United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Wyoming State Office

ENVIRONMENTAL ASSESSMENT

Wyoming Wild Horse Pilot Project
Wyoming State Office

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I. Introduction

A. Background Information

In 1971, the Wild Free-Roaming Horse and Burro Act became Federal law. The Act requires the protection, management and control of wild free-roaming horses and burros on public lands at population levels that assure a thriving natural ecological balance and multiple use relationship. The Bureau of Land Management (BLM) and the Forest Service (FS) are responsible for management of wild horses and burros on public lands managed by each agency. The BLM manages wild horses and burros in 201 separate herd management areas (HMAs) in 10 western states. The primary purpose of herd management is to protect both the animals and their habitat. The BLM has established herd population objectives, called appropriate management levels (AMLs), for each HMA. Wild horse and burro herds increase at relatively high rates in North America due to lack of natural predators. When populations of wildlife, wild horses, wild burros, or domestic livestock exceed the capabilities of their habitat, the environment begins to decline, and there is no longer a thriving ecological balance. If the decline in the environment is prolonged, it leads to poor rangeland condition and accelerates a decrease in the health of the animals. If animals are not removed from this declining range, the animals could be injured or die from starvation, dehydration, or succumb to the elements. The BLM must remove excess animals before these conditions arise.

The excess wild horses and burros removed from the public lands are placed in private maintenance (adoption) through the BLM's Adopt-A-Horse program. The wild horses and burros are prepared for adoption at BLM- operated holding facilities. Newly arriving animals at these holding facilities are examined, sorted by sex, age and condition, tested for infectious diseases, vaccinated and treated by a veterinarian. The animals are also freeze marked on the neck to facilitate identification. Between 1995 and 2000, the BLM adopted an average of 7,750 wild horses, nationwide through the Adopt-A-Horse program. The BLM receives a $125 fee for each adoption; however, the cost to the BLM to administer each adoption is about $600.

The wild horses and burros remain at the holding facility for a minimum of 30 days after arrival. Booster vaccinations are given to the animals after 30 days, and before shipping to adoption sites. While the animals are at the holding facility they are fed grass and/or alfalfa hay. The animals are closely observed for sickness, injury, loss of appetite and other factors that may affect their health and welfare. Sick or injured animals are separated and quarantined from the general population while they are being treated.

These wild horse facilities are designed to provide care in a natural setting off the public rangelands, but only for a short period of time until the horses are adopted. Excess wild horses that have not been adopted because of age or other factors are termed "unadoptable" and have in the past been placed on private land sanctuaries in Kansas and Oklahoma. The BLM currently has 3 wild horse sanctuaries in operation and is in the process of acquiring two more under contract. Each sanctuary has a capacity of about 2,000 head of horses and the cost to the BLM to maintain a wild horse at a sanctuary is about $450 per head per year.

B. Purpose and Need

The BLM is the Federal Agency within the Department of the Interior mandated to manage wild horses and burros on BLM-administrated public lands. Management of the wild horses and burros includes not only the management of the public lands which provide habitat for theses animals, but also the animals themselves. The purpose of the proposed action is to provide cost-effective, safe, and humane pasture or rangelands for unadoptable wild horses. The need for additional pastures or rangelands for unadoptable wild horses is because the existing wild horse sanctuaries are near capacity and the BLM is projecting to gather an additional 13,000 wild horses in Fiscal Year 2001 (2100 horses in Wyoming) to ensure that the Herd Management Areas are within their authorized AMLs.

This proposal is a method the BLM can use to determine if more incentive can be provided for individuals to select these previously unadoptable wild horses. An evaluation of this pilot project would be conducted by the BLM one year after initiation to determine viability.

This assessment focuses on the proposal to pasture wild horses gathered in Wyoming on lands within the state and that have been historically used to pasture cattle and/or horses.

C. Conformance with Land Use Plan

The BLM, as a Federal Agency within the Department of the Interior, is required to conduct land use planning and development according to the requirements of the Federal Land Policy and Management Act of 1976. The removal of excess wild horses is addressed in all BLM land use plans written for lands which contain wild horse herds. The placement of excess wild horses into private land sanctuaries is not subject to BLM land use planning regulations. The Proposed Action does comply with the goals of the Strategic Plan For The Management Of Wild Horses And Burros On Public Lands of June 1992. These goals include perpetuating and protecting viable wild horse and burro populations and their habitat, and ensuring humane care and treatment of excess wild horses and burros.

D. Statutes, Regulations, or Other Plans

The following statutes and resultant regulations are of primary concern to this environmental assessment:

- The National Environmental Policy Act of 1969, as amended.
- The Wild Free-Roaming Horse And Burro Act of 1971, as amended.
- Title 43 Code of Federal Regulations - 4700.

