

Attachment 1:

Pryor Mountain Wild Horse Range EA for the 2002 Humane-Use of Fertility Control on Select Young Wild Horse Mares

Summary of Public Comments and BLM Responses

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Introduction:

Eighteen documents (letters and e-mail) were received by the Billings Field Office (BiFO) in response to the EA for the proposed 2002 Humane-Use of Fertility Control on Select Young Wild Horse Mares on the PMWHR. BiFO appreciates the continued interest in management of the PMWHR and public input provided to assist in the decision-making process. Individual documents are on file at BiFO. Individuals and agencies who responded include:

1. Dick Walton, Billings, Mt.
2. Jerri Tillett, Lovell, Wy.
3. Peter Lesica, Missoula, Mt.
4. Donald Heinze, Grants Pass, Or.
5. Barbara Warner, Marion County Humane Society, Lebanon, Ky
6. Doug Dreeszen, Past President, Montana Chapter, Foundation for North American Wild Sheep
7. Nancy Smoller (via e-mail)
8. Margaret Webster, Billings, Mt.
9. Craig Downer (via e-mail)
10. Carol Kruse, NEPA Policy Analyst, Office of Federal Land Policy, State of Wyoming
11. Bill Wichers, Deputy Director, Wyoming Game and Fish Department
12. Joey Deeg, Bridger, Mt.
13. Trish Kerby, Billings, Mt.
14. Andrea Lococo, Rocky Mountain Coordinator, Fund for Animals, Jackson, Wy.
15. Patricia M. Fazio, Coordinator, Wyoming Animal Welfare Network, Cody, Wy.
16. [Redacted] (via e-mail)
17. Ann Evans (via e-mail)
18. Margaret Webster, Chair, The Eastern Wildlands Chapter of Montana Wilderness Assoc.

Questions, concerns and comments were very diverse and an effort has been made to summarize and consolidate the content of all letters in order to facilitate BLM's response process. Questions are paraphrased to preserve the integrity of content. No intent is expressed or implied by BLM to question the merit of input, but wherever possible, BLM has provided clarification of details.

A. Questions and Concerns Related to the Potential Impacts of Fertility Control on Wild Mares:

How and why were younger Pryor Mountain mares chosen for fertility control?

Purely from the standpoint of humane management (and compassionate use of PZP vaccine), BLM recommends that all yearling and two-year old mares currently in the herd receive a single-dose (primer) of PZP contraceptive vaccine with a follow-up booster at least one month later (Appendix 1). Note that any mares, which received a primer injection during gather efforts last Fall, will only receive a booster vaccine this summer. This two-shot application, which will be remotely-delivered, is necessary as the primer simply acts to enhance the immune system response and does not generally confer infertility.

The intent of this action (as explained in detail in the EA#MT-010-02-22) is to provide one year of infertility, in order to give the mares an opportunity to fully mature before becoming pregnant, or to fully recover before becoming pregnant again. Close monitoring of individual Pryor horses has demonstrated that most yearling and two-year old mares which become pregnant and carry the foal to term, do so at the expense of their own health, and sometimes that of the foal. Although the foaling rate of two-year old mares may be low (<10%) it is possible that conception rates are higher but the mares are unable to carry the foals to term. This conception, with ensuing resorption and/or abortion is also costly to the mare. Mares which are repeatedly compromised in their early reproductive history may have significantly reduced lifetime foal production. This could be costly to the viability of the herd and is currently being researched for the Pryor herd.

The PMWHR is managed for multiple use values and seasonally experiences high levels of public visitation. During these periods, BLM often receives calls regarding the well-being of these young mares. BLM has the legal authority to make management decisions on the basis of animal health for humane reasons, as long as these decisions support the mandate to manage for healthy, viable populations. Direct, indirect and cumulative impacts to the herd, and other aspects of the affected environment as a result of the Proposed Action, have been considered in detail within the EA. BLM feels that the Proposed Action is also responsive to the mandate that management should be carried out at the minimum feasible level. Minimum feasible level does not translate to a management prescription of “do nothing,” but can be interpreted to mean “do the minimum necessary to be effective in managing for healthy, viable herds.”

