U.S. Department of the Interior
Bureau of Land Management
Billings Field Office
Wild Horse and Burro Management

U.S. Department of Agriculture
Forest Service
Gallatin National Forest
Wild Horse and Burro Management

Objections to Responses to Central Oregon Wild Horse Coalition Comments
Pryor Mountain Wild Horse Range Joint Herd Management Plan Revision

May 26, 2025

To Whom It May Concern:

The Central Oregon Wild Horse Coalition appreciates the detailed responses compiled to commenters' concerns following the draft Decision issued on April 8, 2025. Our hope was that our specific questions would be answered either through clarification or further revision. To some extent, especially in that our understanding of the issues was limited, this did occur. But there are several significant areas where we did not find BLM and Forest Service responses to be adequately addressed. These issues are voiced herein, organized into matters of law and also those remaining concerns which pertain to the more nuanced aspects of the Pryor Mountain Wild Horse Range ("PMWHR") plan revision.

I. Adherence to Applicable Law

A. Wild Free-Roaming Horses and Burros Act ("WFRHBA")

1. Translocation (Importation of outside horses to alleviate low genetic diversity)

In simplest terms, the WFRHBA, 16 U.S.C. § 1331 states "...and to accomplish this they are to be considered in the area where presently found, as an integral part of the natural system of the public lands."

A wild horse descended from a herd found in Utah in 1971 could not, lawfully, be relocated after 1971 to become "presently found" in Montana. However, in keeping with the true intended purpose of translocation – the genetic remixing between adjacent HMAs or those with historically-exchanged DNA – the "where presently found" stipulation is essentially satisfied. This is not the situation in the PMWHR; considered an "isolated herd" by the BLM and Forest Service. In its Responses to Comments ("Responses"), the misconstruction of the translocation concept, and clear violation of § 1331, are apparent. BLM's Responses to Comments at 102, gets the "metapopulation" premise completely backward; isolated populations are plainly, by definition, excluded from the metapopulation as the interconnectedness is absent. The commenter, here, is correct in suggesting that the PMWHR Herd should be guided by specialized management; in essence, conserving standing genetic make-up and carefully monitoring diversity levels as the 2013 NAS Report directs.

In comments submitted by the Central Oregon Wild Horse Coalition, some of the NAS Report's context for metapopulation was included to show "The committee recommends that BLM consider

some groups of HMAs to constitute a single population and manage them by using natural or assisted migration (translocation) whenever necessary to maintain or supplement genetic diversity. Although there is no magic number above which a population can be considered forever viable, studies suggest that thousands of animals will be needed for long-term viability and maintenance of genetic diversity. Very few of the HMAs are large enough to be buffered against the effects of genetic drift, and herd sizes must be maintained at prescribed AMLs, so managing the HMAs as a metapopulation will reduce the rate of reduction of genetic diversity in the long term." (emphasis added)

Comments also cited BLM's own Wild Horse and Burro Management Handbook, H-4700-1 ("Handbook"):

4.4.6.3 *Herd size* "A minimum population size of 50 effective breeding animals (i.e., a total population size of about 150-200 animals) is currently recommended to maintain an acceptable level of genetic diversity within reproducing WH&B populations (Cothran, 2009). This number is required to keep the rate of loss of genetic variation at 1 percent per generation. **Animal interchange between adjacent HMAs** with smaller population sizes **may** reduce the need for maintaining populations of this size within each individual HMAs." (emphasis added)

The following are other references from the NAS Report which further illuminate the intent of the committee's guidance. Agencies have exercised undue freedom to wrap isolated/island populations into the grand metapopulation, which violates the WFRHBA and will only serve to ultimately genericize and marginalize the adapted wildness of every herd.

NAS p. 161

"Many HMAs are spatially isolated, and others are contiguous. **Some of the contiguous HMAs have been grouped into complexes by BLM (see Figure 1-2); this suggests that they are exchanging migrants and may be considered a single unit.** Within each of the HMAs, BLM could accomplish the goal of conserving genetic diversity through intensive management, as has been done for the herds at Assateague Island and Shackleford Banks. Alternatively, BLM could consider the HMAs as a single population and use the principles of metapopulation management to guide its actions." (emphasis added)

NAS p.169,170

"The committee recognizes that genetic management of some HMAs is complicated by other considerations. For herds that have strong associations with Spanish bloodlines—such as those of the Cerbat Mountain, AZ; **Pryor Mountains, MT**; and Sulphur, UT—or herds that contain unique morphological traits—such as the Kiger, OR, herd—BLM will need to balance concerns about maintaining breed ancestry with the need to maintain optimal genetic diversity. Herds that remain isolated over the long term will inevitably lose genetic diversity inasmuch as maintaining or slightly increasing herd sizes will not offset the effects of genetic drift. The public is interested in these herds, and it is particularly important that BLM seek opportunities to discuss the complexity of the situation with interested parties. It is true that the existence of a few genetic markers may indicate Spanish origin, but the remainder of the genome may not; rather, it **may reflect horses that are well adapted to local conditions.** If the latter is the case, isolation of the herd to maintain purity may be mistaken and may lead to unnecessary loss of genetic diversity. The committee recommends that BLM examine in more depth the genetic constitution of these herds and share the findings with the public so that

informed decisions about the sustainability of the populations can be made (see Chapter 8). **The committee recommends that BLM consider *some* groups of HMAs to constitute a single population** and manage them by using natural or assisted migration (translocation) whenever necessary to maintain or supplement genetic diversity." (emphasis added)

In addition to a more clarifying context for translocation found in the NAS Report, Dr. E. Gus Cothran affirms the proper application of translocation in a 2024 study cited by BLM in their Responses *Genetic Dynamics of Mustang and Feral Horse Populations in the Western United States,* Cothran et al., 2024. At 7: "The general trend for feral herds on public lands has been a decrease in population size over time. This will inevitably lead to a long-term loss of genetic variability within individual HMAs. However, this loss of variation can be mitigated by a low level of exchange of individuals from **geographically close herds. This process will tend to homogenize the herds** but this would take many generations." (emphasis added)

Also of note from this study, the PMWHR Herd is no longer considered "Spanish" due to the "change in the makeup of the herd(s) over time" This also applies to Oregon's Kiger/Riddle Mtn. Herds, which had been certified by the University of Kentucky to be of Spanish heritage, and Utah's Sulphur Herd, which BML states could be used as a source population for PMWHR translocation. Spanish lineage aside, the PMWHR horses' unique identity has been altered, rightly or wrongly, through management actions.