The Proposed Action does not conflict with any known State or local planning or zoning ordinance. This action is not specifically addressed in any county's plan, however, as the private lands involved with this proposal have historically been used to pasture cattle and/or horses, the proposal is consistent with the land uses occurring within the area.

E. Public Scoping

The BLM released a scoping notice for the proposed Wyoming Wild Horse Pilot Project on March 12, 2001 and provided a 30-day comment period. Twelve written responses were received. Additionally, the

BLM hosted two open house meetings to discuss the proposal, one in Cheyenne on March 28th and another in Casper on March 29th. One member of the public attended the Cheyenne meeting and six people attended the meeting in Casper. The majority of the respondents, either in writing or at the meetings, were in favor of the project and were primarily interested in participating in the pilot project. One written concern dealt with the potential for an increase in foal production that would reduce the demand for horses through the BLM's Adopt-A-Horse program. Other concerns expressed in the written comments were generally about the cost to the Federal Government, what BLM specifications will be used to determine a suitable location for this horses (e.g. pasture sizes, water resources, shelter, and forage requirements), BLM supervision, and public viewing. Possible alternatives and potential impacts have been incorporated in the EA where appropriate.

II. Proposed Action and Alternatives

A. Proposed Action

The Proposed Action is a pilot project to provide suitable, cost-effective private land pastures for unadoptable wild horses. This pilot project includes a Memorandum of Understanding (MOU) with the Wyoming State Grazing Board (WSGB) and the Wyoming Department of Agriculture (WDA) that convey the responsibilities of each of the parties involved with this pilot project. The WSGB would directly encourage private landowners with land and facilities that meet BLM qualifications, to accept unadoptable wild horses. The WDA would become involved with the administration of grants and the bonding requirements.

The proposed action involves annually placing up to 240 unadoptable wild horses on private lands over the next four years. These horses are usually older than 5 years old, and in the case of males have been gelded. These landowners would be required to provide a safe and humane pasture or rangeland home for these horses for the remainder of their natural lives under the periodic supervision of the BLM or their designee. There would be no transfer of title for these horses. The horses would have a freeze mark on their necks to facilitate identification. Horses could be trained and used as saddle horses or pack horses. An individual landowner can adopt a maximum of 60 horses, 10 of which they can choose, the remaining 50 would be chosen by the BLM from a pool of older horses. The landowner would receive a one time grant of $1,000 for each horses over the initial 10. To receive this grant the landowner must adopt a minimum of 11 horses. To protect the BLM's financial investment, the landowners would be required to carry a performance bond for three years. The performance bond would be administered through the WDA.

Since the private lands that would be involved with this pilot project have operated as cattle and/or horse ranches, most facilities needed to provide a safe and humane area for the horses are already in place, eliminating the need for new construction. Only minor construction and modification may be needed to accommodate the horses meaning no additional acreage is disturbed.

To the maximum extent feasible, the horses would exist in a natural setting. Supplemental feeding, mineral supplements, and watering facilities would be provided by the private landowner only as necessary to ensure the safe and humane treatment of the horse. Artificial shelters (e.g. barns) would not

be required. Periodic preventive veterinary care would not be required. The private landowner would contact the BLM if any horses under their care become injured, sick, or perished.

Only areas where the predominate land ownership is private would be considered suitable for this pilot project. There may be small isolated tracts of Public Lands within these pastures. No lands bordering an existing HMA would be eligible for this program. The BLM would conduct compliance checks to ensure the safe and humane treatment of the horses, as they do in the existing adoption program. However, since title would not transfer, these compliance checks would continue past the usual one year time frame associated with normal adoption procedures. Similar to the adoption program, if compliance checks determine that the horses are encountering neglect or mistreatment, the horses would be repossessed by the BLM.

B. No Action Alternative

The No Action Alternative is to not implement this pilot project. Excess unadoptable wild horses would be housed at existing BLM wild horse sanctuaries. The cost in 2001 to house a wild horse at one of these sanctuaries is about $450 per year. At the sanctuary, breeding of the mares is not permitted.

C. Exclude Mares from the Pilot Project Alternative

One concern voiced during the public scoping process was that mares involved in this pilot project would be bred and the resulting foals, which would be the property of the landowner, may be sold. The increased availability of young horses could over-saturate demand and reduce interest in the wild horse adoption market. In the wild horse sanctuaries, the horses are prevented from breeding and producing additional foals. To address this concern, an alternative was developed that would exclude any mares from the pilot project, only geldings would be available.

D. Limited Exclusion of Mares Alternative

Another alternative was developed to address the expressed concern over the resulting foals. This alternative would just exclude the mares from the wild horses involved with the grants. In other words, the landowner would still be able to choose mares in the first 10 horses, but the remaining horses (up to 50 per landowner) chosen by the BLM would be geldings. The rationale for this alternative was to retain an incentive for the private landowners, while reducing the number of foals potentially available for sale.

