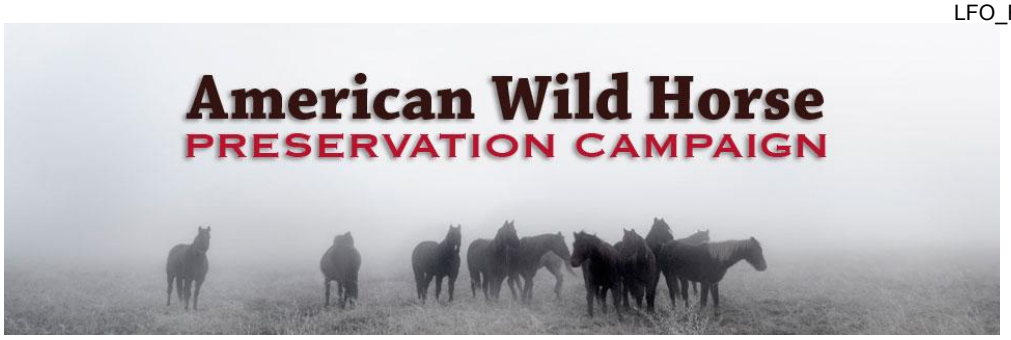

January 20, 2011

Lander Field Office RMP / EIS
1335 Main Street
Lander, WY 82520

Attn: RMP Project Manager

RE: Comments on Lander, Wyoming Resource Management Plan (RMP) Revision and DRAFT Environmental Impact Statement (EIS)

VIA Email: **BLM_WY_LRMP_WYMail@blm.gov**

To Whom It May Concern:

These comments are submitted on behalf of the American Wild Horse Preservation Campaign (AWHPC). AWHPC is dedicated to preserving the American wild horse in viable free-roaming herds for generations to come, as part of our national heritage. Our grassroots efforts are supported by a coalition of over 45 historic preservation, conservation, horse advocacy and animal welfare organizations. (see http://www.wildhorsepreservation.org/about.html)

AWHPC notes for the record that these comments are endorsed by over 3,800 American citizens who have submitted comments to the BLM on this RMP via the AWHPC website.

AWHPC further notes that we are submitting documents referenced via hyperlink in these comments, and we request that these documents be incorporated with our comments as part of the official record.

SECTION I: QUALIFICATIONS OF SUBMITTER

In preparing these comments, we are drawing on the extensive expertise of experts in the field of wild horse biology and behavior, as well as those familiar with the National Environmental Policy Act. Experts consulted or referenced in these comments include:

- Celeste Carlisle, Wildlife Biologist
- Neda DeMayo, Founder & CEO Return to Freedom American Wild Horse Sanctuary
- Dr. Jay Kirkpatrick, Director, Center for Science and Conservation, Billings, MT
- Dr. Anne Perkins, Director, Human Animal Bond Program, Carroll College, Helena, MT

- Dr. Allen Rutberg, Assistant Dir., Center for Animals and Public Policy, Tufts-Cummings School of Veterinary Medicine
- Dr. Bruce Nock, Faculty, Department of Psychiatry, Anatomy and Neurobiology, Washington University School of Medicine

In addition, AWHPC staff have extensive experience reviewing and commenting on Environmental Assessments (EAs) and EISs prepared by the Bureau of Land Management (BLM), and have submitted public comments on virtually every EA prepared for a wild horse roundup over the past two years, as well as on EIS's and draft RMPs for other BLM Field Offices in Nevada and Wyoming.

SECTION II: BACKGROUND -- NEED FOR REFORM

The draft RMP - EIS, to be approved in 2012, will replace the current plan, which was promulgated in 1987 -- nearly 25 years ago. As such, the documents will set policy that will affect 2.4 million acres of public lands for the next several decades. With regard to wild horses, seven Herd Management Areas (HMAs) containing a quarter of Wyoming's remaining wild horse population, and at least three Herd Areas, are at stake.

Due to its breadth, scope and longevity, it is important that this plan reflect present day reality as well as incorporate best available science for the management of our public lands and resources into the decades ahead. Unfortunately, as currently proposed, the revised RMP falls far short of the mark and requires revision.

Specifically with regard to wild horses, the federal management program for this species is in fiscal crisis due to four decades of mismanagement, including:

- Preferential treatment of commercial livestock at the expense of federally-protected wild horses, resulting in the giveaway of the majority of forage and water resources in designated wild horse and burro habitat areas to privately-owned livestock;
- Artificially, arbitrarily and unnaturally-low "Appropriate" Management Levels (AMLs) for wild horses and burros; many of these AMLs are genetically unsustainable.
- Management of wild horses as livestock instead of a wildlife species, including reliance on mass roundups and removals as the sole method of controlling population numbers.

As a result of this mismanagement, the BLM now warehouses more wild horses in government holding facilities (45,000+) than are left free on the range. The costs to taxpayers for this program have spiraled out of control, and now exceed $70 million annually.

Over the past several years, the BLM has received hundreds of thousands of comments from the public on EAs for wild horse and burro roundup plans, draft revisions to RMPs in Nevada, Idaho and Wyoming, and two iterations of the draft strategy for reforming the BLM wild horse and burro program. In 2011, AWHPC supporters alone generated in excess of 100,000 public comments; supporters of our coalition partners ASPCA, Humane Society of the United States and The Cloud Foundation generated hundreds of thousands more. These public comments

unanimously urged BLM to enact badly-needed reform of its fiscally-unsustainable wild horse and burro management program, particularly in two areas:

- Increasing wild horse and burro AMLs by reducing commercial livestock grazing in designated Herd Management Areas (HMAs);
- Shifting resources to on-the-range management of wild horses (including improved range stewardship, protection of predators, and use of non-hormonal (PZP) fertility control, where necessary) instead of continued mass roundups and removals.

Congress has echoed these concerns. In **2010** and **2011**, the BLM received letters signed by scores of members of Congress urging reform of the wild horse and burro program. (Please include copies of these letters, linked at the dates above, in the official record for the RMP comments.

In response, BLM officials have promised reform, but on-the-ground policy remains largely unchanged. This is abundantly clear in the proposed revisions to the Landers RMP, which simply carry forth the failed policies of the past.

NEPA requires BLM to consider social factors, in making land use decisions, such as setting and maintenance of AML and grazing allocations. This was highlighted in a 1982 National Research Council report on the BLM's wild horse and burro program:

> *Attitudes and values that influence and direct public priorities regarding the size, distribution, and condition of horse herds, as well as their accessibility to public viewing and study, must be an important factor in the determination of what constitutes excess numbers of animals in any area. . . [A]n otherwise satisfactory population level may be controversial or unacceptable if the strategy for achieving it is not appropriately responsive to public attitudes and values. . . .*
>
> Biologically, the area may be able to support 500 cattle and 500 horses, and may be carrying them. But if the weight of public opinion calls for 1,000 horses, the area can be said in this context to have an excess of 500 cattle. For these reasons, the term excess has both biological and social components. In the above example, biological excess constitutes any number of animals, regardless of which class above 1,000. Social excess depends on management policies, legal issues, and prevailing public preference..."

In this regard, the Lander RMP/EIS has failed to address the changing social and political landscape, by proposing a continuation of the same failed policies of the past. This glaring deficiency must be corrected.

SECTION III: LANDERS RMP: BUSINESS AS USUAL AT BLM

Despite the mandate for reform, and the promises of reform made by Secretary of Interior Ken Salazar and BLM director Bob Abbey, the Lander RMP simply carries forward the same policies of the past, namely the agency practice of giving preference to commercial livestock grazing

over wild horse and burro protection, while continuing to rely on the failed roundup and removal approach to wild horse and burro management.

It is disturbing troubling that the RMP revisions were prepared without consulting wild horse experts and advocacy organizations.

The Distribution **List** (Section 5-4, *pdf*-pages 742-747 at link **here**), to which the Lander Field Office sent copies of the draft RMP-EIS for review and comment, shows a conspicuous absence of any wild horse advocacy groups. This omission surely contributed to the RMP's continuation of obsolete and failed policies and practices for managing wild horses that have been in place for the last four decades. The only horse-related organization contacted was the **Back Country Horsemen of America**, a group that advocates trail riding on public lands.

This failure to incorporate input from wild horse experts and advocacy groups is a glaring deficiency in the Lander Field Office's planning process. Had the BLM solicited input from wild horse advocates in the planning process, the RMP could have addressed the changing social, political and economic landscape and included alternatives that would achieve promised and badly needed reform, instead of simply perpetuating business-as-usual at the BLM.

A. No significant difference between alternatives.

- Alternative **A** -- ***No Action*** -- Basically keeps current management approach.
- Alternative **B** -- Emphasizes ***environment***, ***conservation***. Resource ***protection***.
- Alternative **C** -- Emphasizes ***development***. Resource ***production***.
- Alternative **D** -- **BLM's preferred approach**. *Reportedly can still be modified.*

Wild horse management stays the same across all alternatives except for two respects (See RMP alternatives description **here** , Table 2.22, p. 98 of .pdf)

- **Scenic loops** -- establishing improved or paved roads for self-guided tours in wild horse HMAs (Alternatives B, C & D)
- **Fences** -- removal thereof to a greater or lesser extent, allegedly to enhance genetic exchange; versus no fence removal. (Alternative B most restrictive: "Remove or modify existing fences to allow free movement among herd populations")

B. No Change in 17-Year Old AMLs

The draft RMP carries forth "Appropriate" Management Levels (AMLs) for wild horses that were set 16-17 years ago. **These AMLs are the same in all the alternatives under consideration in the RMP revision.** They are based on *old data, and* the draft RMP makes no mention of re-evaluating the method for determining AMLs and determining **today's** ideal based on best management practices, which would mean better (and newer) technologies for accurate herd counts, analysis of riparian and upland habitat and comparisons to baseline data (does it exist?), modern uses of the land and our better understanding of conservation and restoration, new livestock grazing data, a consideration of carbon sequestration into soils and which grazers are capable of making this happen and how (climate change, climate change, climate change).

AMLs determined with an outdated and unscientific method 17 years ago are not valid today. In at least five out of the seven HMAS, these AMLs are so low as to raise serious concerns about the genetic viability of these herds.

The total allowable population level for wild horses in the 2.4 million, BLM acre planning area is just 615-1,003. The AMLs for each HMA are as follows:

Antelope Hills HMA
- Appropriate Management Level: **60 - 82 wild horses**
- Size: 96,071 BLM acres
- Acres per horse: 1,172 - 1,601
- Much of the HMA is also a designated uranium district, with large areas of projects.
- The horses exhibit "traits of the Spanish mustang" that could be lost.

Conant Creek HMA
- Appropriate Management Level: **60 - 100 wild horses**.
- Size: 49,528 BLM acres
- Acres per horse: 495 - 825

Crooks Mountain HMA
- Appropriate Management Level: **65 - 85 wild horses**
- Size: 54,726 BLM acres.
- Acres per horse: 644 - 842 .

Dishpan Butte HMA
- Appropriate Management Level: **50 - 100 wild horses**
- Size: 92,282
- Acres per horse: 923 - 1,846

Green Mountain HMA
- Appropriate Management Level: **170 - 300 wild horses**
- Size: 99,231 BLM acres
- Acres per horse: 331 - 584

Muskrat Basin HMA
- Appropriate Management Level: **160 - 250 wild horses**.
- Size: 176,421 BLM acres
- Acres per horse: 706 - 1,103

Rock Creek HMA
- Appropriate Management Level: **50 - 86 wild horses**
- Size: 19,107 BLM acres
- Acres per horse: 222 → 282

As justification for maintaining these outdated and unnaturally-low AMLs, the BLM cites a

Consent Decree that "requires BLM to reduce the wild horse population to the **low end** of the appropriate management level." which is identified for each herd management area (HMA).

