

**United States Department of the Interior, Bureau of Land Management  
Burns District**

**DECISION RECORD**

**Spay Feasibility and On-Range Behavioral Outcomes Assessment and  
Warm Springs Herd Management Area Population Management Plan  
Environmental Assessment  
DOI-BLM-ORWA-B050-2018-0016-EA**

**BACKGROUND**

The Spay Feasibility and On-Range Behavioral Outcomes Assessment and Warm Springs Herd Management Area (HMA) Population Management Plan Environmental Assessment (EA) (DOI-BLM-ORWA-B050-2018-0016-EA) analyzed the effects of:

- **Alternative A – No Action** – No Spay Assessment, Gather, or Removal, *and*
- **Alternative B – Proposed Action** – Spay Feasibility and On-Range Behavioral Outcomes Assessment and 10-year Population Management Plan for Warm Springs HMA.

This EA originally incorporated a partnership between the United States Geological Survey (USGS) and Colorado State University (CSU) as research partners to conduct this study in cooperation with Burns District Bureau of Land Management (BLM). On August 8, 2018, CSU informed BLM that they would not be participating in BLM Oregon's proposed research related to spaying wild horse mares and studying their on-range behavior. The BLM respects CSU's decision, however, as described in the EA (Chapter I.A. Background and Chapter III.B), conditions related to population level, water availability, and rapid population growth remain the same on the Warm Springs HMA. The BLM must continue to pursue management actions to move toward achieving and maintaining the established appropriate management level (AML) and reduce the wild horse population growth rate in order to restore and maintain a thriving natural ecological balance (TNEB) and multiple-use relationship on public lands. Following the withdrawal of CSU, USGS resubmitted their proposal (EA, appendix C) to include only the behavioral research portion of the original proposal. Burns District BLM then updated the EA to clarify that CSU was no longer a proponent and that, rather than CSU, the BLM would evaluate the safety, complication rate, and feasibility of ovariectomy via colpotomy (spay) on wild horse mares and allow the USGS to evaluate the impacts of spaying on mare and band behavior once returned to the range as compared with an untreated herd.

In conjunction with the BLM spay feasibility study and the USGS on-range behavioral outcome study, Burns District continued to propose a 10-year population management plan for Warm Springs HMA.

## COMPLIANCE

Alternative B, the proposed action, complies with and is consistent with the following documents:

1. Oregon Greater Sage-grouse Approved Resource Management Plan Amendment (GRSG ARMPA) (September 2015), Wild Horses and Burros (WHB) Objectives (p. 2-21).
2. Three Rivers Resource Management Plan and Record of Decision (RMP/ROD) (1992) (p. 2-43).
3. Wild Free-Roaming Horses and Burros Act of 1971 (Pub. L. 92-195) as amended.
4. Wild Free-Roaming Horse and Burro Management (43 CFR 4700).
5. BLM Wild Horses and Burros Management Handbook, H-4700-1 (June 2010).
6. Warm Springs Equine HMA Plan (1979).
7. Warm Springs Wild Horse HMA Plan – Update (December 1987).
8. Warm Springs HMA Plan Update (June 2010).
9. Livestock Grazing Allotment Objectives: West Warm Springs Allotment Management Plan (AMP) (1980) and East Warm Springs AMP (1993).
10. Instruction Memorandum (IM) No. 2009-062, Wild Horse and Burro Genetic Baseline Sampling.
11. IM No. 2009-090, Population-Level Fertility Control Field Trials: HMA Selection, Vaccine Application, Monitoring and Reporting Requirements.
12. IM No. 2010-057, Wild Horse and Burro Population Inventory and Estimation.
13. IM No. 2013-058, Wild Horse and Burro Gathers: Public and Media Management.
14. IM No. 2013-060, Wild Horse and Burro Gathers Management by Incident Command System.
15. IM No. 2013-146, Exception to Policy in BLM Handbook H-4700-1 and Manual 4720.41: Helicopter Gather of Wild Horses and Burros between March 1 and June 30 Due to Emergency Conditions and Escalating Problems.
16. IM No. 2018-066, Guidance for the Sale of Excess Wild Horses and Burros.
17. IM No. 2015-070, Animal Health, Maintenance, Evaluation and Response.
18. IM No. 2015-151, Comprehensive Animal Welfare Program for Wild Horse and Burro Gathers.
19. Burns District BLM IM-ORB-000-2018-004, Oregon Wild Horse and Burro Corral Facility Access for Visitors.
20. The Federal Land Policy and Management Act (FLPMA) of 1976, as amended.
21. National Environmental Policy Act (NEPA) (42 U.S.C. 4321–4347) (1970).
22. BLM NEPA Handbook, H-1790-1 (January 2008), FLPMA (43 U.S.C. 1701, 1976), Section 302(b) of FLPMA, states, “all public lands are to be managed so as to prevent unnecessary or undue degradation of the lands.”
23. Public Rangelands Improvement Act (43 U.S.C. 1901) (1978).
24. Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the BLM in the States of Oregon and Washington (1997).

25. Vegetation Treatment Using Herbicides on BLM Lands in 17 Western States Programmatic Final Environmental Impact Statement (FEIS) (2010) and ROD (2010).
26. Integrated Invasive Plant Management for the Burns District Revised EA (DOI-BLM-OR-B000-2011-0041-EA) Decision Record (DR) (2015).
27. BLM Manual 6310, Conducting Wilderness Characteristics Inventory on BLM Lands (March 2012), Section 201 of FLPMA requires that BLM maintain on a continuing basis an inventory of all public lands and their resources and other values, which includes wilderness characteristics. It also provides that the preparation and maintenance of the inventory shall not, of itself, change or prevent change of the management or use of public lands.
28. BLM Manual 6320, Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process. Section .04 Responsibilities, "C. District Managers and Field Managers shall: 1. Update and maintain the wilderness inventory for lands within the planning area consistent with BLM wilderness characteristics inventory guidance. 2. Ensure that wilderness characteristics inventories are considered and that, as warranted, lands with wilderness characteristics are protected in a manner consistent with this manual in BLM planning processes."

## **DECISION**

Having considered the alternatives and associated impacts in the EA (DOI-BLM-ORWA-B050-2018-0016-EA), I have determined that there are excess wild horses and burros in Warm Springs HMA, and it is my decision to implement a portion of the proposed action analyzed in the EA.

The proposed action included two separate sections:

1. The Spay Feasibility and On-Range Behavioral Outcomes Assessment (2018–2022) and,
2. The 10-year Population Management Plan (2018–2028)

My decision is to implement the following actions as described in the EA:

1. The Spay Feasibility and On-Range Behavioral Outcomes Assessment (2018–2022), and,
2. The portion of the population management plan that provides direction on gathering wild horses in 2018.

The spay study will allow BLM to evaluate the safety, complication rate, and feasibility of ovariectomy via colpotomy on wild horse mares and USGS to evaluate the impacts to mare and band behavior once returned to the range as compared with an untreated herd. Additionally, a finding of no significant impact (FONSI) found those portions of the proposed action to be implemented under this decision do not constitute a major Federal action that will significantly impact the quality of the human environment. Therefore, an environmental impact statement (EIS) is unnecessary and will not be prepared.

## **PUBLIC INVOLVEMENT**

On May 21, 2018, the BLM Burns District mailed a scoping letter to 127 interested individuals, groups, and agencies regarding the proposed spay feasibility and on-range behavioral outcomes assessment and the proposed population management plan for Warm Springs HMA. The scoping letter was also posted to BLM's ePlanning website. Letters mailed to the Burns District BLM and emails sent to [blm\\_or\\_spaystudy\\_warmsprhma@blm.gov](mailto:blm_or_spaystudy_warmsprhma@blm.gov) were received from 2,044 individuals, groups and agencies during the scoping period. Scoping comments were both in support and opposition of the proposed project. Scoping comments voiced concerns about the current wild horse and burro population far exceeding AML and consequential effects on the health of the range and various species (such as GRSG) dependent upon healthy range; the reduction of livestock animal unit months (AUM) due to the wild horse and burro population exceeding AML; the suffering of wild horses and burros due to the overpopulation and inaction to maintain the population within AML; the physical effects to the mare associated with ovariectomy via colpotomy; potential for abortions in early pregnancies due to the procedure; and the effect on behavior after spaying mares and returning them to the range; as well as support for the use of PZP to control population growth instead of surgical sterilization.

A copy of the draft EA and unsigned FONSI were mailed to 105 interested individuals, groups, tribes, and agencies on June 29, 2018, for a 30-day comment period. The announcement for the availability of the EA for public comment was also emailed to 49 interested parties. In addition, the EA and unsigned FONSI were posted on BLM's ePlanning website, and a notice was posted in the Burns Times-Herald newspaper for one week, beginning on July 4, 2018. A total of 8,326 comment emails, letters, and faxes (a majority of which arrived as form letters) were received during the 30-day public comment period. Those comments have been addressed in the EA or responded to in appendix A of this decision. On August 8, 2018, following 30-day comment period, CSU withdrew from participation in this project. USGS provided an updated proposal to include only the behavioral research portion of the original proposal and BLM adjusted the draft EA to reflect those changes. The updated EA was released for an additional public comment period from August 22 through September 2, 2018. These documents were posted on BLM's ePlanning website, and a notice of availability was posted in the Burns Times-Herald newspaper. A total of 10,104 comment emails, letters, and faxes (a majority of which arrived as form letters) were received during the additional comment period (August 22–September 2, 2018). Comments from this comment period have also been incorporated into the attached EA or responded to in appendix A (attached) of this decision record.

## **CHANGES TO THE ENVIRONMENTAL ASSESSMENT FOLLOWING THE JUNE 29, 2018 VERSION RELEASED FOR PUBLIC COMMENT**

- Grammatical mistakes have been corrected throughout.