Is the safety and efficacy data sufficient to safely use the PZP vaccine on yearling and two-year old mares?

At this time, all published research indicates that the immunocontraceptive Porcine Zona Pellucida (PZP) vaccine meets BLM requirements for an ideal contraceptive agent including criteria for safety and efficacy (Appendix 6 in the EA). When injected, PZP vaccine acts as an antigen and causes the mare’s immune system to produce antibodies. These antibodies then bind to eggs in the mare’s ovaries and effectively block sperm binding and fertilization. Research has shown that if the mare is already pregnant, the PZP vaccine will not affect normal development of the fetus or hormone health of the mare. In fact contracepted mares are known to actually show improvements in body condition and live longer.

From a mare physiological standpoint, PZP contraception has no impact on mare hormone secretion or developing endocrine systems. It operates as an immune response only and appears to be completely reversible. Most development of reproductive systems, including lifetime oocyte count in the ovary, is done during the fetal stage. Research has shown that PZP has no

negative impacts on the developing fetus and ensuing post-birth fertility. Thus, if a mare is not yet sexually mature, there will be no negative impacts on her normal reproductive development. Research has shown that PZP does not appear to cause ill effects on ovarian function unless contraception is repeated for more than five consecutive years on a given mare. Thus, a single primer and booster vaccine dose is not expected to result in any negative physiological impacts to yearling and two-year old mares.

The BLM National Research Field Trials on Wild Horse Fertility Control will require close monitoring of all treated populations in order to evaluate management-level use of the fertility control vaccine under a research protocol. On the Pryors, any wild mares receiving the vaccine will be individually-identified and tracked regularly with data non-intrusively gathered on behavior, estrous (evaluated by collecting urine samples not just overt behavior), fertility, survival, and any health concerns. The field studies will be conducted by seasonal and term USGS-BRD biological technicians under the supervision of BRD research biologists. Any behavioral data will be compared to pre-treatment data from 2002 as well as existing BLM baseline studies from previous years.

Is it appropriate to use the Pryor herd for on-going fertility control studies?

The BLM (with public and researcher assistance) has been closely monitoring the Pryor herd for some time. The exact age of most animals is known due to birth records, while other animals have been aged by their teeth (American Association of Equine Practitioners Official Aging Guide) during chute confinement at the time of gathers. Thus, more individual animal and population information is known about this herd than any other herd in the country. This is not a typical BLM management approach for herds of wild animals. As such, the Pryor herd has led the way for non-intrusive research efforts which have been done with the intent of improving management of wild horses across the country. Some public question the use of the Pryor herd for fertility control research as the impacts are more intrusive and may jeopardize the value and uniqueness of the herd. The BLM has a different opinion on this issue.

The BLM supports the intensive research effort which has already been invested in the use of PZP vaccine on both East Coast and Nevada wild horses. Data on safety and efficacy has allowed the Assateague Island National Seashore to effectively use the vaccine on the barrier island herd for more than 14 years. The Assateague horses are known to be a much older population than the Pryors, and some might even say a more unique herd. Even so, the National Park Service has been very satisfied with the desired and predictable impacts which the vaccine has imposed on the herd.

Some public question the continued availability of Pryor horses for adoptions, after initiation of fertility control. It is unlikely that any level of fertility control in the Pryors will ever replace the need for occasional gathers and adoptions. Gathers impose a significant intrusion on the herd and reducing the frequency of the gathers over time would certainly be beneficial. It is interesting to note also, that the typical gather and adoption of about 50 Pryor horses cost about \$100,000. In contrast, the PZP vaccine is available at about \$20/dose and thus an annual program to vaccinate 20-30 mares is estimated to cost about \$5000 including labor for remote-delivery and herd monitoring. As such, there appears to be no reasonable justification for not using the PZP vaccine on the Pryor herd because they have valued characteristics. In fact, most wild horse herds are different in one way or another and management prescriptions may be designed to

protect and conserve these differences.

Will BLM eventually consider the use of fertility control for reducing wild horse population growth in the Pryors?