The Consent Decree expires "no later than" August 2013, which is less than a year following the scheduled promulgation of Lander's new RMP. However, it is important to note that this consent decree **does not limit or modify BLM's discretion regarding** ...

- Specific removal and gather decisions,
- Census technique or method used to count the horses, and
- Changing appropriate management level in accordance with applicable law.

Therefore, BLM is free to reform its policies and practices in these regards immediately. Given that the Consent Decree expires in 2013, and that policies set in the RMP will span 10-20 years past that date, the RMP should look forward to post-Consent Decree management of its wild horses and plan for remediation of the inadequate herd sizes allocated to the HMAs.

The failure of the Lander Field Office to consider adjustments to AML through the RMP revision process is at odds with the directives in the BLM's **reform strategy** (Objective 1, Action 2, p. 7), which states: *"Consider adjustments to AML through in-depth analysis of herd and habitat monitoring data, and following appropriate NEPA analysis with public involvement."*

Further, Objective 5 (p. 8) states, *"Conduct rangeland health assessments, herd health evaluations, and habitat monitoring (utilization, trend, actual use, and climate data) in order to verify appropriate management level (AML) ranges and determine progress toward attainment of land health as well as long-term sustainable herd health."* However, the Lander RMP carries forth the old AMLs in the absence of this data. Objective 5, Action 1, states, *"Use best available rangeland health information to support decisions that affect the management of WH&B herds and their habitat."*

However, it is clear that Lander Field Office is making planning decisions in the absence of such information. **At the time the draft RMP was compiled, only approximately 45 percent -- which would be about 1,046,220 acres -- of the planning area had undergone rangeland health assessment.**

C. Preferential Treatment of Commercial Livestock Grazing Continues

The vast majority of acreage in the Lander planning area is dedicated to livestock grazing, while wild horses are limited to one-quarter of the public lands in this area. **Permitted livestock outnumber the *high end* of the total wild horse herd level by about 23 to 1.**

	Livestock	**Wild Horses**
BLM Acres	2.3 million (97%)	587,333 (25 %)
Authorized Population	~23,000 year round cow/calf equivalent	615-1003
Animal Unit Months (AUMs)	280,000	7,380-12,036*
Acres per animal	100	586-955

*Based on proper allocation of 1 AUM per 1 horse. BLM currently incorrectly calculating AUM use, by overcharging wild horses – see below section IV B.

Lander currently permits **livestock** grazing on **2,324,934 acres**, which is about **97.1 percent** of its BLM-managed surface area. These acres and percentage correspond to Alternative A (current management) as well as to Alternative C (maximum production). The following is list of all the Alternatives with their respective percentage of BLM-administered surface land that to be used for grazing:

Alternative **A** -- **97.1 percent**
Alternative **B** -- **96.6 percent**
Alternative **C** -- **97.1 percent** -- same as A
Alternative **D** -- **96.8 percent**

As is readily apparent, there are no significant differences across Alternatives in regard to acres open to livestock grazing. Differences show up due to other management actions that result in more or fewer AUMs being available to permit-holders.

Despite calls to address inequities in forage distribution to livestock in wild horse and burro HMAs, only Alternative B (which is not BLM's preferred alternative) calls for a marked reduction in livestock grazing, yet even that alternative will would not result in significant reductions of current usage, at least for 15 years.

By Alternative -- Acres, AUMs, Cow+Calf Annual Equivalents, Acres per Cow+Calf

Alternative **A**:

Acres: **2,324,934**
Permitted AUMs: **279,399**
Cow+Calf Annual Equivalents: **23,283**
Acres per Cow+Calf: **100**
Ratio of Cow+Calf Equivalents to high-end of **current** wild horse herd level (1,003): **23 to 1**

Alternative **B**:

Acres: **2,312,095**
Permitted AUMs: **128,759**
Cow+Calf Annual Equivalents: **10,730**
Acres per Cow+Calf: **216**
Ratio of Cow+Calf Equivalents to high-end of **current** herd level (1,003): **11 to 1**

Alternative **C**:

Acres: **2,324,934** -- Same as Alternative A
Permitted AUMs: **250,491**
Cow+Calf Annual Equivalents: **20,874**
Acres per Cow+Calf: **111**
Ratio of Cow+Calf Equivalents to high-end of **current** herd level (1,003): **21 to 1**

Alternative **D**:

Acres: **2,318,621**
Permitted AUMs: **229,005**
Cow+Calf Annual Equivalents: **19,084**
Acres per Cow+Calf: **122**
Ratio of Cow+Calf Equivalents to high-end of **current** herd level (1,003): **19 to 1**

Based on currently-trending usage levels, only Alternative **B** would require permit-holders to reduce their AUMs over time. If Alternative **B** were selected -- as AWHPC recommends with additions (see below) -- permit-holders would not have to reduce their ***actual*** livestock grazing **nearly 15 years**. Permitted AUMs would decline gradually over the 20-year life of the RMP -- 7,603 AUMs a year -- or 634 fewer annual cow+calf equivalents. It would take just under 15 years before permitted AUMs would equal actual AUMs currently in use, according to the RMP.

```
        280,813
−       167,170
--------------------
=       113,643 ÷ 7,603 ≈ 15
```

Once the 15-year mark was reached, thereafter permit-holders would be required to relinquish AUMs. But across so many allotments, the impact would scarcely be noticed. And it must be

noted that the BLM is recommending Alternative D, not Alternative B, as the preferred course of action.

E. Alternatives for Conversion of Livestock AUMs to Wild Horse AUMs Rejected: More Bureaucratic Doublespeak

The **reform strategy** (Objective 3, p.7) sets a goal to: *"Implement actions to improve WH&B management within HMAs."* Action 1 further clarifies: *"Enter into voluntary agreements with livestock operators to trade use areas (livestock to WH&B) where feasible."* Action 2 states: "*Identify opportunities to mitigate impacts to WH&B, where appropriate, from authorized activities on the public lands."*

The RMP fails entirely to explore this option, and no alternative is presented for converting forage allocations (AUMS) from livestock to wild horses, even though:

- BLM has the clear authority to limit livestock grazing, pursuant to 43 C.F.R. 4710.5(a), to close livestock grazing on areas of public lands "if necessary to provide habitat for wild horses or burros, to implement herd management actions, or to protect wild horses or burros, to implement herd management actions, or to protect wild horses or burros from disease, harassment or injury."
- BLM has discretion to alter land use decisions through its Adaptive Management Policy.
- BLM has the legal discretion to designate the HMAs as areas to be managed principally for wild horse herds under 43 C.F.R. 4710.3-2.

► ***The RMP and EIS must include alternatives that seriously consider giving wild horses a fairer share of resources within the HMAs and re-allocating resources for wild horses within zeroed out HAs.***

One alternative that would appear to involve reallocation of AUMs from livestock to wild horses was rejected out of hand in the daft RMP. That alternative (2.4.7) involves consolidation of all seven wild horse HMAS into one management area in the enormous livestock grazing allotment called the Green Mountain Common Allotment *"in lieu of the sheep and cattle that currently utilize the allotment (along with one HMA)."*

Presently, livestock usage in the Green Mountain Common Allotment is authorized at 46,179 AUMS. (See attached spreadsheet provided to AWHPC by the BLM Lander Field Office.)

If converted to wild horses, this would be the equivalent to a population of over 3,800 wild horses – a significant increase over the current maximum allowable population of 1,003.

However, the BLM has *"determined that this is a site-specific issue that does not require an RMP level decision and thus is not a reasonable alternative."*

Previously, when asked by the public to revise AMLs and reduce livestock grazing, the BLM has stated that such decisions are made during the RMP process and cannot be changed by lower level planning decisions.

Examples of BLM Claiming that AUM Allocation and AML are set through RMP Process

- **High Rock Wild Horse Gather EA:** *The current apportionment of multiple use grazing between livestock and wild horses was established through multi-year public review processes culminating in 2004 and 2008 respectively, with the development of the Black Rock-High Rock and Surprise Resource Management Plans. Land-use plan amendments would be required to modify the current multiple use decisions*

- **White Mountain/Little Colorado Wild Horse Gather EA**: *"… the 1997 Green River RMP established an AML of 205-300 wild horses within the White Mountain HMA. The Little Colorado HMA AML of 100 wild horses was established in the 1997 Green River Resource Management Plan with a management range of 69 to 100 adult horses Deviating from existing policy, planning decisions, and agreements reached pursuant to the District Court Order are not considered options nor are they within the scope of this EA.*

Now, when it serves the BLM's purpose to maintain the status quo, the agency claims that AML and AUM decisions are site specific, and not only do not require an RMP level decision, but are actually inappropriate for RMP level decision making.

This bureaucratic doublespeak serves only to confuse the public and perpetuate the status quo at the expense of reform.

SECTION IV: INACCURACIES AND INADEQUACIES IN DRAFT RMP/EIS

A. **Lack of monitoring data on which to base decisions regarding resource allocations, wild horse AML and Thriving Natural Ecological Balance (TNEB).**

The RMP sets a goal (BR: 15- Vol. 1, Chapter 2, .pdf page 97) to **"***Manage healthy wild horse herds within appropriate management levels that will maintain a thriving natural ecological balance [TNEB] between wild horse populations, wildlife, livestock, vegetation resources, and other resource values.*"

However the Lander Field Office lacks monitoring data on which TNEB can be determined. Indeed, at the time the draft RMP was compiled, only approximately 45% of the planning area had undergone rangeland health assessment. Reportedly more than half of the allotments evaluated—584,195 acres—failed to meet standards, with livestock grazing identified as a causal factor. (Vol 1, *pdf*-pages 499-500)

► **BLM must complete the rangeland assessments before promulgating the RMP.**

► **BLM must take decisive action to reduce livestock grazing significantly over the life of the new RMP to account for present levels of grazing and harmful impacts on rangeland health.**

B. Lack of data to differentiate rangeland impacts attributable to wild horses vs. livestock.

As stated above, the draft RMP states that horses must kept at the arbitrarily-determined AML numbers to maintain TNEB. However, no threat to this balance is greater than the extensive livestock grazing authorized by BLM in these seven federally designated wild horse habitat areas (HMAs). Indeed, **permitted livestock grazing rates are 23 times more than the allowable wild horse populations in this planning area**. Indeed, if TNEB is BLM's objective and if, as the RMP states, range conditions are not meeting this objective, the first species that must be removed are the non-native livestock.

C. Overcharging Wild Horses for AUM Usage

BLM-Lander tacks a **15-percent surcharge** on wild horse AUMs. Thus, every wild horse is deemed to use **1.15 AUMs** each month rather than just 1 AUM, even though the draft RMP states in Volume 1 (*pdf*-page 443) that many of the subject wild horses *"... range from 11 to 15 hands and 750 to 1,000 pounds mature weight."*

However, according to "**Using the AUM Effectively**," for an AUM of **1.15**, the corresponding weight would be a creature in excess of 1,200 pounds. Note also the discussion of how selective breeding and cross-breeding have resulted in beef cattle that are much heavier today than they were when the AUM system was created. Thus, if anything, BLM should be assessing livestock AUMs at a higher rate based on currently-prevailing average weight rather than continuing to use the old standard.

This comports with a **report by Dr. John Carter** of the Western Watersheds Project, which concludes that, due to the larger size of cows today, *"**BLM is understating forage consumption by cow/calf pairs by a nominal 50% based on the average body condition and frame scores."***

The obviously inappropriate and inaccurate way in which BLM estimates AUM usage both *underestimates forage consumption by livestock* and *overestimates forage consumption by wild horses.* This serves as an excuse to maximize cattle stocking rates, while minimizing wild horse allowable population size.

► BLM must re-evaluate all AUM allocations in HMAs and grazing allotments, using a formula that correctly reflects the true forage consumption levels, based on actual sizes of present day wild horses and livestock. The "surcharge" on wild horse AUM consumption must be discarded.