E. Alternatives Considered But Dropped From Further Analysis

Other alternatives were suggested in comment letters. They were:

- Increase the AML on Public Lands to reduce the number of unadoptable horses.
- Develop a long-term strategy to control wild horse numbers on Public Lands.
- Not providing any federal monies to the adopters.
- Grants to the adopters could vary in size.

- Different monetary allocation schedules.

The suggested alternative of increasing the AML on Public Lands was considered, but was dropped from further analysis because it is outside the scope of this environmental document. This document addresses some alternative strategies to manage excess unadoptable wild horses. The determination as to how many horses are excess, which is in essence this suggested alternative, has already been determined through the establishment of AMLs when Herd Management Area Plans were prepared in the 1980s and verified through monitoring data and public input during land use planning. The suggested alternative of developing a long-term strategy to control wild horse numbers on Public Lands was also considered, but was dropped from further analysis because it too is outside the scope of this environmental document.

The other three suggested alternatives deal with the issue of the $1,000 grants. These alternatives were considered, but were dropped from detailed analysis because they are administrative in nature and would not result in any meaningful differences to the environmental impacts anticipated in this analysis. From the analysis provided below, grant payments even in excess of $3,000 per horse would be cost effective to the Federal Government.

III. Affected Environment

Regional Setting

Because specific private landowners have not yet been determined, the site-specific affected areas are not known. However, general statements about the affected lands can be made. Given the landownership patterns in the State of Wyoming, the majority of the horses would be relocated to the eastern portion of the State. Vegetation would be predominately mixed-grass prairie or sagebrush steppe. Affected areas are existing corrals, or pasture/range lands that are already receiving, or have received in the past, domestic grazing disturbances.

Because there would be essentially no difference between the Proposed Action and the two alternatives specifically addressing mares for many of the below environmental components, all three were lumped together and termed “action alternatives” where appropriate in the analysis. These action alternatives are analyzed separately when addressing the issue of impact on the adoption program.

Because the lands used to harbor these wild horses are private lands and would otherwise be grazed by livestock at or near the carrying capacity desired by the private landowner, it was determined that the below listed critical elements are either not present, and/or are not adversely affected by any of the alternatives. Any improvements required to bring the private property to acceptable specifications to receive a wild horse are considered normal to a livestock grazing operation. Overgrazing could potentially impact some of these below critical elements. However, the periodic (four times per year) compliance checks would prevent possible overgrazing, as overgrazed lands are considered unsuitable for wild horses. These horses would be repossessed by the BLM and removed from the area.

The critical elements that will not be discussed in this document are:

- Areas of Critical Environmental Concern (ACEC's)

- Cultural or Historic Resources
- Environmental Justice
- Farm Lands (Prime or Unique)
- Floodplains
- Invasive, Non-native Species
- Native American Religious Concerns
- Wastes, Hazardous or Solid
- Water Quality (Surface or Ground)
- Wetlands/Riparian Zones
- Wild and Scenic Rivers

A. Air Quality

The Clean Air Act dictates that National Ambient Air Quality Standards (NAAQS), established by the Environmental Protection Agency, must be maintained nationwide. The NAAQS have included standards for six "criteria" pollutants: ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), "respirable" particulate (PM_{10}), sulfur dioxide (SO_2), and lead (Pb). Although the city of Sheridan (problems with PM_{10}), is designated non-attainment for PM_{10}, all other areas in Wyoming are designated attainment for all NAAQS "criteria" pollutants.

B. Threatened and Endangered (T+E) / Special Status Species

Suitable habitat for, and/or habitation by, Federally listed, proposed, or candidate species under the Endangered Species Act (ESA) possibly occurs in the grassland/sagebrush areas where the horses would be relocated. Listed/proposed species that potentially could be affected include Ute's ladies'-tresses, Colorado butterfly plant, Black-footed ferret, Preble's Meadow Jumping Mouse, Bald Eagle, Wyoming Toad, Mountain Plover, and Black-tailed Prairie Dog.

In April 2001, the Wyoming BLM established a Sensitive Species List for Public Lands in the State. The list consists of 78 plant, mammal, reptile, amphibian, fish, and bird species. The list is available for viewing in the April 2001 News Releases section of the Wyoming BLM web site (www.wy.blm.gov). Impacts to these species are also a consideration in the BLM decision-making process. Similar to the discussion on T+E species, suitable habitat for, and/or habitation by, these sensitive species possibly occurs in the grassland/sagebrush areas were the horses would be relocated.

