangeland health. The less desirable community lacks cool season bunchgrass species, dominate grass species in this community include the grazing tolerant species such as sandberg bluegrass or prairie junegrass which provide less forage production and lower nutritional value than needle and thread. Undesirable vegetation communities include a rabbitbrush/rhizomatous wheatgrass or cheatgrass dominated site as these communities provide little forage value and are generally incapable of sustaining rangeland health.

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[4] Laycock, W.A. 1991. Stable states and thresholds of range condition on North American rangelands: A viewpoint. Journal of Range Management 44(5):427-433

[5] Briske, D.D., S.D. Fuhlendorf, and F.E. Smeins. 2005. State and Transition Models, Thresholds, and Rangeland Health: A Synthesis of Ecological Concepts and Perspectives. Rangeland Ecology & Management 58(1):1-10

[6] Bestelmeyer, B.T., J.R. Brown, K.M. Havstad, R. Alexander, G. Chavez, and J.E. Herrick. 2003. Development and use of state and transition models for rangelands. Journal of Range Management 56(2):114-126

The vegetation community which occupies a given area depends on multiple factors, including climate within an area (refer to Section 5.3 for climate data), soil properties and slope, presence or absence of disturbance, and the level of disturbance. Individual plants compete for space, soil nutrients, water, and sunlight within an area. In order for vegetation to produce adequate food needed to complete its lifecycle and maintain reproduction, plants must have access to adequate sunlight, carbon dioxide, and nutrients including water in order to complete photosynthesis, to maintain growth and vigor. Because a diverse composition of vegetation species is needed in order to maintain healthy rangelands, and achieve rangeland health standards, there will always be competition between different vegetation species as well as intraspecific competition between individual plants within a site. In order for a species as well as individual plants to sustain within a population they must be able to adequately compete for necessary resources.

One factor which can influence a species ability to compete is disturbance. Following disturbances within a site or across a landscape, a species' ability to compete may be increased or decreased depending on the disturbance. Following a fire for example, grass species can initially gain an advantage due to the increased space and nutrients not used by shrubs, while shrubs may be at a disadvantage due to the reduction of mature plants which provide seed or the opposite would be true where shrubs have an advantage under the presence of grazing and absence of fire[6]. Herbivory is another disturbance which can greatly affect vegetation's ability to complete its life cycle. Season long grazing can reduce competitiveness of grass species, especially the most palatable species. Following repeated removal of photosynthetic material by herbivory, individual grass plants lose their ability to complete their growth cycle including reproduction especially during the spring growing season when plants are using food stored in the roots for growth. If they are unable to produce more food because the leaves are repeatedly removed by herbivory, the plant will likely die[7]. Following this disturbance, other species such as shrubs, and less palatable grasses gain an advantage because they are not as susceptible to the disturbance, and can complete their life cycle without the added pressure of outside influences[6]. Under continuous season long grazing, the palatable grass species susceptible to grazing begin to be replaced by less palatable species which are also likely less valuable forage to grazing animals including wild horses, livestock, and wildlife[8]. As the desirable plant community is replaced, rangelands become less capable of sustaining conditions necessary to achieve land health standards.

Long term trend transects established within the WDHA represent various key habitat or ecological sites within the HA which provide indications of the overall trend and condition of vegetation communities throughout the HA. Map 17 shows the location of these trend sites, the location and number of wild horses counted during the February 2012 wild horse inventory, and the area deferred from livestock grazing since 2005.

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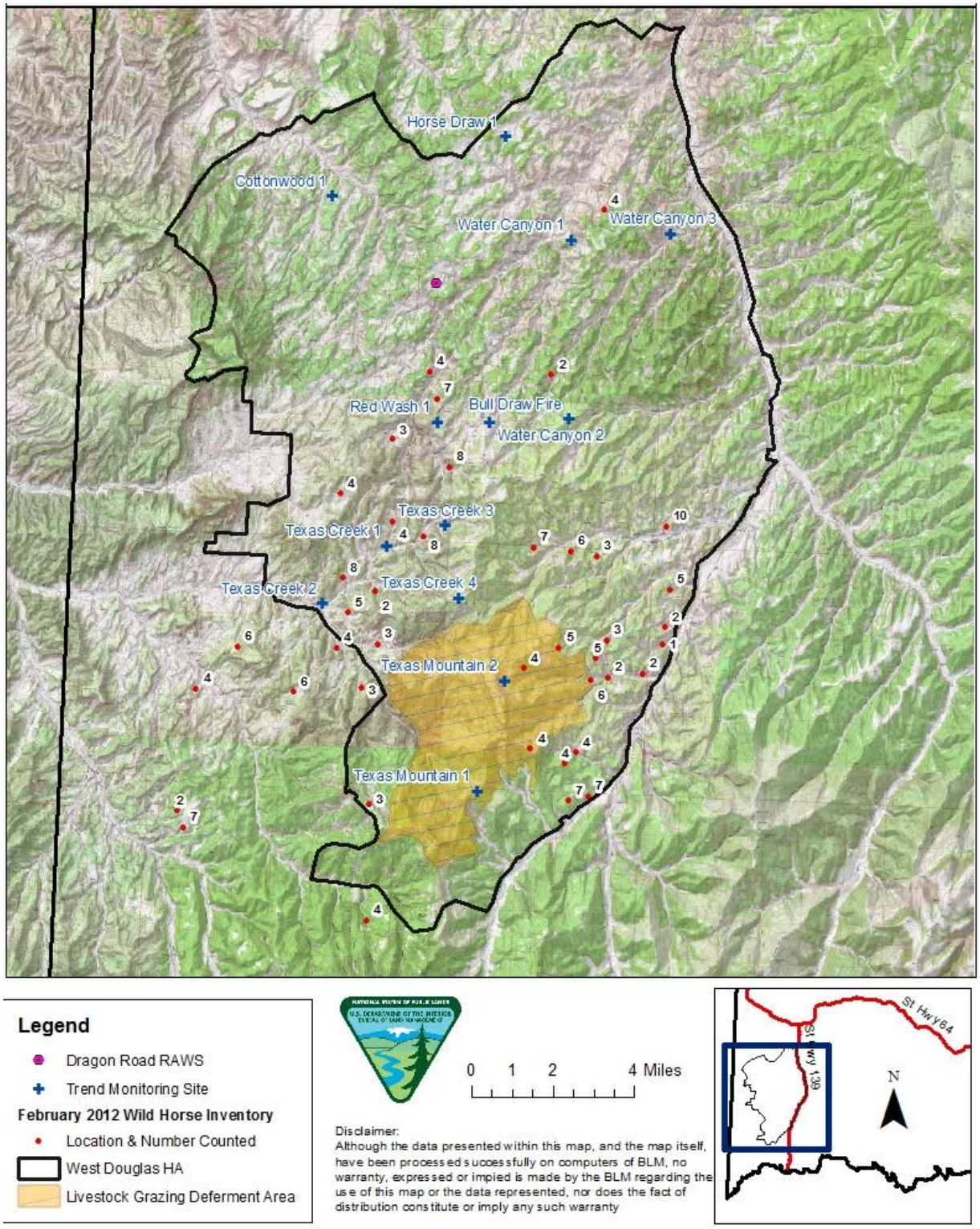
[7] Burkhardt, J.W., and K. Sanders. 2012. Management of Growing-Season Grazing in the Sagebrush Steppe: A Science Review of Management Tools Appropriate for Managing Early-Growing Season Grazing. Rangelands 34(5):30-35

[8] Milton, S.J., W.R.J. Dean, M.A. du Plessis, and W.R. Siegfried. 1994. A Conceptual Model of Arid Rangeland Degradation. BioScience 44(2):70-76

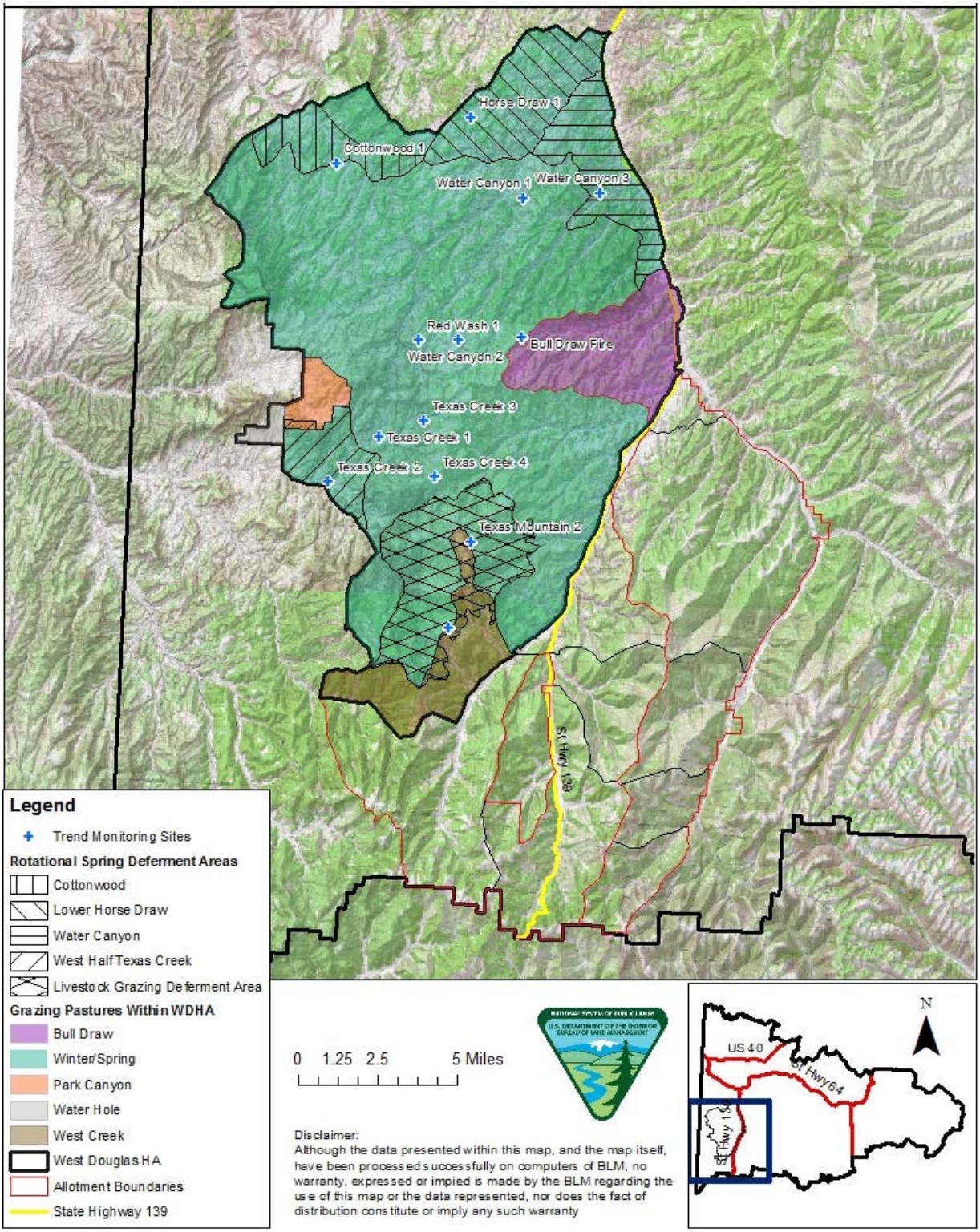
Map 17. Monitoring Sites and Livestock Grazing Deferment Area



Monitoring studies conducted in conjunction with the 1999 Allotment Management Plan (AMP) revision for the Twin Buttes Allotment indicated concerns with land health standards. A livestock grazing schedule and grazing management areas which receive rotational grazing deferment during the spring growing season were developed and incorporated into the AMP to address land health concerns. Map 18 shows pastures of the Twin Buttes Allotment within the WDHA, grazing management areas, the area deferred from livestock grazing, and the location of long term monitoring sites within the WDHA. The AMP describes minimum periods or levels of rest an area should receive during an average year to maintain land health, other factors such as drought, fire, or increased competition for forage from other grazing animals may increase the level of livestock grazing rest necessary to maintain healthy rangelands. Under the current AMP, the grazing management areas receive complete deferment of spring growing season use two out of four years and partial growing season deferment one out of four years. The goal of this rotational grazing system was to allow opportunity for regrowth and reproduction of forage species needed for improvement in cover and composition. The rotational deferment system has been fully implemented for permitted livestock.