D. Failure to Evaluate On-the-Range Management Strategies

Under the each of the alternatives, BLM Lander would continue to rely on roundup and removal as the primary method for managing wild horses and maintaining AML. No more than scant attention is given to various on-the-range management strategies that can reduce the need for and eventually eliminate removals.

Such strategies include improved range stewardship and protection of predators. BLM must also begin to address reproduction in the field, by proper and sufficient administration of PZP fertility control. To *eventually* end gathers, in-the-wild population management would have to be **started** immediately.

►The Final RMP/EIS should include full disclosure of all predator kill programs in and around the 7 HMAs in the planning area. Further the RMP should establish an objective for protecting predators through Memoranda of Understanding between BLM and various state and federal agencies under whose jurisdiction predator-killing programs occur, to minimize and ideally cease such activities within and around HMAs.

► The Final RMP should designate a management alternative that sets as a goal the phasing out of removals in all but emergency situation and the implementation of effective on-the-range management through the use of PZP fertility control. The Lander BLM should familiarize itself with the economic model developed by the Humane Society of the United States, which shows cost savings in the hundreds of millions through implementation of this approach to wild horse management. The model was created by Dr. Charles de Seve, President of the American Economics Group and can be obtained by contacting him at cwdeseve@verizon.net.

E. Failure to Disclose Extent of Livestock Grazing Within HMAs

The RMP and EIS fail to disclose the percent of each livestock grazing allotment that lies within the 7 HMAs in the planning area. AWHPC downloaded the attached spreadsheet of allotments in the Lander HMAs from the BLM's online Rangeland Administration System. However, this system does not provide full information about allotments within the HMAs, and the BLM Lander Field Office has not determined, and therefore is unable to provide, the percent of the Green Mountain Common Allotment that is in the Lander HMAs.

Incomplete Information on AUM breakdown in HMAs:

Antelope Hills HMA

- AML: 60-82 wild horses
- AUMs Wild Horse: 720 - 984
- AUM's Livestock: ?*

*Green Mountain Common Allotment in HMA. ?% Total authorized livestock AUMs: 46,179

Conant Creek HMA

- AML: 60 – 100 wild horses
- AUM's Wild Horse: 720 – 1,200
- AUM's Livestock: 7,987 AUM*
- Cow/Calf Equivalent: 666

* 100% of Conan Creek Common Allotment

Crooks Mountain HMA

- AML: 65 – 85 wild horses
- AUMs Wild Horse: 780 – 1,020
- AUMs Livestock: ?*

**Green Mountain Common Allotment in HMA. ?% Total authorized livestock AUMs: 46,179*

Dishpan Butte HMA

- AML: 50 – 100
- AUMs Wild Horse: 600 – 1,200
- AUMs Livestock: 13,833*
- Cow/calf Equivalent: 1,157

** Big Pasture Allotment & Dishpan Butte Allotments 100 % in HMA.*

Green Mountain HMA

- AML: 70 – 300 wild horses
- AUMs Wild Horse: 840 – 3,600
- AUMs Livestock: ? AT LEAST 2,960 + % of Green Mountain Common Allotment- Total AUMs 46,179
- Cow/Calf Equivalent: ? 247+ % of Green Mountain Allotment – 3,848 total cow/calf equivalent*

**Whiskey Peak Allotment 100 % in HMA; Green Mountain Allotment ?% in HMA.*

Muskrat Basin HMA

- AML: 160 – 250 wild horses
- AUMs Wild Horse: 1,920 – 3,000
- AUMs Livestock: 23,103*
- Cow/Calf Equivalent 1,926

** Muscrat Open & Granite Mountain Allotments 100 % in HMA*

Rock Creek HMA

- AML: 50 – 86 wild horses
- AUMs Wild Horse: 600 – 1,032
- AUMs Livestock: 3,983*
- Cow/calf Equivalent: 332
  ** Rim Pasture Allotment 100% in HMA*

► Final RMP and EIS must contain full disclosure of authorized livestock grazing levels within each HMA in the planning area, including the percent of each allotment that is contained within each HMA.

F. **Fails to take the required "hard look" at alternatives for wild horse management**.

In fact, the only meaningful difference between the proposed alternatives considered is the establishment of a wild horse viewing loop and limited removal of fencing. (See above discussion, Section III A.)

► Final RMP & EIS should adequately consider reasonable alternatives for wild horses pursuant to public and Congressional demand; fiscal realities; and the BLM's own reform strategy. Alternatives must include:

- ***Increasing wild horse AMLs and Decreasing Livestock Grazing in Designated HMAs;***
- ***Phasing out frequent and large-scale wild horse removals in favor of on-the-range management to include improved range stewardship, protection of predators, and use of non-hormonal (PZP) fertility control where necessary. The RMP should set a goal of removing wild horses only in emergency circumstances.***

G. Failure to Disclose and Re-Evaluate "Zeroed Out" Herd Areas for Reintroduction as Wild Horse Habitat

The RMP/EIS is silent on Herd Areas (HAs) that exist within the planning district. Upon inquiry to the Lander Field Office, AWHPC has learned that at least three such HAs exist within the planning area: Copper Mountain, East Beaver and Sand Draw.

► ***The Final RMP/EIS must include the following information regarding HAs:***

- ***Identify all HAs in the planning area;***
- ***Give a detailed description of their current use.***
- ***Evaluate alternatives for reinstating HAs to HMA status, at minimum for reintroduction of horses from holding facilities to alleviate fiscal pressures. Any HA that has been "zeroed out" for wild horse use, but is still utilized for commercial livestock grazing must be considered appropriate for reintroduction of wild horses and reinstatement as an HMA***

H. Failure to Evaluate Impacts of Various Population Control Strategies

The RMP/EIS as currently written lacks description and analysis of the impacts of "sex ratio adjustment" and "chemical and other population control measures" to be implemented. This vague language is unacceptable. At minimum the EIS must analyze the impacts of each of the possible options (i.e. permanent sterilization, castration of stallions, spaying of mares, various chemical fertility-control methods, etc.) on wild horses.

In at least two of these areas: the impacts of sterilization and sex ratio skewing, the detrimental impacts are well known.

1. Sex Ratio Skewing-

The BLM itself has examined the impacts of sex ratio skewing. For example, the **BLM Beatys Butte EA DR FONSI 2009** (page 33) states, "*If selection criteria leave more studs than mares, band size would be expected to decrease, competition for mares would be expected to increase, recruitment age for reproduction among mares would be expected to decline, and size and number of bachelor bands would be expected to increase. . . .*"

The **EA for the South Steens Wild Horse Gather** (page 41) states, *"Skewing the sex ratio of stallions v. mares would result in a destabilization of the band (stallion, mare and foal) structure moving it from five to six animals to three animals. Social band structure will be lost resulting in combative turmoil as surplus stallions attack a band stallion trying to capture his mare. This could result in the foal being either killed or lost. The mare and foal will not be allowed to feed or water naturally as the stallion tries to keep them away from the bachelor bands of stallions, resulting in stress to the mare during her lactation condition*

2. Sterilization-

Chemical or surgical sterilization of stallions and mares is non-reversible, and causes significant impacts on wild horse behavior, health, well-being and ability to survive in the harsh, rugged environments where wild horses exist today. As such, it violates the **Wild Free Roaming Horses and Burros Act**, which requires BLM to manage wild horses and burros in a manner that protects their wild and free-roaming behavior, and considers them to be "an integral part of the natural system of the public lands," and directs that "all management activities shall be at the minimal feasible level."

Further the procedures are invasive and subject to high complication rates, particularly with regard to the spaying of mares, which, for that reason, is not a standard practice for the domestic horse industry, let alone for the management of wild horses on the range.

The RMP/EIS examines none of these significant detrimental impacts.

In fact, the impacts of sterilization on wild horses can be severe, affecting their physiology and ability to survive, as well as their behavior and therefore impact on the herd.

By reference, we request that the following declarations/expert statements be incorporated into the record with our RMP comments.

- **DECLARATION OF NEDA DEMAYO**
- **DECLARATION OF DR. JAY KIRPATRICK**
- **DECLARATION OF DR. ALLEN RUTBERG**
- **DECLARATION OF DR. ANNE PERKINS**
- **DECLARATION OF DR. LORI EGGERT**
- **DECLARATION OF DR. BRUCE NOCK**

Excerpts from these declarations follow:

"The very essence of the wild horse, that is, what makes it a wild horse, is the social organization and social behaviors. Geldings (castrated male horses) no longer exhibit the natural behaviors of non-castrated stallions. We know this to be true from hundreds of years experience with gelded domestic horses. Furthermore, gelded stallions will not keep their bands together, which is an integral part of a viable herd. These social dynamics were molded by millions of years of evolution, and will be destroyed if the BLM returns castrated horses to the HMAs. . . . Castrating horses will effectively remove the biological and physiological controls that prompt these stallions to behave like wild horses. This will negatively impact the place of the horse in the social order of the band and the herd." - Dr. Kirkpatrick, the Director of Science and Conservation Biology at Zoo Montana and a foremost authority on wildlife reproductive biology.

Gelding (removing a horse's testes) will have irreversible effects on both the individual horse and the herd. A gelded horse does not behave as a "wild" or "free-roaming" horse. . . It decreases muscle mass and strength, reduces bone density, and increases frailty. These deficits put the horse at a significant disadvantage on the range in terms of survival. A gelding will still have to compete with intact stallions for resources. His smaller size and strength, however, will not only put him at a competitive disadvantage, it increases the likelihood that agonistic encounters with intact stallions will result in severe injuries.. . . The compromised physical capacities that accompany gelding are likely to endanger castrated horses in a number of ways. In addition to undermining their ability to compete with intact stallions, it may diminish their ability to traverse the harsh terrain and great distances normally travelled to acquire food and water. This would jeopardize their survival particularly during challenging weather conditions, like droughts or heavy snow storms. A limited geographical home range is also likely to deplete local resources and negatively impact the ecological system as a whole. To survive in the wild, a

horse must be able to achieve a certain fitness level that may be impossible to attain once the animal is castrated. In my professional opinion, releasing a castrated horse into a wild herd is an inhumane management approach that certainly does not "protect" or "help preserve" wild horses in any sense of the word.- - Bruce Nock, Ph.D., tenured faculty member at Washington University School of Medicine and an expert in the physiological effects of stress

It is important to note that Section 3(b)(1) of the Wild Free Roaming Horses and Burros Act, as modified by the Public Rangelands Improvement Act of 1978, does specifies options for population management that include sterilization, it states that such determinations must be made in conjunction with other wildlife agencies and experts independent of government, such as those recommended by the National Academy of Sciences. Indeed, the BLM has requested that the National Academy of Sciences evaluate this question related to sterilizing wild horses (please see study description **here**):

> ***Managing a portion of a population as non-reproducing:*** *What factors should the BLM consider when managing for WH&B herds with a reproducing and non-reproducing population of animals (i.e., a portion of the population is a breeding population and the remainder is non-reproducing males or females)? When implementing non-reproducing populations, which tools should be considered (geldings (castration), sterilized (spayed) mares or vasectomized stallions or other chemical sterilants)? Is there credible evidence to indicate vasectomized stallions in a herd would be effective in decreasing annual population growth rates, or are there other methods the BLM should consider for managing stallions in a herd that would be effective in tangibly suppressing population growth?*

The BLM lacks the scientific information on which to base a decision to designate a portion of wild free roaming herds within AML as "non-reproducing" and to implement a sterilization program that will return hundreds of geldings to the range. This is evidenced by the fact that the agency has turned to the National Academy of Science to provide answers to necessary questions.