"Uniqueness" worthy of conservation should not be tied to arbitrary designations or standards, but may be assessed through the lens of localized genetic adaptations, as the Central Oregon Wild Horse Coalition also noted in their comments. This describes the PMWHR Herd. Therefore, agencies ***are*** required to "manage wild horses to maintain specific lineages" when those lineages, for example, represent original stock and descendants' successful adaptation to specific environmental conditions; may be linked to historical/cultural significance; or DNA is peculiar to that specific herd (such as mtDNA found in the horses of Theodore Roosevelt National Park, or Ochoco National Forest).

As also stated in the Central Oregon Wild Horse Coalition's comments, genetic "diversity" should be distinguished from genetic "identity". The PMWHR Herd is distinct, which expresses a genetic profile, or "make-up". Genetic diversity is a measure of variability which guards against inbreeding. This is consistent with the NAS Report's counsel that BLM balance, to the extent possible, the need to maintain desirable lines with requisite healthy levels of genetic diversity (see NAS Report cite above, pgs. 169, 170). The WFRHBA demands both; for the sake of longevity of wild herds across the West. BLM and Forest Service appear to conflate these different aspects of genetic metrics, often describing genetic identity under the heading of genetic diversity. They are intertwined, but are not the same. This apparent confusion has muddied the entire discussion of and critical decisions impacting on the PMWHR Herd.

Another conclusion from the 2024 study was that the metapopulation which assumes close relationship between all wild horse herds is not supported by the extensive lineage cataloging in the study. Wild horses may be descended from a mixture of identifiable ancestors, but herds are not as closely related to one another as was presumed.

A very weighted additional assumption, on which the metapopulation is based, is that the NAS Report's Appendix F is accurate, and reliable in terms of informing agencies of the appropriateness of interbreeding certain herds with certain other herds. The Central Oregon Wild Horse Coalition discovered, through analysis of the Big Summit Herd by Dr. DeEtta Mills of Florida International

University's renowned Genetic Forensics program., that the Fixation Index (relatedness) values for specific herds depicted in Appendix F were vastly different when calculated by her FIU facility. Dr. Mills compared seven Oregon wild herds to each other, finding that they were ***not*** closely related, as they were in Appendix F; sufficiently to be "safely" exchanged. (Fixation Index shows whether herds are so distantly related that translocation could invite out-breeding depression or other deleterious effects. (*Genetic structure of the Big Summit herd and neighboring wild horse populations inhabiting herd management areas of Oregon*, KETAKI DESHPANDE1,2,3, EVELYN PEREZ1,2, NATALIE LEYVA1,2, MERLY SUAREZ3, AND DEETTA K. MILLS, 2019, enclosed) (Note: habitat and phenotypical similarity must also be considered and properly aligned.) The Central Oregon Wild Horse Coalition brought this to agencies' attention in their comments, though Responses only defended Appendix F for its many thousands of samples. That is not disputed nor is that the issue. Dr. Mills' research, and clarifying personal communication, merely suggest that Fixation Index (Fst) values are not absolute, and are determined by a complex process which can have varying outcomes. Appendix F could be used to narrow the field of possible source populations, but additional, objective analysis must occur prior to management actions which dangerously reduce populations with the expectation of translocation as the means of diversity mitigation. (Of importance, the Cerbat wild horse herd, also recommended for translocation to the PMWHR Herd, is not shown in Appendix F.)

BLM continues to respond by denying that the NAS Report "specifies that translocated animals should be limited to sources that are geographically close or have history of interbreeding." In fact, cognizant reading of the full NAS text devoted to genetic health ***does*** advise that the use of translocation should be limited to herds which are somewhat interconnected. As previously shown, this is affirmed through other credible sources.

Finally, Dr. Cothran himself, apart from the 2024 study, has alluded to his own skepticism. In comments to the 2020 Big Summit Territory revision draft EA, Dr. Cothran is credited with stating the following:

-AWHC's quote from Dr. E. Gus Cothran – "Dr. Gus Cothran has personally informed AWHC that once genetic viability is low, it takes generations to correct and that adding a few horses does not prevent inbreeding in small herds."(American Wild Horse Campaign comments, EA at 269)

-B. K. conversation with Cothran – "The 1971 Law says the horses are to be "where found". "Cothran himself who suggested bringing in 1-2 mares from other herds to increase genetic diversity, said his idea may be challenged by law in court." (public comments to draft EA)

The strategy and practice of translocation clearly deviates from the letter and intent of the WFRHBA.

<u>Suggested Remedy:</u> Agencies should avert the need to import horses from outside the PMWHR Herd. Managing for genetically-viable numbers (especially considering the geographic separations within the Range, and continual monitoring via hair or fecal sampling would facilitate the retention of individuals with greater diversity values.

2. Sterilization.

Responses, at 60, states "Sterilization is beyond the scope of the EA because none of the analyzed alternatives would sterilize horses on the PMWHR."

This conflicts with BLM's admission (EA at 13) that GonaCon could be used as a means of fertility control under the proposed alternative. As BLM and Forest Service well know, GonaCon can cause permanent sterilization. Advocates and agencies are familiar with the controversy surrounding truncated research, supposed evidence, widely disparate opinions and findings, and a significant likelihood of permanent sterilization.

Dr. Dan Baker interview, 05/28/2013: https://www.youtube.com/watch?v=kdLHvgVmIuw

Too, fertility control becomes permanent when the subject horse dies, and previous research on potentially life-threatening side effects of GonaCon provides a basis for such concerns.