BLM is currently preparing for national research field trials to begin this summer with selected Herd Management Areas (HMAs) which have considered the use of immunocontraception in appropriate NEPA documents. Field trials are a necessary requirement as BLM is restricted in using the PZP vaccine under guidelines set by the National Wild Horse and Burro Advisory Board, Humane Society of the United States (HSUS), and the Food and Drug Administration (FDA) for investigational drugs. Although safety and efficacy data have been well-researched for horses and other species, there remain some questions regarding potential impacts on mare estrous cycling and the timing of foal births. BLM intends to monitor these concerns carefully prior to recommending widespread application of fertility control to limit population growth in western herds.

Enhanced use of fertility control to control population growth within the Pryor wild horse herd will likely be considered during revision of the Herd Management Area Plan (HMAP). Management still requires more information on possible PZP impacts on mare behavior and the cumulative impacts of foal predation and fertility control on herd viability. In addition, biologists from the USDA Natural Resources Conservation Service, in Bozeman, are currently involved in a two-year study (2002-2003) on the Pryors to re-evaluate ecological site inventory data. These data are used to calculate forage production and grazing capacity for the horse range, based on range site classifications (soil type), precipitation level zones and condition class estimates. Since existing data is more than 20 years old, more relevant and up-to-date information is critically needed. Once this study is complete, and the Fertility Control Field Trials have provided necessary answers, then the BLM will be able to move forward with preparation of NEPA documents for the HMAP revision.

B. Questions and Concerns Related to the Potential Impacts of Fertility Control on Herd Genetics and Social Behavior:

What will be the impact of the Proposed Action on Herd Genetics?

Long term data indicate that BLM management efforts have resulted in a total pre-removal population size of between 136-200 wild horses annually, with post-removal numbers ranging between 115-155 horses. The average post-removal population size since 1971 has been 142 ± 24 horses, or 144 ± 21 since 1984. Although the Appropriate Management Level (AML) for the Pryors is still under revision, an average population of this size has resulted in both a healthy, productive, genetically sound, and environmentally resilient herd of wild horses, as well as a thriving and prolonged ecological balance on the range.

There is not, nor has there ever been, any scientific information which suggests that the BLM is managing the Pryor herd to extinction. Previous research does suggest that a total herd size of 140 to 150 will provide for a genetic effective population size (N_e) of ~ 50 . Research with domestic horses suggests this should be considered a minimum size if the intent is to manage the

Pryors exclusively for a self-sustaining wild horse herd. The BLM must, however, manage the Pryors for multiple use relationships and all resources must be considered in management prescriptions. These issues and others continue to be considered during the on-going HMAP revision.

Currently, there are 154 horses on the range plus 21 surviving foals of the year (Appendix 1). Herd size is currently above that needed to ensure a minimum genetically viable population. As such, immunocontraception of younger mares, who would normally contribute only a small number of surviving foals annually, will have a negligible impact on herd genetics. Furthermore, research in genetic modeling indicates that delaying the age to first reproduction of these young mares will actually act to conserve genetic diversity within the herd.

As stated earlier, gathers impose a significant intrusion on the herd and reducing the frequency of needed gathers would certainly be beneficial. Gathers also, generally result in animals five years of age and younger being removed from the range. These age classes typically contain high numbers of animals and the young animals are more suitable for the adoption program. As a result, some young animals are removed prior to any opportunity to contribute to herd genetics. Fertility control can change this pattern by allowing more young animals the opportunity to contribute genetically, after a delay of 1-2 years until individual mares are more mature.

Additional proposals to continue darting yearling and two-year old mares (and perhaps other age classes) are expected to be considered on an annual basis, while both the research field trials are on-going and age classes of young mares in the Pryors are large enough to warrant concern for mare health. These proposals will continue to be subject to the NEPA process with appropriate public review and comment.

Will the application of immunocontraception alter the natural behavior of the mares?

Recent behavioral studies with the Assateague Island and Shackleford Banks populations have shown that contracepted and uncontracepted mares had virtually identical activity budgets, associated in a similar manner with the harem stallion and showed no increase in harem exchange behavior or change in their social status during the length of the study. Current data for the PMWHR shows that a high rate of interchange activity between harems already appears to be the "norm" for yearling and especially two-year old mares. The unpublished Shackleford study, however, did raise concerns that young primed (one shot only) mares showed a decrease in the overall length of time they spent grazing as a result of increased herding behavior by the stallions. Currently, the reasons for this behavior are unidentified and research continues in this area. All Pryor mares subjected to fertility control under the Proposed Action in the current EA will be closely monitored for social behavior and compared to existing baseline (control) data developed during previous field studies.