The BLM also lacks the necessary information to conduct a thorough environmental assessment of the impacts of the sterilization and sex-ratio skewing on wild horses and burros .
`

► ***The final RMP/EIS should prohibit sex ratio skewing and sterilization as management tools. At minimum, these controversial and precedent-setting management strategies should not be implemented until the results of the NAS review are available, and the BLM has conducted an EIS on their impacts.***

I. **Lack of data on genetic assessments of wild horses in the HMAs upon which decisions about proper "Appropriate Management Levels (AMLs) and genetic health should be based.**

1. AMLs in 5 of 7 HMAS to low to sustain genetic health of herds -

The RMP addresses the extremely low AMLs in the Antelope Hills, Conant Creek, Crooks Mountain HMA, Dishpan Butte, and Rock Creek HMAs by suggesting that the genetic health of

the herds is preserved by intermingling between two "meta-populations:"

North Lander Complex:

- Conant Creek
- Dishpan Butte
- Muskrat Basin
- Rock Creek.

The second metapopulation is ***not referenced*** in the RMP but was identified in an earlier Environmental Assessment co-issued with Rawlins Field Office, which shares jurisdiction with Lander over the five HMAs known as the **Red Desert Complex (**See Map **here.)** Here are the three assigned in whole or in part to Lander:

- Antelope
- Crooks Mountain
- Green Mountain.

Lander administers the upper portion of Antelope HMA and all of Crooks Mountain and Green Mountain HMAs.

BLM claims that the four HMAs it has combined, consolidated, and designated as the "North Lander Complex," and the other three HMAs that have been merged and labeled the "Red Desert Complex," constitute ***metapopulations*** that mix genetic information adequately. The RMP revision indicates -- in the Summary of the Analysis of the Management Situation, pdf-page 222 -- that the HMAs in question were combined "... to ensure long-term genetic diversity ...." However, the RMP provides not evidence that intermingling or genetic mixing will occurs amongst these sparsely-populated herds which are isolated by vast distances and miles of fences.

2. The draft RMP makes only passing reference to the **genetic health** of the herds –

The RMP states that it "... can be estimated during inventory by observation of body condition (e.g. the presence of physical abnormalities) at various times of the year." (Vol 1, pdf-page 440.) Because BLM currently conducts said inventories via aerial survey, it does not appear possible for Lander to gauge genetic status with this method. The accepted standard for such evaluation is by taking hair or blood samples from a representative portion of each herd and submitting those specimens for DNA testing by an equine genetics expert. Thus, the draft RMP is deficient in addressing management of its wild horse herds for genetic viability -- as are current procedures.

This past summer, the Lander and Rawlins Field Offices issued a joint environmental assessment (EA) for a roundup to be conducted in the "Red Desert Complex," some of whose HMAs they co-manage -- Antelope Hills, Crooks Mountain, and Green Mountain -- as well as two administered exclusively by Rawlins -- Lost Creek and Stewart Creek. The EA stated that genetic samples had been taken during the 2009 roundup, and it provided a summary of Equine Genetics Specialist Dr. Gus Cothran's report and recommendations. However, the actual report

was not included in the "References" section of the EA. The EA reported that the **Antelope Hills** herd was last tested in **2006**, with Dr. Cothran noting that the appropriate management level for this herd was **fairly low**.. Although the EA said that the Crooks Mountain and Green Mountain herds had also been tested in 2006, only a summary, not the actual report was provided.

► ***Lander's RMP needs to fully address how the herds' genetic health will be maintained, managed, and monitored. The final RMP and EIS must include specific information regarding the genetic health of the herds within each HMA. In addition, it must set forth the following criteria to safeguard the genetic viability of the herds:***
:

(a) A healthy breeding population in perpetuity per herd area
(b) Considerations of physical health of the herd - body condition, parasite load, disease
(c) Considerations of behavioral health of herd - are normal social behaviors and organization represented?
(d) Reproductive health - demonstration by the herd of effective fertility rates and survival of young
(e) Habitat health and diversity - establish parameters to evaluate range health per range or per herd area which accommodates the sustainability for and of healthy herds and other wildlife

J. No Consideration of Animal Welfare in RMP

Despite the fact that that the BLM reform strategy includes improved animal welfare standards as a primary objective, the RMP is silent in this area. **The RMP/EIS fails to adequately assess the impacts of proposed management alternatives on wild horses and fails to evaluate procedures for minimizing stress and injury to horses during roundups.**

► ***The RMP should recognize the importance of maintaining social bands to the well-being and proper management of wild horses. The RMP should incorporate the draft SOP for conducting roundups in accordance with this principle.***

► ***The final RMP should incorporate the recommendations by the Humane Society of the United States for improving the care and handling of wild horses and burros during capture operations.***

► ***The final RMP should specify that bait and water trapping should be the preferred method of rounding up horses, as it less traumatic and dangerous than helicopter drives.***

K. Failure to Consider Implications of NAS Scientific Review of Wild Horse and Burro Program and Plan Accordingly

A key element of the BLM's reform strategy is a National Academy of Sciences (NAS) of the BLM wild horse and burro program in order to "make recommendations on how the BLM should proceed in light of the latest scientific research." (p. 3-4) Yet, the Landers RMP does not mention or anticipate this forthcoming directive from the NAS on critical areas such as population modeling and estimates, options for fertility control, etc. (See **NAS Project Description** for further details.) Given the importance that BLM has placed on this scientific review, the revised Landers RMP sections relating to wild horses should state that they are adopted conditionally-in-part, depending on the findings of the report issued by the NAS following its review of the wild horse and burro program. The RMP should advise that it is subject to immediate amendment in regard to the Program, pursuant to the findings and corrective actions outlined in the NAS report. Further, controversial and unstudied proposed actions, such as introduction of non-reproducing components to existing herds and use of fertility control agents other than PZP, which has a long history of use, should not be implemented in advance of the NAS findings.

L. Failure to "identify opportunities to mitigate impacts to WH&B, where appropriate, from authorized activities on the public lands," pursuant to the reform strategy (Objective 3, Action 2, p. 7)

Various uses within HMAs that impact wild horses are described in the HMA, including wind energy projects, transmission line construction, oil and gas drilling and fracking (Green Mountain, Muskrat Basin, Conant Creek HMAs**)** and uranium mining (**Antelope Hills, Dishpan Butte, Green Mountain, Muskrat Basin**), the actual impacts of these uses on wild horses are not analyzed, nor are ways to mitigate potential impacts. It must be noted that that while the agency is not legally mandated to provide access to the public lands by these extractive users, it is mandated to protect and preserve wild horses and burros.

The harmful effects of these uses are well documented. First, the extractive projects use tremendous amounts of ***water***, a scarce commodity in arid Wyoming. Further, the resulting "produced" water is full of toxic substances such as benzene and other carcinogens that can endanger wildlife, including wild horses, and pollute their water sources. Air pollution from gas wells, radiation from uranium mining and processing, and landscape devastation from strip mining do untold damage. Noise pollution is significant. Access roads, heavy vehicles such as tractor-trailers and construction equipment, and personnel to build, operate, and manage the aforementioned disturb what would otherwise be peaceful and tranquil rangeland.

Just a few examples:

- **Lack of enforcement and contamination of water from fracking**
- **Wyoming regulations enacted to avoid more stringent federal rules on extractive mineral industry**
- **Water pollution from fracking**
- **BLM stays course in Wyoming gas patch despite mule deer decline**

Remarkably, the only impact of such uses on wild horses examined in the RMP is the impact of wind turbines and power lines on the BLM's "ability to manage wild horses within HMAs." The reason? Siting of wind turbines and power lines can preclude the use of helicopters. In BLM's view, helicopters and other aircraft are essential components of wild horse management. It is telling that the primary impact on wild horses about which the agency is concerned is the impact on the BLM's ability to remove them from the public lands!

► ***AWHPC supports Alternative B to emphasize environment, conservation and protection of natural resources, and to minimize harmful extractive uses.***

► ***Final RMP should include greater discussion of the impacts of wind energy, oil and gas drilling and fracking, uranium mining and other extractive uses on wild horses and explore mitigations to protect wild horse populations from their harmful effects.***

SECTOIN V: RECOMMENDATIONS

A. General Recommendations

► ***The Lander RMP should have a much shorter lifespan.***

Although not identified as an issue, it is suggested that *the new RMP should have a shorter validity period* -- four to five years, maximum. Global (as well as political) climate change demands greater flexibility on the part of BLM to respond quickly to rapidly-developing conditions on the ground. An RMP needs to be up-to-date and dynamic, because future actions and decisions will be guided by it. Indeed, Wyoming's 2010 State Wildlife Action Plan (SWAP) said: "*It is often difficult to keep Bureau of Land Management Resource Management Plans sufficiently updated and specific to meet the needs for effective mitigation and conservation planning*." The SWAP said that "*rapidly changing technologies and threats can also cause RMPs to quickly become outdated*."

►***The Lander RMP should state that it is issued conditionally-in-part, depending on the findings of the report issued by the National Academies of Science (NAS) following its study of the Wild Horse and Burro Program.*** The RMP should advise that it is subject to immediate amendment in regard to the Program, pursuant to the findings and corrective actions outlined in the NAS report.

► ***The Lander RMP Should Be Accountable to the Public.***

Lander needs to count the number of comments "voting" for or against the particular management actions at issue. Consolidating thousands of comments into one "form letter" and weighting them as a single submission results in distortion -- a false picture of the magnitude of support for or opposition to particular management actions. Collapsing the vote thwarts the intent of public participation in the RMP planning process. BLM is supposed to be building consensus, and considering the social, political and economic aspects of its plan. Disregarding feedback leads to decisions that are not supported by the majority of stakeholders. It is not

BLM's place to disqualify otherwise valid comments based on what Agency staff deem an inconvenient format. As public servants, BLM personnel need to show due respect for constituents. All comments must be honored -- considered fully and individually, with the results published.

► ***BLM Lander should cultivate partnerships with wild horse stakeholders for finalization of the RMP.***

Lander needs to implement coordinated resource management (CRM) with regard to its wild horse stakeholders. BLM needs to cooperate, consult, and coordinate with wild horse experts and advocacy groups, just as the Agency does with its grazing permittees (see Volume 2, *pdf*-page 475). The CRM approach will result in consensus-based decisions and the development of best management practices concerning wild horses.

► **The Lander RMP should not be finalized until rangeland health assessments for the planning area have been completed.**

Lander is urged to assemble a task force to complete the rangeland health assessments before promulgating the RMP. BLM's national office should redeploy staff from other field offices to assist Lander in this regard.

B. Specific Recommendations

Table 2.22. 4000 Biological Resources (BR) -- **Wild Horses** (Vol. **1**, *pdf*-pages **176-177**):

► ***AWHPC Supports Alternative B – with the following provisions -- because it offers the most protections to wild horses and the environment by placing greater limitations on energy development, mining and livestock grazing.***

Record # 4110 -- Appropriate Management Levels (AMLs) for Wild Horses –
The AMLs of five of the seven HMAs are arbitrarily low and genetically unsustainable.

► ***Increase AMLs in all HMAs and reduce livestock grazing, pursuant to 43 C.F.R. 4710.5(a).*** The current imbalance in which authorized livestock use in the planning area outnumbers wild horse use by at least 23-1 must be reversed.

► ***Increase AMLs in all HMAs to genetically viable levels***. BLM claims of horse movement across HMAs are unsubstantiated and do not negate the need for each HMA herd to have a genetically-viable population number.

► ***Evaluate the current usage of all "zeroed out" Herd Areas, and if livestock grazing currently take place, utilize 43 C.F.R. 4710.5(a) to reduce or eliminate livestock grazing in order to improve conditions and forage availability for wild horses.*** The relocation of healthy self-sustaining herds to these HAs or the introduction of horses from holding facilities must be included in the RMP.