The use of GonaCon, or any form of permanent sterilization, is unacceptable; intentional or not. As noted in the 2013 NAS Report, p.108 "At the population level, removing females even temporarily from the breeding pool is likely to reduce the effective population size (*Ne*) and genetic diversity of the population". Also, research on behavioral effects of fertility control is sorely limited, typically to the simplistic verification of treated mares' acceptance into social structures of the remaining population. But this ignores the more subtle impacts to that structure. Foals are the heart of a band or a herd; at the core of band cohesion which promotes generational knowledge transfer, leadership development, survival strategy, and position security. Interrelationships are dynamic and purposeful, with foal production inherently recognized and valued as the future of the band. These critical aspects of wildness, and infinitely more that mere humans cannot know, are bound to be diminished or lost with permanent sterility.

To appreciate early understanding of the ramifications of sterility, the Conference Reports associated with the 1978 Public Rangeland Improvement Act (PRIA) amendment to the Wild Free-Roaming Horses and Burros Act should be reviewed, both in terms of untested solutions and the broader objective.

(H. Report 95-1122):

"Where an overpopulation is determined to exist, the Secretaries must decide how excess animals will be controlled. In this regard, the bill mandates that consideration be given to options to use sterilization or to allow natural controls (such as disease and parasites) to achieve appropriate management levels. If the Secretaries find that such methods will not work, they are then directed to remove excess animals from the range until appropriate population levels are achieved."

It should be noted that although perhaps none of these other options would be embraced today, they represent less-draconian alternatives to the animals' removal from their wild home range and familiar herds. Sterilization must have seemed a more humane approach. Also, this language was recorded in the construction of PRIA, not the Wild Free-Roaming Horses and Burros Act, representing the most current iteration of the Act's purpose.

(H. Report 95-1737):

"… with close attention to maintaining ***a stable and viable breeding population*** of animals that are not in excess of appropriate management levels." (emphasis added)

This sentiment is in direct opposition to "authority" conferred by the (PRIA) amendment to permanently sterilize wild horses, in any fashion. It may not be possible to know the intent of the term "steril-

ization” appearing in the Wild Free-Roaming Horses and Burros Act (16 U.S.C. § 1333 (b)(1)), when castration of males was the only widely-used means of sterilization in 1978, but the overarching Conference intent was to allow wild horses to act and function as wild horses.

GonaCon IS an experimental treatment, and there IS ample reason to question the safety of GonaCon use in wild horses. Jay F. Kirkpatrick, Ph.D., the recognized expert on wild horse fertility control, had registered his concerns, specifically regarding increased cardiological risks to humans, for example, which was apparently alleviated to BLM's satisfaction simply because the NAS Report concluded that "the mechanism and results of GnRH agonists would be *expected to be different...*" (see NAS p.115) But this prediction lacks empirical evidence. And, again from the NAS Report, p.132, contraception comparison charts reveal these cautions(re: GonaCon): "Sexual behavior may not be cyclic, inasmuch as ovulation appears to be blocked; Should not be administered during early pregnancy because abortion could occur; Few data on horses". (The Central Oregon Wild Horse Coalition recently witnessed the effects of an unborn foal's arrested development and subsequent death, leaving the mare to suffer untold weeks or months of attempts to expel the necrotic flesh. We were unable to save the mare. This experience warrants our strong opposition to any preventable foal loss, regardless of cause) Too, because the scientific community views effects across a broad spectrum of mammalian species to be potentially relevant to all mammalian species, it may be significant that research findings have cautioned against low levels of progesterone (an effect of GonaCon) in human females; "Anovulation and low levels of serum progesterone have been associated with a significantly higher risk of breast cancer in premenopausal women." (*In Defense of Progesterone: A Review of the Literature*; Allan Lieberman, Luke Curtis). Also, it was perhaps widely suspected that GonaCon and its variants may have potentially-serious side effects on horses:

"At present, immunocontraception based on pZP glycoproteins appears to be the most practical and effective (Barber and Fayrer-Hosken 2000a, Fraker and Brown 2011), with few side effects (Ransom et al. 2010). pZP-specific vaccines likely have fewer side effects compared to GnRH vaccines (like GonaConTM; National Wildlife Research Center, Fort Collins, CO), *because GnRH receptors are located in a variety of tissues in addition to reproductive organs, including the nervous system (Lopez et al. 2007), bladder (Bahk et al. 2008), and heart (Skinner et al. 2009).* The potential effect of pZP-based immunocontraception on social structure and behavior in herd animals has been explored by others who reported either no differences (Kirkpatrick et al. 1995, Powell 2000) or minimal differences (Ransom et al. 2010) between vaccinated and control mares with respect to activity budgets, hierarchy within the herd, or interactions with stallions, unlike GnRH vaccines, which suppressed behavioral and physiological estrus (Elhay et al. 2007, Botha et al. 2008).” (emphasis added)

Since studies of effects of GonaCon on wild mares' return to fertility were inconclusive, because subject mares were not followed into latter years, there certainly cannot be available research analyzing long-range cancer occurrence in wild mares, or other unspecified, unknown effects. This is deeply concerning, and resonates with Kirkpatrick's alarm that "anti-GnRH vaccines could lead to adverse effects in other organ systems outside the reproductive system." Agencies bent on the use of GonaCon will face challenges to the questionable narratives regarding its safety in equine applications, as well as its “temporary effects”.

The long-range health risks to mares treated with GonaCon are simply not known. But the warnings from Kirkpatrick et al., as well as potential effects of low progesterone to human females should give agencies pause. Instead, GonaCon is rapidly becoming the fertility drug of choice, and the PMWHR Herd may not be spared this exposure as long as BLM and Forest Service maintain GonaCon as an option in this management plan revision.

Again, Congressional intent was voiced in the cited Reports, above. But Congressional Committees were/are neither omniscient nor infallible. H. Report 95-1122, in particular, in the present context is absurd. In 1978, "sterilization" in all likelihood meant castration; permanent infertility while the "excess" horse remained within the censused population. To "allow" disease or parasites to not merely reduce wild horse populations but to possibly eliminate them, spread to others, and perhaps infect domestic horses, would be unthinkable. And, catastrophic outbreaks would likely be *introduced* (one reason why translocation is ill-advised), since wild herds generally have adapted immunity to natural pathogens. Agencies have historically been oblivious to the need to protect wild herds from such occurrences, so the prospects are real. However, contemporary reading of the Conference language would reject "disease or parasites" as population control measures. Sterilization was mentioned in the same sentence, reflecting the same disconnect to wild horse reality, and with no regard for the now-known loss to herd cohesion and genetic diversity.