- Clarifications were made where needed; these did not change context.
- The current estimated wild horse population was updated with data collected during a June 18–19, 2018, simultaneous double-observer horse survey (USGS unpublished data, 2018). This data replaced the estimated fall 2018 population of 885 horses (738 adults and 147 foals) (based on a 20 percent population growth rate from the 2016 survey) with 852 horses (694 adults and 158 foal) (USGS unpublished data, 2018). This data was updated throughout the text of the EA, as were out-year estimates of the wild horse population.
- Explanation of CSU's withdrawal from the project on August 8, 2018, was added to the Background section of the EA with all further reference to CSU's involvement removed, including the removal of all EA appendices related to CSU's involvement. This caused a renumbering of most appendices in the EA.
- The USGS research proposal was updated to include only the behavioral research portion of the original proposal (EA Appendix C: USGS Research Proposal, August 2018).
- Appendix I was updated with the June 2018 Warm Springs HMA Survey Map; this was previously the September 2016 Warm Springs HMA Survey Map.
- Appendix H: Inventory, Gather and Release History since 1972 was updated with the June 2018 survey data as well as the 2018 burro estimates.
- The no action alternative simulation of Appendix K: Warm Springs HMA WinEquus Simulations was updated with a starting population (fall 2018) of 852 horses based on the June 2018 survey results.
- The fall 2018 estimated burro population was updated throughout the EA from 49 adults and 9 foals to 68 adults and 6 foals based on 2018 ground counts and the June 2018 aerial survey. The 2028 estimated burro population was updated throughout the no action alternative based on the updated 2018 estimate.
- The Purpose and Need section was updated in response to CSU's withdrawal from the project, the updated USGS research proposal, and BLM's need for more detailed quantification of surgical and behavioral effects of ovariectomy via colpotomy.
- IM No. 2014-132: Guidance for the Sale of Wild Horses and Burros was replaced with IM No. 2018-066: Guidance for the Sale of Excess Wild Horses and Burros.
- The Scoping and Identification of Issues section and the Summary of Public Participation section were updated with a summary of the public comment period from June 29 through July 30, 2018.
- The proposed action, 1. Spay Feasibility and On-Range Behavioral Outcomes Assessment section of the EA (Chapter II.B.1.), was updated to clarify that BLM would be responsible for the gathering of animals, contracting to conduct ovariectomy via colpotomy, and monitoring the mortality and morbidity rates of mares treated. Clarification was also provided on USGS's responsibilities of radio collaring/tagging horses, studying herd genetics, and on-range behavioral observations.
- In Chapter II.B.1., Spay Feasibility and On-Range Behavioral Outcomes Assessment, wording was added that describes that all horses returned to the range would receive a microchip for improved individual identification.

- In Chapter II.B.1., Spay Feasibility and On-Range Behavioral Outcomes Assessment, the section titled “Post-surgery Welfare Observations” was removed from the proposed action. An explanation as to why it was removed and how the existing veterinary observations would provide the information needed to address the specific aim: “Evaluate the immediate and short-term effects of the surgical procedure on free-roaming wild mares.”
- Appendix I: Public Observation Protocol was removed and incorporated into the updated EA (Chapter II.B.1.c. Opportunity for Public Observation). This section was updated to allow for photography/filming of collaring and surgeries.
- In Chapter II.B.1.b. Ovariectomy via Colpotomy Procedure, an additional ultrasound at 60 days post-surgery was added to further evaluate pregnancy status.
- Wording was added to the EA (Chapter III.B.1.b. Proposed Action – Anticipated Effects of Surgery on a Pregnancy) regarding potential complications to the mare associated with pregnancy loss.
- Wording was updated regarding PZP-22 remote delivery as it relates to the study by Rutberg and others (2017) (EA Chapter III.B.1.b. Proposed Action – Effects of PZP).
- The long-term holding (off-range pasture) costs were updated to reflect more accurate per day per horse costs (EA Chapter III.B.7. Economic Values).
- Because the fall 2018 estimated wild horse population was updated following the June 2018 aerial survey, the estimated costs for a fall 2018 helicopter gather were also updated (EA Chapter III.B.7. Economic Values).

#### **CHANGES TO THE EA FOLLOWING THE AUGUST 22, 2018 VERSION RELEASED FOR PUBLIC COMMENT**

- Grammatical mistakes have been corrected.
- Clarifications were made where needed; these did not change context.
- Clarification was made that approximately 652 excess animals would be removed from the range in the fall of 2018.

#### **CHANGES TO THE FONSI FOLLOWING THE JUNE 29, 2018 VERSION RELEASED FOR PUBLIC COMMENT**

- Grammatical mistakes have been corrected.
- Clarifications were made where needed; these did not change context.
- Updated the Introduction section to explain the withdrawal of CSU from the project and describe the updated proposed action by BLM in cooperation with USGS.
- Updated the summary of the proposed action to correspond with the updated proposed action in the EA.

## **CHANGES TO THE FONSI FOLLOWING THE AUGUST 22, 2018 VERSION RELEASED FOR PUBLIC COMMENT**

- The FONSI has been revised to examine only those parts of the proposed action being implemented under this decision.

### **RATIONALE**

I have selected the Spay Feasibility and On-Range Behavioral Outcomes Assessment (2018–2022) and the portion of the population management plan that provides direction on gathering wild horses in 2018 based on public comments, consultation with local governments and State agencies, discussion with multiple-use members of the public, requirements to manage wild free-roaming horses in a manner that is designed to achieve and maintain a TNEB on public lands, and conformance to applicable laws and regulations. The selection of these portions of the proposed action also meets the purpose and need to remove excess wild horses and move toward achieving and maintaining the established AML and reduce the population growth rate in order to restore and maintain a thriving natural ecological balance and multiple-use relationship on public lands. These portions of the proposed action also meet the second purpose and need of studying the use of ovariectomy via colpotomy as a method to maintain the wild horse population within Warm Springs HMA at AML and providing BLM with a more detailed quantification of surgical and behavioral effects. These actions are consistent with the provisions of section 1333(b) of the WHB Act, the multiple-use mandate of FLPMA (1976), and the Three Rivers RMP/ROD (1992) that established the AML for the HMA.

The spay feasibility and on-range behavioral outcomes assessment and 2018 wild horse gather portions of the proposed action were chosen over the entire proposed action, which includes a 10-year population management plan for Warm Springs HMA, because the BLM's results of the spay feasibility study and USGS's results of the on-range behavioral outcomes assessment will play a role in the determination of the type of fertility control treatment applied to wild horse mares during future population management activities in this HMA. Following the completion of the study, additional population management actions for wild horses and burros would be implemented under a separate decision.

The no action alternative was not chosen because the current estimated population of wild horses (500+ adult animals over high AML) in this water limited HMA creates a high potential for wild horse and burro mortality under the National Oceanic and Atmospheric Administration's (NOAA) U.S. Seasonal Drought Outlook of "persistent drought" (NOAA 2018). Water availability is presently inadequate to support a subset of the wild horse population in the western portion of the HMA, and BLM has begun hauling water to sustain a population of approximately 236 animals in this area. With an estimated 694 adult horses and 158 foals by fall 2018, severe drought in coming years would likely result in loss of life, especially as compared to 2014 when the estimated wild horse population was only 253 adults and 44 foals and loss was expected without water hauling. Because water resources are limited in this HMA, especially during

drought years, wild horse observations show high congregation areas are occurring within 4 miles of all pending GRSG leks (range of 15–120 horses per lek; average 49 horses per lek). Continuous yearlong impacts from horses to GRSG are a serious concern. Wild horse competition with native wildlife species for water sources is concerning especially in relation to recent GRSG lek trends in the HMA (drastic decline or loss) versus leks outside the HMA (stable). Herbaceous cover and height provide horizontal screening at GRSG nest sites, which obscures the nests from predators. Recent upland forage utilization monitoring documents moderate to high utilization levels in portions of the HMA experiencing concentrated wild horse and livestock use. In 2017 and 2018, moderate to heavy use was indicated in several areas of the HMA where lower levels of livestock use occurred. The no action alternative would increase the potential for conflict with other uses of public lands (such as wildlife and permitted livestock grazing) and therefore would be inconsistent with the multiple-use policy of public rangelands. The no action alternative does not meet the purpose and need of this EA.

### **AUTHORITY**

The two activities in this decision, (1) spay feasibility and on-range behavioral outcomes assessment, and (2) 2018 wild horse gather, fall under separate authorities.

- 1) Spay feasibility and on-range behavioral outcomes assessment:  
The effective date of this decision is 31 days from the date of the authorized officer's signature on this document (43 CFR Part 4.21).
- 2) 2018 wild horse gather:  
The authority to provide that all or part of a decision be effective upon issuance is found in 43 CFR 4770.3(c), "Notwithstanding the provisions of paragraph (a) of 43 CFR 4.21, the authorized officer may provide that decisions to remove wild horses or burros from public or private lands in situations where removal is required by applicable law or is necessary to preserve or maintain a thriving ecological balance and multiple use relationship shall be effective upon issuance or on a date established in the decision." Due to escalating conditions related to limited water availability in the HMA and deteriorating conditions of the natural surface roads presently being used for hauling water, this decision becomes effective upon the date of the authorized officer's signature.

### **APPEAL PROCEDURES**

You have the right to appeal this decision to the Office of Hearings and Appeals, Office of the Secretary, U.S. Department of the Interior, Board of Land Appeals (Board), in accordance with the regulations contained in 43 CFR Part 4 and the enclosed Form 1842-1 (Appendix B). In taking an appeal, there must be strict compliance with the regulations.

If you choose to appeal, a notice of appeal must be filed with the Burns District BLM Office within thirty (30) days of receipt of this letter for transmittal to the Board. If your



notice of appeal does not include a statement of reasons, one must be filed with the Board within thirty (30) days after the notice of appeal was filed.

A copy of your notice of appeal and any statement of reasons, written arguments, or briefs, must also be served upon the Regional Solicitor, Pacific Northwest Region, U.S. Department of the Interior, 601 SW 2nd Avenue, Suite 1950, Portland, Oregon 97204-3174. Service must be accomplished within fifteen (15) days after filing in order to be in compliance with appeal regulations.

As provided by 43 CFR Part 4, you have the right to petition the Office of Hearings and Appeals to stay implementation of the decision; however, you must show standing and present reasons for requesting a stay of the decision that address your interests and the manner by which they would be harmed.

A petition for stay of a decision pending appeal shall show sufficient justification based on the following standards: (1) The relative harm to the parties if the stay is granted or denied; (2) the likelihood of the appellant's success on the merits; (3) the likelihood of immediate and irreparable harm if the stay is not granted; and (4) whether the public interest favors granting the stay.

Should you choose to file one, your stay petition must accompany your notice of appeal. A notice of appeal with petition for stay must be served upon the Board, Regional Solicitor, and adverse parties at the same time such documents are served on the deciding official at this office. The person signing the notice of appeal has the responsibility of proving eligibility to represent the appellant before the Board under its regulations at 43 CFR 1.3.