► ***Designate all HMAs and HAs in the planning area as wild horse ranges to be managed principally for wild horse herds pursuant to 43 C.F.R. 4710.3-2.***

Record # 4111 -- Population Control Measures to Be Used on Wild Horses

► ***Eliminate removals as a population-management strategy in all but emergency situations. Properly utilize non-hormonal PZP fertility control to accomplish this goal.***

► ***Prohibit all detrimental types of fertility control, including hormonal fertility control methods, castration, spaying, permanent chemical sterilization, and sex ratio skewing, all of which alter wild horse behavior.***

► ***Establish a policy to promote the protection of predator species in an effort to restore natural population control mechanisms and restore the thriving natural ecological balance of these public lands areas.***

Record # 4112 -- *Dealing with Horses Outside HMAs*

► ***Establish a policy to return horses found outside HMAs to the HMAs. Implement range improvements to eliminate reasons for horses to leave the HMA, i.e. address water shortages by installing guzzlers.***

Record # 4113 -- Selective Removal Criteria for Wild Horses

► ***Removals should be minimized due to negative impacts: social disruption; compensatory reproduction; and rising cost of off-the-range warehousing of removed horses. Removals should be limited to verifiable emergency situations.***

► ***Conduct any roundups that do occur or catch-treat-release operations in a manner that preserves social band structures, so as to maintain the stability and integrity of wild horse social organization and establish humane policies in accordance with SOP's suggested by the Humane Society of the United States***. (referenced above)

Record # 41**14** -- *Use of Monitoring and Evaluation Data for HMAs*

► ***Use independent census takers and scientific methods for counting wild horses. Abandon dependence on assumed birth rates and extrapolations to project population growth.***

Current approach has proven unreliable. Accurate and scientifically-based census information is the foundation of an effective wild horse management program.

Record # 41**15** -- *Wild Horse Health Monitoring*

► ***Explain how BLM proposes to monitor horse health. Set forth procedures for scientific DNA sampling and testing at every gather to track the genetic diversity status of each herd.***

► Stipulate that the HMAP will be modified to increase herd populations if DNA test results reflect declining gene-pool diversity.

► ***Maintain genetic diversity by ensuring:***

(a) A healthy breeding population in perpetuity per herd area
(b) Considerations of physical health of the herd - body condition, parasite load, disease
(c) Considerations of behavioral health of herd - are normal social behaviors and organization represented?
(d) Reproductive health - demonstration by the herd of effective fertility rates and survival of young
(e) Habitat health and diversity - establish parameters to evaluate range health per range or per herd area which accommodates the sustainability for and of healthy herds and other wildlife

Record # 41**16** -- *Drop Metapopulation Theory*

► ***Each HMA should have a population of wild horses adequate in number to promote a self-sustaining herd.*** *Abandon designation of the "North Lander Complex" and manage the Conant Creek, Dishpan Butte, Muskrat Basin, and Rock Creek HMAs as separate, stand-alone herd areas. BLM shall abandon designation of the "Red Desert Complex" and manage the Antelope Hills, Crooks Mountain, and Green Mountain HMAs also as separate, stand-alone herd areas.*

The proposed administrative designation of the subject HMAs as metapopulations is unscientific and contrary to the interests of the wild horse herds at issue. Continued presence of fences precludes these HMAs from constituting true metapopulations. Lack of data in the draft RMP/EIS substantiates BLM's intermingling theories.

Record # 4117 -- *Year-Round Water Sources*

► ***Install an ecologically-sensitive water enhancements to provide a year-round water supply. Give preference to guzzlers over more intensive water developments. Require livestock permit-holders to keep their water improvements operating and available for wildlife, including wild horses, even when the grazing seasons conclude.***

► Establish a systematic process for allocating water and accounting across all multiple uses.

Although stated as an objective for management action, the draft RMP does not detail how the BLM would ensure a continuous supply of water for the wild horses under its jurisdiction.

Record # 41**18** -- *Updating the HMAP*

► ***Update the Lander HMAP now to raise the wild horse authorized management levels while reducing livestock grazing within the 25 percent of BLM land in the planning area that is designated as HMAs.***

► ***Manage each HMA for genetic sustainability. Clarify objective for on-the-range management of wild horses that minimizes the need for roundups and removals.***

Record # 41**19** -- *Wind Energy Projects' Affect on Wild Horse Management*

► ***Adequately assess impacts of all extractive industries on wild horses; identify methods for mitigating negative impacts; set objective for minimizing uses that negatively impact wild horses within HMAs.***

Record # 41**20** -- *Scenic Loops*

► ***Adopt Alternative B and creation of Wild Horse Viewing Loop as important factor for promoting ecotourism and promoting awareness of and respect for wild horses. Set parameters for minimizing disturbances to wild horses, such as creating permit system for wild horse guides and outfitters.***

Record # 4121 – Fences

► ***Remove fencing to the extent possible, and minimize construction of new fencing, to create corridors for natural migration by wild horses and other wildlife species. This will minimize any impacts on the range. This will also reflect the recent BLM initiative described here.***

Table 2.30. 6000 Land Resources (LR) -- **Livestock Grazing Management** (Vol. 1, *pdf*-pages 206-209) presents a chart of the ***record numbers*** and associated "management actions" corresponding to each of the proffered Alternatives. Regarding issues that impact wild horses:

Record # 60**63** -- *Range Improvements*

► Develop e***cologically-sound water improvements, with preference given to "guzzlers" (rain and snow catchment devices) over more intensive water developments.***

Lacking covers, stock reservoirs, troughs, and wells are prone to evaporative loss, which is a waste of water, a scarce resource. Small animals frequently become trapped in them. Guzzlers, in contrast, have covers that reduce evaporation and keep wildlife safe.

Record # 60**64** -- *Utilization Levels for Livestock Grazing*

► *Implement* ***Alternative B. Light utilization of 21-40 percent.***

More than half of the allotments assessed so far were not meeting rangeland health standards.

Also, as stated in this Alternative Record,: "... to achieve an adequate residual forage standard used as cover for wildlife and to be made available for utilization by wildlife and wild horses.

► Implement additional reductions to livestock grazing within HMAs pursuant to BLM legal authority.

Record # 60**66** -- *Fences (in connection with livestock grazing)*

► Implement Alternative B to minimize fencing to the extent possible within HMAs for the benefit of wild horses and other wildlife. Support creation of wildlife corridors, pursuant to the initiative detailed here.

C. Miscellaneous Recommendations

► Include standards to ensure transparency of the management of the planning area and any operations which take place to manage wild horses.

- Ensuring meaningful public observation opportunities during roundup activities – including bait and water trapping – is essential.
- Public observation should be provided each day of the operation.
- If BLM intends to locate the trap site or holding corrals on private land and the land owner does not agree to public access, the BLM should identify alternative property on which to conduct the government operation.
- It is important that the public be allowed to observe all horses brought into the trap, all horses at holding facilities and the release of all horses. The public must be allowed to arrive at the trap prior to the first horses brought into the trap and remain until after the last horses are brought in that day.
- In order to provide meaningful proximity to the trap site for public observation, the BLM may establish an observation "pool" by which a small number of individuals are allowed within close proximity to the trap to observe and document the animals and operation. The individuals in the pool would alternate with other public observers present.

► Include the following information in the RMP and EIS:

- All water allocation and usage (percentages should be provided for all uses) within and around the HMA.
- A full listing, or disclosure, of all predator-killing activities in and around the 7 HMAs in the planning area. This information should be obtained through cooperation with local and national wildlife service agencies.
- A full disclosure of all fencing location and length within HMAs and HAs.
- All data upon which the AMLs for the 7 HMAs were based.
- A full disclosure of all livestock grazing within the 7 HMAs, including a complete list of grazing allotments and percentage of each allotment that lies within each HMA.

SECTION VI: CONCLUSION: OVERALL MANAGEMENT ISSUES

In keeping with the intent of Congress that wild horses are managed in the most humane and minimally intrusive manner, the RMP and EIS should credibly and objectively evaluate the following options:

- Increase the AML for wild horses in the HMAs;
- Close or limit livestock grazing within the HMAs to increase AML;
- Designate the HMAs to be managed principally for wild horse herds;
- Offer ranchers in the affected HMAs the option to retire livestock grazing allotments with financial compensation or tax credits, or convert livestock grazing allotments to wild horse allotments to promote ecotourism activities;
- Implement on-the-range management of wild horses, reduce or eliminate wild horse removals, and expand the proposed fertility control treatments – expand the number of horses to be treated in order to allow more horse to remain on the range;
- Re-evaluate and reinstate HA territories – if livestock can utilize the public lands wild horses can too.

Thank you for your consideration of these comments.

Sincerely,

Suzanne Roy
Director
sroy@wildhorsepreservation.org
919.697.9389

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN WILD HORSE PRESERVATION CAMPAIGN, et al.,	)	
Plaintiffs,	)	
v.	)	Civ. No. 1:11-cv-01352
KEN SALAZAR, Secretary Department of the Interior, et al.,	)	
Defendants.	)	

DECLARATION OF BRUCK NOCK

1. I hold a B.A. from Elizabethtown College, an M.S. in psychobiology from Bucknell University, and a Ph.D. from the Rutgers University Institute of Animal Behavior. Between college and graduate school I served in the United States Air Force. I had top secret security clearance and served overseas in Guam and Viet Nam. After my Ph.D. I continued my education as a Post-doctoral Fellow at Rutgers University (1980-82) and then at The Rockefeller University (1982-84), where I focused on behavioral neuroendocrinology – the study of the interaction between the nervous system, hormones, and behavior.

2. I am currently an Associate Professor of Neurobiology in the Department of Psychiatry and the Department of Anatomy and Neurobiology at Washington University School of Medicine in St. Louis. I have been a faculty member at Washington University since 1985. My complete curriculum vitae is attached, as Attachment A.

3. I have spent more than thirty years working as a laboratory scientist. I have published numerous articles of original research in leading scientific journals on diverse topics, including wild horse behavior, stress physiology, brain biochemistry, anatomy, molecular drug design. I am also an avid horseman with extensive experience as a dressage and trail rider, and dressage and training instructor.

4. In 2003, I founded *Liberated Horsemanship* in Warrenton, Missouri with the goal of bringing science-based information on horse use and care to horse owners and equine professionals. *Liberated Horsemanship* provides a variety of services and educational programs for equine professionals and horse owners that are designed to maximize the health and welfare of horses while also increasing the fun and enjoyment of horse ownership.

5. I have authored several books, including two on riding and training horses: *Ten Golden Rules of Horse Training: Universal Laws for all Levels and Riding Styles; Ride for Tomorrow: Dressage Today* and *The Biology of Natural Horsemanship*.

6. I am an Advisory Board member of the *American Wild Horse Preservation Campaign* ("AWHPC"), a broad-based coalition representing over ten million supporters, and have written a series of science-based articles for the AWHPC on how *Bureau of Land Management* practices affect the long-term health and welfare of America's wild horses.

7. In addition to my current academic appointments and work with Liberated Horsemanship, I have promoted horse welfare by serving in the following positions: Wild Horse Research Coordinator, *Association for the Advancement of Natural Horse Care*

Practices (2006-2008); Board of Directors, *Association for the Advancement Of Natural Horse Care Practices* (2006-2008); and Director, Science and Applied Technology, *Association For The Advancement Of Natural Horse Care Practices* (2006-2008). I am also on the faculty of *The Kerulos Center*—a non-profit organization that finds science-based solutions to questions and concerns that affect the lives of animals.

8. I am familiar with the Bureau of Land Management ("the BLM") proposed roundup of the wild horses in the White Mountain and Little Colorado Herd Management Areas ("HMAs") and I strongly oppose that action.

9. The BLM recently proclaimed, "to ensure [the wild horses] of the Western United States are there forever for us to enjoy, the Bureau of Land Management must protect and manage the land and the animals in a thriving natural ecological balance." *Working Toward Sustainable Management of America's Wild Horses and Burros: Draft Goals, Objectives and Possible Management Actions*, Bureau of Land Management, Department of the Interior, June 2010. That goal is consistent with Congress' intent in passing The Wild Free-Roaming Horses and Burros Act of 1971 ("WFRHBA").