C. Socio-Economic Factors

Two separate issues are discussed in this section. The first addresses the cost effectiveness of this pilot project as concerns related to the cost to the Federal Government were expressed during the scoping process. As all alternatives had the same non-monetary benefit (a safe, humane, long-term home for the horse), and none had any monetary benefits to the Federal Government, the most cost-effective (and economically preferable) alternative would be the one with the lowest present value cost. More detailed information related to the cost effectiveness analysis is provided in Attachment 1. The second issue related to the socio-economic component addresses the impact of additional foals on market demand for horses, as well as the impact on the adoption program.

The approach taken in this document for the cost effectiveness analysis is to compare the present cost on a per head basis to the Federal Government assuming each horse involved results in a one-time $1000 grant (action alternatives) and the present value of annual compliance costs (discounted at 5.74%*) verus the present value of the cost (at the same 5.74% discount rate) if that horse was taken to a wild horse sanctuary (No Action Alternative). This approach, by attributing a $1000 cost for each horse simplifies the analysis, but does not bias the resulting calculations toward the action alternatives. In fact, it somewhat overstates the cost to the BLM under the action alternatives.

As stated earlier, the cost in 2001 to maintain a wild horse at a sanctuary is about $450 per year. Assuming an average life expectancy of 15 years per horse at the sanctuary and a 5.74% discount rate, the present value of this cost is about $4,446 per horse. It was assumed that 25% of the 240 unadoptable horses available each year would be pregnant mares.

To determine the cost to the BLM for compliance checks, the following assumptions were made based on the professional experience of the Wyoming State Office wild horse specialists: a travel cost of $500 per statewide compliance check and four compliance checks per year, for a total annual cost of $2,000, or about $8.33 per horse per year ($2,000/240 horses). Assuming the same average life expectancy of 15 years per horse as in a sanctuary and the same 5.74% discount rate, the present value of the compliance cost over the life expectancy of the horse is approximately $82 per horse ($82.30).

To address the potential impact of increased foal production on the BLM's Adopt-A-Horse program, data on total horse numbers and the number sold annually were analyzed to determine the intensity of this potential impact on the market demand for horses. The data was looked at in two contexts: regionally, to predict the effect specifically to Wyoming and Nebraska and nation-wide, as wild horses gathered in Wyoming are adopted through out the country. Per the 1999 Equine Inventory 1999 report from the National Agricultural Statistics Service (US Department of Agriculture), there were approximately 5.32 million head of equine (includes horses, ponies, mules, burros, and donkeys) in the nation on January 1, 1999. Within Wyoming, there were approximately 62,000 head and there were 75,000 head in Nebraska. While not specifically stated, it is assumed that this number represents domestic head only, as their description of sampling procedures does not include wild horse information. Per this same report, in 1997 and 1998, an average of 548,600 head were sold nationwide. The numbers sold in Wyoming were 5,000 in both 1997 and 1998, while approximately 8,000 were sold each year in Nebraska.

* The discount rate of 5.74% was chosen as it is the 30-Year U.S. Treasury Bond rate as of May 8, 2001.

Within the 1995 through 2000 time period, an average of 731 wild horses were adopted per year through the BLM Wyoming-Nebraska program. While not a part of it, this represents about 5 percent of the domestic market (731/13,000 head) for horses in the regional (Wyoming/Nebraska) area. During this same time period, an average of 7,750 wild horses were adopted nationwide. Again, while not a part of it, this represents about 1 percent of the domestic market (7,750/548,600 head) for horses in the nation.

IV. Environmental Consequences

A. Air Quality

Exhaust emissions and dust from vehicles inspecting the private lands, as well as delivering animals, would be expected; however, the frequency and volumes of these discharges should not have a significant short- or long-term impact. Under all of the alternatives, any changes to air quality are anticipated to be negligible and would not exceed the NAAQS. Therefore, no conformity determination per the Clean Air Act is required.

B. T+E / Sensitive Species

None of the alternatives are likely to adversely affect any Federal or state listed threatened or endangered plant or animal species, designated critical habitat, species proposed for listing, species under review by the U.S. Fish and Wildlife Service (FWS) or special status species. This determination is based on the consideration that the lands involved with this proposed action are currently under a domestic livestock grazing management system, or have been under one until just recently. The effects of wild horses grazing on this land would be very similar to the effects on the land in the past. No measurable change to vegetation, with potential indirect impacts to local fauna is anticipated. Informal Section 7 (per ESA) consultation with the US Fish and Wildlife Service requesting their concurrence of our determination of "may affect, but not likely to adversely affect" was initiated on April 19, 2001. This consultation would be completed prior to implementation of the Proposed Action.

None of the alternatives are likely to adversely affect any species on the Wyoming BLM Sensitive Species List using the same rationale as the analysis of impacts to T+E species; namely, the areas are already receiving or have received grazing activities.