A notice of appeal and/or petition for stay electronically transmitted (e.g., email, facsimile, or social media) will not be accepted. A notice of appeal and/or petition for stay must be on paper.

Authorized Officer: Jeffrey Rose, District Manager, Burns District BLM

Signature: 

Date: 09/12/2018

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## **Appendix A - Response to Public Comments**

On June 29, 2018, the Bureau of Land Management (BLM) emailed a letter announcing the availability of the environmental assessment (EA) and unsigned finding of no significant impact (FONSI) to 49 interested parties for a 30-day public comment period. In addition, the EA and unsigned FONSI were posted on BLM's ePlanning website, and a notice was posted in the Burns Times-Herald newspaper for one week, beginning on July 4, 2018. A total of 8,326 comment letters (a majority of which arrived as form letters) were received during the 30-day public comment period. Following this comment period, on August 8, 2018, CSU withdrew from participation in this project. USGS submitted an updated proposal to include only the behavioral research portion of the original proposal. The BLM adjusted the draft EA to reflect those changes. The updated EA was released for an additional public comment period from August 22 through September 2, 2018. In addition, the updated EA and unsigned FONSI were posted on BLM's ePlanning website, and a notice was posted in the Burns Times-Herald newspaper for one week. A total of 10,104 comment emails, letters, and faxes (a majority of which arrived as form letters) were received during the additional comment period.

Responses to substantive comments have been addressed by updating text in the EA or grouped by subject below.

### **10-year Population Management Plan**

1. Comment: The BLM should be managing the current wild horse population on the range with the PZP-22, native PZP, or GonaCon<sup>TM</sup> fertility control vaccines.

Response: Chapter II, Section C of the EA is titled Alternatives Considered but Eliminated from Further Analysis. Number 5 of this section discusses intensive fertility control using PZP vaccine via remote darting and explains why management under this option was eliminated from further analysis. The same rationale applies to intensive fertility control using GonaCon vaccine because a majority of the horses in Warm Springs HMA are not approachable by humans within 0.5 mile of them for identification and darting and because of limited access during late winter or early spring for annual darting.

The use of PZP-22 is part of the 10-year Population Management Plan of the proposed action and is fully analyzed in Chapter III.1. Wild Horses and Burros. This decision does not include management actions past the completion of the spay feasibility and on-range behavioral outcomes assessment portion of the proposed action. PZP could not be applied to mares during the spay study as it would confound the data being collected associated with the effects of ovariectomy via colpotomy on behavior.

2. A number of comments were received suggesting management options for the years following the spay feasibility and on-range behavioral outcomes assessment such as, but not limited to:
  - Spay only older (e.g. 8–10 year old) mares, and use PZP on younger mares;
  - spay mares and geld stallions; and
  - spay the least adoptable horses, and leave the best conformation with sound minds intact.

Response: This decision only includes the 2018 wild horse gather and implementation of the spay feasibility and on-range behavioral outcomes assessment. Because the results of the spay study will play a role in the determination of the type of fertility control treatment applied to wild horse mares during future population management activities in the Warm Springs HMA, future management actions would be implemented under a separate decision following completion of the spay study.

3. Comment: The EA provides contradictory information on PZP. For instance, the agency states that longer lasting methods of population growth suppression have not been proven effective at population growth suppression on the majority of HMAs, and that if the agency were to proceed with PZP they would have to follow the two-injection liquid PZP inoculation protocol, which would require gathering and treating horses every year. Rutberg et al. (2017) showed that contraception in wild horses initially treated with PZP-22 was extended by at least three years with a single PZP booster administered 2 to 4 years later. Fertility in treated animals was reduced by an average of 70%. Indeed, the agency itself notes this later in its own EA, stating that these findings “provide evidence of a double-treatment, multi-year contraceptive that is already available for use, which is a major step toward improving vaccine longevity. The treatments by Rutberg et al. (2017) would be similar to treatments in the proposed action.”

Response: In response to the last sentence of this comment, the EA was updated to explain why BLM does not plan to use darting for PZP-22 delivery as done by Rutberg and others (2017).

The EA, Appendix L: PZP Literature Review, also discusses the findings of Rutberg and others (2017) and an explanation as to why the BLM would not use this method at this time. This appendix states:

For the first administration of the PZP-22 vaccine pellet formulation given to any mare, she would receive a single dose of the two-year PZP contraceptive vaccine at the same time as a dose of the liquid PZP vaccine with modified Freund’s Complete adjuvant. The pellets are applied to the mare with a large gauge needle and jab-stick into the hip. Subsequent “booster” doses given



to mares that have received the PZP-22 vaccine pellets may be either of ZonaStat-H, or of PZP-22 vaccine pellets (Rutberg et al. 2017). Although PZP-22 pellets have been delivered via darting in trial studies (Rutberg et al. 2017), BLM does not plan to use darting for PZP-22 delivery until there is more demonstration that PZP-22 can be reliably delivered via dart. Therefore, WH&Bs must be gathered for each application of this formulation.

## **Behavior**

4. Comment: The procedure will inalterably change the natural behaviors of spayed mares, so it is inconsistent with the BLM's legal mandate to protect the natural, free-roaming behaviors of wild horses and burros.

Response: This study would add to the scientific knowledge about the behavioral outcomes on the range when spayed mares are living with other treated and untreated animals. The Purpose and Need section of the EA explains, "There is a need for more detailed quantification of surgical and behavioral effects of this method [ovariectomy via colpotomy], using appropriate study design—including studying an adequate population—to effectively draw conclusions about the method's effects." The EA, Chapter II.B.1.a., outlines the specific aims of the study. These aims include, but are not limited to, measuring rates of social and reproductive behavior, group cohesion, spatial ecology, and demographic characteristics of both treated and untreated herd segments. It is expected that the results of this study would provide BLM with a more detailed quantification of behavioral effects than is currently available.

The EA (Chapter III.B.1.b. Anticipated Effects on Mare Health and Behavior on the Range) explains the anticipated effects on mare health and behavior. It provides details of the Collins and Kasbohm (2016) study on ovariectomized feral horse mares returned to the range with treated and untreated animals, specifically that aerial surveys showed that all treated individuals appeared to maintain group associations, there were no groups consisting only of treated females, and there were no observations of solitary treated females.

There is nothing about spaying that is expected to change the free-roaming nature of wild horses. Any behavioral differences due to spaying are not expected to change the wild and free-roaming nature of the spayed mares, as defined by the Wild Free-Roaming Horses and Burros (WHB) Act. It appears that the commenters are reading far more into the term "free-roaming" than the plain meaning of the term. "Wild free-roaming horses and burros" are those that are not in narrowly "fenced ranges" or constrained in zoo-like pens. There is no basis in law for interpreting "free-roaming" to include all behaviors typical only of fertile animals. In the WHB Act, Congress explicitly permitted sterilization as a

permitted management action—therefore, the position that spaying would illegally lead to behavioral changes is invalid.

5. Comment: A U.S. District Court Judge has already struck down the approach of creating sterile herds of wild horses.

*"The Defendants decision to manage the herd as entirely non-reproducing is arbitrary and capricious. The BLM failed to consider the impacts of maintain the herd as nonreproducing and whether those impacts were consistent with the requirement that the herd maintain its free-roaming behavior."* United States District Court for the District of Idaho, Case No. 1:16-cv-000001-EJL, Memorandum Order, Pg. 40.

Response: This EA and decision pertain only to the Warm Springs HMA, which would continue to include fertile animals. No part of this EA or decision discusses managing "the herd as entirely non-reproducing." In addition, this EA and decision will incorporate non-reproducing horses into the Warm Springs HMA to study the on-range behavioral effects of having spayed mares on the range with other treated and untreated animals. A full analysis of the anticipated effects is provided in the EA (Chapter III.B.1.b.).

6. Comment: BLM must study behavior of the exact mares receiving surgery prior to treatment and then afterwards for accurate comparison of behavioral differences.

Response: There are a large number of experimental designs that allow researchers to make valid inferences about the effect of a treatment. A study design with pre-treatment observational data from specific treated animals is not required. Valid comparisons can be made when groups and individuals are randomly assigned as treatment or control, as is the case for this study. The EA (chapter II.B.1. second paragraph) explains how one advantageous aspect of this HMA is that it is divided into two large pastures; this allows for a comparison of sub-herds that either do or do not contain some spayed mares. For this study, one side of the HMA would be the control segment (no treated (spayed) mares) and the other would be the treatment segment (treated (spayed) mares present). This study design allows for valid inferences about the effects of spaying, based on comparisons of observed behaviors between the control and treatment groups. One of the benefits of this study design for this action is that it prevents the need to gather twice.

7. Comment: The University of Florida College of Veterinary Medicine cites that the ovariectomy procedure will make many mares "appear to be permanently in estrus" <https://largeanimal.vethospitals.ufl.edu/hospital-services/surgery/ovariectomy/>.

Response: The topic of ovariectomized mares showing estrus was analyzed in the EA, Chapter III.B.1.b. Proposed Action - Anticipated Effects on Mare Health and Behavior on the Range. This section describes the varying estrus behavior responses of mares following ovariectomy, similar to how some intact mares naturally exhibit estrus behavior even during the anovulatory period. The article published by the University of Florida mimics this discussion as it explains even after ovariectomy, "some mares will continue to produce estrogen from another source." This article does not hypothesize as to how estrus behavior post-ovariectomy would influence behavior in a wild horse herd. As explained in the EA, "the BLM anticipates that some spayed mares may continue to exhibit estrus behavior that could foster band cohesion. If free-ranging ovariectomized mares show estrous behavior and occasionally allow copulation, interest of the stallion may be maintained, which could foster band cohesion (National Research Council (NRC) Review 2013). This last statement could be validated by the observations of group associations on the Sheldon [National Wildlife Refuge] NWR where feral mares were ovariectomized via colpotomy and released back onto the range with untreated horses of both sexes (Collins and Kasbohm 2016)." In this study, USGS expects to capture data on the effects of ovariectomy on intra- and interband behavior that will quantify on-range behavioral effects.

8. Comment: "Dr. Robert Miller, Equine behavior expert, CSU DVM alumnus and Dr. Ian Devick evaluated behavior alterations in mares due to ovariectomies last spring... How much more can BLM and university clinicians learn?"