10. However, the proposed action will not preserve our wild horses in "a thriving natural ecological balance." Scientifically speaking, a natural ecological balance cannot be obtained by implementing a management procedure that causes unnatural social interactions and social disruption, which will happen if the BLM goes forward with its plan to return castrated males to these herds. If the goal is to establish "a thriving natural ecological balance," management practices that disrupt social interactions within a herd or alter herd structure – like the BLM's proposed action − should not be employed.

11. Gelding (removing a horse's testes) will have irreversible effects on both the individual horse and the herd. A gelded horse does not behave as a "wild" or "free-roaming" horse. In fact, one of the reasons domesticated and adopted wild horses are castrated is to make them more "manageable" – i.e. to artificially tame them.

12. Testes produce powerful steroid hormones called androgens or "sex hormones," such as testosterone. These hormones are powerful agents that function to coordinate an animal's behavior and physiology with the external world. Androgens have a wide range of biological functions. Their classic effects are on the induction and maintenance of secondary sexual characteristics and reproductive behaviors.

13. Gelding (also called castration) has an array of behavioral and physiological consequences, either through direct actions on tissues like muscle or by altering other physiological systems. Removing a horse's testes affects more than circulating sex hormones levels. It also affects the production and synthesis of other hormones, like cortisol, that are important to behavior, physiology and long-term health. By binding to transcription factors which regulate the activity of certain genes, androgens also affect neural circuits in the brain which are important to physiology and behavior." While gelded horses may do okay in captivity, this unnatural physiology will undoubtedly affect the horse's ability to survive and compete in the wild.

14. Androgens are anabolic steroids. They are what some athletes use to enhance musculature development, physical strength, and overall performance. As in humans, anabolic steroids make horses bigger, stronger, and faster. Castrating a horse has the opposite effect. It decreases muscle mass and strength, reduces bone density, and increases frailty. These deficits put the horse at a significant disadvantage on the range in

terms of survival. A gelding will still have to compete with intact stallions for resources. His smaller size and strength, however, will not only put him at a competitive disadvantage, it increases the likelihood that agonistic encounters with intact stallions will result in severe injuries.

15. The compromised physical capacities that accompany gelding are likely to endanger castrated horses in a number of ways. In addition to undermining their ability to compete with intact stallions, it may diminish their ability to traverse the harsh terrain and great distances normally travelled to acquire food and water. This would jeopardize their survival particularly during challenging weather conditions, like droughts or heavy snow storms. A limited geographical home range is also likely to deplete local resources and negatively impact the ecological system as a whole.

16. To survive in the wild, a horse must be able to achieve a certain fitness level that may be impossible to attain once the animal is castrated. In my professional opinion, releasing a castrated horse into a wild herd is an inhumane management approach that certainly does not "protect" or "help preserve" wild horses in any sense of the word.

17. In its Environmental Assessment and Record of Decision that considered alternative management approaches, the BLM appears to have focused principally, if not entirely, on raw numbers in its anticipated environmental outcomes. That, however, is not how natural systems work, especially in terms of genetic viability. A castrated male should not be counted in the same manner as a stallion because they cannot contribute to the genetic diversity or sustainability of the herds.

18. Horses normally form stable breeding groups comprised of one adult male, one or more adult females, and their offspring. A viable herd will generally stabilize at a ratio of equal

numbers of males and females. In the natural world, most, if not all, of these animals are capable of reproducing. Returning castrated males to the White Mountain and Little Colorado Herd HMAs will change the natural order within the herd and disrupt the herds' viability. There is no reason to believe a herd of such an artificial composition will be stable or self-sustaining.

19. The BLM's proposed act will foster unnatural competition for resources, including unnatural competition for reproductive mares, and cause social disruption within the herd. Social disruption is a very powerful stressor for herd animals that can accelerate physical and mental deterioration and long-term viability of individuals and the herd as a whole. An artificially produced atypical male to female sex ratio is not "a thriving natural ecological balance." It is difficult for me to envision anyone with even a superficial understanding of animal behavior and herd dynamics suggesting this as a possible viable management practice.

Pursuant to 28 U.S.C. § 1746, I hereby declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Bruce Nock

Executed on this 26 day of July 2011.

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN WILD HORSE PRESERVATION CAMPAIGN, et al.,	)	
Plaintiffs,	)	
v.	)	Civ. No. 1:11-cv-01352
KEN SALAZAR, Secretary Department of the Interior, et al.,	)	
Defendants.	)	

DECLARATION OF LORI EGGERT

1. I hold a B.S. in Biology from University of California, San Diego; an M.S. in Ecology from San Diego State University; and, a Ph.D. in Biology from University of California, San Diego.
2. I currently serve as an Assistant Professor in the Division of Biological Sciences at University of Missouri, and will be promoted to Associate Professor as of September 1, 2011. Prior to the promotion, I worked as an Assistant Professor in the university's Division of Biological Sciences since 2005. Concurrent to my professorship at University of Missouri, I have been a Research Associate for the Smithsonian Institute's National Museum of Natural History since 2003. Prior to beginning my work at the University of Missouri, I served as a Postdoctoral Associate for the National Museum of Natural History, Smithsonian Institution.
3. I have published numerous articles on wildlife conservation in peer-reviewed scientific journals. My research articles have covered topics including from genetic diversity, social structure, stress levels, population size estimation, simulation models for contraception management, and genetic and morphological evolution. I have also authored several book chapters on the genetics in wildlife populations. A full copy of my curriculum vitae is attached as Attachment A.

4. In addition to my work as a research scientist and professor, I am an active member of the American Society for the Advancement of Science, Society for Conservation Biology, Society for the Study of Evolution, and The Wildlife Society.
5. It is important for wild horse herds to maintain an adequate level of genetic diversity if they are to remain viable. I have reviewed the BLM documents that were generated in support of its proposed action to remove wild horses from the White Mountain and Little Colorado Herd Management Areas (HMAs), and find no evidence that the BLM has adequately accounted for genetic diversity in their assessments. In my professional opinion, the proposed BLM action will leave the White Mountain and Little Colorado herds unviable without significant future intervention.
6. Gus Cothran's population and genetics analysis of the White Mountain herd, on which the BLM relies in its Environmental Assessment (EA), was done with samples collected in 2000. This was well before the 2007 gather, in which more than 70% of the herd was removed. Removing such a large percentage of the herd is analogous to creating a genetic "bottleneck." For example, the small size of the White Mountain herd after the proposed removals made it more probable that genetic erosion will occur, even though the population was allowed to grow between 2008 and 2011.
7. Subjecting wild herd populations to a series of size bottlenecks can drive down the genetic effective population size. This is defined as "*the size of an idealized population that would lose genetic diversity at the same rate as the actual population*," and it is the measure we use to make predictions about the loss of genetic diversity.
8. The BLM is proposing to remove 873 horses from the White Mountain and Little Colorado HMAs, leaving approximately 100 horses on the range after the round-up. Even though 177 gelded (castrated) males will be put back into the population, none of them will contribute genes to the next generation. Thus, although the public will see approximately 205 horses at White Mountain and 69 at Little Colorado, there will only be about 100 reproductive individuals combined between the two populations.
9. The BLM's proposed action takes both herd populations below the minimum number that Gus Cothran felt was necessary to maintain genetic diversity in the White Mountain population alone, even before the 2007 roundup occurred. His comments that the Little Colorado population will have few problems for at least ten years included the caveat that

loss of herd size (as envisioned in the BLM's Modified Decision Record) could lead to loss of genetic variation. While it is conceivable (but unlikely) that none of those 100 horses would be closely related in the first generation after the reduction, their offspring will be more closely related with each generation and the likelihood of the deleterious effects of inbreeding (deformities, stillbirths, etc.) will increase.

10. It does not appear that the BLM has analyzed the impact of its chosen course of action on the genetic viability of these herds, which, in my opinion, could be detrimental to their ability to survive over the long term.

Pursuant to 28 U.S.C. § 1746, I hereby declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Lori Eggert

Executed on this 26th day of July 2011.

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN WILD HORSE PRESERVATION CAMPAIGN, et al.,	)	
Plaintiffs,	)	
v.	)	Civ. No. 1:11-cv-01352
KEN SALAZAR, Secretary Department of the Interior, et al.,	)	
Defendants.	)	

DECLARATION OF ANNE PERKINS

1. I hold a B.S. in Zoology from University of California, Davis, a M.S. in Animal Science from Montana State University, and a Ph.D. in Animal Behavior from University of California, Davis.
2. I currently work as a Professor of Anthrozoology and Psychology at Carroll College in Helena, Montana, where I have been employed since 1990. I am also the founder and director of the Human-Animal Bond Program within the Department of Psychology at the college. Concurrent with my faculty career at Carroll, I held an appointment as a cooperative research scientist with the U.S. Department of Agriculture (1992-1999). Attached, as Attachment A, is my curriculum vitae.
3. I am an active member of the International Society of Anthrozoology (ISAZ), the North American Riding for the Handicapped Association (NARHA), the Delta Society, the Equine Facilitated Mental Health Association (EFMHA), the Equine Assisted Growth and Learning Association (EAGALA), and the Equine Guided Education Association (EGEA).
4. In my capacity as a research scientist, I have published numerous peer-reviewed articles, including "The Effects of Population Density on the Social Structure of Wild Horses." My interest in horses prompted me to spend five years researching age characteristics and

fertility control of feral horses (free-roaming horses of domesticated ancestry) in the Pryor Mountains located in the Wyoming-Montana border area, Juntura Oregon and Challis Idaho.

5. I am familiar with the proposed roundup in the White Mountain and Little Colorado Herd Management Areas and I strongly oppose it. BLM's proposed management approach will harm individual horses and completely alter the natural social structure of wild and free roaming horses.
6. There is no doubt that castrating stallions and releasing them back into the herd as geldings (castrated males) will change the behavior of both the individual horses and the herd itself. Geldings behave much differently from stallions (intact males). A castrated male will not exhibit the same "wild" or "free-roaming" nature that is evident in fully-intact stallions. We know this from extensive studies done on domestic horses following castration.
7. Castration will drastically reduce testosterone, which is largely responsible for stallion behavior. Castrated male horses will lose much of their masculine behavior. Testosterone also plays a role in the "free roaming" nature of wild horses. We have repeatedly observed in domestic situations that geldings behave quite different from stallions. Castration, therefore, harms individual horses by altering their natural behavior and changing their social standing within the herd.
8. Wild horses form intricate social structures called "family bands." Testosterone is partially responsible for the stallion behavior that maintains these intricate family bands. Introducing large numbers of castrated males will impact family structures within the herds.
9. When a stallion reaches sexual maturity he begins to assert himself aggressively within the family band. Mares and the dominant stallion respond by kicking these "bachelors" out of the family band which reduces inbreeding.
10. Sexually mature stallions form "bachelor bands" in which they compete for mates and social standing through displays of aggression and physical strength. Geldings do not exhibit these natural behaviors to the same extent as stallions. We know this from our experience with domesticated horses. If you castrate stallions and release them back into

a wild herd, they will behave much like domesticated animals because their physiology will have been irreparably altered. Within the herd, male horses compete to earn the right to reproduce, winning and/or stealing mares from each other. This competition among stallions for reproductive access to mares promotes a stronger gene pool through the mechanism of "survival of the fittest." Geldings are unable to contribute to the genetic diversity of the herd. Removing this natural mechanism will diminish the bands' role in maintaining a sustainable, healthy, and viable herd.