The duration and intensity of livestock use is controlled by regular herding of livestock throughout the allotment particularly during the critical growing season, or by adjusting stocking rates in response to varying ecological conditions. The ability to implement controlled management of domestic livestock allows land managers to develop grazing systems which outline seasonal use or deferment on an annual basis to provide vegetation periods of rest from grazing to sustain or improve rangeland health. In order to maintain wild free roaming behavior, wild horses are not herded to different areas within the HA on an annual basis as is done with livestock resulting in continuous season long wild horse use. The inability to manage wild horse grazing in the same manner as domestic livestock by controlling the timing, duration, and intensity of use is contradictory to the grazing management system developed in the AMP and has reduced or eliminated the benefits of rotational grazing management. Continuous concentrated grazing throughout the growing season increases the likelihood of exceeding the maximum point of defoliation which continues to maintain or improve rangeland health. If continued without action to reduce utilization to proper levels necessary to sustain rangeland health repeated overutilization of forage results in deteriorated rangelands.

Map 18. Grazing Pastures and Rotational Spring Deferment Areas Within West Douglas Herd Area



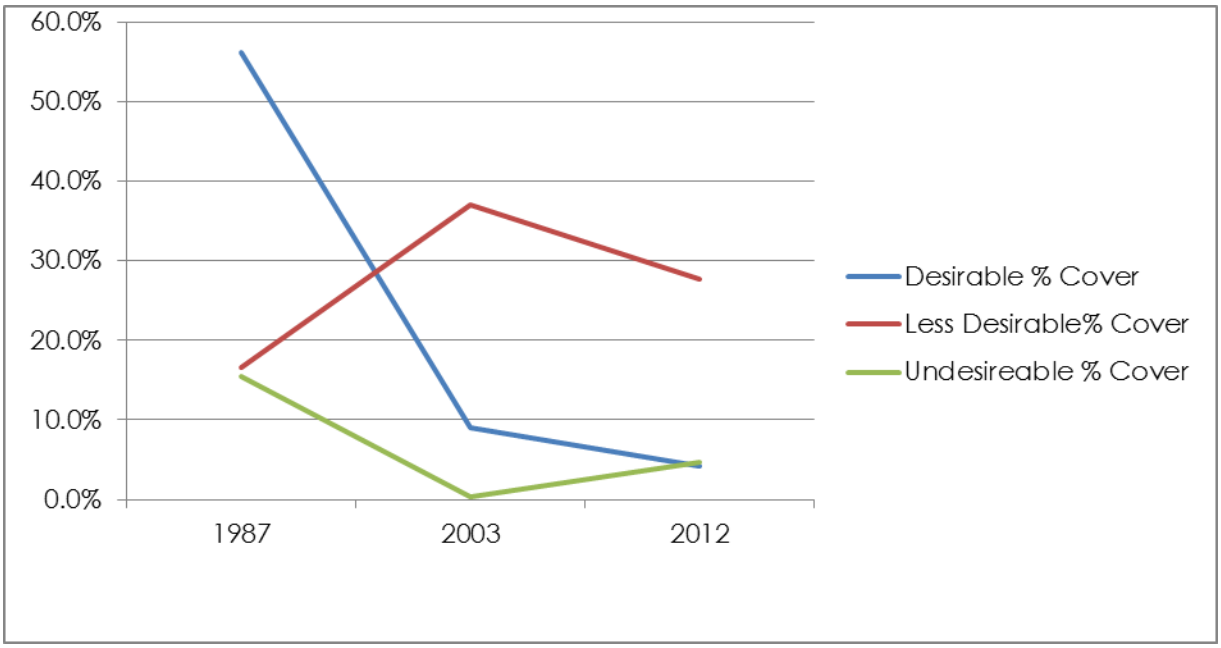
5.4.1 Horse Draw Trend Plot

The Horse Draw trend plot (Table 8) is located in the Northern portion of the HA within the Lower Horse Draw Grazing Management Area (GMA). Needle and thread grass, an important bunchgrass species, shows a large decrease from 1987 (from 43.9 percent to 3.8 percent) while Wyoming big sagebrush and green rabbitbrush have increased, this is indicative of a downward trend. Although needle and thread shows an increase in both canopy cover and frequency since 2003, this species has likely remained static since 2003. The apparent increase in canopy cover is due to the loss of western wheatgrass and Colorado wildrye and the decrease of other desirable species which contribute to the overall vegetation community and canopy cover within the site. The data collected in 2012 is an indicator of the vulnerability of this site to loss of desirable species, which provide greater forage value and soil cover as well as contribute to the maintenance of land health standards.

Table 8. Horse Draw Trend Plot (06346-1) Data from 1987, 2003, and 2012

YEAR	1987		2003		2012	
Species	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover
Colorado Wildrye	10.0	6.1	20.0	2.4	0.0	0.0
Needle and Thread	90.0	43.9	25.0	3.0	62.5	3.8
Western Wheatgrass	0.0	0.0	35.0	2.8	0.0	0.0
Winterfat	35.0	6.3	10.0	0.9	2.5	0.4
Desirable Species Percent Cover		**56.3**		**9.0**		**4.1**
Sandberg Bluegrass	40.0	5.3	80.0	8.8	57.5	3.0
Big Sagebrush	15.0	7.5	45.0	28.4	70.0	24.8
Shadscale	10.0	3.9	0.0	0.0	0.0	0.0
Less Desirable Species Percent Cover		**16.6**		**37.1**		**27.8**
Cheatgrass	50.0	15.5	15.0	0.4	50.0	2.5
Pricklypear	0.0	0.0	0.0	0.0	2.5	0.9
Green Rabbitbrush	0.0	0.0	0.0	0.0	27.5	1.3
Undesirable Species Percent Cover		**15.5**		**0.4**		**4.8**

Figure 3. Change in Desirable Cover at the Horse Draw Site from 1987-2012



5.4.2 Cottonwood 1 Trend Plot

The Cottonwood 1 trend plot (Table 9) is located in a key area in the northern portion of the HA in the Cottonwood Creek area. This area is within the WDHA however during population inventories wild horses have not historically been documented in this area since 1994. This trend plot is located within the Cottonwood GMA identified for rotational spring grazing deferment in the 1999 Twin Buttes AMP. The increase in frequency and nearly static canopy cover of needle and thread from 2003, suggests that the grazing program outlined in the AMP as well as the absence of wild horses is allowing the condition of this area to improve, by allowing defoliated plants opportunity to regrow and complete growth cycles resulting in higher vigor and reproductive capability. Although figure 4 shows a nearly 5% decline in desirable species since 2003, the increase in frequency of needle and thread is favorable for progression toward a vegetation community comparable to that observed in 1987. Photos 5-7 show the vegetation changes between 1987 and 2012, and the increase of needle and thread from 2003 to 2012.

Table 9. Cottonwood 1 Trend Plot (06346-2) Data from 1987, 2003, and 2012

YEAR	1987		2003		2012	
Species	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover
Needle & Thread	55.00	19.75	60.00	14.00	67.50	16.56
Indian Ricegrass	15.00	3.38	0.00	0.00	0.00	0.00
Colorado Wildrye	10.00	3.88	0.00	0.00	0.00	0.00
Sand Dropseed	0.00	0.00	40.00	4.00	0.00	0.00
Western Wheatgrass	70.00	28.38	50.00	5.50	30.00	2.88
Winterfat	20.00	5.38	15.00	1.00	5.00	0.13
Desirable Species Percent Cover		**60.75**		**24.50**		**19.56**
Sandberg Bluegrass	5.00	0.13	5.00	0.13	0.00	0.00
Big Sagebrush	10.00	2.00	10.00	2.00	25.00	7.19
Less Desirable Species Percent Cover		**2.13**		**2.13**		**7.19**
Cheatgrass	40.00	9.88	20.00	5.88	37.50	1.88
Green Rabbitbrush	0.00	0.00	0.00	0.00	5.00	0.13
Undesirable Species Percent Cover		**9.88**		**5.88**		**2.00**

Figure 4. Change in Desirable Cover at the Cottonwood 1 Site from 1987-2012

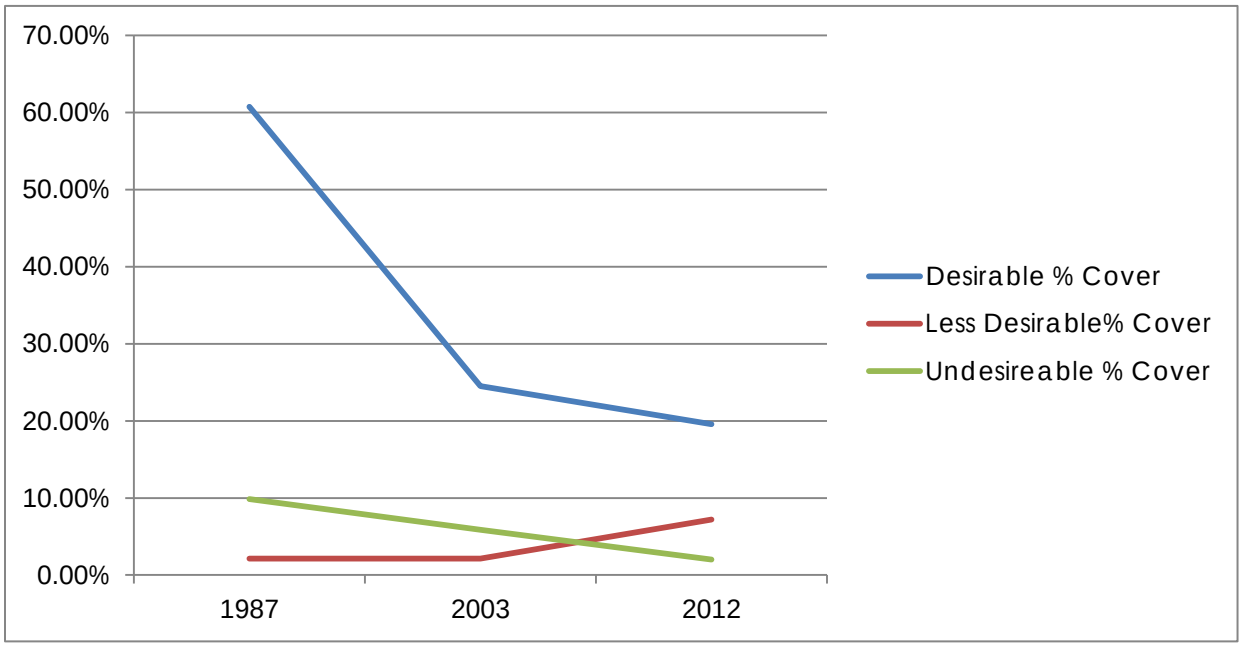


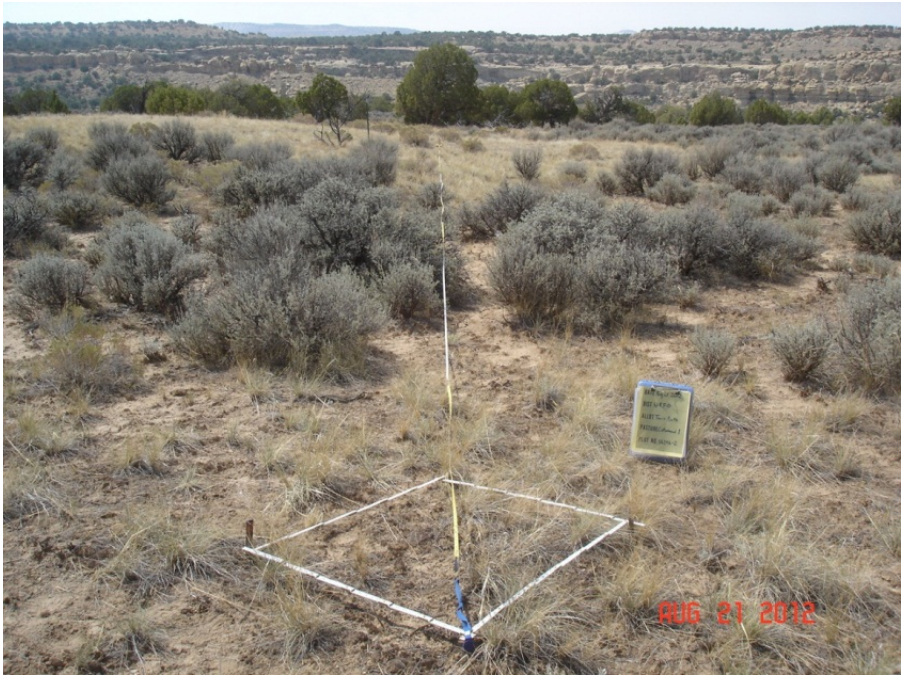
Photo 5

Cottonwood 1 Trend Plot Site. Photo taken 8/6/1987.