Response: No publication or citation was provided with this comment. The BLM assumes the commenter was referencing: Devick, I.F., B.S. Leise, S. Rao, and D.A. Hendrickson. 2018. *Evaluation of post-operative pain after active desufflation at completion of laparoscopy in mares undergoing ovariectomy*. Can Vet J. 2018 Mar, 59(3):261–266.

This study did not evaluate behavioral effects to mares following ovariectomy, but evaluated "if residual pneumoperitoneum is associated with transient post-operative pain in mares undergoing ovariectomy" (Devick et al. 2018). In other words, they were trying to determine the effects of active desufflation (the act of removing the air that was blown into the body cavity for laparoscopic surgery) at the completion of laparoscopy. The procedure described in the EA does not include insufflation (or desufflation) of the abdominal cavity.

9. Comment: BLM has access to the recent data regarding ovariectomy via colpotomy surgeries and feral mares. There is no explanation in the Draft EA of why the CSU or USGS researchers, instead of subjecting mares to this procedure, could not use information from the Sheldon NWR in Nevada to understand what on-range behaviors were exhibited there and therefore what may be expected in Warm Springs HMA.

Response: The Anticipated Effects on Mare Health and Behavior on the Range section in the EA (Chapter III.B.1.b. Proposed Action) explains what the study by Collins and Kasbohm (2016) did and did not collect related to on-range behavior. To be clear, this section of the EA states, “No data were collected on inter- or intra-band behavior (e.g. estrus display, increased tending by stallions, etc.)” in the study by Collins and Kasbohm (2016). Four of the seven specific aims of BLM’s spay study revolve around collecting better information about on-range behavior than what is currently available.

10. Comment: “The manufactured herd dynamics resulting from this experiment will have catastrophic effects on the lives of the stallions and foals. The EA indicates that the horses will be released in a 50:50 gender ratio; however, the effective stallion-to-mare breeding ratio is actually significantly higher. If the ovariectomized mares do not allow copulation, stallions will fight over the remaining available mares.”

Response: The BLM is unaware of any literature that documents increased stallion aggression resulting from ovariectomized mares returned to the wild. However, returning non-reproductive mares to the range with an equal number of stallions is not a new practice for the BLM. For decades, BLM has applied the temporary fertility control vaccination PZP to mares returned to the range. The EA (Chapter III.B.1.) includes analysis of the available literature that discusses behavioral impacts of contracepted mares returned to wild herds. One of the key aims of this research is to measure rates of social and reproductive behavior and group cohesion in free-roaming male and female wild horses, thus expanding BLM’s knowledge and understanding of the spay fertility control option.

### **Reduction of Livestock AUMs and Range Improvements**

11. Comment: The EA should consider an alternative for maintaining larger numbers of wild horses on the range by reducing livestock grazing pursuant to 43 CFR 4710.5(a) and by implementing range improvements to enhance the ability of the Warm Springs HMA wild horses to utilize the entire HMA instead of forcing them to concentrate in certain areas.

Response: Chapter II, Section C of the EA is titled “Alternatives Considered but Eliminated from Further Analysis.” Number 1 of this section discusses closure of the HMA to livestock use and explains why management under this option was eliminated from further analysis.

Range improvement projects were not considered as part of the proposed action in this EA because they are currently being considered under a separate EA under development, West Warm Springs Allotment Management Plan (DOI-BLM-



ORWA-B050-2014-0033-EA). Refer to next comment regarding water quality and quantity.

12. Comment: "The EA recognizes that [']water is the main limiting factor within Warm Springs HMA.[']... But it has been a requirement for decades that BLM provide adequate water in the HMA for the wild horses to thrive. ...[Cited HMA plans from 1979 and 2011 and the Three Rivers RMP/ROD (1992)]. The droughts that may occur in the Warm Springs HMA are going to occur whether the wild horses there are sterilized or not. If water is the main limiting factor, and BLM is already obligated to cart in sufficient water in times of drought, then any lack of water resources does not justify BLM's proposed action."

Response: It is accurate that the HMA plans from 1979, 1987, and 2010, along with the Wild Horse and Burro section of the Three Rivers RMP/ROD (1992), encompass objectives to provide adequate water for wild horses and burros. These plans also include objectives to maintain wild horses and burros at specified appropriate management levels. The Wild Horses and Burros Management Handbook (H-4700-1, 2010) clearly explains that "an adequate year-round quantity and quality of water must be present in the HMA to sustain WH&B numbers *within AML*" (*emphasis added*). No policy requires BLM to develop artificial water sources or expend funds to haul water to sustain a population of horses above AML.

13. Comment: "The table in the EA shows a steady increase in percent of permitted livestock AUMs from 2008 (67%) to 2017 (73%). This EA describes the Warm Springs HMA as limited in terms of water, and in the midst of a severe drought. How then can livestock AUMs increase?"

Response: Table III-5 of the EA depicts actual livestock use, which fluctuates each year from 2008–2017, not a steady increase as the comment implies. Fluctuations in actual livestock use can be attributed to multiple environmental factors including drought and events such as wildland fire. In addition, many livestock permittees on the involved grazing allotments own or have access to private lands containing water within or immediately adjacent to the HMA boundary. These water sources serve livestock grazing within the HMA; however, they do not provide year-round water to wild horses and burros.

#### **Re-Evaluate AML for Warm Springs HMA**

14. Comment: BLM did not consider re-evaluating the current AML to support additional wild horses in the Warm Springs HMA. In this EA, BLM should formally re-evaluate the AML and adjust AML based on monitoring data.

Response: "AML is not generally established or adjusted as part of the gather [or population management] planning (NEPA) process due to the in-depth and

complex nature of the analysis required” (Wild Horses and Burros Management Handbook, H-4700-1, p. 47). In this instance, the review of AML does not meet the purpose and need of the EA. The authorized officer has not elected to formally review AML but is, instead, proposing gathering to study a spay method with the potential to reduce wild horse population growth and move toward achieving AML.

### **Population Control by Predation**

15. Comment: BLM should consider a natural control alternative that includes protection of native predators such as mountain lions.

Response: The EA considered this alternative in Chapter II.C. Alternatives Considered but Eliminated from Further Analysis, 7. Manage the Warm Springs HMA Wild Horse and Burro Population by Natural Predation. Although there may be places in the United States and Canada where predators influence feral horse populations, the rationale as to why BLM eliminated this alternative from further analysis as it relates to the management of Warm Springs HMA is described in the EA.

### **Ovariectomy via Colpotomy Procedure and Effects**

16. Comment: “It is unclear what measures or standards BLM is using to evaluate whether ovariectomy via colpotomy in this context should be considered a [‘]success[’]... BLM needs to set those expectations and set up measurable parameters -- before it conducts its experiments.”

Response: The BLM did not identify an arbitrary threshold value that delineates acceptable versus unacceptable effects of spaying in the “statement of research objectives” (EA, appendix B). The Purpose and Need section of the EA (Chapter I.B.) explains, “Further study of this method is needed to provide BLM more detailed quantification of the feasibility of this procedure for reasons related to morbidity and mortality rates.” The EA describes specific aims (Chapter II.B.1.a.) that outline what will be studied. Section B of this chapter also discusses what the veterinarian will be monitoring for post-surgery, what USGS would monitor related to herd genetics, specific on-range behavioral observations that would be documented, and documentation of the effects on population level. Anticipated effects are disclosed in the EA (Chapter III.B.1. Wild Horses and Burros) with an anticipated mortality rate of less than 2 percent based on a previous similar study on feral horse mares (Collins and Kasbohm 2016). Based on this study’s findings, BLM will determine if the results compare to those published by Collins and Kasbohm (2016) as they relate to the safety and efficacy of the procedure.

17. Comment: BLM should work with Veterinary Schools to provide a short class on spaying mares, thereby getting the knowledge to more veterinarians.

Response: Once published, the results of this research will quantify the feasibility of performing this method on wild mares. Feasibility will be measured by the results related to the safety for the mare and veterinarian, morbidity and mortality rates, as well as the duration of the procedure. This information could then be used by BLM, veterinarians, or managers of other free-roaming horse herds when considering training and education on this method.

18. Comment: How would BLM account for veterinarian fatigue after multiple procedures?

Response: This was previously described in the draft EA Appendix D: Institutional Animal Care and Use Committee (IACUC) Protocol where it stated, "Each surgery is expected to take 12–15 minutes, however, surgeons will conduct no more than 23–25 surgeries per day to avoid surgeon fatigue." Although CSU IACUC will not be providing oversight on the surgery portion of the study, BLM will follow the same surgical protocol previously approved by CSU. This statement that limits the number of surgeries per day has been added to the EA (Chapter II.B.1.b. Ovariectomy via Colpotomy Procedure).

19. Comment: There needs to be a full analysis... but by independent veterinarians, on the optimal dosage of anesthesia and the range of times it takes to be fully effective on wild horses.

Response: This protocol has been approved by university (Oregon State University (OSU) and CSU) IACUCs that are comprised of a panel of veterinarians and ethics officials who are independent of the principal investigator and research team implementing research. Although CSU's IACUC will not be providing oversight on the surgery portion of the study, BLM will follow the same protocol twice approved by CSU and described in this EA. The BLM considers these multiple IACUC reviews and approvals as independent veterinary analysis and approval.

20. Comment: The Draft EA does not include details regarding the training and experience of the surgeons and treating veterinarians in the specific ovariectomy via colpotomy sterilization technique.

Response: The EA explains how BLM would contract with veterinarians experienced in ovariectomy via colpotomy and standing sedation on at least 100 ungentled, wild horse mares (Chapter II.B.1.b. Ovariectomy via Colpotomy Procedure).

21. Comment: "Colorado State University IACUC protocols are deficient in that aseptic procedures are not identified, and that adequate post-surgery monitoring is not realistic in terms of accurate clinical standards."

A similar comment was received which included: "Performing these surgeries in field conditions is a violation of the regulations governing the IACUC under the federal Animal Welfare Act, ... major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions" 9 CFR, §2.31(d)(ix)."

Response: The ovariectomy via colpotomy procedure is described in the EA in Chapter II.B.1.b. Ovariectomy via Colpotomy Procedure. This section includes a description of the aseptic techniques to be used for the surgeries, which are the same as those previously approved by the CSU IACUC. The post-surgery monitoring is also described in the EA in Chapter II.B.1.b. Ovariectomy via Colpotomy Procedure.