11. Castrating free-roaming wild stallions and releasing them to public lands is essentially creating populations of "domestic horses" on public land which has no value for scientists or the public.
12. I recognize population management is essential because the resources to support a growing population of horses eventually become depleted. The overall management goal should be to keep the herd population at a sustainable level with as little human interference as possible.
13. For more than two decades I have been involved in the study of humane fertility control of wildlife populations. Reversible fertility control is currently the best method for maintaining natural herd structure while responsibly managing the populations of wild horses. Short-term fertility controls were designed to be reversible and not affect the family structure of the herd. In addition, reversible fertility control such as porcine zona pellucida (PZP), a birth-control dart used extensively on mares, does not permanently remove an animal from the gene pool.
14. I am opposed to the method of management as accepted by the BLM in choosing a modified version of Alternative D, which is an untested course of action The environmental and ecological consequences of this management approach have not been considered. There are better, less invasive systems for accomplishing the goal of sustainable herd management.

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN WILD HORSE PRESERVATION CAMPAIGN, et al.,	)
Plaintiffs,	)
v.	)
KEN SALAZAR, Secretary Department of the Interior, et al.,	)
Defendants.	)

DECLARATION OF ALLEN RUTBERG

1. I hold an A.B. in Biological Anthropology from Harvard College and a Ph.D. in Zoology from University of Washington. As a Ph.D. zoologist, I have significant research experience in wild horse behavior and fertility control.
2. I currently work as a Research Assistant Professor in the Department of Environment and Population Health at Cummings School of Veterinary Medicine at Tufts University. I have extensive experience teaching coursework in comparative vertebrate anatomy, physiology, endocrinology, animal behavior, sociobiology, ecology, evolutionary biology, and introductory biology. For the past three years I have simultaneously served as the Assistant Director for Education at the Center for Animals and Public Policy within the School of Veterinary Medicine. A copy of my curriculum vitae is attached.
3. Concurrent to my career at Tufts, since 2000 I have served as a Senior Research Scientist for The Humane Society of the United States (HSUS). Prior to joining the Tufts-

Cummings faculty, I spent nine years working as a Senior Scientist in Wildlife and Habitat Protection for HSUS.

4. I am a former appointee to the National Wild Horse and Burro Advisory Board for the U.S. Departments of Interior and Agriculture (1998-2000). As a member of the Advisory Board, I chaired the science subcommittee, authored the BLM's first guidelines on the use of immunocontraception in wild horse herds (dated April 29, 1999), and drafted the board's final report to the Secretaries of Agriculture and Interior. I was also a principal author of the HSUS's EPA registration application for the use of porcine zona pellucida (PZP) as a contraceptive in wild horses and burros.

5. In my capacity as a research scientist, I have spent more than twenty years studying wildlife immunocontraception, as well as the breeding and social organization of ungulates (hoofed animals). My research has included extensive field tests on the efficacy and efficiency of delivery of PZP contraceptive vaccines in populations of feral horses (*Equus caballus*) at Assateague Island National Seashore, MD, Cedar Mountains, UT, Sand Wash Basin, CO, and elsewhere; and on white-tailed deer (*Odocoileus virginianus*) at Fire Island National Seashore, NY, the National Institute of Standards and Technology, MD, Mumford Cove, CT, Fripp Island, SC, and elsewhere. I have published more than two dozen peer-reviewed articles on wildlife contraception wildlife management, and wild horse behavior; edited a book on wildlife contraception; and frequently provide seminars and presentations for professionals in these fields.

6. Prior to beginning my research on wildlife immunocontraception, I conducted extensive studies on group cohesion and dispersal in feral horses on Assateague Island, Maryland (1985-88). This work included research on the ecological, social and reproductive

influences on juvenile dispersal, band stallion experience, adult group membership and within-group spacing, female intraspecific aggression, and opportunities for peer interaction among immature males.

7. In addition to my work as a professor and research scientist, I have reviewed research grant proposals for the Bureau of Land Management (BLM), National Science Foundation, U.S. Agency for International Development (USAID), U.S. Department of Agriculture SBIR program, Park Foundation, Alternatives Research & Development Foundation, Earthwatch, and Animal Welfare Institute. I have also served as a manuscript reviewer for the following peer-reviewed journals: *Animal Behaviour, Biosciences, Crop Protection, Journal of Animal Welfare Science, Journal of Applied Animal Behavior Science, Human-Wildlife Conflicts, Journal of Mammalogy, Ethology, Journal of Wildlife Management, Wildlife Research, Wildlife Society Bulletin, Netherlands Journal of Zoology, Reproduction, and Zoo Biology,* and for the University of Chicago Press, University of Massachusetts Press, Smithsonian Institution Press, and Harvard University Press.

8. I have also worked extensively in policy-making related to wild horse management, hunting and state wildlife management, endangered species conservation, and wildlife management in national parks. In that capacity I have prepared fact sheets and delivered testimony to legislatures and legislative committees, conducted lobbying visits to congressional and state legislative offices, and prepared formal comments on federal regulations and environmental impact analyses. I have also worked with the Food and Drug Administration (FDA) Center for Veterinary Medicine to develop research protocols for Investigational New Animal Drug files, and assisted in drafting a

registration submission to the Environmental Protection Agency for the use of PZP as a contraceptive in wild horses and burros.

9. I strongly object to the decision of the Rock Springs Field Office to manage the wild horses on the White Mountain and Little Colorado HMAs as "non-reproducing" or "minimally-reproducing" herds. I have analyzed the Modified Record of Decision (ROD) and related documents and, in my professional opinion, the BLM will not be managing these populations as viable herds of wild horses, and the agency has no forecast for population growth of the animals left on these HMAs.

10. The language of the Green River Resource Management Plan is consistent with the stated goals of the BLM's Wild Horse and Burro Program: "The objectives for management of wild horses are to ... protect, maintain, and control viable, healthy herds of wild horses while retaining their free-roaming nature."

11. It is my understanding that after determining there was an “excess” number of horses in the White Mountain and Little Colorado HMAs, the BLM presented four proposed actions in its April 2011 draft EA −Proposed Alternative A which involved rounding up “excess” horses and returning some mares that were treated with PZP; Alternative B, which involved rounding up “excess” horses and returning some without any fertility treatment; Alternative C, which was taking “no action” at all; and Alternative D which was rounding up all of the horses in these areas and then castrating all males and spaying all females that would be returned to the range, so that none of the returned horses would be capable of reproduction. In June 2011, after receiving public comments, the BLM issued its final EA stating that its “Proposed Action” was Alternative A. Then on June 13, 2011, the BLM issued a Finding of No Significant Impact (“FONSI”) and Record of

Decision ("ROD") explaining that it had decided to implement Alternative D. On June 22, the BLM issued a "Modified Decision Record" that explained it was implementing "Modified Alternative D" "—under which it will remove 90% of the wild horses from these HMAs and return only castrated males.

12. Neither the "non-reproducing herd" described in the June 13 Decision Record nor the "minimally-reproducing herd" described in the June 22 Modified Decision Record achieves the objectives outlined in the Green River Resource Management Plan.
13. If implemented, either version of Alternative D would create a semi-free-roaming herd of domestic horses on public lands, where the Wild Free-Roaming Horses and Burros Act of 1971 (WFRHBA) requires that true "wild," "free-roaming" horses belong.
14. Biologists speak of herd viability in two senses, demographic viability − the ability to compensate for death or emigration of its members by reproduction and natural immigration, and genetic viability, the ability to maintain sufficient genetic diversity to keep animals healthy, fertile and capable of raising healthy offspring. By design, the proposed management plan does not achieve herd viability under either definition.
15. Gelding (castration) removes the animal from the population gene pool as effectively as if he had been removed from the range, thus further reducing the number of animals available to maintain genetic diversity, and accelerating inbreeding. From a genetic viewpoint, the projected population of 274 horses spread over two HMAs becomes only 97 horses if 177 of them are geldings. This is a drastic change from what the BLM considered in the EA.
16. Such a sharp reduction in the reproductive capacity of the herds makes it extremely difficult for the herd to respond to environmental challenges or the loss of membership

through attrition, and, without continued intervention, the herd will go extinct. Under the chosen course of action, the AML must be maintained artificially by importing horses from other HMA's. Such a result is not consistent with the statute's mandate that "[a]ll management activities shall be at the minimum feasible level."

17. The proposed herds will no longer be "wild horses" from a conservation, population ecology, or behavioral viewpoint. Wild horses typically live in reproductive bands consisting of adult mares, their dependent offspring, and one or more stallions whose lives revolve around trying to protect mares from harassment by other stallions to secure exclusive reproductive access to the mares for themselves; and bachelor bands of stallions whose lives revolve around displacing band stallions and acquiring or re-acquiring reproductive access to mares. Mares, meanwhile, simultaneously bond with one another and compete with each other for access to water, food, and other resources for themselves and their foals. Geldings will not participate in these fundamental processes of wild horse behavior.
18. The castrated males will also not retain their "free-roaming nature," except in the literal sense that they will be able to move around the HMA's without physical restraint because these horses will not be hormonally prompted to protect their mares, compete with other stallions for reproductive mates, or cover as much geographical distance as they would in their natural state. The castrated horses will behave much more like domesticated horses, with diminished aggressiveness and competitiveness.
19. Nearly two-thirds of the horses remaining on the HMAs under the newly proposed action will be geldings. As a result, the population as a whole will also not reflect wild horse

behavior. This result also violates Objective 3 of the Green River Herd Management Plan, which is to "provide opportunity for the public to view wild horses."

20. If the newly designed action is implemented, members of the public who view horses at the White Mountain and Little Colorado HMA's will be misled and mis-educated about the true nature of wild horses and their behavior. Non-castrated males will not behave like fully intact wild stallions which, as described above, will also adversely impact the behaviors of the herds as a whole.

21. The accepted proposal, without explanation, deviates from longstanding BLM herd management policies. Since the mid-1970's, the BLM has looked to various fertility control technologies to reduce the "excess" population of wild horses. I have been involved with that effort since 1992, both as a researcher contributing to the testing of PZP immunocontraception of wild horses, and as a formal and informal advisor to the BLM on fertility control policy. With respect to PZP, I can personally attest that BLM has moved very cautiously, subjecting proposed research projects to intensive scrutiny, and discussing, revising, and adopting strict and specific guidelines for its use. Before approving PZP research projects, the BLM has required extensive testing in laboratory and captive settings, detailed documentation of minor side effects, and maintained detailed records on treated individuals − even for minor variants of vaccines whose safety and efficacy have been scrutinized for decades.

22. For field use, guidelines adopted by BLM require the adoption of detailed use protocols, extensive NEPA compliance and public involvement, population modeling (to demonstrate long-term viability under the prescribed treatment regime), and other conditions. This scrutiny, evaluation, and planning has been directed at a vaccine for

which data published in peer-reviewed journals show is reversible, has no serious adverse health effects, has no major disruptive behavioral effects, preserves genetic viability better than management by gather and removal, and is cost effective. It has also been proven to be effective in managing several populations of wild horses on public lands.

23. To the individual wild horses, their bands, and their populations, the reproductive interventions entailed with the newly designed approach adopted by the BLM are, by contrast with PZP, highly invasive, intrusive, and disruptive. Moreover, the environmental impacts of this approach are completely uncertain at this juncture.
24. Given that PZP represents a better tested, better scrutinized, effective, and far more benign management alternative for fertility control in wild horses, and that the language of the Act dictates, "All management activities shall be at the minimal feasible level"(§ 1333(a)); I do not see a defensible justification for implementing the massive sterilization actions contained in the chosen alternative.
25. BLM's standard population modeling technique was developed by Dr. Steven Jenkins at the University of Nevada at Reno. Dr. Jenkins' model, known as the WinEquus population model, was designed to assist the BLM in predicting and evaluating impacts on wild horse populations given various stochastic factors and management alternatives. No population modeling was done for the chosen action and hence the BLM has no idea how it will impact these populations of wild horses. This is a critical oversight in the BLM's analysis of the environmental impact of their proposed action.
26. The WinEquus population model assumes that fertility control will be administered to females and be reversible. It does not, and cannot, account for the effects of the presence of geldings on population size and growth. Thus, the BLM has no tool for modeling the

population impacts of the implementation of Modified Alternative D on the wild horse herds.