Photo 6

Cottonwood 1 Trend Plot Site. Photo taken 8/18/2003.

Photo 7



Cottonwood 1 Trend Plot Site. Photo taken 8/21/2012.

5.4.3 Texas Creek 1 Trend Plot

The Texas Creek 1 trend plot site (Table 10) is located within the North Fork of Texas Creek Drainage. During population inventories multiple bands of wild horses are consistently observed in this area. The large decrease in western wheatgrass and absence of perennial bunchgrass species show a downward trend at this site. The area has likely crossed an ecological threshold that cannot be reversed without intensive human intervention such as seeding and reduction or exclusion of grazing to allow desirable species to reestablish. Long term trend data and photographs indicate this area is not meeting land health standards. Photos 8-11 show the transition from a productive vegetation community to a degraded site with little vegetation and abundant bare ground between 1987 and 2012.

Table 10. Texas Creek 1 Trend Plot (06346-6) Data from 1995, 1999, and 2012

YEAR	1995		1999		2012	
Species	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover
Western Wheatgrass	95.00	24.00	100.00	60.13	92.50	5.44
Winterfat	40.00	3.50	35.00	2.13	32.50	2.38
Desirable Species Percent Cover		**27.50**		**62.25**		**7.81**
Sandberg Bluegrass	50.00	3.13	30.00	1.38	15.00	0.38
Less Desirable Species Percent Cover		**3.13**		**1.38**		**0.38**
Green Rabbitbrush	0.00	0.00	0.00	0.00	7.50	0.19
Greasewood	5.00	4.88	5.00	3.13	5.00	1.31
Undesirable Species Percent Cover		**4.88**		**3.13**		**1.50**

Figure 5. Change in Desirable Cover at the Texas Creek 1 Site from 1995-2012

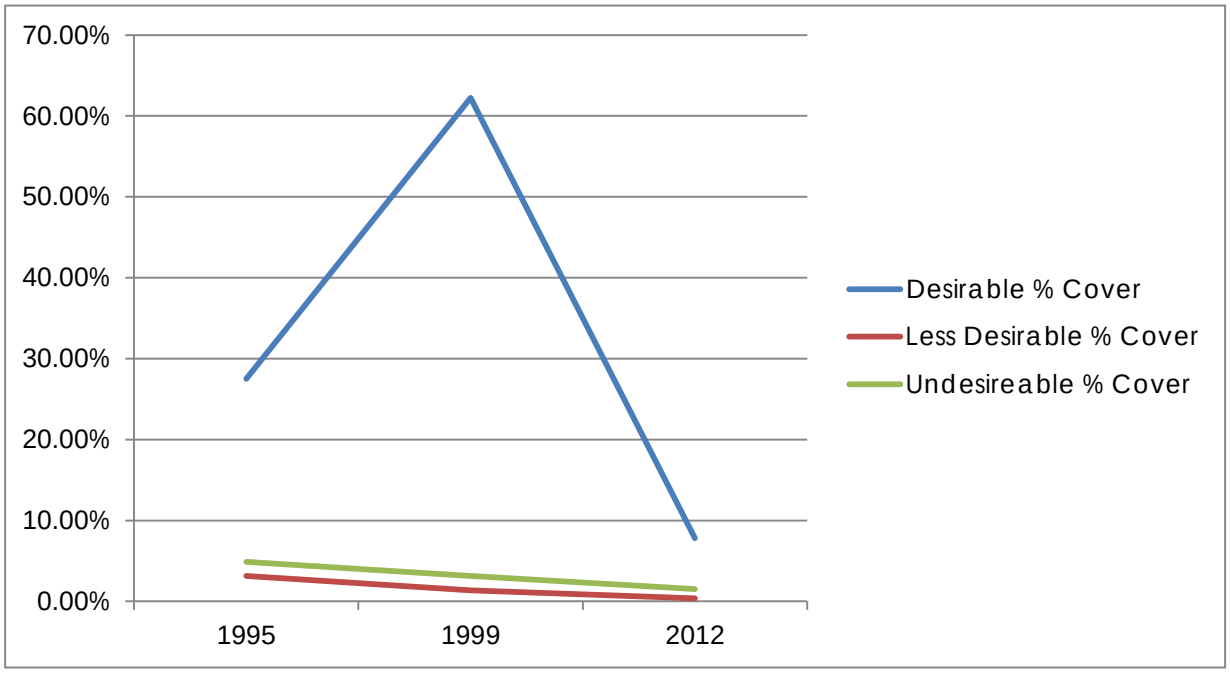


Photo 8

Texas Creek 1 Trend Plot Site. Photo taken 8/10/1987.

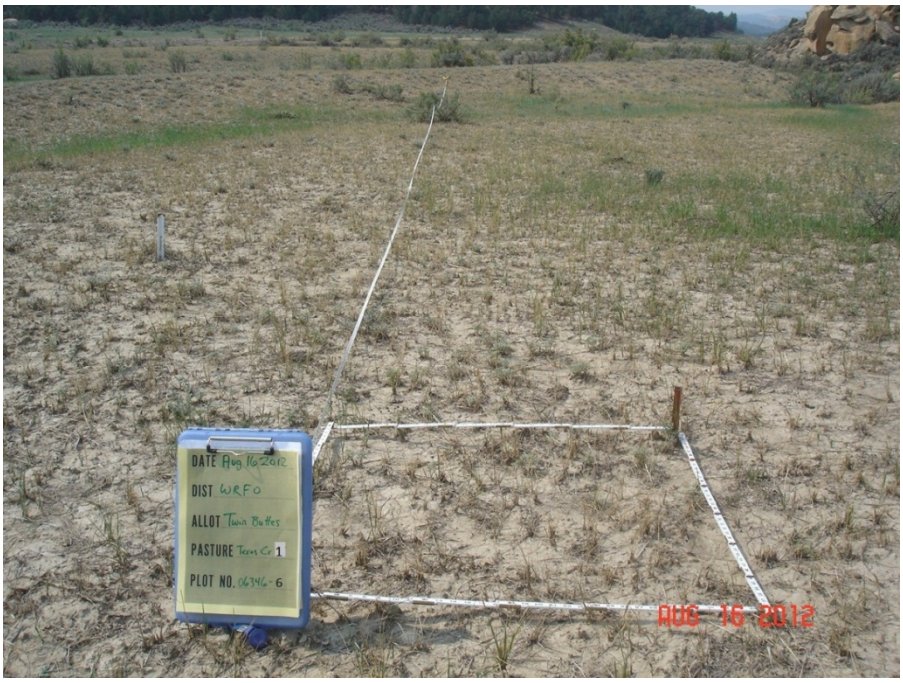
Photo 9

Texas Creek 1 Trend Plot Site. Photo taken 9/28/1995.

Photo 10

Texas Creek 1 Trend Plot Site. Photo taken 8/27/1999.

Photo 11



Texas Creek 1 Trend Plot Site. Photo taken 8/16/2012.

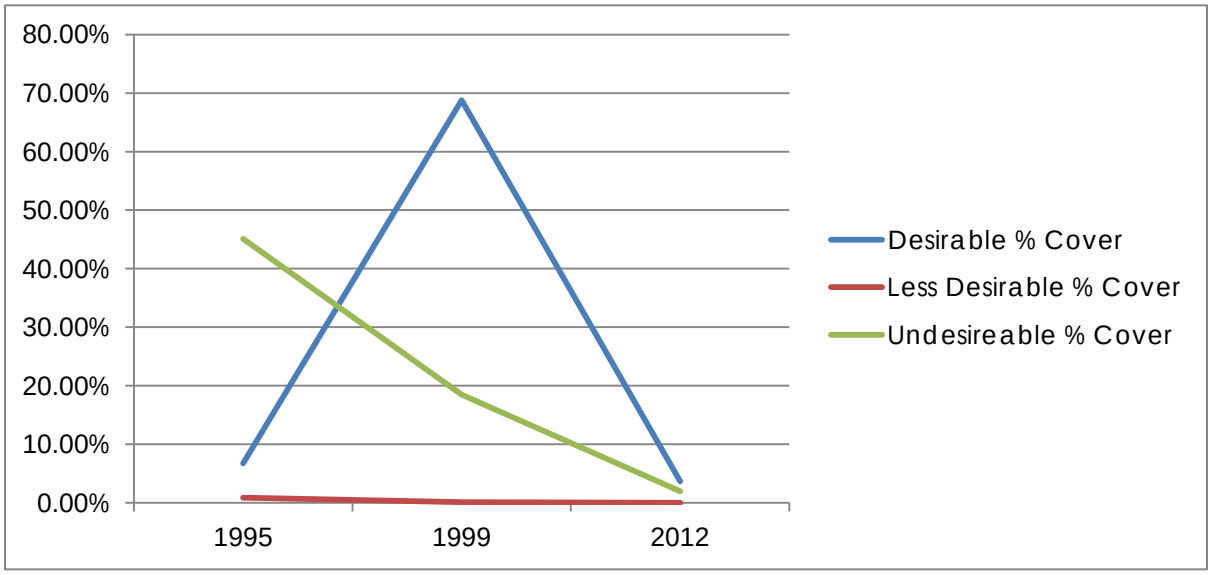
5.4.4 Texas Creek 2 Trend Plot

The Texas Creek 2 trend plot transect (Table 11) is located at the confluence of the north and south forks of Texas Creek near the HA boundary. During the 2012 population inventory 5 bands totaling 22 wild horses were documented within 1.75 miles of this site. The original transect has been disturbed by pipeline construction, a new transect was established in the opposite direction of the previous transect due to the disturbance. The Texas Creek 2 trend site is located within the West Half Texas Creek GMA identified in the 1999 Twin Buttes AMP to receive rotational spring deferment of livestock grazing. However, with the inability to manage wild horses in this area the range continues to show a downward trend due to the continual growing season use by wild horses. The loss of galleta and western wheatgrass is a downward trend however the sharp decrease of cheatgrass is an improvement in condition. Although it is an undesirable species, cheatgrass is palatable for a short period in the spring; the decline in cheatgrass is likely due to elevated utilization of this species due to the loss of other desirable species from this site.