And, to reiterate, H. Report 95-1737 irrefutably suggests that any form of permanent sterilization would be in derogation of Congressional intent, and therefore would violate the WFRHBA.

Suggested Remedy: Agencies must commit to the exclusion of GonaCon or any similarly-formulated fertility control agent, and all forms of permanent sterilization, at least until all potential side-effects and behavioral consequences are fully known.

3. Minimal Feasible Level Management (MFLM)

The WFRHBA states that management actions should be carried out at the "minimal feasible level". As with other mandates embedded in the WFRHBA, (such as Thriving Natural Ecological Balance or Principal Use), MFLM is not precisely defined; but neither is it ambiguous, when considered within the intent of the WFRHBA. In an early court ruling, cited often by agencies, *American Horse Protection Association, Inc., et al. v. James G. Watt,* 694 F.2d 1310 (D.C. Cir. 1982) inadvertently provided the lower court's unchallenged meaning of MFLM:

"(a) The Wild Horse Act's section 1333(a) mandate of "minimal feasible level[s] of management by the Agency required BLM to consider 'all alternative courses of action' that would affect the wild horse population less severely than would the proposed roundup and removal."

The origin of this reasoning is made more clear through the Conference language (H. Report 95-1122), cited above, where the committee envisions agencies first considering "less severe" strategies for reducing populations, and *only after doing so*, resorting to the removal of excess wild horses or burros. This correct reading of the WFRHBA effectively removes agency authority to assign other meanings; though not for lack of trying. Watt never materially challenged this point, even though the final ruling was based on the Public Rangelands Improvement Act's supposed reductions to WFRHBA protections; H. Report 95-1122 was written during the course of PRIA's enactment, and therefore MFLM could not be challenged within this context.

"Minimal Feasible Level Management" was a requirement in the original WFRHBA which was destined to be cherry-picked for the next five decades. Agencies frequently cite from *In Defense of Animals v. U.S. Department of Interior,* 751 F.3d 1054, which is a case fraught with questionable interpretations, not the least of which being the meaning attached to 'minimal feasible level management'. The dissenting opinion captured this, stating "In addition, in cannot be gainsaid that the wholesale capture

of the wild horse herd is the complete antithesis of the "minimal feasible level" of management mandated by the Act."

Further, if agreement between court rulings can be found on the meaning of MFLM, it would be set forth in *W.Watersheds Project v. Haaland*, 850 F. App's 14 (D.C.Cir. 2021) "activities should be conducted 'with as little disruption in the horses' lives as possible'".

Responses repeat worn examples of the misreading of the WFRHBA: "management shall be at the minimal level necessary to attain the objectives identified in approved LUPs and HMAPs." This is inconsistent with the letter and spirit of the WFRHBA, in that the legislation was meant to protect the interests of *wild horses and burros*; not the agenda of agency or industry. Nothing has changed in this regard. The arbitrary and capricious definitions of MFLM, surfacing since 1971 like road sludge after a cold rain, are at odds with the WFRHBA and case law, regardless of time-honored repetition.

BLM's position is that managing the PMWHR Herd for certain lineages would not be consistent with regulations directing the BLM to manage the population at a minimal level to ensure healthy horses (EA at 40, 84). Responses at 20 also cites the definition of MFLM to withhold "supplemental feed" or to maintain water sources. While misconstruing a regulation or ignoring precedential definitions in the setting of policy may not be an actionable violation of law, harm resulting from such policy which conflicts with the parent statute could constitute violation.

As discussed previously, managing for the "standing genetic material…" is recommended by the NAS Report. Preserving certain lineages may be necessary to ensure the future of the PMWHR Herd, thus overriding conventional interpretation of MFLM. It would be similarly arbitrary and capricious for BLM and Forest Service to consider "some" maintenance of water sources to be within MFLM, but unspecified additional life-saving maintenance would somehow exceed MFLM.

Pragmatic application of MFLM must first and always support wild horses' and burros' essential habitat needs; which include the four identified basic components, but also, capacity to maintain standing genetic diversity and identity, as well as other necessities such as predator defense; mineral access, pest management; and the unimpeded ability to interact with and contribute to an intricate natural ecosystem.

Suggested Remedy: Agencies must cease and desist with the practice of rewriting the statutory mandate to manage wild horses and burros at the Minimal Feasible Level, and instead consult the WFRHBA's text, context, Congressional intent, and case law consistent with these. (Also, nothing in the WFRHBA prohibits live-saving provision of feed and water when the situation so indicates. Early WHB Advisory Board meeting notes express the intention that certain circumstances would warrant temporary action, and Central Oregon Wild Horse Coalition possesses an in-depth legal opinion supporting this. Too, most such dire situations are the direct or indirect result of man's influence on the horses' and burros' habitat, and we cannot now absolve ourselves of responsibility for the state of Nature.)

4. Thriving Natural Ecological Balance

As noted, in the Central Oregon Wild Horse Coalition's comments, even the (acting) BLM Division Chief admitted that both BLM and Forest Service had failed to develop definitions for Thriving Natural Ecological Balance ("TNEB"). Indeed, every square inch of BLM and Forest Service land devoted to wild horses and burros has been impacted to varying degrees by un-natural influences, especially from the point of European contact. In contemporary terms, humans are everywhere; from week-

end hikers to corporate extractive industry. While PMWHR now excludes livestock grazing, the effects of such grazing – upstream or on faraway continents – may be seen in local water quality or drought conditions worsened by livestock's methane emissions in Zimbabwe. Yet, wild horses are expected to maintain TNEB; which BLM admits may not even exist (see Central Oregon Wild Horse Coalition comments "Standards are not expected to recreate theoretical 'pristine' rangeland conditions that may have existed before livestock grazing began. It is assumed that most areas will be grazed unless there is no way to graze them and still achieve standards or the area is dedicated to other uses such as campgrounds, mining, and cultural or historical sites, like Pompeys Pillar." This statement, from a Billings and Pompeys Pillar National Monument FEIS, is sadly fatalistic, but also speaks to the wild horse's 'mission impossible'.

And so, BLM simply equates TNEB to "progress toward meeting Land Health Standards", while the Forest Service appears yet to establish quantifiable metrics.