C. Socio-Economic Factors

<u>Cost Effectiveness</u>

Private landowners who accept these unadoptable wild horses would receive a $1,000 grant per horse for any horses over 10. Therefore, the cost to the Federal Government would depend on how many private landowners are involved and how many horses each person receives. For example, if 24 landowners receives 10 horses each, there would be no grants. Conversely, if 4 landowners receive 60 horses each, then there would be $200,000 in grants. For the purposes of this analysis, it was assumed that each horse would involve a one-time grant cost of $1,000. The present value cost of the action alternatives was $1,082 per horse ($1,000 grant + $82 compliance cost).

The present value cost of the No Action Alternative includes the present value of annual $450 payments over the next 15 years ($4,446) plus consideration that about 25% of the 240 horses headed to the sanctuary are pregnant mares that will foal at the sanctuary. Normal procedures are to place these foals in the Adopt-A-Horse program when they are mature enough to be separated from the mares. The economic analysis looked at this on a per head basis for the entire 240 horse population involved each year. Therefore, it looked at the present value of 25 percent (only 25% of the horses will foal) of the $125 adoption fee, or $31.25 (present value = $27.95) per head (considered a revenue) and the present

value of 25 percent of the $600 adoption cost per horse, or $125 (present value $111.80). So, the total present value cost of the No Action Alternative is $4,530 ($4,446 - $28 + $112). In conclusion, the action alternatives are more cost- effective than the No Action Alternative, with a dollar difference of $3,448 per horse ($4,530 - $1,082). See Attachment 1.

To examine the effect of varying key inputs on the cost-effectiveness of this proposal, a sensitivity analysis was conducted to determine if a small change in a key input could produce a major change in the results. Attachment 2 contains the varying inputs considered and the results in the present value cost difference between the alternatives. Changes to inputs in the economic analysis include a shorter life expectancy of the wild horses to 8 years ($1,855 difference), a higher discount rate of 10 percent ($2,437 difference), a lower sanctuary cost of $200 per head per year ($977 difference), a higher compliance cost of $100 per head per year ($2,542 difference), and a higher grant fee of $2500 ($1,947 difference).

Only one year's inputs were calculated for the cost-effectiveness analysis, as no differences in the inputs for the succeeding years are anticipated, nor is the analysis affected by any cumulative effects. Therefore, the economic analysis just considered the cash flows associated with the horses involved during the first year of the program.

Adoption Program

The level of foal production anticipated under the different alternatives is difficult to project because it would be very dependent on individual landowner objectives. For the purposes of this analysis, varying levels of available reproductive mares were projected by alternative. The length of reproductive time for each mare was assumed to be 10 years. As this proposal would be implemented over the next four years, the number of reproductive mares would increase yearly (2002-4), level out at a maximum in year 5 (2005), continue at that level for the next 6 years (2011) and decrease proportionately each year for the next 3 years (2012-2014). By the year 2015, no mares would be reproducing foals. More detailed information concerning these calculation is provided in Attachment 3.

Under the Proposed Action, two foal production scenarios were developed. The first scenario considered all 240 horses available each year were reproductive mares (24 landowners opting for 10 mares each; BLM did not have the opportunity to select any geldings). This scenario would provide a maximum number of foals produced. The second Proposed Action scenario considered 140 reproductive mares per year (4 landowners opting for 10 mares and 50 percent of the remaining BLM-selected horses would be reproductive mares). Under the Proposed Action, there could be an average of between 430 and 738 foals produced per year over the next 13 years. On a regional basis (Wyoming/Nebraska) this represents between 3 (430/13,000) and 6 (738/13,000) percent of the regional domestic market. On a national basis, this represents about 0.1 percent of the domestic market.

Under the No Mares Alternative, there would be no foal production.

Under the Limited Mares Alternative, two scenarios were developed. The first scenario considered all 240 horses as reproductive mares using the same potential situation as the Proposed Action (namely 24 landowners opting for 10 mares each and the BLM not having an opportunity to include geldings). The second scenario considered 40 reproductive mares per year (4 landowners opting for 10 mares and the

remaining 50 horses per landowner being geldings selected by the BLM). The first scenario under the Limited Mares Alternative has the same impact on regional and national horse demand as the annual production of 738 foals under the Proposed Action. In the second scenario there could be about 123 colts produced per year over the next 13 years. This represents less than 0.9 percent of the regional domestic market and even less of the national market.

Under the No Action Alternative, there would be no foal production.