27. The BLM's chosen action represents an unnatural and unsustainable environmental management scenario because the castrated males will continue to use limited resources while contributing nothing to the demographic or genetic viability of the herd. In consuming the herds' resources, the 177 released geldings will have similar environmental impacts as the non-castrated stallions. By consuming resources that would otherwise be available to breeding horses, this environmental pressure will actively decrease the herd's overall viability and resilience to environmental pressure.

28. The genetic analysis upon which the BLM relied, recommends maintaining a population of 100 horses to sustain genetic viability for the White Mountain herd. Final EA at 13. The number projected to be left on the range under BLM's chosen action, however, is far less than the designation outlined in the genetics analysis. Thus, according to the agency's own EA, this approach will not ensure a "self-sustaining population" as required by BLM's own regulations.

29. I am opposed to the method of management that was chosen by the BLM. As a scientist who is intimately familiar with the BLM's management of wild horses on public lands, I believe the biological and ecological consequences of this management approach have not been adequately considered, and could have drastic impacts on the "wild" and "free-roaming" nature of the herds in these areas. In addition, as explained above, there are better, less invasive, systems for accomplishing the goal of sustainable herd management.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief. Executed this 22 day of July, 2011.

Allen Rutberg

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN WILD HORSE PRESERVATION CAMPAIGN, et al.,	)	
Plaintiffs,	)	
v.	)	Civ. No. 1:11-cv-01352
KEN SALAZAR, Secretary Department of the Interior, et al.,	)	
Defendants.	)	

DECLARATION OF JAY KIRKPATRICK

1. I hold a B.S. in Biology from East Stroudsburg State College, and a Ph.D. in Reproductive Physiology from The College of Veterinary Medicine at Cornell University.
2. I currently work as the Director of The Science and Conservation Center in Billings, Montana. Prior to this position, I was an Associate Adjunct Professor in the Department of Population Health and Reproduction within the School of Veterinary Medicine at University of California, Davis. Concurrently, I was a Senior Staff Scientist for the Deaconess Research Institute in Billings, Montana. I also spent more than two decades working as an Associate Professor of Physiology in the Department of Biology at Montana State University-Billings, Montana. I also spent thirty years working with the U.S. Department of Interior, National Park Service, Bureau of Land Management (BLM), researching reproductive biology and chemical fertility control in wild horses.
3. For the past forty years I have dedicated my work as research scientist to studying wildlife fertility control. I have conducted research in a variety of areas including:

reversible contraception in free-roaming herds, ovarian function in mares chronically treated with porcine zonae pellucidae (PZP), long-term effects immunocontraception of wildlife, and mechanisms of reproductive self-regulation in free-roaming ungulates. I was also integrally involved in the construction of a laboratory for wildlife immunocontraception research. In addition to this work, I have published more than seventy peer reviewed articles and peer reviewed book chapters on these topics.

4. Throughout my career I have been actively involved in many professional organizations. Since 1999, I have served as a Professional Fellow for the Association of Zoos and Aquariums (AZA), and for the past twenty years I have been a Member of the AZA Contraceptive Advisory Group and the American Association of Zoo Veterinarians. In addition to these positions, I was a long-time member of the Society for Experimental Biology and Medicine and the Society for Study of Reproduction. A copy of my curriculum vita is attached, as Attachment A.
5. I have spent considerable time living, recreating, and working on the public lands in the Western United States, including six years working as a Park Ranger at Rocky Mountain National Park in Estes Park, Colorado. The wild horses that roam public lands are an integral part of the landscape and the ecological systems that comprise these areas.
6. I am familiar with the proposed BLM roundup in the White Mountain and Little Colorado Herd Management Areas (HMAs), and I strongly oppose this approach to herd management. It is extremely intrusive for the individual horses and not viable for the herds as a whole.
7. If stallions are sterilized as proposed by BLM, there will be massive changes in social organization and behavior. As a research scientist and former BLM contractor who

worked extensively on chemical fertility control in wild horses, I believe capturing and castrating wild male horses, and then releasing them back into the herds, is incompatible with the BLM's mandate to protect and retain the free-roaming nature of wild horses.

8. The very essence of the wild horse, that is, what makes it a wild horse, is the social organization and social behaviors. Geldings (castrated male horses) no longer exhibit the natural behaviors of non-castrated stallions. We know this to be true from hundreds of years experience with gelded domestic horses. Furthermore, gelded stallions will not keep their bands together, which is an integral part of a viable herd. These social dynamics were molded by millions of years of evolution, and will be destroyed if the BLM returns castrated horses to the HMAs.

9. Reproduction in male horses is a complex cycle that moves from the horse's brain to the testes and back again. Reproductive steroids, such as testosterone [T], affect the higher levels of the brain and cause a variety of a stallion's behaviors. These higher levels of the brain also send neural messages to the hypothalamus. The hypothalamus, in turn, stimulates the production and release of a protein hormone known as gonadotropin releasing hormone (GnRH). The GnRH, in turn, stimulates the anterior pituitary to produce and release follicle stimulating hormone (FSH) and luteinizing hormone (LH). The protein hormones stimulate the testes. Testosterone causes the aggressive behavior associated with successful stallions. These higher levels of the brain signal the hypothalamus to release GnRH, which in turn signals the pituitary to secrete FSH and LH. The FSH causes sperm production and the LH causes the testes to produce testosterone, which then feeds back to the brain, and on and on.

10. Castrating horses will effectively remove the biological and physiological controls that prompt these stallions to behave like wild horses. This will negatively impact the place of the horse in the social order of the band and the herd. For this reason, I oppose the BLM's proposed method of managing the White Mountain and Little Colorado HMAs. There are less intrusive, more humane, and more sustainable forms of fertility control available to the BLM.

Pursuant to 28 U.S.C. § 1746, I hereby declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Jay F Kirkpatrick

Jay Kirkpatrick

Executed on this 26 day of July 2011.

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN WILD HORSE PRESERVATION CAMPAIGN, et al.,	)	
Plaintiffs,	)	
v.	)	Civ. No. 1:11-cv-01352
KEN SALAZAR, Secretary Department of the Interior, et al.,	)	
Defendants.	)	

DECLARATION OF NEDA DEMAYO

1. I have been a horsewoman since the age of 4. I spent my childhood and young adult life competing in jumping, competitive trail riding, cross country riding, and eventing. Although my education focused on natural healing modalities and work in the film industry, my love of horses remained. In 1997, I established Return to Freedom (RTF), a sanctuary for wild horses in Lompoc, CA. Return to Freedom began by relocating intact family bands and social bands directly from the range to our sanctuary. The original bands came from Fish and Wild Service (FWS) lands at Hart Mountain and the Sheldon Wildlife Refuge. Currently, we have approximately 400 wild horses, many living in their natural herds at the sanctuary. I have directly managed the wild horses at our sanctuary for the past thirteen years.
2. RTF has worked with The Science and Conservation Center for over ten years managing our populations with the use of the porcine zonae pellucidae (PZP) immunocontraception vaccine. Our data shows a 93% success rate using the PZP immunocontraception. RTF has also developed a virtual "Living History Tour" with undiluted strains of Colonial

Spanish Horses (the original foundation of the Spanish mustangs in America, such as the pure tribal Choctaw horse, the mission strains, the Sulphur horses, the Cerbat horses, etc.), as well as the various rancher and cavalry strains fighting for their lives on our public lands today.

3. In 2004, I launched the American Wild Horse Preservation Campaign (AWHPC) to create a unified message and provide a national educational and advocacy platform. Since that time, AWHPC has been supported by over forty-five organizations and groups nationwide, which collectively represents well over ten million people across America.
4. For more than a decade, RTF and AWHPC have provided leadership to help define a viable direction for the preservation of America's wild horses with the understanding of their natural social behaviors and needs for long term genetic viability and social well being.
5. At our sanctuary, the horses live in their family and social bands. As a result, we have been able to educate the public to understand and appreciate America's wild horses by providing the opportunity, through sensitive observation, to see the horses exhibiting their natural behaviors and living in their natural family and social band structures.
6. Throughout the years, we have castrated approximately seventy-five wild horses and closely observed their behaviors. I have come to regret the decision to employ that method of fertility control on wild horses because of the negative impacts it has on the individual horse and the herds.
7. The wild stallion is a significant member of the herd society, whether it is a lead stallion or in a bachelor band. As a result of the gelding, however, the band stallions lose their

mares and spend most of their time alone. The geldings also lose much of their natural drive, tendency for movement, and wild spirit.

8. Castrating stallions completely changes their behaviors. In their natural state, stallions challenge each other, protect their mares, procreate, educate other horses, and are nomadic. They keep the bands moving forward, driving from behind. The horse, which was originally a browser and developed into a grazer over millions of years, needs to move to maintain a healthy bone density, digestion, and hoof. Movement is critical for their health and well-being. Movement is not only generated by their need to travel from food to water. It is also behavior driven, as exhibited in their fighting, playing, courting, and educating of their young. A healthy stallion is a very active animal. After gelding, however, these fundamental behaviors are lost or, at best, significantly decreased forever.
9. The behavioral changes we have witnessed are most pronounced in the band/leadership stallions. These horses become visibly dejected, and have live relatively isolated for years after their gelding.
10. A gelded horse also significantly reduces its roaming behavior. No longer driven to seek out and compete for mares, geldings move less and move slower, lingering for longer stretches of time in a given area. On a range with sparse watering holes, this may result in lingering closer to riparian areas and, as feed dwindles, having a tougher time maintaining a healthy weight.
11. In light of what I have observed, releasing gelded horses onto the range would be not only inhumane, but also harmful to the herd. It is one thing for gelded studs to live in our small and protected sanctuary, where we supplement food and water as necessary and where the horses enjoy a mild climate. It is quite another matter for geldings to survive in

the harsh environment and vast regions of the open range where wild horses live. Survival in the desert often requires horses to range over long distances between forage areas and water. Without the energy and drive that is provided by testosterone, a gelded stallion is often alone and vulnerable.

12. Some of the younger horses that were gelded on at our sanctuary formed groups and exhibited domestic pasturing behavior. For the band stallions, however, the impact was far more extensive. I have witnessed a dramatic difference in the behavior of leadership stallions that were castrated at an older age. These stallions were former leaders of their herds, but now have to wait until last at the water hole. They are on their own, ostracized from the herd.
13. The BLM's proposed action at the White Mountain and Little Colorado Herd Management Areas is not a precedent the government should set, especially in light of Congress' intent in passing the Wild Free-Roaming Horse and Burrows Act to "protect and preserve" these horses and their free-roaming and wild behavior.
14. For the past ten years I have successfully used PZP as a tool to slow down or eliminate reproduction in mares. With this management approach, I have experience a ninety-three percent effectiveness rate. PZP is non-hormonal, so it does not impact behavior. The horses still cycle, breed, go through courtships, and exhibit a full range of natural behavior.
15. The proposal to geld wild stallions and return them to the range is unnecessary. If BLM simply redirected funding currently spent to gather, process, and maintain horses in short- and long-term holding facility to managing horses on the range with fertility control, millions of dollars would be saved.

16. A far more cost-effective, tested, and humane approach would be for the BLM to gather the horses in their bands, construct temporary corrals in which to house them, vaccinate the mares with PZP, hold them for ten days, give them a booster shot, and then release them onto the range. Unlike the current proposed action, this approach would be in accordance with the objectives and intent of the Wild Horses and Burros Act for minimally-intrusive management.

Pursuant to 28 U.S.C. § 1746, I hereby declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Neda M. DeMayo

Neda DeMayo

Executed on this 26 day of July 2011.