Table 11. Texas Creek 2 Trend Plot (06346-7) Data from 1995, 1999, and 2012

YEAR	1995		1999		2012	
Species	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover
Western Wheatgrass	50.00	5.00	35.00	15.13	0.00	0.00
Galleta	20.00	1.75	0.00	0.00	0.00	0.00
Sand Dropseed	0.00	0.00	80.00	45.88	0.00	0.00
Blue Grama	0.00	0.00	45.00	7.75	47.50	3.69
Desirable Species Percent Cover		**6.75**		**68.75**		**3.69**
Sandberg Bluegrass	10.00	0.88	5.00	0.13	0.00	0.00
Less Desirable Species Percent Cover		**0.88**		**0.13**		**0.00**
Cheatgrass	95.00	45.13	70.00	18.50	15.00	0.38
Greasewood	0.00	0.00	0.00	0.00	5.0	1.6
Undesirable Species Percent Cover		**45.13**		**18.50**		**2.00**

Figure 6. Change in Desirable Cover at the Texas Creek 2 Site from 1995-2012



5.4.5 Texas Creek 3 Trend Plot

The Texas Creek 3 trend site (Table 12) is located near the head of the North Fork of Texas Creek. The decline in western wheatgrass and sand dropseed suggest a downward trend. Photographs taken in 1999 compared to photographs from 2012 show that canopy cover of perennial grass species, particularly the warm season sand dropseed, has decreased sharply; this site has been degraded. Comparison of Photos 12-15 shows a large increase in the amount of bareground vulnerable to erosion. Vegetation trend data and photographs indicate that this area is not meeting land health standards. During the 2012 population inventory, 4 bands totaling 27 wild horses were documented within 2.25 miles of this site.

Table 12. Texas Creek 3 Trent Plot (06346-8) Data from 1987, 1995, and 2012

YEAR	1987		1995		2012	
Species	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover
Western Wheatgrass	100.00	68.75	100.00	45.88	75.00	4.38
Sand Dropseed	40.00	6.38	60.00	6.38	60.00	4.63
Desirable Species Percent Cover		**75.13**		**52.25**		**9.00**
Sandberg Bluegrass	0.00	0.00	0.00	0.00	2.50	0.06
Big sagebrush	0.00	0.00	0.00	0.00	2.50	0.38
Less Desirable Species Percent Cover		**0.00**		**0.00**		**0.44**
Bare Ground	100.00	18.63	100.00	49.88	100.00	64.19
Litter	100.00	59.50	100.00	29.75	100.00	25.69

Figure 7. Change in Desirable Cover at the Texas Creek 3 Site from 1987-2012

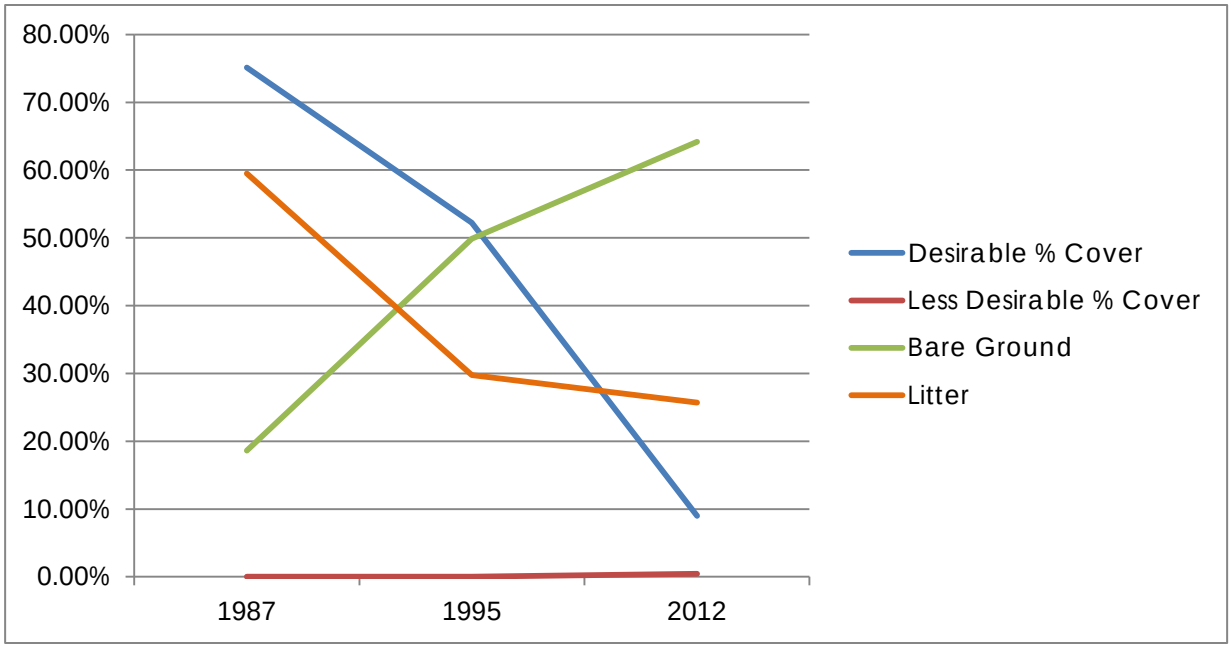
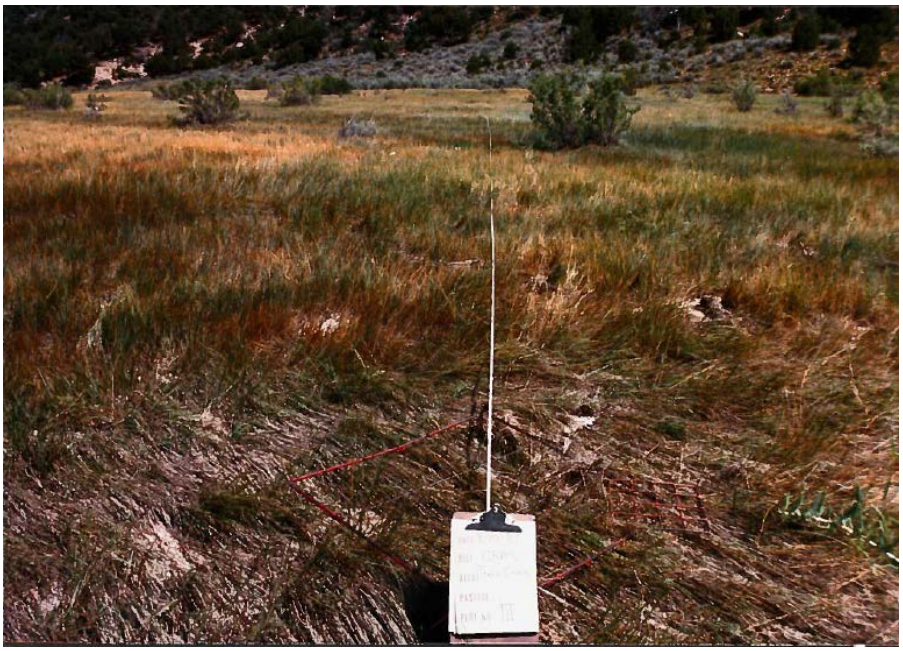


Photo 12

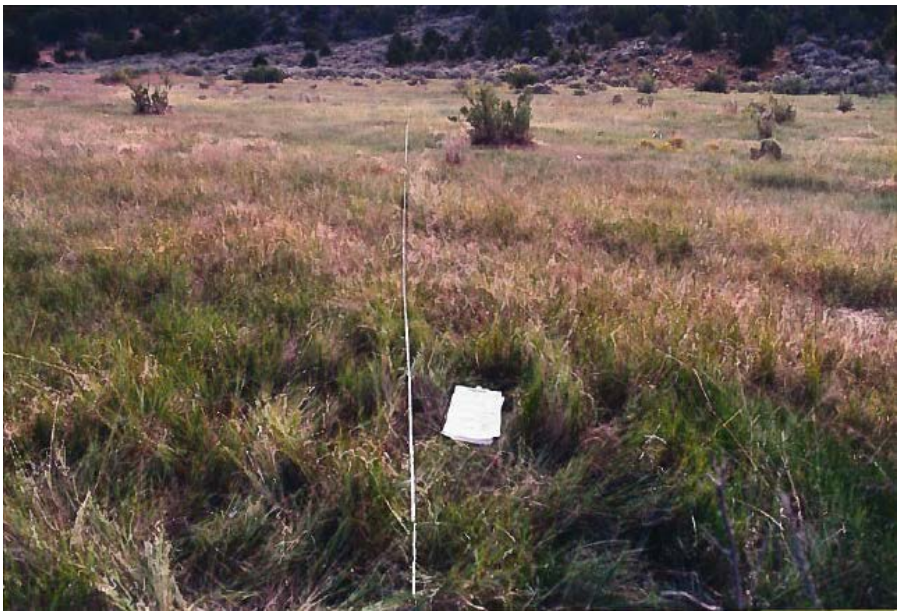


Texas Creek 3 Trend Plot Site. Photo taken 8/10/1987.

Photo 13

Texas Creek 3 Trend Plot Site. Photo taken 9/28/1995.

Photo 14



Texas Creek 3 Trend Plot Site. Photo taken 8/27/1999.

Photo 15

Texas Creek 3 Trend Plot Site. Photo taken 8/16/2012.

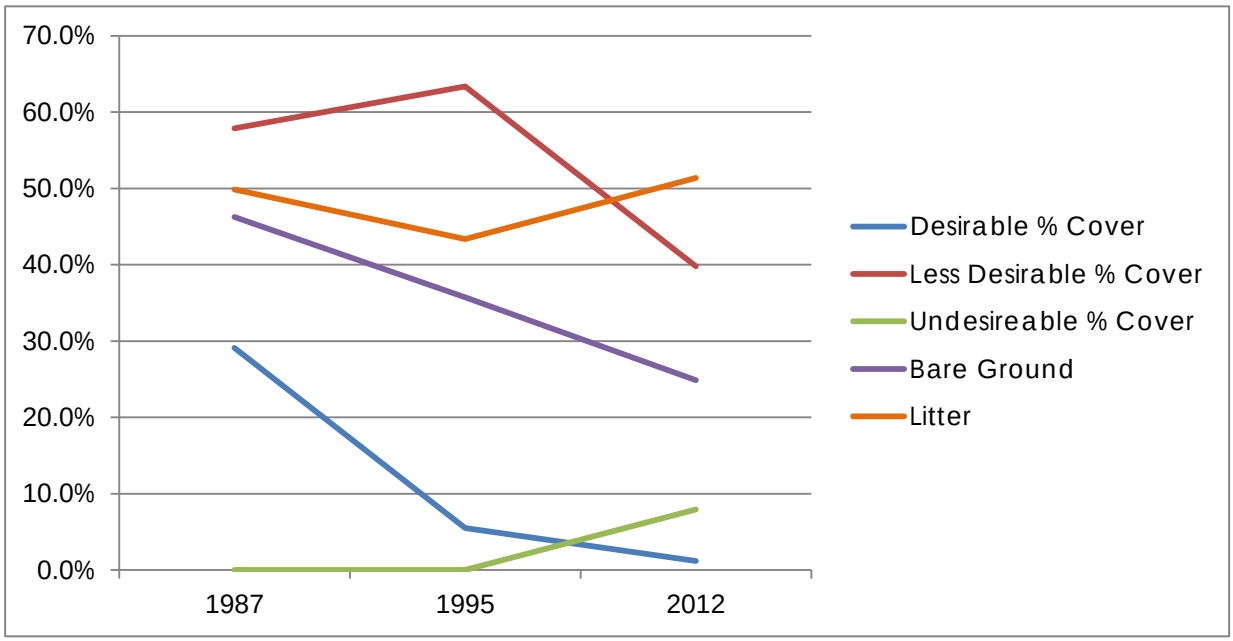
5.4.6 Texas Creek 4 Trend Plot

The Texas Creek 4 site (Table 13) is located approximately 2 miles north west of Texas Mountain off of BLM Road 1064. The monitoring results show this site has transitioned to a vegetation community dominated by less desirable prairie junegrass a drought and grazing tolerant species adapted to the ecological site covered by this transect and Wyoming big sagebrush. The decrease in canopy cover of winterfat and absence of bunchgrass species indicate forage production within this site has declined.