In summary, the alternatives which could potentially produce the most foals are the Proposed Action or the Limited Mares Alternatives, resulting in a maximum of 738 foal produced per year. While this nearly equals the average number of wild horses adopted annually in Wyoming/Nebraska, it is only 10 percent of the wild horses adopted annually nationwide. This maximum foal production scenario would have a minor effect (6 percent) on regional domestic horse demand, but a negligible effect on national domestic horse demand. As this foal production, under any alternative would have minimal to no effect on domestic horse demand, the BLM anticipates little to no effect on the Adopt-A-Horse program.

D. Cumulative Impacts

Because the environmental impacts of any of the alternatives are anticipated to be very minimal, any cumulative effect of this proposal added to other past, ongoing, or future activities in the areas where the horses are relocated is also anticipated to be minimal. The cumulative effect of foal production over the 4-year life of the project plus an anticipated 10-year reproductive time span for the mares is discussed above in the effects to the adoption program under the socio-economic factors.

Wyoming Wild Horse Pilot Project EA
Attachment 1
Economic Analysis Calculations

Because the cash flow streams in this analysis have a finite life, the formula used in these calculations was for the present value of a terminating annual series. This formula is:

$$V_o = a \left[\frac{(1+i)^n - 1}{i\,(1+i)^n} \right]$$

V_o = present value

a = annual series payment

i = discount rate

n = number of years over which the payment occurs

Two examples of this formula are:

The present value calculation for the compliance cost is:

$$V_o = \$8.33 \times \frac{(1 + 0.0574)^{15} - 1}{.04\,(1 + 0.0574)^{15}} = \$8.33 \times \frac{1.31}{0.133} = \$82.30$$

The present value calculation for the sanctuary cost is:

$$V_o = \$450.00 \times \frac{(1 + 0.0574)^{15} - 1}{.04\,(1 + 0.0574)^{15}} = \$450.00 \times \frac{1.31}{0.133} = \$4446.00$$

All calculations are shown on the following table, as well as the cash flows per year.

Wyoming Wild Horse Pilot Project EA
Attachment 1 - Economic Analysis
Date: 5/8/01

Assumptions:

Discount Rate: 30-Year US Treasury Bond = 5.74%

One Time Grant = $1000
Compliance Cost = $8.33 per year
Foals: 25% of the horses in the Sanctuary will foal and that foal will be available for auction
Wild Horse Sanctuary Cost = $450 per year
Foal will sell for $125, which on a per horse basis translates into $31.25 ($125 x .25)
Cost of adopting the foal is $600

Item	Present Value	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total (Undiscounted)
Action Alternatives																	
Grant	-$1,000.00																-$1,000.00
Annual Compliance Cost	-$82.30	-$8.33	-$8.33	-$8.33	-$8.33	-$8.33	-$8.33	-$8.33	-$8.33	-$8.33	-$8.33	-$8.33	-$8.33	-$8.33	-$8.33	-$8.33	-$124.95
Total Action Alternatives PV Cost	-$1,082.30																
No Action Alternative																	
Wild Horse Sanctuary Costs	-$4,445.73	-$450.00	-$450.00	-$450.00	-$450.00	-$450.00	-$450.00	-$450.00	-$450.00	-$450.00	-$450.00	-$450.00	-$450.00	-$450.00	-$450.00	-$450.00	-$6,750.00
Foal Revenue	$27.95		$31.25														$31.25
Cost of Adopting	-$111.80		-$125.00														-$125.00
Total No Action Alt. PV Cost	-$4,529.58																

Note: The total present value of the cost of the grant per head is overestimated because this anaylsis assumes a grant of $1,000 is awarded for each horse accepted by a private landowner.
In reality, the grant would be less due to the fact that a private landowner only collects the $ 1,000 if they take more than 10 horses.

Wyoming Wild Horse Pilot Project EA
Attachment 2
Sensitivity Analysis
Date 5/8/01

Assumptions used in the EA

Assumptions:

Discount Rate: 30-Year US Treasury Bond = 5.74%
One Time Grant = $1000
Foals: 25% of the horses in the Sanctuary will foal and that foal will be available for auction
Foal will sell for $125, which on a per horse basis translates into $31.25 ($125 x .25)
Cost of adopting the foal is $600, which on a per horse basis translates into $125 ($600 x .25)

Sensitivity Analysis:

One Time Grant	-$1,000.00
Annual Compliance Cost	-$8.33
Wild Horse Sanctuary Costs	-$450.00
% of Horses Carrying Foal	25.00%
Estimated Sale Price of Foal	$125.00
Foal Revenue	$31.25
Year Foal is Sold	2
Cost of Adopting	-$125.00
Discount Rate	5.74%
Number of Years Discounted	15