Further, as other commenters have also suggested, standards established to evaluate domestic livestock impacts may not be appropriate for wild horses which use their habitat differently. Commenters also stated that the assessment components used to support agency conclusions were limited temporally and geographically, or failed to supply baseline data to provide qualitative and quantitative context for alleged rangeland condition changes.

BLM states repeatedly that PMWHR conditions have been degraded since at least 2004, yet commenters appear to have data which conflict with BLM's historical record. Though AML cannot be re-evaluated solely on the basis of a declaration that the HMA/Territory is *not* in a state of TNEB, as that factor alone does not quantify exactly how many wild horses would reverse the alleged degradation, it is a requisite benchmark for determining *if* an overpopulation exists. But the other determinate found in the WFRHBA § 1333(b)(1) is a "current inventory" for the purpose of "determin(ing) appropriate management levels..."Committed advocates have provided this; comparing censused numbers to range conditions found to have met standards.

The contrast between agency and public narratives regarding PMWHR range condition over the last decades is stark. The general public, however, is not in a position to check either party's math, other than to draw upon personal experience that suggests "If agencies' data seem to lack sufficient basis, integrity, or provenance, it's reasonable to conclude the data are flawed." And, despite NEPA requirements for data quality, agencies are seldom held accountable, while public testimony is seldom believed.

In that light, we could have considered BLM and Forest Service data and the range condition history relative to past horse populations provided by expert public to have equal weight. Even so, BLM and Forest Service failed to definitively *prove* the PMWHR to be in a degraded state (*not* TNEB) due to an overpopulation of wild horses; in violation of the WFRHBA.

However, the Central Oregon Wild Horse Coalition was able to review extensive land health and AML Determination data from private individuals. Concurrently, we pursued the invitation (Responses at 38) to obtain additional data to "support the reasoning behind the (BLM) conclusions." Commenters are therein asked to contact the Billings Field Office with a "formal request" for the data. We were first automatically redirected to the National BLM Office for all wild horse-related matters, which did not respond. A second contact of the Billings office connected us with a person – a kind person – and after speaking with a couple more BLM/FS staff – all kind and helpful – it was admitted that there really wasn't any additional data supporting agency conclusions. The privately-sourced data, in contrast, was

detailed, wholly relevant, complete, and supportive of our own, independently-derived conclusion that there was absolutely no scientific basis for agency assumptions that the PMWHR was\is in a degraded condition, especially a degraded condition for which an overpopulation of wild horses was responsible.

But *if* a wild horse range is, authentically, determined to have failed to meet Land Health Standards (which are at the outset inappropriate for AML determination), and wild horse use is the causal factor for the standards or objectives not being met, "AML is proposed based on the estimated number of WH&Bs present relative to the level of forage utilization that is occurring." (BLM Handbook at 70) This text follows the logical progression of analysis set forth in § 1333(b)(1) and (2) which must be conducted prior to declaring the existence and removal of "excess" horses. AML is correlated to a certain number of horses perpetrating a certain amount of resource damage.

Appendix C fails to show that correlation, as the Central Oregon Wild Horse Coalition demonstrated in their comments.

In the end, "Method 2" is a complex formula, perhaps well-intentioned but better suited for some other application than determining critical population levels for a herd of heritage wild horses. The formula does check some preliminary boxes from BLM Handbook guidance; but it ends there. Were the Method 2 process consistent with the ensuing Handbook AML determination procedure, which it is not, the derived AML would violate the WFRHBA at the point of departure from the AUM value for one horse. To have arbitrarily and capriciously decided that horses necessarily consume 3 percent of their body weight, and 1.25 percent of a given cow/calf pair's consumption, is not a permissible "agency choice of methodology", but instead a conscious choice to make stuff up. That is not the level of TNEB/AML analysis required by the WFRHBA to decide the optimal number of wild horses the land can support.

The basis for this is convoluted and backward; rangeland management figurehead Jerry Holecheck reasoned that if horses eat more than cows of the same body mass, then horses should be calculated at 1.80 AUMs. Generously, BLM realized that the PMWHR horse is generally smaller than Holecheck's 1200 lb. model, which frighteningly consumes 3 percent of its body weight daily. 3 percent might measure a domestic horse's appetite-generated consumption, but does not speak to a horse's nutritional needs to maintain a healthy weight. Conversely, any internet search will verify that horses typically thrive on 1.5 to 2.0 percent of their body weight, with reproduction or metabolic variables adding up to perhaps 2.5 percent for a wild horse. Holecheck was wrong, and the authors of the EA were wrong to accept Holecheck's numbers without more thoughtful consideration.

As the Central Oregon Wild Horse Coalition's comments stated, the conversion of supposed pounds of available forage to AUMs using the 1.25 AUM factor resulted in a substantially lower AML than should have been derived from the forage calculation process. Notwithstanding that Method 2 is a departure from the prescribed AML determination procedure, we do appreciate that the "1.25 AUM" adjustment serendipitously provided a somewhat more realistic representation of a PMWHR horse's annual forage consumption than the 800 lbs. per month rate associated with wild horse AUMs. However, Method 2 applies the 1.25 AUM rate twice in the AML calculation (first deciding that a PMWHR horse would consume 608 lbs. per month if it were a cow, then multiplying that by the 1.25 percent penalty for being a horse), arriving at a high AML of 120. In contrast, using a very simple approach based on BLM's 40 percent available forage by weight, and taking the same liberties with AUM as the authors have done here, we calculate Method 2's forage equation as follows:

> Average weight of PMWHR horse = 800 lbs. (few PMWHR horses would weigh this much, and average would more accurately be closer to 700 lbs.)

Average daily forage consumption = 2.5 percent. (exceeds recommended domestic horse daily requirements, accounting for higher reproductive/free-roaming energy expenditures, and lower forage availability during winter)

800 x 2.5 percent = 20 lbs. Daily x 365 = 7300 lbs.