Table 13. Texas Creek 4 Trend Plot (06346-9) Data from 1987, 1995, and 2012

YEAR	1987		1995		2012	
Species	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover
Indian Ricegrass	5.00	0.13	0.00	0.00	0.00	0.00
Western wheatgrass	85.00	20.50	10.00	0.25	7.50	0.50
Winterfat	30.00	8.50	20.00	5.25	15.0	0.7
Desirable Species Percent Cover		**29.1**		**5.5**		**1.2**
Sandberg bluegrass	15.0	1.0	5.0	0.8	2.5	0.1
Prairie junegrass	50.0	16.3	70.0	23.8	92.5	11.9
Big sagebrush	65.0	40.6	85.0	38.9	77.5	27.9
Less Desirable Species Percent Cover		**57.9**		**63.4**		**39.8**
Broom snakeweed	0.00	0.00	0.00	0.00	72.5	7.9
Undesirable Species Percent Cover		**0.00**		**0.00**		**7.94**
Bare Ground	95.0	46.3	100.0	35.8	100.0	24.9
Litter	95.0	49.9	100.0	43.4	100.0	51.4

Figure 8. Change in Desirable Cover at the Texas Creek 4 Site from 1987-2012



5.4.7 Red Wash 1 Trend Plot

The Red Wash 1 trend site (Table 14) is located on a bench between the head of Water Canyon and Red Wash; wild horses have historically been inventoried in this area during population surveys. The loss of Indian ricegrass and needle and thread (two important bunchgrass forage species) suggests a downward trend from mixed grass/sagebrush site to a site dominated primarily by western wheatgrass and grazing tolerant species such as sandberg bluegrass and prairie junegrass. The loss of the large bunchgrass species from the site results in a decline of available forage. Currently this site is likely meeting land health standards however, under continued or increased use levels, the condition of this area is expected to continue to decline over time. Photos 16-18 show the decrease in cover of desirable species from 1987-2012.

Table 14. Red Wash 1 Trend Plot (06346-13) Data from 1987, 2003, and 2012

YEAR	1987		2003		2012	
Species	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover
Needle & thread	5.00	0.75	5.00	0.13	0.00	0.00
Indian ricegrass	10.00	1.50	0.00	0.00	0.00	0.00
Western wheatgrass	35.00	13.38	70.00	11.25	80.00	6.00
Winterfat	40.00	14.13	30.00	7.25	0.00	0.00
Desirable Species Percent Cover		**29.75**		**18.63**		**6.00**
Prairie junegrass	40.00	7.63	25.00	4.25	0.00	0.00
Sandberg bluegrass	60.00	9.25	80.00	12.75	65.00	5.69
Big sagebrush	75.00	50.00	50.00	39.13	70.0	22.8
Fourwing saltbush	0.00	0.00	0.00	0.00	12.5	0.6
Less Desirable Species Percent Cover		**66.88**		**56.13**		**29.13**
Cheatgrass	45.00	14.25	40.00	10.50	25.00	0.63
Broom snakeweed	0.00	0.00	0.00	0.00	7.5	0.5
Undesirable Species Percent Cover		**14.25**		**10.50**		**1.13**

Figure 9. Change in Desirable Cover at the Red Wash 1 Site from 1987-2012

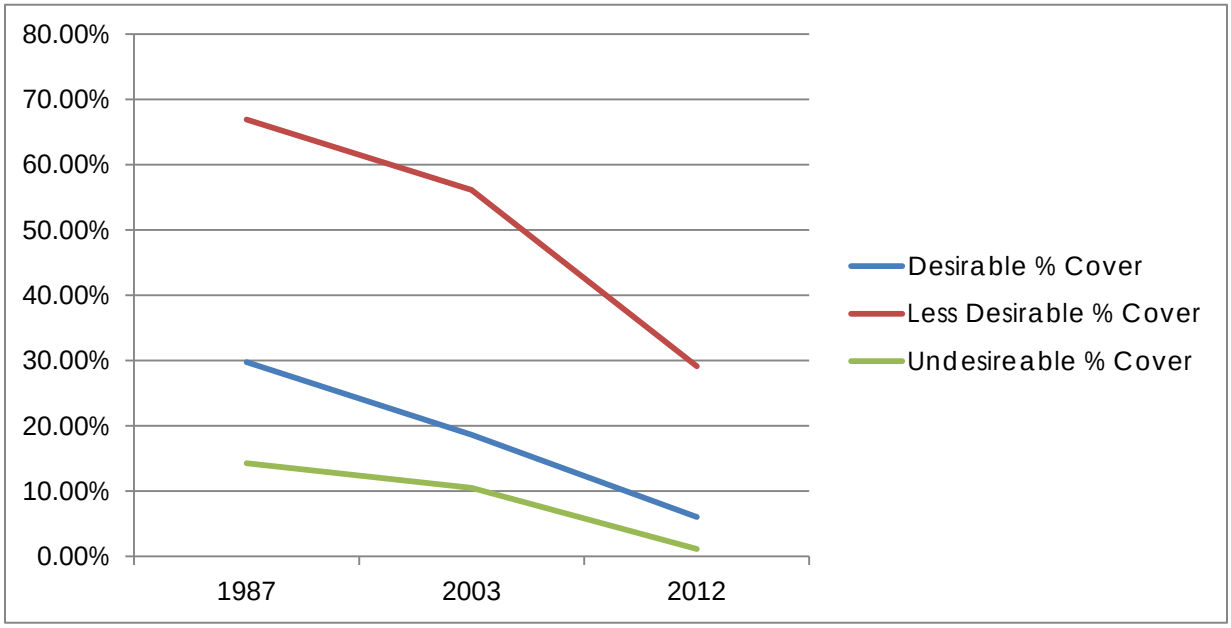


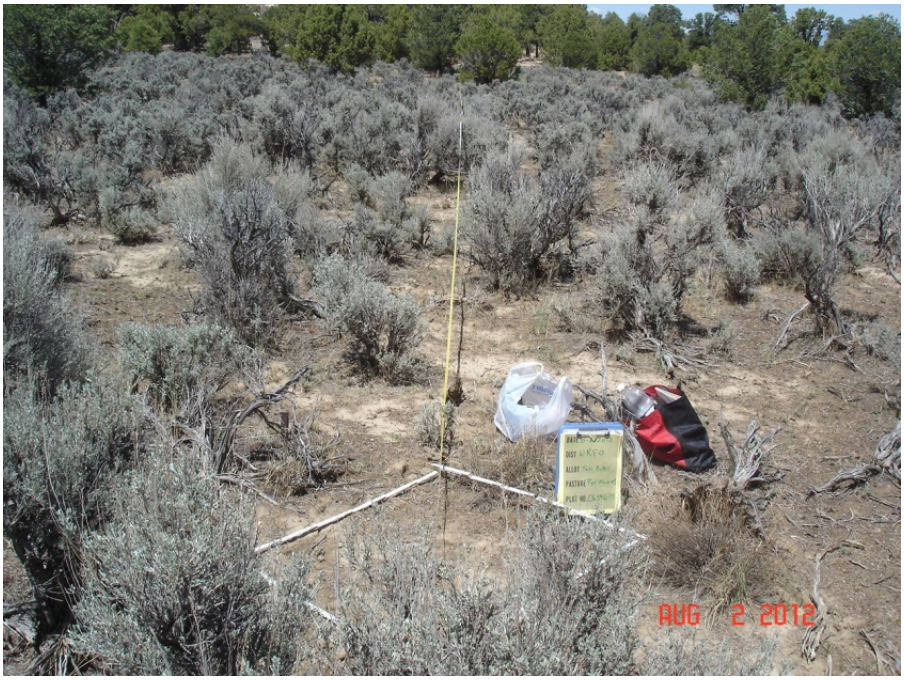
Photo 16

Red Wash 1 Trend Plot Site. Photo taken 8/6/1987.

Photo 17

Red Wash 1 Trend Plot Site. Photo taken 8/18/2003.

Photo 18



Red Wash 1 Trend Plot Site. Photo taken 8/2/2012.

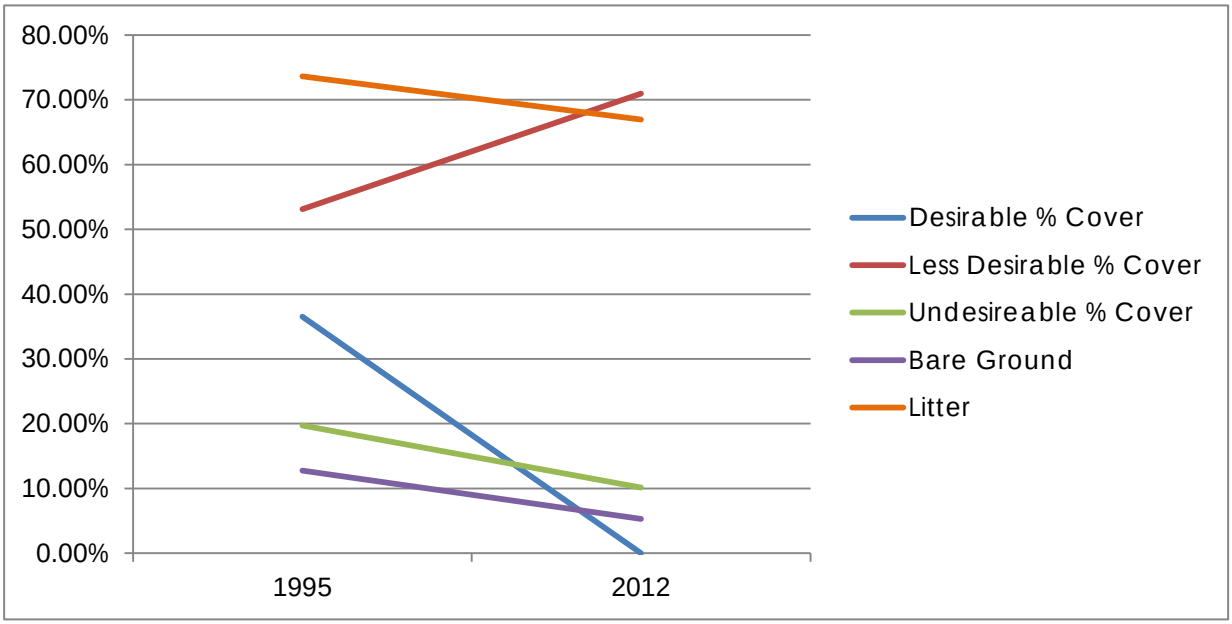
5.4.8 Texas Mountain 1 Trend Plot

The Texas Mountain 1 site (Table 15) is located south of Texas Mountain along BLM Road 1063. This area is historically used by wild horses during the summer and fall months. This site only had one year of comparable Daubenmire data that was collected in 1995. The loss of western wheatgrass and the increase of the grazing tolerant prairie junegrass shows a downward trend for this site. During collection of data in 2012 it was noted that this area had received heavy wild horse use; forage utilization was estimated to be 75 percent. Complete livestock grazing deferment in this area has occurred since 2005. This site is located within the limited summer range of the WDHA and is indicative that deferment of livestock grazing alone has not been sufficient to avoid a decline in rangeland health to the point that land health standards are not being met.