The Oregon Wild Horse Corral Facility is not "in the field" in the sense of being temporarily constructed in the field; it is a purpose-built, permanent facility that has animal restraint equipment specifically designed for activities including controlled surgeries on wild horses. This equipment in this facility has been used to successfully perform thousands of castration surgeries and numerous other surgeries including treatment of hernias and cryptorchidism. Both the OSU and CSU IACUC approvals were finalized following inspection of the Oregon Wild Horse Corral Facility.

22. Comment: The updated proposal constitutes "research" in every sense and requires adherence to AWA standards. Missing from this EA and its updated appendices are the written, signed IACUC surgical protocol, and any evidence of an established IACUC. Without evidence of adherence to these regulations, this research is unlawful.

Response: No applicable law requires BLM to obtain IACUC approval for these procedures. The Animal Welfare Act (AWA) is the only Federal law in the United States that regulates the treatment of animals in research, exhibition, transport, and by dealers. In addition to providing standards for humane care, the AWA requires IACUC oversight of research on animals protected under the Act. The Act defines "animals" as:

*The term "animal" means any live or dead dog, cat, monkey (nonhuman primate mammal), guinea pig, hamster, rabbit, or such other warm-blooded animal, as the Secretary may determine is being used, or is intended for use, for research, testing, experimentation, or exhibition purposes, or as a pet; but such term excludes (1) birds, rats of the genus *Rattus*, and mice of the genus *Mus*, bred for use in research, (2) horses not used for research purposes, and (3) other farm animals, such as, but not limited to livestock or poultry, used or intended for use as food or fiber, or*



*livestock or poultry used or intended for use for improving animal nutrition, breeding, management, or production efficiency, or for improving the quality of food or fiber. With respect to a dog, the term means all dogs including those used for hunting, security, or breeding purposes.*

A Federal Register notice (April 5, 1990) provides a technical amendment to the AWA to regulate horses and other farm animals used in “biomedical” or other “nonagricultural” research under the AWA. This amendment maintained exemptions noted for farm animals (including horses) intended for use for improving animal nutrition, breeding, management, or production efficiency. Since this project includes research that is neither biomedical nor nonagricultural, the horses used in the project are exempt from regulation of AWA. USDA’s “Licensing and Regulation Under the Animal Welfare Act” (APHIS Program Aid No. 1117) states that “agencies of the Federal Government that do research are not required to register with USDA” and “agricultural research that uses horses and domestic farm animals are exempt by regulation and do not have to be registered.”

Based on this review, BLM has determined the horses and research protocols used in this project are considered farm animals exempt from regulation by the AWA, and therefore requires no IACUC oversight. Nevertheless, as explained in the EA (chapter I.A.), BLM would use “the same surgical protocol for ovariectomy via colpotomy originally approved by the CSU IACUC.”

23. Comment: The EA does not provide useable long-term data pertaining to out-year survival. The only reference provided to post-surgery long-term survival is that mare lifespan will likely be extended, and that no veterinary care will be possible.

Response: The EA, Chapter III.B.1.b. Proposed Action – Movement, Body Condition, and Survival of Ovariectomized Mares section, summarizes information available regarding long-term survival of ovariectomized mares and other contracepted wildlife species.

24. Comment: Bone density loss is just one example of the negative impacts that sterilization would have on these captive wild mares, all of which should be given careful consideration and evaluation. I request that that Dr. Bruce Nock’s article be given consideration.

Response: The EA (Chapter III.B.1.b. Proposed Action – Bone Histology) fully analyzes concerns related to bone density loss and considers the opinion article by Nock (2013).

25. Comment: BLM must also consider factors such as apparent comfort level after the procedure.

Response: Although the “Post-surgery Welfare Observations” portion of the study was removed from the proposed action following the departure of CSU from participation, the specific pain scoring measures that had been in the original proposal are not necessary for quantifying the immediate outcomes of the spay surgery nor was that section designed to provide care for the mare if needed. The three times per day for the first week post-surgery monitoring by veterinarians will still be conducted with appropriate veterinary interventions as needed. A more detailed explanation of this is included in the EA (Chapter III.B.1.b. Ovariectomy via Colpotomy Procedure).

26. Comment: “2016 Guidelines of the American Society of Mammalogists for the Use of Wild Mammals in Research and Education (Robert S. Sikes and the Animal Care and Use Committee of the American Society of Mammalogists, Basic Animal Services Unit, Department of Biology, University of Arkansas at Little Rock) clearly admonishes researchers regarding observations of wild animals compared to domesticated animals:

*An extensive list of indicators of pain for a variety of laboratory animals is available from Cornell University at <https://www.iacuc.cornell.edu/documents/IACUC009.01.pdf>, but animal care personnel should be aware that wild mammals often will provide little or no sign of pain or distress until the condition is acute because overt signs of pain or distress would be strongly selected against in nature, where predators or competitors may cue in to such signs.*

This research, if optimally “successful,” cannot in any way inform the future use of ovariectomy via colpotomy as a safe, humane means of regulating wild horse populations.”

Response: The “Post-Surgery Welfare Observations” portion of the study, which included recognition and quantification of pain, has been removed from this project. The three times per day for the first week post-surgery monitoring by veterinarians will still be conducted with appropriate veterinary interventions as needed during this time. Information recorded by veterinarians during this time would provide data on morbidity due to the surgery.

27. Comment: “Existing medical research presents in detail the risks to which these mares will be exposed. In a test of a similar surgical procedure in just twenty mares, in which the same tool now recommended was used, intraoperative hemorrhage occurred in three mares, postoperative vaginal bleeding in two mares, and a large blood clot in another mare. R.N. Hooper, et al., *Use of an Ecraseur for Ovariohysterectomy in mares*, Vet Surg. 1992 Sep-Oct; 21(5):374-7.”

Response: The commenter is correct in that Hooper and others (1992) used an ecraseur in their study. However, ovariohysterectomy (as in Hooper et al. 1992) is

a very different surgical procedure than ovariectomy. Ovariohysterectomy is the surgical removal of one or both ovaries *and* the uterus (Dictionary.com, accessed July 31, 2018). Ovariectomy, as described in this EA, removes only the ovaries. The potential complications and anticipated mortality associated with the ovariectomy via colpotomy procedure are disclosed in the EA (Chapter III.B.1.b. Proposed Action).

28. Comment: “Ovariectomy via colpotomy has a [‘h]igh frequency of perioperative complications – some of which can be life-threatening[’] and which include myopathy, neuropathies, wound infections, post-operative pain, and hemorrhage. Dr. Graham Munroe, Dr. David Moll, Ovary: Colpotomy, Vetlexicon Equis ISSN: 1757-8272, <https://www.vetstream.com/equis/Content/Technique/teq00448>.”

Response: The Vetlexicon website is designed to provide information to support veterinary staff in their clinical work and to help practices market themselves effectively or build successful businesses. The “full text” of this citation was found although it is only a 4 page, double spaced bullet point list describing the technique based on three papers on ovariectomy on domestic horses and cattle and published by veterinarians other than Munroe and Moll. This article does not appear to be quantifying the effects of ovariectomy via colpotomy, just stating what the potential complications may be. It is loosely comparing different techniques available for ovariectomizing domestic mares in a clinical setting. The EA, in multiple sections, references Bowen (2015), which was a panel of veterinary experts convened to assess the relative merits and drawbacks of several surgical ovariectomy techniques that are commonly used in domestic horses for potential application in wild horses. The summary in Bowen (2015) helped BLM to preliminarily identify ovariectomy via colpotomy as the most likely mare surgical sterilization method that could be successfully used as a management tool for wild horse mares. Further, the EA (throughout) describes the Sheldon National Wildlife Refuge’s study (Collins and Kasbohm 2016) where ovariectomy via colpotomy was performed on 114 feral mares gathered from and released back to the range. The mortality rate reported by Collins and Kasbohm (2016) was less than 2 percent. The EA (Chapter III.B.1.b. Environmental Consequences – Proposed Action) describes the anticipated complications and complication rates associated with ovariectomy via colpotomy based on peer reviewed studies.

29. Comment: “Intra-abdominal hemorrhage is a real and potentially lethal risk... Dawn A. Loesch, Dwayne H. Rodgerson, Surgical Approaches to Ovariectomy in Mares, Compendium Vol. 25, No. 11:862 (Nov. 2003), p. 864.”

Response: This risk and this reference of Loesch and Rodgerson (2003) are both disclosed in the EA section titled “Anticipated Complications and Complication Rates Associated with Ovariectomy via Colpotomy” (Chapter III.B.1.b. Proposed Action).

30. Comment: “The BLM proposed procedure involves no visualization of the ovaries, not even by the very commonplace and standard use of laparoscopy. And the BLM’s main reasons for choosing this most basic of surgical procedures are clearly cost and convenience – without concern for the horses’ welfare. In fact, even when laparoscopy is used, ovariectomy via colpotomy still is [‘]associated with a high rate of complications including wound infection and incision dehiscence.[’] Yoshinori Kambayashi et al., Evaluation of Single Incision Laparoscopic Ovariectomy in Standing Mares, *Journal of Equine Science* 34(2014), pp. 446-50. Without visualization, the chances of error obviously increase to unknown proportions.”

Response: The EA section titled “Alternatives Considered but Eliminated from Further Analysis” discussed spaying via flank laparoscopy (EA Chapter II.C.3.). The rationale provided in the EA explain why this procedure would not be feasible for wild horses, none of which revolved around cost or convenience, but safety and technical feasibility for the *wild* mare (emphasis added). The words “both technically and economically infeasible” were changed to “technically infeasible” in the EA to clearly reflect the discussion in the two paragraphs above it.

Furthermore, in the EA when discussing anticipated complications and complication rates associated with ovariectomy via colpotomy in the section of the same name (Chapter III.B.1.b.), BLM discloses “... all surgery is associated with some risk. Bilateral ovariectomy through either a colpotomy or flank approach can be performed efficiently in a standing mare, but potentially serious complications can occur with these approaches....” Potential complications are then listed. The statement cited by Kambayashi and others (2014) regarding “wound infection and incision dehiscence” really only refers to approaches where there are flank incisions. With the ovariectomy via colpotomy approach described in this EA there would be no external incisions, which would greatly reduce the possibility of wound infection. Also, incisional dehiscence does not apply to this ovariectomy via colpotomy procedure since there are no sutures that can dehiscence.

The study by Collins and Kasbohm (2016) where 114 feral mares received ovariectomy via colpotomy was thoroughly discussed in the EA. They reported a less than 2 percent mortality rate, therefore “without visualization” BLM anticipates a similar complication rate for this study.