Table 7:	116,100/7300	16 horses
Table 8:	770,000/7300	105 horses
Table 9:	62,400/7300	9 horses
Table 10:	101,668/7300	14 horses
Table 11:	46,680/7300	6 horses

High AML = 150 horses

Again, this calculation assumes latitude to deviate from the prescribed AML determination process, as Method 2 has done, and also assumes analysis *could have* reasonably sampled and speculated range-wide usage and condition with a high degree of accuracy, as opposed to rightly evaluating the Herd's actual usage across the entire range and under variations in precipitation, temperature, water availability, and predator pressure.

The Central Oregon Wild Horse Coalition also suggests, regarding agency construction of the WFRHBA, that *Loper Bright Enterprises v. Raimondo* (2024) may control in actions where an agency is authorized to interpret a given statute, as BLM and Forest Service are authorized under the WFRHBA. In a word:

"The majority agreed, reasoning that courts, not agencies, decide 'all relevant questions of law arising on review of agency action—even those involving ambiguous laws—and set aside any such action inconsistent with the law as they interpret it.' The court also agreed with the position that the Chevron doctrine has promoted agency inconsistencies in statutory interpretation."

Suggested Remedy: Agencies must commit to defining "Thriving Natural Ecological Balance" within the totality of the intended purpose of the WFRHBA. "Land Health Standards" utilized by BLM are not mirrored by Forest Service with identical metrics, and were established for domestic livestock grazing. These standards may satisfy LUPs, but the WFRHBA is a Federal statute with which LUPs must comply, rather than expecting wild horse and burro management to fit within local land management ideals. Wild horse and burro areas are also to be devoted "principally but not necessarily exclusively to their welfare" which conveys the fundamental establishment of HMA/Territory-specific definitions of TNEB to consider the wild horses' habitat in harmony with wildlife and that elusive state of optimal health and sustainability; adhering to the multiple use *concept* but with emphasis on natural, symbiotic relationships within ecosystems.

B. Administrative Procedure Act ("APA")

The BLM Handbook irrefutably describes the methodology for determining AML. The method is not discretionary or a suggested template to be tweaked or conveniently segregated. The process is a little daunting, but is a reasonable means of comparing existing population numbers to degrees of forage consumption and condition. It can be, and has been, manipulated to achieve desired numbers. But the same can be said of every approach. The Handbook's process, at least, is predicated on broad

landscape data rather than representative and speculative sampling, and considers modulating factors over multiple years.

BLM offers some explanation that the BLM WH&B Handbook is not regulatory; that BLM is not legally bound to the policies and procedures set forth in the Handbook. Yet, BLM continually cites the Handbook as authority to manage wild horses and burros according to the policies therein, including the "definition" of Thriving Natural Ecological Balance which is now tightly bonded to Land Health Standards. But there is no explanation offered as to why BLM has elected to deviate from policy in the instance of AML determination, which is a foundational component of wild horse management.

While the APA does not require that agencies' established policies must never change, it does consider the failure to provide explanation for the change in policy or practice to be arbitrary and capricious.

FCC v. Fox Television Stations, Inc., 556 U.S. 502 (2009) "When an agency changes its policy it must acknowledge the change and "show that there are good reasons for the new policy."

Neither does the Central Oregon Wild Horse Coalition presume to know whether the re-evaluation of PMWHR according to the BLM Handbook protocol would result in a higher or lower AML. We can only request that agencies utilize the methodologies which most closely align with the letter and intent of the WFRHBA, with integrity and authenticity of effort, and that all aspects of wild horse and burro management conform to applicable law. The APA governs agency conduct; requiring that the court shall "hold unlawful and set aside agency action, findings, and conclusions found to be...arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."

Kathrens v. Zinke, CV 18-125-BLG-SPW (2018) "As a result, this court noted **the heightened requirements for recalculating the AML according to BLM's Handbook**, including 'a separate decision process' from the gather planning process, 'accomplished by issuing a separate Decision Record' and 'document[ing] the results of this analysis in an HMA Evaluation Report, provided to the public for a 30 day review and comment period.'" (emphasis added)

Suggested Remedy: Agencies must provide a reasoned explanation when deviating from established policies and practices. Too, given the Court's expectation that BLM follow its own direction, adherence to the BLM's WH&B Handbook may be more actively binding than is assumed.

C. National Environmental Policy Act ("NEPA")

Several aspects of the analysis strain the intent of NEPA, especially when the protected natural resource is the PMWHR Herd, though by extension, the Herd's habitat and specific ecosystem with which the horses interact. Agencies tend to evaluate wild horses' impacts on the environment, with little regard for how an agency action may severely affect the Federally-protected wild horses.

1. Cumulative Effects

(a) Genetic diversity

It is stated in Responses that no projects or conditions would contribute to the loss of genetic diversity. But, limiting populations to below-viable levels, and the importation of outside DNA, would likely affect genetic diversity and identity.

(b) Other Issues - Population growth trends/body condition; upland health; riparian condition; sensitive species; wildlife.

The effects mentioned here could all be seen from the same vantage point; past practices are implicated, directly or indirectly, for the effects *on* the horses and *by* the horses. Legacy livestock grazing; weather extremes compounded by human climate-altering activity which includes ruminant livestock to a much greater extent than is widely known; recreation, which BLM does admit is increasing in the PMWHR and which likely impacts horse distribution across the Range and may affect stress levels; water availability; *and especially,* historic and rightful extent of wild horse range beyond present boundaries, which most certainly provided much greater access to forage, water, cover, and space than available on the presently described Range.

Suggested Remedy: Cumulative Effects are not restricted to known future agency activities; but any and all past, present, and foreseeable future influences which may impact, or may have impacted, the PMWHR Herd and its habitat.

2. Translocation as a Remedy for Low Genetic Diversity

The importation of outside horses in order to cure a situation where natural diversity levels have fallen below recommended values – generally due to low AML – does not substitute for cognizant, preventative management which avoids the need for reactive measures.

Strategic Research Plan, Wild Horse and Burro Management (2005). Under D. Genetic Conservation Strategies: "*Similar or closely-related herds of horses should be identified for any genetic augmentation of wild horse herds."*This same Report also admonishes under Goals 1: *Manage to minimize the need for augmentation, if possible."*

Robert C. Lacy, Department of Conservation Biology, Daniel F. and Ada L. Rice Center, Brookfield Zoo, states in Importance of Genetic Variation to the Viability of Mammalian Populations:

"Exchange with other populations can restore variation, but only with the risk of losing genetic variants that had been unique to the local population."