Will the application of immunocontraception alter the breeding behavior and fitness of the harem stallion?

Although data exists for other wildlife like deer and elk, no scientific studies have documented prolonged estrus or cycling in horse mares with the continued pursuit by harem stallions late into the breeding season. Recent studies done on the Shackleford Banks horses, by students of Princeton University, suggest some behavioral changes in herding activity but these studies were

of limited duration. Fertility control on the Pryors, under this EA, will involve only yearling and two-year old mares who, because of their age, are not generally pursued and bred repeatedly by stallions until successful conception. Under the guidelines of the National Fertility Control Field Trial Plan, these types of behavioral interactions will be monitored and evaluated prior to any recommendation for a broader application of fertility control within the Pryor herd.

C. Questions and Concerns Related to the Potential Impacts of Fertility Control Activity on other Resource Values on the Range:

Will the timing of remote-delivery activities impact hunting on the PMWHR?

As stated clearly in the EA cover letter (dated April 23, 2002) and the Introduction within the EA, the proposed fertility control activity is scheduled to begin no earlier than July 15, 2002 and may continue through September 30, 2002. Any subsequent fertility control efforts, involving animals not identified in this EA, will be covered by additional NEPA documents.

Some public are concerned that remote-delivery of fertility control vaccine to ~20 mares, primarily in the upper elevations and subalpine meadows of the mountain, will impact the single sheep hunter with a permit when Bighorn hunting season begins September 15. Negative impacts seem unlikely as spatial and temporal separation of horse and Bighorn sheep distributions at this time of year should limit interactions. However, if the fertility control darters encounter any hunters (including Bighorn sheep, upland game and archery big game) they will be sure to communicate openly their intended activities in efforts to reach a compromise with the hunters where necessary. No closures are intended during this management activity and the area will continue to be managed for multiple use.

Will the BLM and/or certified darters be allowed to drive off-road in order to dart horses?

No. The EA states that most horse access and darting activities are likely to happen on foot within reasonable hiking distances of wilderness roads. The document also clearly states that the BLM recognizes that certain activities are restricted within Wilderness Study Areas (WSAs) and Areas of Critical Environmental Concern (ACECs). As such, although most darting may occur on foot, it may also occur from a vehicle while on a designated open road.

Will the BLM be darting any animals on Custer National Forest Lands?

Unknown at this time. The BLM made successful efforts to remove Pryor wild horses from non-designated range last Fall. Since this effort, two family groups have been seen near the Big Ice Cave this Spring. Currently these groups do not contain any yearling or two-year old mares identified to receive the PZP vaccine. As more horses from the herd tend to use the upper elevation Custer Forest meadows in late July and August, it is possible that some groups with targeted mares may be encountered by darters in this area. All safety precautions will be adhered to as outlined in the Standard Operating Procedures (SOPs) in the EA.

D. Questions and Concerns Related to the National BLM Wild Horse and Burro Research Strategy and Field Trials on Wild Horse Fertility Control:

What is the status of the National BLM Wild Horse and Burro Research Strategy and the National Fertility Control Field Trial Program?

Details of the BLM Wild Horse and Burro Research Strategy and the National Research Field Trials on Wild Horse Fertility Control are nearing completion and will be provided to the National Wild Horse and Burro Advisory Board at the next scheduled meeting. This meeting will be held in Denver, CO., on June 24th and 25th, 2002 and public members are invited to attend. Information on this meeting may be obtained by calling the Wild Horse and Burro Program National Program Office in Reno, NV. (775-861-6583).

Is the Proposed Action for the Pryors still subject to approval of the National Plan?

Approval of the national-level field trial plan, by the Wild Horse and Burro Advisory Board, is still required prior to implementation of the Proposed Action within this Decision Record/FONSI for the PMWHR. A press release will be issued by the Billings Field Office in early July to notify the public of the approval to move forward (or not) with the Proposed Action.