Table 15. Texas Mountain 1 Trend Plot (06346-14) Data from 1995 and 2012

YEAR	1995		2012	
Species	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover
Western wheatgrass	65.00	29.50	0.00	0.00
Elk Sedge	15.00	7.00	0.00	0.00
Desirable Species Percent Cover		**36.50**		**0.00**
Big sagebrush	60.00	25.75	80.0	27.1
Serviceberry	50.00	27.38	20.0	4.1
Prairie junegrass	0.00	0.00	100.00	32.13
Snowberry	0.00	0.00	42.5	7.6
Less Desirable Species Percent Cover		**53.13**		**70.94**
Rubber Rabbitbrush	55.00	19.75	85.0	10.1
Undesirable Species Percent Cover		**19.75**		**10.13**
Bare Ground	100.00	12.75	100.00	5.32
Litter	100.00	73.63	100.00	66.92

Figure 10. Change in Desirable Cover at the Texas Mountain 1 Site from 1995-2012.



5.4.9 Texas Mountain 2 Trend Plot

The Texas Mountain 2 site (Table 16) is located on a bench at the base of the east side of Texas Mountain. Wild horses have historically concentrated in this area during late spring, summer, and fall and are frequently observed in the area. This site has undergone a downward trend, with the exception of sandberg bluegrass which is a species that is highly tolerant to heavy grazing. The loss or decline of grass species is a consequence of continuous overutilization that occurs in this area, the forage utilization Photos 1-4 were taken approximately 300 yards southeast of this site. Livestock grazing has been deferred from this area since 2005 in an effort to prevent degradation. Photos 19-22 show a transition from a mixed grass/sagebrush community to a shrub dominated community with little grass understory.

Table 16. Texas Mountain 2 Trend Plot (06346-15) Data from 1987, 1995, and 2012

YEAR	1987		1995		2012	
Species	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover
Needle & thread	5.00	0.75	0.00	0.00	0.00	0.00
Western wheatgrass	75.00	19.75	100.00	26.38	2.50	0.06
Elk sedge	40.00	8.75	40.00	12.88	0.00	0.00
Desirable Species Percent Cover		**29.25**		**39.25**		**0.06**
Prairie junegrass	65.00	26.75	5.00	0.13	0.00	0.00
Sandberg bluegrass	0.00	0.00	25.00	2.50	65.00	6.00
Big sagebrush	60.00	25.25	60.00	25.25	47.5	13.7
Rubber rabbitbrush	10.00	3.75	5.00	0.75	0.00	0.00
Serviceberry	40.00	22.25	40.00	26.50	57.5	17.5
Less Desirable Species Percent Cover		**78.00**		**55.13**		**37.19**
Broom snakeweed	0.00	0.00	0.00	0.00	10.0	0.3
Pinyon	0.00	0.00	5.00	4.25	7.5	4.1
Juniper	0.00	0.00	0.00	0.00	2.5	0.1
Undesirable Species Percent Cover		**0.00**		**4.25**		**4.38**
Bare Ground	100.00	14.50	100.00	25.75	97.50	20.75
Litter	100.00	74.00	100.00	59.50	100.00	60.75

Figure 11. Change in Desirable Cover at the Texas Mountain 2 Site from 1987-2012

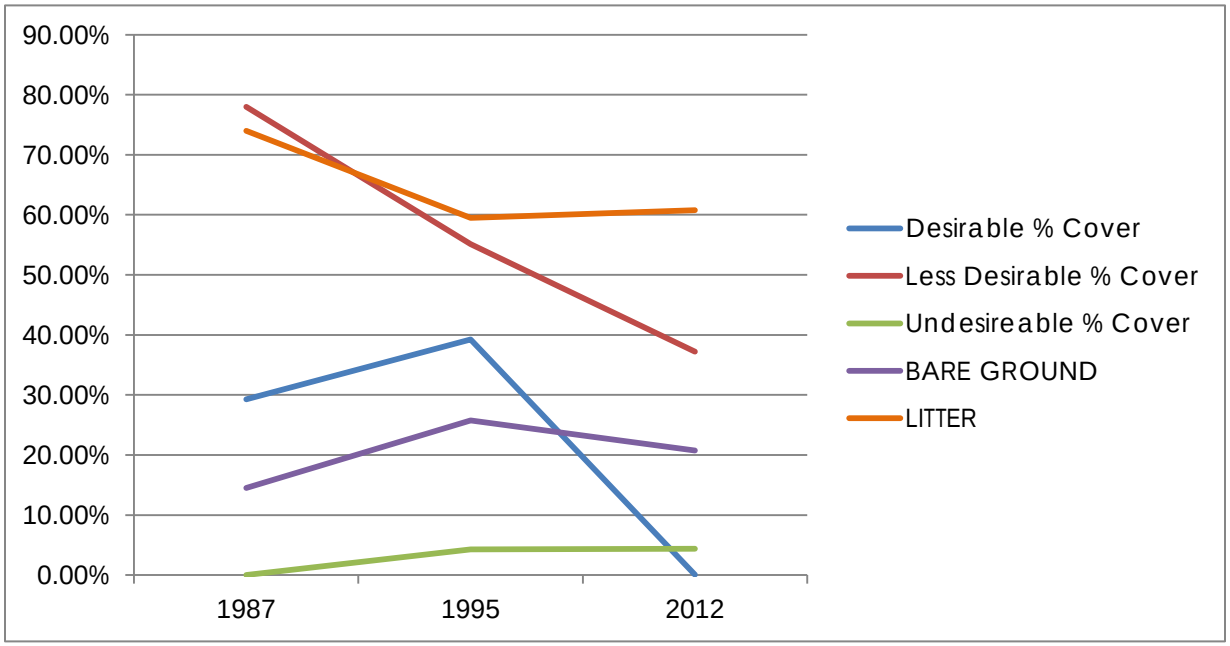


Photo 19

Texas Mountain 2 Trend Plot Site. Photo taken 8/5/1987.

Photo 20

Texas Mountain 2 Trend Plot Site. Photo taken 10/17/1995.

Photo 21

Texas Mountain 2 Trend Plot Site. Photo taken 8/30/1999.

Photo 22

Texas Mountain 2 Trend Plot Site. Photo taken 9/13/2012.

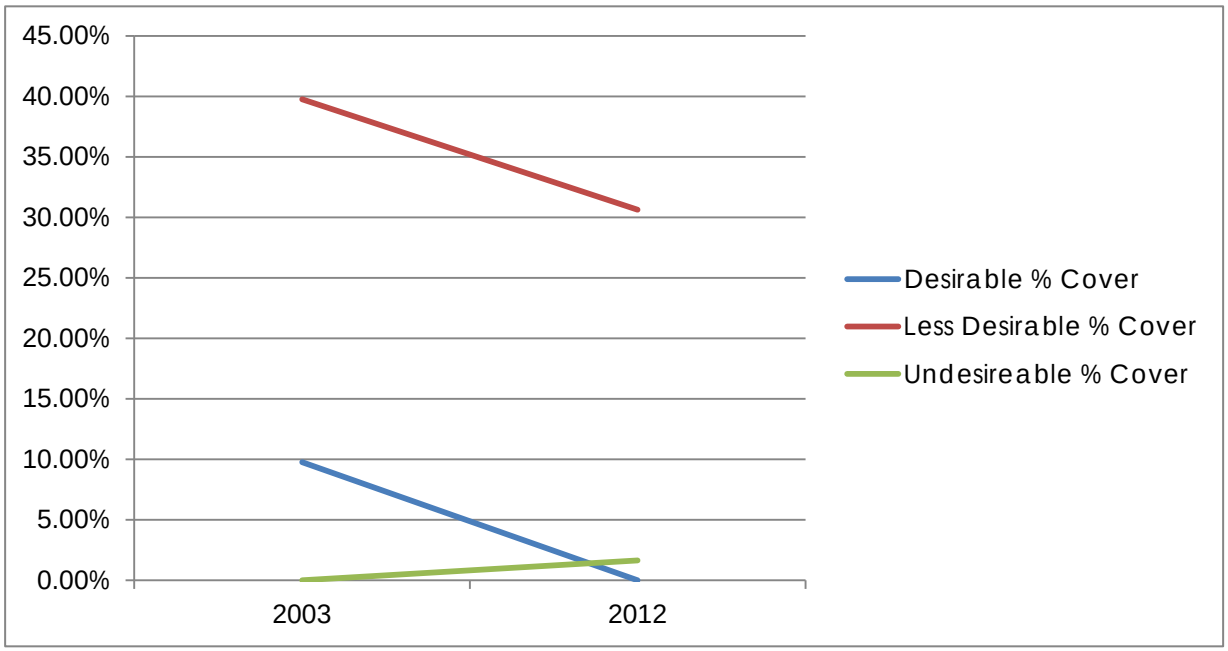
5.4.10 Water Canyon 1 Trend Plot

The Water Canyon 1 site (Table 17) is located on a bench near the confluence of Big Horse Draw and Water Canyon. Wild horses have historically been inventoried in this area during population surveys. This site has undergone a downward trend with the loss of western wheatgrass, needle and thread, and Colorado wild rye. As shown in the data, the increase in canopy cover composed of sandberg bluegrass suggests this site has transitioned to more grazing tolerant vegetation community which provides less forage and reduced ground cover than the desired vegetation community.

Table 17. Water Canyon 1 Trend Plot (06346-23) Data from 2003 and 2012

YEAR	2003		2012	
Species	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover
Needle & thread	45.00	6.00	0.00	0.00
Colorado wildrye	30.00	2.63	0.00	0.00
Western wheatgrass	20.00	1.13	0.00	0.00
Desirable Species Percent Cover		**9.75**		**0.00**
Sandberg bluegrass	55.00	3.88	75.00	6.19
Big sagebrush	75.00	30.88	77.5	24.4
Shadscale	10.00	5.00	0.00	0.00
Less Desirable Species Percent Cover		**39.75**		**30.63**
Cheatgrass	0.00	0.00	12.50	0.31
Broom snakeweed	0.00	0.00	27.5	1.3
Undesirable Species Percent Cover		**0.00**		**1.63**

Figure 12. Change in Desirable Cover at the Water Canyon 1 Site from 2003 to 2012



5.4.11 Water Canyon 2 Trend Plot

The Water Canyon 2 site (Table 18) is located at the head of Water Canyon and during the last population inventory, wild horses were documented in this area. This site has experienced a downward trend in condition with the loss of Indian ricegrass, needle and thread grass, and western wheatgrass. This site has also transitioned to a community dominated by sandberg bluegrass and prairie junegrass, two grazing tolerant species. Photos 23-25 show the loss of bunchgrass species from the site.