31. Comment: While the draft EA cites to article describing colpotomy as having a relatively low complication rate, the colpotomy procedure as described is disfavored by the veterinary community, and virtually every colpotomy done today is typically performed in combination with a laparoscopic approach, so that the surgeon can fully visualize the horse’s internal anatomy, greatly reducing



potential dangers. See. L.P. Tate, Jr., et al., *Laparoscopic-Assisted Colpotomy for Ovariectomy in the Mare*, Vet Surg. 2012 Jul;41(5):625-8.

Response: The rationale for why laparoscopic-assisted colpotomy was not considered and analyzed further would be comparable to that described above and in the EA under Chapter II.C.3. Spaying via Flank Laparoscopy. This procedure does allow the surgeon to visualize the ovaries prior to removal; however, it requires an increased duration, which adds stress to an already stressed animal and an external (flank) incision, which increases the risk of infection. In the transcript of Bowen (2015, p. 17) it was discussed that a laparoscope could be used to train veterinarians in ovariectomy via colpotomy, but it would not likely be preferred for field conditions due to the reasons above.

32. Comment: “BLM must analyze alternative methods for sterilizing wild horses including more modern ovariectomy via laparotomy as well as less invasive procedures including oviduct ligation and laser ablation of the UTJ (papilla).”

Response: The rationale for not analyzing an alternative of ovariectomy via laparoscopy is discussed in the previous response as well as in the EA. The EA (Chapter II.C.4.) includes discussion and rationale as to why sterilization methods of tubal (oviduct) ligation and laser ablation of the papilla were removed from further analysis.

33. Comment: There is a completely non-surgical option for effective sterilization in N-Butyl cyanoacrylate, a butyl ester of 2-cyano-2 propenoic acid. This treatment is currently in its third successive mating season of study by Dr. Irwin Liu.

Response: BLM is unaware of any peer reviewed scientific literature that documents this approach. However, in review of the attachment to this comment, which appears to be a research abstract regarding a pilot project utilizing this method, it appears as though this method is similar in nature to laser ablation of the oviduct papilla discussed in the EA (Chapter II.C.4.). Although such a method does not meet the purpose and need for this action, Dr. Liu’s continued research into this method and published results could be utilized by BLM in future consideration of sterilization techniques.

34. Comment: “Wild mares targeted in this action will not be provided with any of the critical follow-up care required of this procedure, including stall confinement, a period on crossties to prevent lying down or rolling, careful monitoring for hemorrhage, pain relief and antibiotic treatment.”

Response: Wild mares will be provided follow-up care and monitoring. The surgical protocols of this project include a long-lasting direct anesthetic applied to the ovarian pedicle, systemic analgesics in the form of butorphanol and flunixin meglumine for pain management, and a long-lasting antibiotic given to every

treated mare (EA, Chapter II.B.1.b.). Post-surgery veterinarian monitoring, three times a day for a week, is included in the description of the ovariectomy via colpotomy procedure, and any animal showing signs of pain or discomfort will be provided additional analgesia at the veterinarian's discretion (EA, Chapter II.B.1.b.). As discussed in the EA, a panel of veterinary experts (Bowen 2015) discussed the issue of cross-ties and the risk of evisceration associated with ovariectomy via colpotomy. This panel of veterinarians identified evisceration as not being a probable risk associated with ovariectomy via colpotomy, and none of the panel participants had had this occur nor had heard of it actually occurring (EA, Chapter III.B.1.b. Anticipated Complications and Complication Rates Associated with Ovariectomy via Colpotomy).

35. Comment: "According to the prescribing label for Torb, there are no well-controlled studies using butorphanol in breeding horses, weanlings and foals. Therefore, the drugs should not be used in these groups. Additionally, the Health Products Regulatory Authority cautions that the combination of detomidine hydrochloride and Torb should not be used in pregnant mares. Finally, the antibiotic Excede has not been evaluated in pregnant mares."

Response: As discussed in the EA, butorphanol ("Torb") will be administered to mares age three and above prior to surgery. Weanlings and foals will not receive surgeries and therefore will not receive butorphanol. According to Equimed.com (<https://equimed.com/drugs-and-medications/reference/butorphanol>), butorphanol provides sufficient sedation and pain control for use in post partum treatment of mares, surgery, and many other veterinary procedures. It is useful for the relief of pain associated with colic in adult horses and yearlings.

The Health Products Regulatory Authority (HPRA) is an independent regulator of health products in the country of Ireland, and this agency does not regulate veterinary medicine in the United States. However, BLM did review the most recent revision (December 2016) of the HPRA "Summary of Product Characteristics" for Domosedan (detomidine hydrochloride), which cautions against using in pregnant mares; however, this assessment notes that this product has not been evaluated for use in breeding animals. This summary also cautions the use of Domosedan in combination with butorphanol in horses with a history of liver disease or cardiac irregularities.

The BLM is unaware of any existing scientific literature that documents any adverse side effects of administering a detomidine hydrochloride/butorphanol combination to achieve standing sedation in horses, including pregnant mares. Hubbell (2009) noted that "although the majority of sedative and analgesic drugs used for restraint are labeled for use as ['sole'] agents, the majority of equine veterinarians use them in combination with the goal of optimizing the onset, quality, and duration of the alteration in mental state while minimizing potentially deleterious side effects." Hubbell further notes that detomidine is used alone and

in combination with opioids (butorphanol and nalbuphine) to produce standing chemical restraint for a wide variety of procedures. The combination of drugs used to sedate and provide analgesia described in the EA is commonly used by veterinarians to perform ovariectomy surgeries. Previous research of ovariectomy in mares conducted by McKinnon and Vasey (2007), Rodgerson and others (2001), and Prado and Schumacher (2017) all used combinations of detomidine hydrochloride/butorphanol to achieve appropriate standing sedation and analgesia with no reported adverse effects.

As suggested by the commenter, the use of the antibiotic Excede has not been clinically evaluated in horses less than 4 months of age and in breeding, pregnant, or lactating horses. However, the label for Excede does not preclude its use in horses meeting these criteria. The BLM commonly uses Excede as a long-duration antibiotic for treatment of infection in pregnant or lactating mares. Such application is commonly prescribed by veterinarians, and this protocol was approved by the CSU IACUC.

36. Comment: "During a procedure performed in stocks (also known as a chute), the horse's head should be hanging and supported by a halter and human handler or on a head rest."

Response: As discussed in the EA, the spay procedure will be performed with the mare restrained in a padded hydraulic squeeze chute. This same method of restraint is used to perform all animal preparation procedures at the Oregon Wild Horse Corral Facility. Because these are ungentled wild horses, attempting to halter or tie an animal's head in place during restraint increases stress and would increase the risk of injury to the animal. Modifying the chute to provide some form of head rest inside the chute would also increase risk of injury to the horses as it would be an object with which they could collide prior to sedation.

37. Comment: "Disposition and respiratory rate are the only factors BLM plans on monitoring with any accuracy. Without physical contact [with the horse], assessment of the horse's temperature, pulse, digital pulses, mucus membrane, gut sounds, and jugular refill are all out of reach."

Response: As discussed in the EA, post-surgery monitoring will include observation of attitude, respiratory rate, fecal production (if possible), signs of abdominal distress (colic), ambulation, and appetite. Because these are ungentled wild horses, restraining each animal in a squeeze chute shortly after surgery (to perform physical examination) would only increase the stress and risk of injury. However, as stated in the EA, any animal showing signs of distress would be further evaluated, and such physical evaluation would be possible when that animal is administered additional analgesia while being restrained in the chute.

## Genetics

38. Comment: “BLM does not have a plan to do any genetic monitoring during the next seven to eleven years into the future.”

Response: The EA (Chapter II.B.2. Project Design Features) states “Hair samples would be collected to assess genetic variability of the herd, as outlined in [Washington Office] WO IM 2009-062.” This policy does state that genetic analysis does not need to be conducted at every gather but should be collected every 10–15 years. The BLM does plan to collect hair samples following the fall 2018 gather. It is preferred that these samples be collected from the animals being returned to the range, therefore BLM would have data from animals from both herd segments involved in the study. The EA (Chapter II.B.1. Spay Feasibility and On-Range Behavioral Outcomes Assessment) also states, “Once the study is complete, the gates would remain open along this fence line when livestock are not present” thus allowing the two herd segments to mix.

In addition to BLM’s standard genetic assessment (WO IM 2009-062), the EA (Chapter II.B.1.f. Herd Genetics) explains the DNA sampling that would be conducted on both herd segments in the study.

39. Comment: “The reduction of the number of wild free-roaming horses to the low AML of 111, even though AMLs are unsupported by science and make it impossible to maintain a genetically viable herd.”

Response: This decision implements a gather and removal of excess horses down to a post-gather population of approximately 200 wild horses. The EA includes analysis of previous gathers and population inventories (EA, appendix H) and genetic analysis (EA, table III-1). It is notable that this herd has undergone a number of gathers to low AML but still had higher than average heterozygosity measures in both 2001 and 2010. Since the 2010 genetic sampling, the herd has increased in size exponentially; such population growth tends to preserve genetic diversity.

40. Comment: “The [genetic] history residing in every Warm Springs HMA horse is irreplaceable, and must not be compromised.”

Response: As explained in the previous two comments, genetic sampling has been conducted on the Warm Springs HMA and indicates higher than average heterozygosity measures. As noted in the EA, neither the 2001 nor the 2010 sampling resulted in the documentation of any unique alleles, so there is no clear evidence in support of the contention that every horse living in Warm Springs HMA holds “irreplaceable” genetic information. This HMA, and all in Oregon, is not managed for genotype but for phenotype with monitoring conducted to maintain adequate genetic variability.



41. Comment: “The reduction in the number of wild free-roaming, reproductively intact horses and the management of that population has never before been done in an HMA. There is no research regarding the impacts of maintaining a significant portion of the wild horse population as non-reproducing.”

Response: Gathers and removals of excess horses and burros have been common practices on HMAs, including Warm Springs HMA for decades. Following this gather and spaying of a portion of the mares on Warm Springs HMA, there will be approximately 58 reproductive mares left within the HMA. This number of reproducing mares is actually slightly larger than the population of reproducing mares that have remained on this HMA following past gathers to low AML. Furthermore, the EA (throughout) describes the Sheldon National Wildlife Refuge’s study (Collins and Kasbohm 2016) where ovariectomy via colpotomy was performed on 114 feral mares gathered from and released back to the range.