E. Questions and Concerns Related to Consideration of Management Alternatives within the EA:

Will the use of fertility control on wild horses lead to the elimination of hunting on the Pryors?

No. The BLM is charged with managing populations of wild horses and burros and has no jurisdiction over wildlife species which are regularly hunted for sport or recreation. That is not to say that other responsible agencies haven't considered the use of fertility control in the management of these species as this is already being done in several states and other countries. But in the management regime of wild horses, hunting is neither a legally, politically nor socially acceptable option and so BLM has the opportunity to consider only removals and fertility control.

Why were all other Alternative Actions eliminated from further analysis within the EA?

The Proposed Action and three alternatives represented a reasonable range of alternatives based on issues and goals previously identified through public scoping efforts and research specific to the PMWHR. NEPA guidelines for the preparation of Environmental Assessments (EAs) require that several management alternatives be developed during the decision-making process. These alternatives are then judged on merit and value and may be eliminated from further consideration. This may happen if it is determined that the alternative may not either establish or maintain management goals.

The PMWHR Humane-Use of Fertility Control EA considered only one management option in detail (the Proposed Action). All other alternatives were considered up to the point where BLM determined the alternative would result in either unacceptable (measurable) impacts to the wild horse herd or provided no additional measurable value to a previously analyzed alternative. Reasons for elimination from further consideration are provided in the EA under the relevant sections (EA #MT-010-02-22 Section IV. Alternative Management Actions pg 11-13). There is

no need for the BLM to consider further environmental impacts and mitigation measures for these alternatives, if the impacts to the horse herd are deemed unacceptable at the time of preparation of the NEPA document.

F. Questions and Concerns Related to the Overall Need for the Proposed Action:

Would natural mortality eventually rise to a level where the Pryor Mountain wild horses would be stabilized, negating the need for BLM management and population control?

Research with other wild horse herds, which are known to be regulated by predation (Montgomery Pass Wild Horse Territory, near Bishop, Ca.), indicate that at least 70% of the foals must succumb to natural mortality annually in order for stabilization of herd size to occur. BLM has been aggressively monitoring the impacts of natural mortality on the Pryor herd for some time. In natural systems these impacts tend to fluctuate from year to year, and foal mortality on the Pryors has been low for periods of time (<10% of the age class) and high for periods of time (>30% of the age class).

Currently, much greater levels of predation, or a combination of disease and starvation as well as predation, would be needed on the Pryors to significantly impact herd size. Ecosystem studies have shown that the herd size would need to increase to 300-450 horses before density-dependent regulatory mechanisms would take effect. By this time, the herd would be experiencing high levels of natural mortality (in all age classes) with reduced foaling rates and individual fitness coupled with severe impacts to wildlife and irreparable damage to the range. This is not a management goal for the Pryors under the mandate to “maintain a thriving natural ecological balance” with a multiple use prescription.

G. Questions and Concerns Related to Earlier Research on Fertility Control in Wild Horses:

What is the relationship of immunocontraception to earlier studies of fertility control?

None. Immunocontraception is not in any way similar to the earlier studies done in the late 1970s which focused on the development of a chemosterilant for wild stallions. The primary hormonal agent tested, testosterone propionate, was found to be effective in reducing sperm motility and could sterilize the wild stallions for up to six months. There were a number of drawbacks to the use of the hormonal sterilant including: application required immobilization of the stallion and injection of a large dose of the agent; foaling times in treated herds shifted into the summer or fall; chasing, capturing, immobilizing and re-injecting the harem stallions on an annual basis was difficult and costly; long-term effects on the treated horses remained unknown; and the hormone could enter the food chain. For these reasons, chemical sterilization of stallions for research into fertility control was abandoned in the 1980s.

Neither is immunocontraception in any way similar to the earlier studies started in the 1980s which focused on the use of synthetic estrogen and progestin implants in mares. The intent was

to create a pseudo-pregnancy status for the mares. These efforts required immobilizing and anesthetizing the mares and inserting the implants surgically, which resulted in serious problems and a significant number of animal deaths. There was also concern that if ingested, the hormonal implants would contracept the predator or scavenger recipient. As a result, these studies were also abandoned in the late 1980s.