Table 18. Water Canyon 2 Trend Plot (06346-17) Data from 1987, 2003, and 2012

YEAR	1987		2003		2012	
Species	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover
Needle & thread	25.00	6.00	55.00	8.50	0.00	0.00
Indian ricegrass	5.00	0.75	5.00	0.13	0.00	0.00
Western wheatgrass	40.00	10.00	30.00	3.13	0.00	0.00
Desirable Species Percent Cover		**16.75**		**11.75**		**0.00**
Sandberg bluegrass	50.00	3.75	45.00	2.38	45.00	3.31
Prairie junegrass	65.00	24.88	40.00	4.00	72.50	3.38
Big sagebrush	85.00	36.00	45.00	16.63	87.5	22.0
Fourwing saltbush	0.00	0.00	0.00	0.00	2.5	0.1
Less Desirable Species Percent Cover		**64.63**		**23.00**		**28.75**
Cheatgrass	5.00	0.75	5.00	0.75	5.00	0.13
Broom snakeweed	0.00	0.00	25.00	9.50	32.5	1.8
Prickly Pear	0.00	0.00	10.00	0.88	5.0	0.1
Pinyon	0.00	0.00	0.00	0.00	5.0	1.9
Undesirable Species Percent Cover		**0.75**		**11.13**		**3.94**

Figure 13. Change in Desirable Cover at the Water Canyon 2 Site from 1987-2012

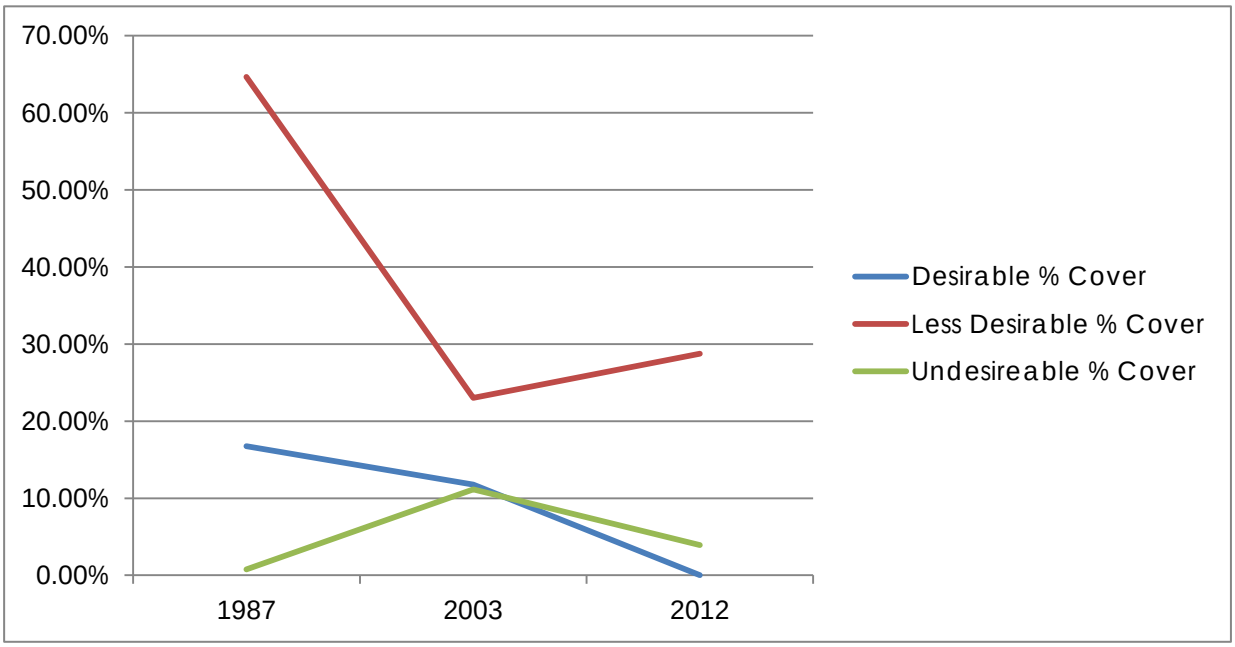
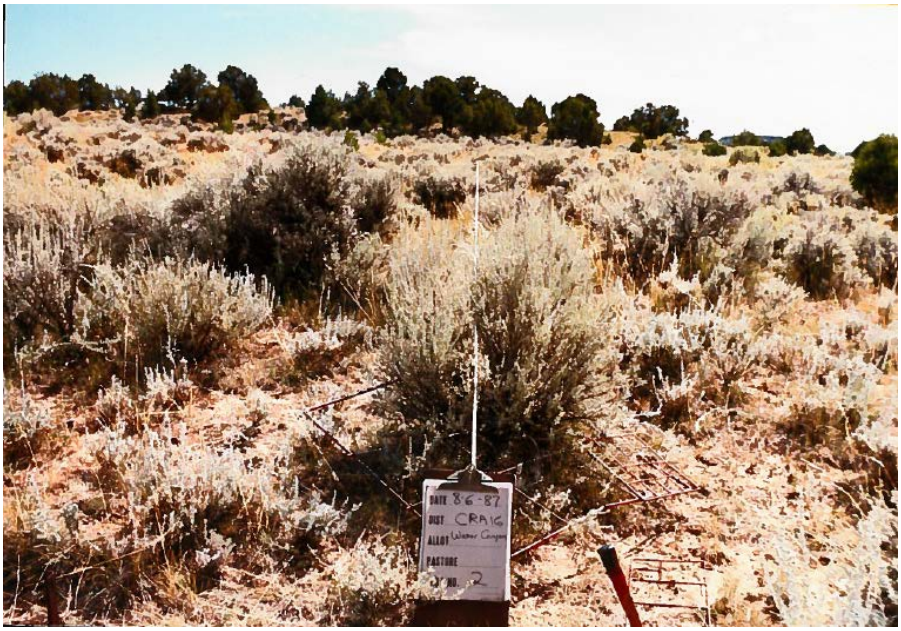


Photo 23

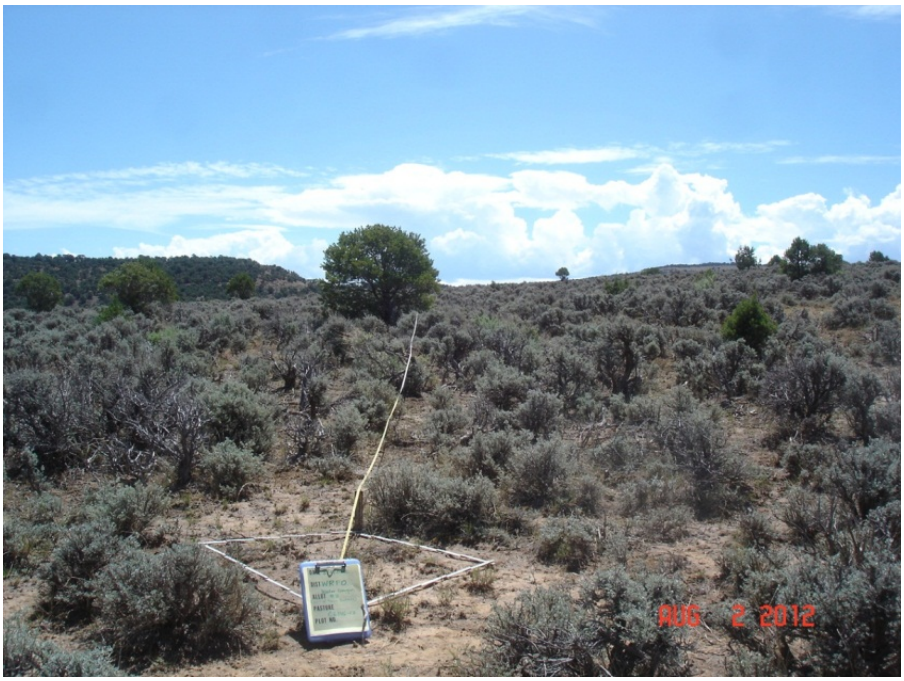


Water Canyon 2 Trend Plot Site. Photo taken 8/6/1987.

Photo 24

Water Canyon 2 Trend Plot Site. Photo taken 8/19/2003.

Photo 25



Water Canyon 2 Trend Plot Site. Photo taken 8/2/2012. (Note: this photo was taken from a different angle than the other photos of the Water Canyon 2 site.)

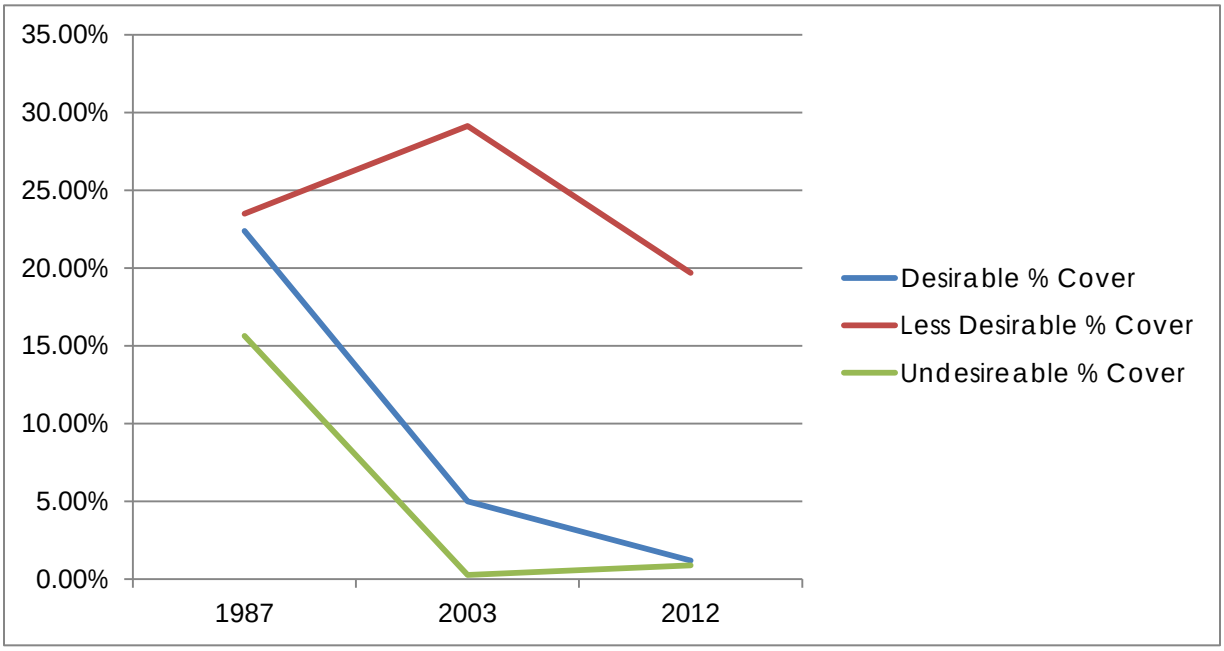
5.4.12 Water Canyon 3 Trend Plot

The Water Canyon 3 site (Table 19) is located in West Fourmile Draw approximately one mile west of Douglas Creek. Like other sites this area shows a downward trend in condition due to the loss of important bunchgrass species, the increase of grazing tolerant forage species, and the increase of Wyoming big sagebrush. The decline in robust bunchgrass species indicates a reduction in available forage within this site.

Table 19. Water Canyon 3 Trend Plot (06346-18) Data from 1987, 2003, and 2012

YEAR	1987		2003		2012	
Species	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover
Needle & thread	45.00	4.13	20.00	2.38	0.00	0.00
Galleta	40.00	12.38	15.00	1.00	10.00	1.19
Colorado wildrye	5.00	0.75	15.00	1.63	0.00	0.00
Western wheatgrass	15.00	5.13	0.00	0.00	0.00	0.00
Desirable Species Percent Cover		**22.38**		**5.00**		**1.19**
Sandberg bluegrass	25.00	1.25	30.00	2.63	10.00	0.56
Prairie junegrass	0.00	0.00	0.00	0.00	15.00	1.00
Big sagebrush	55.00	21.50	40.00	24.63	55.0	18.1
Shadscale	5.00	0.75	5.00	1.88	0.00	0.00
Less Desirable Species Percent Cover		**23.50**		**29.13**		**19.69**
Broom snakeweed	45.00	11.75	0.00	0.00	10.0	0.6
Cheatgrass	15.00	3.88	10.00	0.25	12.50	0.31
Undesirable Species Percent Cover		**15.63**		**0.25**		**0.88**

Figure 14. Change in Desirable Cover at the Water Canyon 3 Site from 1987-2012



5.4.13 Bull Draw Fire Trend Plot

The Bull Draw Fire site (Table 20) was established within the Bull Draw fire scar. The trend of this site is typical of a burned area with early dominance by seeded grass species and the eventual increase of rabbitbrush. Although species diversity and cover has increased since 1995, the diversity has decreased since 2003 with the loss of orchard grass and Indian ricegrass. Slight utilization was noted in the area. In reviewing the data and Photos 26-28 it appears the burned area is continuing to stabilize.