#### **Animal Cruelty/Inhumane**

42. Comment: “Mares with certain gestational timeframes may abort their foals ... While we understand that the agency has expressed an interest in determining the effects of the procedures on mares of varying gestational ages, it goes without saying that conducting research on pregnant mares that may cause abortions and other complications will be considered by many to be simply inhumane.”

Response: The “Anticipated Effects of Surgery on a Pregnancy” section of the EA (Chapter III.B.1.b. Proposed Action) does explain the potential for a mare to abort her foal at certain gestational stages. The “Specific Aims of the Study” section of the EA (Chapter II.B.1.a.) also explains why BLM is choosing to perform this surgery on pregnant mares, “Because a majority of mares are pregnant when gathered after July 1 of any year, it would be important to understand how gestational stage affects the surgical procedure and how the surgical procedure affects maintenance of pregnancy.” Spay surgery on potentially pregnant mares would occur in the context of the need to reduce the population growth rate for wild horses. Although some may consider performing a “spay” procedure on a pregnant animal inhumane, similar procedures are conducted on pregnant cats and dogs across the United States on a daily basis by “humane” organizations. These “humane” organizations will spay a pregnant dog or cat; they just recommend that the owner bring the animal in sooner in the pregnancy and charge extra for the service. Although they may not encourage spaying a pregnant animal, these humane organizations appear to realize that it may help prevent the euthanasia of the 6–8 million homeless animals entering animal shelters every year in the United States (HSUS 2018). The EA (Chapter II.B.1.b.) explains the procedures in place to help ensure the health and well-being of the mares. It also explains how, after the surgery, mares would be assessed “three times a day for a week by

the veterinarians” and that it is expected that “any complications would present within the first several days.”

43. Comment: The particular ovariectomy via colpotomy procedure proposed in this EA meets the standard of animal cruelty as define under Oregon law. The degree of risk and complications associated with the proposed project rise to the level of “gross negligence” within the meaning of ORS 167.315 to 167.333.

Response: The BLM disagrees that the procedures analyzed in the proposed action constitute animal cruelty. Furthermore, the statute cited in this comment does not apply here. ORS 167.310 defines an “[a]nimal” as “any nonhuman mammal, bird, reptile, amphibian or fish,” which would include “equine” when considering offenses against animals in Oregon. ORS 167.335 states that “Unless gross negligence can be shown, the provisions of ORS 167.315 to 167.333 [animal abuse or neglect statutes] do not apply to...(9) Lawful scientific or agricultural research or teaching that involves the use of animals.” The BLM believes that this study is lawful under Oregon law and does not constitute “gross negligence.” The EA (Chapter II.B.1.) details the procedures that would be followed.

In addition, state law may not even be applicable to the activities BLM is planning. Because the mares in the proposed studies would be in BLM’s Oregon Wild Horse Corrals Facility instead of in private care, they would fall under the jurisdiction of the WHB Act (of 1971) and not Oregon law. As stated in *Kleppe v. New Mexico*, 426 U.S. 529 (1976) “Unquestionably the States have broad trustee and police powers over wild animals within their jurisdictions,” but “those powers exist only in so far as [their] exercise may be not incompatible with, or restrained by, the rights conveyed to the Federal government by the Constitution.” (*Kleppe v. New Mexico*, 426 U.S. at 545 (1976) quoted *Geer v. Connecticut*, 161 U.S. 519, 528 (1896)). The Court held “that the Property Clause also gives Congress the power to protect wildlife on the public lands, state law notwithstanding” (*Id.* at 546). The Court stated that “the [WHB Act] does not establish exclusive federal jurisdiction over the public lands in New Mexico; it merely overrides the New Mexico Estray Law insofar as it attempts to regulate federally protected animals. And that is but the necessary consequent of valid legislation under the Property Clause” (*Id.* at 545). The Oregon law referred to by the commenter may be subject to the same preemption finding. Regardless, BLM believes that the proposed action is in conformance with Oregon law and also in conformance with the WHB Act, specially section 1333, describing the powers and duties of the Secretary of the Interior and which allow for research study and sterilization for population management.

## Public Observation

44. Comment: BLM should at least provide the public with a meaningful opportunity to observe and document the study, and in particular should abandon the agency's current arbitrary restriction on recording. ... The BLM cannot be relied on to provide its own recordings, because those recordings will be sanitized in order to make the procedure seem more humane than it really is.

Response: The EA (Chapter II.B.1.d. Opportunity for Public Observation) describes the public observation being provided during helicopter gather operations, collaring/tagging of horses, and surgeries. All public observation opportunities were developed with the safety of the horses, handlers, veterinarians, and public in mind. This section of the EA has been updated to show that photography/filming by the public will be allowed during public observation.

45. Comment: "The BLM is arbitrarily limiting the number of observers allowed in the [observation] space to five at a time, with shifts of 2-4 hours if there are more than five people that are interested in observing. This is a restriction without any basis."

Response: The observation location being offered inside the working barn at the Oregon Wild Horse Corral Facility represents public access that has historically never been offered within this facility. Although this facility has historically provided public access during organized tours and demonstrations of routine preparation procedures, public access within the barn has not been allowed during any form of surgery or any situation where the presence of additional people jeopardizes the safety of the staff, the safety of the public visitors, or the safety of the animals. In fact, BLM will be making structural modifications to an existing office building (historically not accessed by the public) to provide this new observation location. The rationale for limiting the number of public observers within this location is based on the space limitations of this approximately 12-foot by 12-foot room that is being modified to provide observation. As depicted in the photographs in the EA (Chapter II.B.1.c. Opportunity for Public Observation), there is very limited space around the chute where all animal handling occurs. Between the number of BLM employees involved with animal handling and restraint, the veterinarians performing the surgeries, and the research team members collaring and tagging, there simply is not enough space for additional public observers within this confined area.

46. Comment: "BLM claims that the CSU Veterinary Teaching Hospital's Photography and A/V Recording Policy also applies and requires that any member of the public must surrender cell phones and recording devices while they are in the working barn. This does not apply to the study in this EA. Indeed, this policy clearly states that it only applies in the CSU Veterinary Teaching

Hospital in Fort Collins, CO. Since the Oregon Wild Horse Corrals is not this same location, the CSU Recording Policy cannot apply.”

Response: On August 8, 2018, CSU withdrew from participation in this project. All of the CSU policies cited in the draft EA prohibiting photography and recording have been removed from the EA. This EA has been updated and allows observers to photograph and film from the designated observation location (EA Chapter II.B.1.c. Opportunity for Public Observation).

47. Comment: BLM should allow an independent qualified veterinarian chosen by the commenter in the working room to observe and record the ovariectomy via colpotomy procedure and the effect the procedure has on the welfare of the horses.

Response: Chapter II, Section B.1.b. of the EA explains that BLM will only use licensed veterinarians with experience performing ovariectomy via colpotomy procedures and standing sedation on at least 100 ungentled, wild horse mares during the spay feasibility study. The veterinarians are not employees of BLM or USGS, but independent veterinarians contracting with BLM for the purposes of the spay feasibility study. The commenter submitted no information suggesting that its chosen veterinarian would be any more “independent” or qualified than the veterinarians contracted by BLM to perform the spay feasibility study.

The veterinarians contracted by BLM will follow the same surgical protocol originally approved by the CSU IACUC. The veterinarians will also monitor the mares both during and after surgery. As explained in the EA, horses that have received surgery would be turned into an approximately half-acre pen for recovery from sedation where they will be monitored by the veterinarians for any signs of discomfort. As soon as the horses become alert, they will be moved into a larger pen where the veterinarians will be conducting observations three times per day for the first week of post-surgery monitoring.

CSU had originally proposed to study what were termed “Post-surgery Welfare Observations” in the draft EA of June 29, 2018. This monitoring was to have been conducted by a CSU animal welfare specialist experienced in observing, recording, and scoring based on a composite measure pain scale. In its revised proposal, BLM is not proposing to use the specific pain scoring measures proposed by CSU because these measures are not necessary for quantifying the immediate outcomes of the spay surgery. As discussed above, licensed veterinarians will be monitoring the mares during and after surgery.

Additionally, CSU’s originally proposed “Post-surgery Welfare Observations” did not include any proposed veterinary treatments based on the pain measure scores of treated mares. Therefore, there would be no added impacts to the treated mares due to the removal of those pain-scoring observations.



Because the licensed veterinarians contracted by BLM will be observing the procedures and monitoring the effects of the procedure on the welfare of the horses, there is no need to have another veterinarian in the working room to perform these tasks. If another veterinarian wishes to observe or record the procedures in the space designated by BLM for public observation, he or she should follow the public observation protocols in Chapter II, Section B.1.c. of the EA.

48. Comment: BLM should allow the installation of several video cameras that would record the procedures and monitor the mares 24-hours a day post-surgery. The commenter offered to purchase these cameras, install them, and provide an on-site representative who would ensure that the cameras function properly. The commenter states that the purpose of these cameras would be to “help the public evaluate whether this experimental procedure is an appropriate way to manage wild horse populations, and cameras could also provide for 24-hour observation of horses in recovery, improving the odds of a humane outcome for any horses that suffer from post-surgical complications by making it possible to catch such complications at an early stage.” Members of the public and the press have a First Amendment right to access and observation of government activities.

Response: As explained in Chapter I, Section B, the spay feasibility study has two purposes: (1) remove excess wild horses from within and outside the HMA, manage wild horses in a way that would allow BLM to move toward achieving and maintaining the established AML over a 10-year timeframe, and reduce wild horse population growth rates to restore and maintain a thriving natural ecological balance and multiple-use relationship on the public lands consistent with Section 1333(a) of the WHB Act; and (2) study the use of ovariectomy via colpotomy as a method to maintain the wild horse population within the HMA at AML (including obtaining more detailed quantifications of the surgical and behavioral effects of the procedure). The purpose and need of the study does not include determining whether the procedure is socially acceptable or aiding the public in determining whether the procedure is an “appropriate” way to manage wild horse populations.

Additionally, as explained in the response to comment 48, licensed veterinarians will be observing and monitoring the mares post-surgery in person. Therefore, the veterinarians will be able to detect any post-surgical complications that could occur in person. The BLM did consider whether or not cameras over the recovery pens would be a viable method of collecting post-surgery “welfare” data. This was not a viable option because the cameras would not be able to pick up individual mare numbers nor would they be able to document anything in poor lighting. No viable, scientific data would be collected if the individual animals could not be identified.