Item	Present Value
Grant	-$1,000.00
Annual Compliance Cost	-$82.30
Total Grant Cost (PV)	**-$1,082.30**
Wild Horse Sanctuary Costs	-$4,445.73
Foal Revenue	$27.95
Cost of Adopting	-$111.80
Total Sanctuary Cost (PV)	**-$4,529.58**
Difference in Cost (Sanctuary Costs-Grant Cost)	**$3,447.28**

Wyoming Wild Horse Pilot Project EA
Attachment 2
Sensitivity Analysis
Date 5/8/01

Shorter Life Expectancy of Wild Horse (8 years)

Assumptions:
Discount Rate: 30-Year US Treasury Bond = 5.74%
One Time Grant = $1000
Foals: 25% of the horses in the Sanctuary will foal and that foal will be available for auction
Foal will sell for $125, which on a per horse basis translates into $31.25 ($125 x .25)
Cost of adopting the foal is $600, which on a per horse basis translates into $125 ($600 x .25)

Sensitivity Analysis:

One Time Grant	-$1,000.00
Annual Compliance Cost	-$8.33
Wild Horse Sanctuary Costs	-$450.00
% of Horses Carrying Foal	25.00%
Estimated Sale Price of Foal	$125.00
Foal Revenue	$31.25
Year Foal is Sold	2
Cost of Adopting	-$125.00
Discount Rate	5.74%
Number of Years Discounted	**8**

Item	Present Value
Grant	-$1,000.00
Annual Compliance Cost	-$52.26
Total Grant Cost (PV)	**-$1,052.26**
Wild Horse Sanctuary Costs	-$2,823.39
Foal Revenue	$27.95
Cost of Adopting	-$111.80
Total Sanctuary Cost (PV)	**-$2,907.24**
Difference in Cost (Sanctuary Costs-Grant Cost)	**$1,854.97**

Wyoming Wild Horse Pilot Project EA
Attachment 2
Sensitivity Analysis
Date 5/8/01

Higher Discount Rate (10%)

Assumptions:

Discount Rate: 30-Year US Treasury Bond = 10%
One Time Grant = $1000
Foals: 25% of the horses in the Sanctuary will foal and that foal will be available for auction
Foal will sell for $125, which on a per horse basis translates into $31.25 ($125 x .25)
Cost of adopting the foal is $600, which on a per horse basis translates into $125 ($600 x .25)

Sensitivity Analysis:

One Time Grant	-$1,000.00
Annual Compliance Cost	-$8.33
Wild Horse Sanctuary Costs	-$450.00
% of Horses Carrying Foal	25.00%
Estimated Sale Price of Foal	$125.00
Foal Revenue	$31.25
Year Foal is Sold	2
Cost of Adopting	-$125.00
Discount Rate	**10.00%**
Number of Years Discounted	15

Item	Present Value
Grant	-$1,000.00
Annual Compliance Cost	-$63.36
Total Grant Cost (PV)	**-$1,063.36**
Wild Horse Sanctuary Costs	-$3,422.74
Foal Revenue	$25.83
Cost of Adopting	-$103.31
Total Sanctuary Cost (PV)	**-$3,500.22**
Difference in Cost (Sanctuary Costs-Grant Cost)	**$2,436.86**

Wyoming Wild Horse Pilot Project EA
Attachment 2
Sensitivity Analysis
Date 5/8/01

Lower Sanctuary Cost ($200 per year)

Assumptions:

Discount Rate: 30-Year US Treasury Bond = 5.74%
One Time Grant = $1000
Foals: 25% of the horses in the Sanctuary will foal and that foal will be available for auction
Foal will sell for $125, which on a per horse basis translates into $31.25 ($125 x .25)
Cost of adopting the foal is $600, which on a per horse basis translates into $125 ($600 x .25)

Sensitivity Analysis:

One Time Grant	-$1,000.00
Annual Compliance Cost	-$8.33
Wild Horse Sanctuary Costs	**-$200.00**
% of Horses Carrying Foal	25.00%
Estimated Sale Price of Foal	$125.00
Foal Revenue	$31.25
Year Foal is Sold	2
Cost of Adopting	-$125.00
Discount Rate	5.74%
Number of Years Discounted	15

Item	Present Value
Grant	-$1,000.00
Annual Compliance Cost	-$82.30
Total Grant Cost (PV)	**-$1,082.30**
Wild Horse Sanctuary Costs	-$1,975.88
Foal Revenue	$27.95
Cost of Adopting	-$111.80
Total Sanctuary Cost (PV)	**-$2,059.73**
Difference in Cost (Sanctuary Costs-Grant Cost)	**$977.43**

Wyoming Wild Horse Pilot Project EA
Attachment 2
Sensitivity Analysis
Date 5/8/01

Higher Compliance Cost ($100 per head per year)