As also addressed in section (A)(1) above, translocation for the plain purpose of mitigating the poor management decision of unnecessarily-low AML would violate the WFRHBA. It also violates NEPA.

First, without continuous monitoring, genetic testing is only a retrospective which can lag behind for a generation or more. It is not a reflection of the “current” situation, and therefore the introduction may “correct” a problem which does not exist, or may be a miss-match in terms of appropriate Fixation Index between receiving and source herds. Habitats and phenotypes must also match.

Secondly, the potential for negative impacts is great enough that translocation should only be used as a rescue action; not to facilitate low populations. Outside DNA may contain deleterious alleles, or may significantly dilute existing local adaptations. Pathogens can be introduced for which the receiving herd has no immunity. Out-breeding depression is possible, especially since the guiding reference for appropriate relatedness, the 2013 NAS Report’s Appendix F, may have under-calculated Fixation Index for 183 wild herds. The imported horses may not choose or be chosen to breed with the receiving herd, or may simply head for home.

Given the potential for failure, the practice of introducing outside horses in lieu of maintaining genetically-viable populations is in direct derogation of NEPA. Such actions do not amount to the necessary "hard look", they do not consider the consequences suffered by the horses of failure, and do not consider best available science. They do not preserve local adaptations which equip the PMWHR Herd for long-term survival. They do not honor the cultural and historical significance of this Herd.

The Ochoco National Forest imported two mares from a distant HMA. In a short while, one mare seemed to disappear, while the other selected a suitable band stallion and commenced to reproduce in an area well outside the Territory. Subsequently, her successful contribution to the local herd's diversity resulted in a satellite herd which believes the area to be "home". This new herd is likely more inbred than the main population which was supposedly in need of fresh DNA. The area is adjacent to a major highway, and many recent sightings indicate that disaster is looming.

BLM is willing, here, to drive the PMWHR Herd below the minimum number necessary to slow genetic variability loss to acceptable levels, therefore failing to act according to NEPA's requirement that agency actions preempt environmental harm, rather than allow foreseeable harm to which a remedy must then be applied – if it is not too late. (see 40 C.F.R. § 1500.1 (b) (agencies must complete the necessary NEPA process "before decisions are made and before actions are taken")

Methow Valley Citizens Council, 490 U.S. at 349 ("NEPA ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast.")

Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt, 387 F.3d 989, 993 (9th Cir. 2004) (NEPA provides the necessary framework for federal agencies to consider environmental consequences before agencies take actions.)

In the instance of translocation, alternative actions and preventative measures would certainly include managing for a viable population size, as well as intentional retention of individuals whose Ho values are higher than others (Dr. DeEtta Mills, FIU Forensics Institute, 2010). Reducing the PMWHR Herd to non-viable levels could be non-recoverable; with BLM and Forest Service simply leaning on the prospects of importation of unrelated, outside horses.

Neighbors of Cuddy Mtn. v. U.S. Forest Serv., 137 F 3.d 1372 (9th Cir. 1998) ("The Forest Service's perfunctory description of mitigation measures is inconsistent with the "hard look" it is required to render under NEPA. 'Mitigation must be discussed in sufficient detail to ensure that environmental consequences have been fully evaluated.'"

Foundation for North Am. Wild Sheep v. U.S. 681 F.2d 1172 (9th Cir. 1982)("Finally, the Service contends that the area can be repopulated with Bighorn sheep from other areas if necessary. The efficacy of these mitigation measures was severely attacked by numerous responses to the original draft of the EA") ("Consequently, it is manifestly insufficient to mitigate the harm to the sheep emanating from the authorized use of Road 2N06 by Curtis ore trucks and is inadequate to remedy the flaws contained in the Service's analysis of that harm.")

Suggested Remedy: Agencies must exclude the mitigation measure of translocation, and instead concentrate genetic management activities toward achieving population-level viability and other means of maintaining both genetic diversity and identity, thus eliminating the need for outside DNA.

3. Data Quality – AML Re-evaluation

Appendix C does not provide sufficient data to diminish concerns expressed in the Central Oregon Wild Horse Coalition's comments regarding the AML Determination. It is understood that Method 1 was not the basis for AML, except to provide tacit affirmation that Method 2 surely must be reasonable and accurate.

Therefore, Method 2 carries the weight of the PRWHR Herd's future, and our concerns remain, as this method relied on off-site and conjectural ideals, mere sampling of range condition, limited temporal data, and unauthorized liberty taken with expected forage consumption values.

This pale and anemic extent of analysis, deviating from the authentic "hard look" mandated by NEPA, falls short.

Notably, BLM's Ecological Site Descriptions (ESDs) provide only off-site, comparable ecosystems relative to those found within the PMWHR; but precious little real-time, real-space, credible and reliable data on which to shape the PMWHR Herd's entire future. As stated in comments, many variables contribute to a given site's "productivity", and exact contrasts against the supposedly-optimal off-site conditions may not be possible, much less appropriate. We do not fault the BLM for this type of analysis, if used for purposes other than the existential determination of the Herd's genetic health, identity, and resilience into the future.

In *Wild Earth Guardians v. Jeffries*, 370 F. Supp. 3d 1208 (D. Or, 2019), the Forest Service failed to provide site-specific data to support its decision to deviate from prescribed analysis protocol (stream reaches, elk calving areas, gray wolf presence, etc.) and by substituting "studies" for data.

The Forest Service's pervasive absence of site-specific analysis in *Wild Earth* won them the pronouncement "This failure of the Forest Service results in an arbitrary and capricious decision under NEPA." The case is eerily similar to the situation found in the PMWHR AML analysis.

Suggested Remedy: Agencies knowingly selected inappropriate methodologies for determining AML, when other methods were already prescribed and which, if conducted according to protocol, would have met NEPA data quality standards. Further, independently-produced data exposed agencies' evaluation process as not only being inadequate, but factually disingenuous, in violation of NEPA. Agencies must recalculate AML according to existing direction.

4. An Environmental Impact Statement ("EIS") is Required

The Central Oregon Wild Horse Coalition here includes their previously-submitted comment regarding BLM and Forest Service's obligation to prepare an EIS.