Table 20. Bull Draw Fire Trend Plot (06346-24) Data from 1995, 2003, and 2012

YEAR	1995		2003		2012	
Species	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover	Percent Frequency	Percent Canopy Cover
Pubescent wheatgrass	70.00	15.63	75.00	28.13	32.50	7.69
Orchardgrass	55.00	11.00	5.00	0.13	0.00	0.00
Western wheatgrass	0.00	0.00	5.00	0.13	65.00	10.75
Indian ricegrass	0.00	0.00	5.00	0.75	0.00	0.00
Desirable Species Percent Cover		**26.63**		**29.13**		**18.44**
Sandberg bluegrass	0.00	0.00	5.00	0.75	2.50	0.38
Less Desirable Species Percent Cover		**0.00**		**0.75**		**0.38**
Cheatgrass	0.00	0.00	30.00	5.50	0.00	0.00
Rubber rabbitbrush	0.00	0.00	0.00	0.00	10.00	3.50
Broom snakeweed	0.00	0.00	0.00	0.00	5.00	0.44
Japanese brome	0.00	0.00	5.00	0.13	0.00	0.00
Undesirable Species Percent Cover		**0.00**		**5.63**		**3.94**

Figure 15. Change in Desirable Cover at the Bull Draw Fire Site from 1995-2012

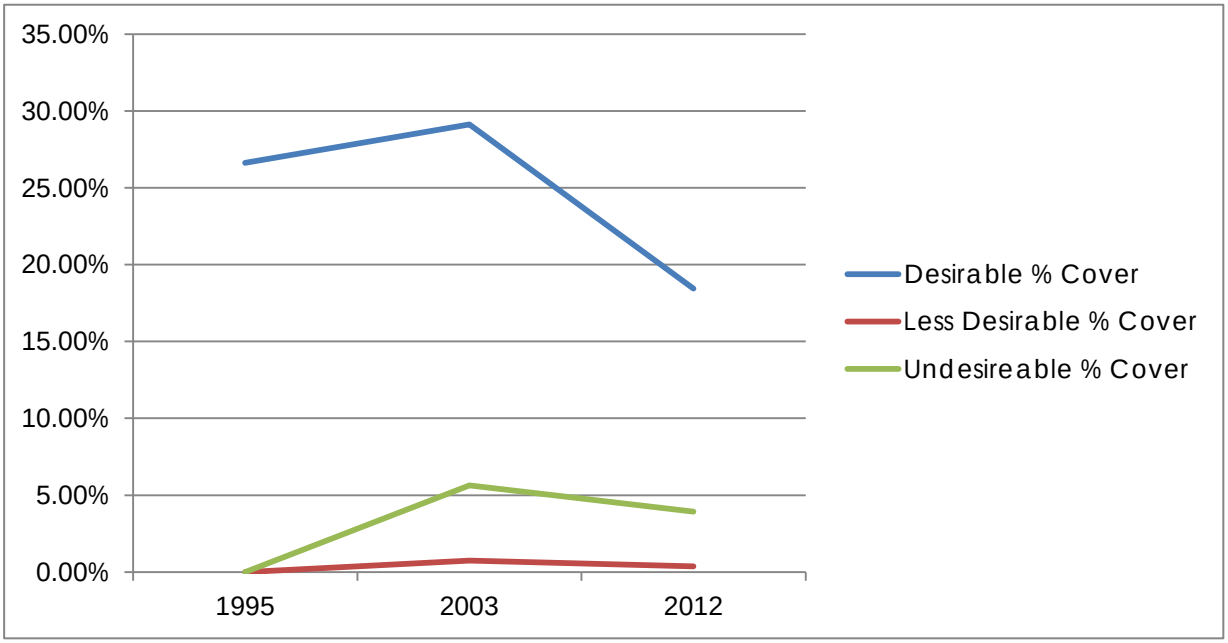
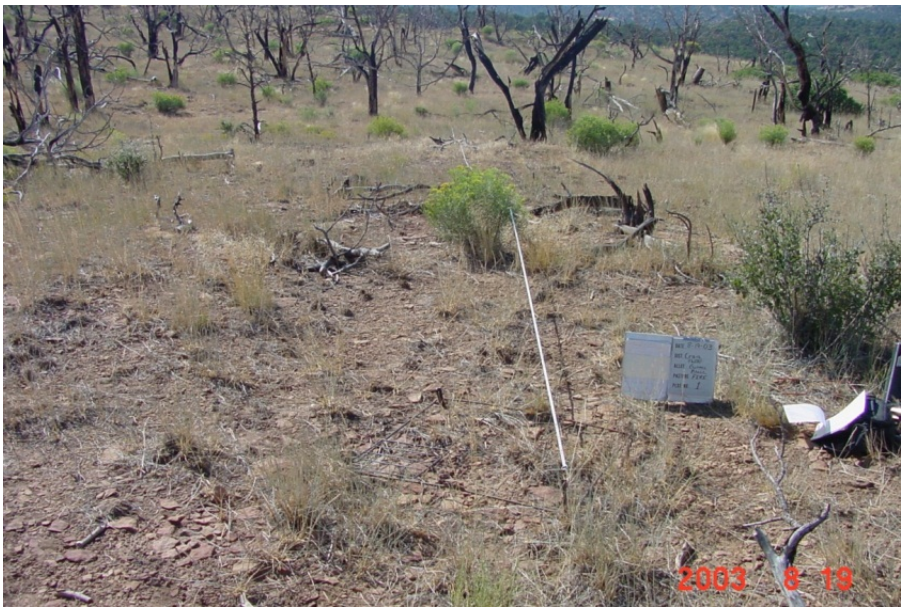


Photo 26

Bull Draw Fire Trend Plot Site. Photo taken 10/11/1995.

Photo 27



Bull Draw Fire Trend Plot Site. Photo taken 8/19/2003.

Photo 28

Bull Draw Fire Trend Plot Site. Photo taken 9/4/2012.

5.4.14 Wild Rose Fire

The Wild Rose Fire which burned 1,064 acres west of Texas Mountain on June 19-24, 2012 was not seeded to facilitate rehabilitation of the burned area as was done for the Bull Draw Fire. This fire was not seeded due to low probability of seedling establishment based on the wild horse population and concentrated use in that area. Without adequate relief from grazing pressure, it is unlikely desirable vegetation species will establish in sufficient density and diversity to persist throughout the burned area. As a result of the wildfire, this area is currently not meeting land health standards, without reduction of grazing pressure to promote establishment and reproduction of desirable species, it is unlikely that the area burned during the Wild Rose Fire will begin to move toward achieving land health standards.

5.4.15 Summary of Trend Plot Data

Some areas within the WDHA have already transitioned to vegetation communities with less desirable species composition. These communities are unable to adequately protect upland soil resources from erosion, do not contribute to efficient infiltration and permeability to maintain soil moisture necessary for optimal plant growth, provide less available forage for grazing animals, and are lacking in diversity and density necessary to ensure reproductive capability and sustainability. The Texas Creek 1, 2, and 3 sites are degraded and currently not meeting land health standards. The Texas Creek 4, Red Wash 1, Texas Mountain 1, Texas Mountain 2, and Water Canyon 2 sites are likely currently meeting land health standards but due to concentrated wild horse use within these areas and potential for overutilization, these sites are vulnerable to deterioration and failure to meeting land health standards. The Water Canyon 1 and Water Canyon 3 sites show a downward trend however these sites do not appear to be as vulnerable to

degradation due to limited wild horse presence in the area and livestock grazing management outlined in the Twin Buttes AMP. With minimal grazing pressure, the Bull Draw fire will likely continue to stabilize and improve, if the population of wild horses increases and wild horse use becomes more concentrated in this area, this site would be vulnerable to degradation. The Horse Draw site appears to be static from 2003 but is likely to show improvement due to negligible wild horse use and grazing management outlined in the Twin Buttes AMP. The Cottonwood trend site is the only site that appears to be improving; this area has received little or no wild horse use since 1994, and is within a GMA identified in the Twin Buttes AMP for rotational spring grazing deferment aimed at improving rangeland conditions.

All of the trend sites have shown a downward trend from 1987 when the population of wild horses within the WDHA was the lowest during the period of data analyzed (1987-2012). The Bull Draw Fire site was not established until 1995 to monitor progress of rehabilitation measures taken following a wildfire event, this site shows a downward trend from 2003 when the estimated wild horse population was approximately half the size of the populations inventoried in 2012. Without action it is likely that additional rangeland habitats both within and outside of the WDHA will decline to the point they are no longer capable of meeting land health standards.

5.5 Spring Monitoring

Within the WDHA there are seven known perennial springs which are all located within the summer range habitat (Map 15). Wild horses primarily use three of these springs: Palouse, Big Cedar, and Wild Rose as well as two unnamed seeps east of Texas Mountain. Pit reservoirs constructed in the area generally do not retain water throughout the summer and fall in sufficient quantities to provide reliable season long water. Due to the limited water sources available and concentrated wild horse distribution within the summer range, heavy use of these sources has occurred. The concentrated heavy use has led to degradation of riparian and upland communities that have crossed an ecological threshold in which they are unlikely to recover without human intervention. Photos 29-37 are of water sources located in the summer habitat around the Texas Mountain area. These photos were taken June 14th 2012; all water sources in Photos 29-37 are located in the livestock grazing deferment area.

Photo 29

Palouse Spring evidence of trampling and riparian degradation

Photo 30

Wild Rose Spring evidence of trampling and riparian degradation

Photo 31

Wild horse at Wild Rose Spring Standing in source, upland degradation of surrounding area

Photo 32

Big Cedar Spring, evidence of trampling and riparian degradation

Photo 33

Unnamed Seep, wild horse concentration around limited water source, upland and riparian degradation

Photo 34

Unnamed Seep, limited water source wild horses are concentrated around shown in photo 33

Photo 35

Small Seep with limited available water

Photo 36

Degraded uplands surrounding small seep

Photo 37

Degraded uplands surrounding small seep

Repeated excessive use of these areas has created degraded riparian zones that do not meet land health standards and are unlikely to fully recover without substantial investment of time and funding to protect and rehabilitate both the riparian zone and surrounding uplands. These sites are lentic riparian systems which should support diverse vigorous riparian vegetation communities however, riparian species are absent or severely lacking within all of these areas. The absence of riparian vegetation, repeated trampling, damage to spring source, and increased demand for water leave these areas vulnerable to erosion, irreversible impairment or complete loss of critical water resources.

6.0 Summary

During preparation of every land use plan for the WRFO since passage of The Act, the WDHA has been considered for designation as an HMA including a resource management plan amendment specifically focused on long term management potential of the HA. Through each land use plan it was determined that essential habitat is insufficient to sustain a healthy wild horse herd on healthy rangelands within the WDHA therefore, the HA has not been designated as an HMA. The WRFO established the Piceance-East Douglas HMA within the habitat used by wild horses at the passage of The Act; this area was chosen for long term management of wild horses as it provides the essential habitat components necessary to successfully manage a healthy wild horse herd while also maintaining a TNEB.

Data and observations for each of the elements to consider in making a determination that excess wild horses are present show that the current population of wild horses within the WDHA is not suitable to maintaining or making progress toward achieving land health standards. Concentrated overutilization of vegetation has led to a transition to undesirable vegetation communities that are not meeting land health standards within some areas of the WDHA. Rangelands that have not transitioned to undesirable states have shown a decline in desirable species composition and density, these sites are vulnerable to further deterioration to the point it is no longer capable of meeting or moving toward achieving land health standards especially following a drought year. Livestock grazing has been reduced or deferred within the WDHA to avoid long term degradation and reduced sustainability of the rangeland resources. Despite the reduction of livestock use, the population of wild horses within and outside of the WDHA has increased to the highest level since passage of The Act resulting in declining rangeland conditions vulnerable to long term degradation and impairment. Throughout the WDHA, many sites are not meeting or are moving toward not meeting land health standards. Based on the most current information contained in this document, a Thriving Natural Ecological Balance is currently not being maintained within the WDHA.