Assumptions:
Discount Rate: 30-Year US Treasury Bond = 5.74%
One Time Grant = $1000
Foals: 25% of the horses in the Sanctuary will foal and that foal will be available for auction
Foal will sell for $125, which on a per horse basis translates into $31.25 ($125 x .25)
Cost of adopting the foal is $600, which on a per horse basis translates into $125 ($600 x .25)

Sensitivity Analysis:

One Time Grant	-$1,000.00
Annual Compliance Cost	**-$100.00**
Wild Horse Sanctuary Costs	-$450.00
% of Horses Carrying Foal	25.00%
Estimated Sale Price of Foal	$125.00
Foal Revenue	$31.25
Year Foal is Sold	2
Cost of Adopting	-$125.00
Discount Rate	5.74%
Number of Years Discounted	15

Item	Present Value
Grant	-$1,000.00
Annual Compliance Cost	-$987.94
Total Grant Cost (PV)	**-$1,987.94**
Wild Horse Sanctuary Costs	-$4,445.73
Foal Revenue	$27.95
Cost of Adopting	-$111.80
Total Sanctuary Cost (PV)	**-$4,529.58**
Difference in Cost (Sanctuary Costs-Grant Cost)	**$2,541.64**

Wyoming Wild Horse Pilot Project EA
Attachment 2
Sensitivity Analysis
Date 5/8/01

Higher One Time Grant Fee ($2500)

Assumptions:

Discount Rate: 30-Year US Treasury Bond = 5.74%

One Time Grant = $2500

Foals: 25% of the horses in the Sanctuary will foal and that foal will be available for auction

Foal will sell for $125, which on a per horse basis translates into $31.25 ($125 x .25)

Cost of adopting the foal is $600, which on a per horse basis translates into $125 ($600 x .25)

Sensitivity Analysis:

One Time Grant	**-$2,500.00**
Annual Compliance Cost	-$8.33
Wild Horse Sanctuary Costs	-$450.00
% of Horses Carrying Foal	25.00%
Estimated Sale Price of Foal	$125.00
Foal Revenue	$31.25
Year Foal is Sold	2
Cost of Adopting	-$125.00
Discount Rate	5.74%
Number of Years Discounted	15

Item	Present Value
Grant	-$2,500.00
Annual Compliance Cost	-$82.30
Total Grant Cost (PV)	**-$2,582.30**
Wild Horse Sanctuary Costs	-$4,445.73
Foal Revenue	$27.95
Cost of Adopting	-$111.80
Total Sanctuary Cost (PV)	**-$4,529.58**
Difference in Cost (Sanctuary Costs-Grant Cost)	**$1,947.28**

Attachment 3
Foal Production Calculations for Each Alternative

Proposed Action Alternative

240 Mares per year Scenario

Calendar Year	Mares in 2001 Pilot Program	Mares in 2002 Pilot Program	Mares in 2003 Pilot Program	Mares in 2004 Pilot Program	**Totals**
2002	240				240
2003	240	240			480
2004	240	240	240		720
2005	240	240	240	240	960
2006	240	240	240	240	960
2007	240	240	240	240	960
2008	240	240	240	240	960
2009	240	240	240	240	960
2010	240	240	240	240	960
2011	240	240	240	240	960
2012		240	240	240	720
2013			240	240	480
2014				240	240

Grand Total: 9600

Annual Average (9600/13 years) = 738 foals

Proposed Action Alternative

140 Mares per year Scenario

Calendar Year	Mares in 2001 Pilot Program	Mares in 2002 Pilot Program	Mares in 2003 Pilot Program	Mares in 2004 Pilot Program	**Totals**
2002	140				140
2003	140	140			280
2004	140	140	140		420
2005	140	140	140	140	560
2006	140	140	140	140	560
2007	140	140	140	140	560
2008	140	140	140	140	560
2009	140	140	140	140	560
2010	140	140	140	140	560
2011	140	140	140	140	560
2012		140	140	140	420
2013			140	140	280
2014				140	140

Grand Total: 5600 foals

Annual Average (5600/13 years): 431foals

Limited Mares Alternative

240 Mares per year Scenario (refer to same scenario under the Proposed Action Alternative

40 Mares per year

Calendar Year	Mares in 2001 Pilot Program	Mares in 2002 Pilot Program	Mares in 2003 Pilot Program	Mares in 2004 Pilot Program	**Totals**
2002	40				40
2003	40	40			80
2004	40	40	40		120
2005	40	40	40	40	160
2006	40	40	40	40	160
2007	40	40	40	40	160
2008	40	40	40	40	160
2009	40	40	40	40	160
2010	40	40	40	40	160
2011	40	40	40	40	160
2012		40	40	40	120
2013			40	40	80
2014				40	40

Grand Total: 1600 foals

Annual Average (1600/13 years): 123 foals