(a) Context. The Pryor Mtn. Horses rise far above any attempt to limit context to a finite, localized area or scope of impact. This is the most known, followed, and seriously loved, herd of horses wild or free in the entire world. From seasoned, informed wild horse preservationists concerned about permanent loss of this heritage herd, to elderly cat-people limited to free access to public broadcasting, the human environment is significantly affected by impacts on this herd. The horses' welfare is deeply important to millions upon millions of people, likely on every continent, and from all socioeconomic strata.

(b) Intensity.

(3) The unique characteristics of this Herd have been celebrated for decades. Historic and cultural importance cannot be questioned.

(4) The Pryor Mtn. Horses represent highly-controversial issues, in terms of genetic value which now seems debated; the criticality of scientifically-prescribed Minimum Viable Population size; the efficacy and wisdom of translocation; the use of GonaCon as potential fertility control when agencies are aware it will likely permanently remove horses from the breeding population.

(5) The Re-evaluated AML does not provide simple population resiliency in the event of stochastic events. Climate change effects are in and of themselves 'controversial' because they are so highly uncertain as to be certainly uncertain. The risks of combining more aggressive fertility control with population reduction and translocation are uncertain in terms of both genetic diversity and local adaptations to the horses' home range.

(6) This action, if implemented, will help establish equally-irresponsible policies and practices in other HMAs and Territories. That's how we got to this point and that's how it works.

(7) Inadequate analysis was conducted which examines cumulative effects. For example, since BLM/FS appear to be acquiescing to increases in human encroachment and harassment, more pressure will be placed on already-limited resources required by the horses. Combined with other limiting factors such as WSAs, the cumulative effects on the resource of wild horses could become existential. The PMWHR also appears to be fair game for surface disturbance restricted by other 'users' and in other areas of the Range, further reducing habitat for the wild horses.

(10) The proposed action violates the Administrative Procedures Act, NEPA, and the WFRHBA.

Suggested Remedy: Agencies must recognize the significance of the proposed Federal action, and prepare an Environmental Impact Statement.

II. Additional Concerns

A. Genetic Monitoring Should be Expanded to Include Allelic Diversity, H*e*, and F*is*

NAS p. 143, 144

"Genetic studies provide essential data for the management of populations, including estimates of the levels and distribution of genetic diversity, assessments of ancestry, and the detection of genetically distinct populations. At the population level, genetic diversity can be measured as the mean number of variants of a gene (alleles) or as the proportion of individuals that have different variants of a gene (heterozygosity). Theoretical and empirical studies have demonstrated substantial fitness costs associated with the loss of genetic diversity in both free-ranging and captive populations (Lacy, 1997; Saccheri et al., 1998; Crnokrak and Roff, 1999; Slate et al., 2000; Brook et al., 2002; Keller and Waller, 2002; Spielmanet al., 2004). In small populations or populations that suffer size bottlenecks, allelic diversity is lost relatively quickly through random genetic drift, but heterozygosity is less affected. In small populations that are isolated, inbreeding is inevitable and occurs within only a few generations. Whereas inbreeding does not change allele frequencies, it results in a change in the proportion of

individuals that carry two alleles at a locus that are identical by descent and decreases heterozygosity. ***Thus, it is important to measure and monitor allelic diversity, observed and expected heterozygosity (Ho and He), and coefficients of inbreeding (Fis) in managed populations."*** (emphasis added)

Suggested Remedy: Due to both a long history of genetic study with a solid record of collected data for the PMWHR Herd, and a need for that data because of the delicate balance sought between genetic diversity and identity, monitoring of additional metrics is strongly indicated for the Herd. This should include, to the extent possible, the values mentioned in the NAS Report, to alleviate the necessity for reactive measures after the fact.

B. Wild Horse Welfare is Not Outside the Scope of the EA

Responses, at 84, states that CAWP is outside the scope of the EA, and at 86, agency responsibility for adopted horses is outside the scope of the EA. From personal experience, the Central Oregon Wild Horse Coalition counters that untold numbers of BLM and Forest Service horses and burros end their lives in a slaughter plant, or in a state of terror from the effects of handling during and after gathers. If agencies would demonstrate the courage to place these issues within "the scope" from the outset, statistics would be infinitely less horrifying.

Although the Central Oregon Wild Horse Coalition, like many other advocate organizations, has purposed to avoid feeding the slaughter industry, we have rescued horses within hours of their final trailer trip. We have petitioned BLM to consider adoption agreements and sales contracts as binding legal documents which do not expire when the horse is titled or in the possession of purchasers. The WFRHBA does not exist to protect only the magnificent rearing stallion on the open range, but every last horse and burro, for the term of its life. Legal opinions are split between interpretations, yet Federal protections absolutely must err to the benefit of the animal. The public wants to see this commitment in the pages of an EA, despite the self-imposed limitations of "scope". We are weary of scope.

In like manner, the public wants every single animal treated with due respect and reverence, whether on- or off-range, all the time and everywhere. This should not be a matter of enforceable "law", as CAWP still is not, but of constant and mindful responsibility. Forest Service regulations do not differentiate between the "inhumane treatment" of wild horses and burros according to whether agency staff or public perpetrate the harm. This may be an oversight, but should be a condition of employment. The public wants definitive assurance and evidence, which should be readily apparent in an EA or EIS, that both agencies are wholly dedicated to this standard.

Suggested Remedy: Protection, Management, and Control of wild horses and burros must paramountly emphasize the animals' "protection". This is within the purview of agencies' mission at every juncture of management, and this must be apparent in every action.

In closing, the Central Oregon Wild Horse Coalition looks forward to honest dialog with agencies, to resolve concerns with objectivity and respect for one another and the irreplaceable natural resource of the PMWHR Herd.

Sincerely,

Gayle Hunt

Gayle Hunt

Central Oregon Wild Horse Coalition
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Attachment:

Genetic structure of the Big Summit herd and neighboring wild horse populations inhabiting herd management areas of Oregon, KETAKI DESHPANDE1,2,3, EVELYN PEREZ1,2, NATALIE LEYVA1,2, MERLY SUAREZ3, AND DEETTA K. MILLS, (2019)