Chapter II, Section B.1.c. of the EA states that BLM will provide public observation of all aspects of the spay feasibility study pursuant to its public observation protocols. Public observation of the helicopter gather operations will be provided in accordance with WO IM 2013-058, Wild Horse and Burro Gathers: Public Media and Management, or an updated policy. Once the horses are gathered and transported to the Oregon Wild Horse Corral Facility, visitors will be able to view the animals via the existing self-guided auto tour. This observation will be provided during normal working hours (8:00 a.m.–3:00 p.m.). Any other pre-surgery and post-surgery observation will be provided in accordance with IM ORB-000-2018-004, Oregon Wild Horse and Burro Corral Facility Access for Visitors, or an updated policy.

Public observation, including the opportunity to photograph and/or film the collaring/tagging and ovariectomy via colpotomy procedures, will be provided in accordance with the public observation protocols in Chapter II, Section B.1.c.(1)–(7) of the EA. Following the collaring/tagging and ovariectomy via colpotomy procedures, horses will be placed in pens outside the working barn and can be viewed via the existing self-guided auto tour and/or other observation in accordance with IM ORB-000-2018-004, Oregon Wild Horse and Burro Corral Facility Access for Visitors, or an updated policy.

Because BLM is allowing both in-person public observation and the opportunity to photograph and/or film the spay feasibility study, it is not necessary for cameras to be installed at its facilities. Moreover, neither the First Amendment of the United States Constitution nor any other legal principle requires BLM to allow cameras to be installed at its facilities for public observation purposes. Therefore, for these and other reasons, BLM will not consent to a third party installing cameras at its governmental facilities to record actions that can be observed by the public in person or that the public can record or photograph on their own.

#### **Wild and Free-Roaming Horses and Burros Act 1971**

49. Comment: This project violates the protections afforded these animals in the 1971 Wild and Free-Roaming Horses and Burros Act. The Act states, “all management activities shall be at the minimum feasible level...”

Response: The EA (Chapter I.F.2. Issues Considered but Eliminated from Detailed Analysis) addressed the question about “minimal feasible level.”

50. Comment: The implementing regulations require that “wild horses and burros shall be managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat.” 43 C.F.R. §4700.0-6(a). Sterilization of these animals does not honor this implementing regulation.

Response: The EA (Chapter III.B.1.b. Effects Common to Both Alternatives) disclosed WinEquus population modelling showing the anticipated population growth rate associated with both the study portion of the proposed action and two separate scenarios of spaying various age classes of mares (Spay all females 2+ years old *or* Spay all females 5+ years old) for the 10-year population management plan. This section of the EA also quotes the Wild Horse and Burro Management Handbook (H-4700-1, 2020, p. 28), “an objective of the modelling is to identify whether any of the alternatives would be likely to cause a [‘]crash[’] of the population, based on a number of stochastic factors (varying environmental conditions).” The EA goes on to explain that “None of the simulations run through the model for this analysis caused a [‘]crash[’] in the population or influenced the population’s ability to self-sustain.”

51. Comment: Sterilizing a wild horse or burro herd is the opposite of the intent of the 1971 Wild Free-roaming Horse and Burro Act [WHB Act].

Response: To be clear, neither this decision nor the proposed action of the EA included sterilization of the entire Warm Springs wild horse herd. Nor did it include burros in any part of the spay study. The WHB Act, in fact, did include language specifically providing for the use of sterilization as a tool to maintain appropriate management levels as shown in the EA (Chapter I.E.1. Wild Free-Roaming Horses and Burros Act). The plain intent of Congress is evident in the fact that it included sterilization as a management method for wild horses and burros.

52. Comment: The Wild Free-Roaming Horses and Burros Act states that the wild horse HMAs are to be managed principally, although not exclusively, for wild horses. Principally, although not exclusively. Yet, there are more than triple the number of cows than horses on the HMA.

Response: The law’s language stating that public lands where wild horses and burros were found roaming in 1971 are to be managed “principally but not necessarily exclusively” for the welfare of these animals relates to the Interior Secretary’s power to “designate and maintain specific ranges on public lands as sanctuaries for their protection and preservation”—which are, thus far, the Pryor Mountain Wild Horse Range (in Montana and Wyoming), the Nevada Wild Horse Range (located within the north central portion of Nellis Air Force Range), the Little Book Cliffs Wild Horse Range (in Colorado), and the Marietta Wild Burro Range (in Nevada). The “principally but not necessarily exclusively” language applies only to specific, designated Wild Horse and Burro Ranges, not to HMAs in general. The Code of Federal Regulations (43 CFR Subpart 4710.3) describes herd management areas (4710.3-1) and wild horse and burro ranges (4710.3-2). In delineating each HMA, the authorized officer will consider the appropriate management level (AML) for the herd, the habitat requirements of the animals, the relationships with other uses of the public and adjacent private lands, and the

constraints in Subpart 4710.4, HMAs may also be designated as wild horse or burro ranges to be managed principally, but not necessarily exclusively, for wild horse or burro herds. The Warm Springs HMA has not been designated as a wild horse “range” and therefore must consider the factors described above in the management of the HMA.

Closure of the HMA to livestock use was discussed in the EA (Chapter II.C.1. Closure of the HMA to Livestock Use). In addition to this discussion, the EA (Chapter III.B.4. Livestock Grazing Management) fully analyzes the effect of the alternatives on livestock grazing management.

53. Comment: “The environmental review must consider the inconsistency of the sterilization procedure with the agency’s legal mandate to preserve the natural free roaming behaviors of wild horses and burros.”

Response: Discussion on the impacts to “free-roaming behaviors” of wild horses and burros is included in the EA (Chapter III.B.1.). As noted previously in this document, there is nothing about spaying that is expected to change the free-roaming nature of wild horses. Any behavioral differences due to spaying are not expected to change the wild and free-roaming nature of the spayed mares, as defined by the WHB Act. It appears that the commenters are reading far more into the term “free-roaming” than the plain meaning of the term. “Wild free-roaming horses and burros” are those that are not in narrowly “fenced ranges” or constrained in zoo-like pens. There is no basis in law for interpreting “free-roaming” to include all behaviors typical only of fertile animals. In the WHB Act, Congress explicitly allowed sterilization as a permitted management action—therefore, the position that spaying would be inconsistent with law is not supported by the law itself.

#### **National Environmental Policy Act (NEPA)**

54. Comment: The “recent actions of the BLM suggest that the agency is very much shifting their policy focus towards sterilization, and that this EA is the first step in the process. Therefore, the inclusion of language that this EA will not be policy setting is inaccurate. In order to allow for the general public to comment effectively on the actions undertaken by this EA, the BLM must include a fair and accurate representation of possible environmental impacts – of this program – and that goes far beyond the research proposed, and into the impacts of potentially sterilizing as many as 90,000 mares.”

Response: As stated in the “Decision to be Made” section of the EA (Chapter I.C.), “[t]his study represents a feasibility approach, and the results are not policy setting for BLM. Any future proposal by BLM to utilize the spay method analyzed in this EA would be subject to NEPA compliance.”



55. Comment: The BLM identifies the purpose and need of the proposed study as “to assess the feasibility of using ovariectomy via colpotomy (spaying) to reduce the annual population growth rate of a wild horse herd.” This purpose and need statement is unnecessarily narrow as it eliminates the consideration of reasonable alternatives.

Response: This comment does not clearly identify why the purpose and need of this EA is unnecessarily narrow. The Background section of the EA identifies the need to which BLM is responding in this project and explains how and why BLM identified its purpose to study ovariectomy via colpotomy. Other alternatives to this method were considered even prior to BLM’s selection of ovariectomy via colpotomy for this study (see Bowen 2015 – BLM solicited panel of veterinary experts to assess the relative merits and drawbacks of several surgical ovariectomy techniques) in the EA (section II.C. Alternatives Considered but Eliminated from Further Analysis) and comments 1, 3, 11, 12, 15, 30, 31, 32, 33, and 64 in this document. The purpose and need statement takes into account basic policy objectives, as well as statutory and regulatory obligations, and is not unreasonably narrow.

56. Comment: Should BLM move forward with this NEPA process, we believe an EIS must be drafted and issued because of the unknown and controversial impacts of this project.

Response: The finding of no significant impact (FONSI) associated with this project outlines BLM’s interpretation of the context and intensity of the selected actions. To BLM’s knowledge, all known possible effects to wild horses and burros and the on-range behavior following spay treatments have been disclosed in the EA (Chapter III.B.1.b). The BLM NEPA Handbook (H-1790-1, p. 71, 7.3 Significance) explains that “[c]ontroversy in this context means disagreement about the nature of the effects, not expressions of opposition to the proposed action or preference among the alternatives.” Although individuals/organizations have voiced disagreement with the gather and spaying actions, BLM is not aware of controversy (disagreement) surrounding any of the impacts identified in the EA. The authorized officer has determined that “[t]he environmental effects, together with the proposed project design features, do not constitute a major Federal action having a significant effect on the human environment as defined by the tests of significance found at 40 CFR 1508.27. Therefore, an EIS is not necessary and will not be prepared.”

57. Comment: BLM is required to prepare an EIS on this proposed action because the possible effects on the human environment are highly uncertain or involve unique or unknown risks. BLM is again proposing the use of the ovariectomy by colpotomy when there is very little known about the procedure, its effectiveness, its physical and behavioral effects on wild mares, and its side effects on herd behavior.

Response: This project would allow for a more detailed quantification of morbidity and mortality rates and of behavioral outcomes on the range when spayed mares are living with other treated and untreated animals. The research is designed to improve BLM's understanding of the effects of conducting this procedure on recently gathered wild horse mares and returning them to the range. However, existing reports (NRC Proposal Review 2015, Bowen 2015) and peer-reviewed studies (Holtan et al. 1979, Hooper et al. 2003, Loesch et al. 2003, McKinnon and Vasey 2007, Röcken et al. 2011, Collins and Kasbohm 2016, Prado and Schumacher 2017, etc.) using this procedure have provided the knowledge necessary to conclude that there are no highly uncertain, unique, or unknown risks associated with ovariectomy via colpotomy on wild horse mares. These peer-reviewed studies indicate a potential mortality rate resulting from the surgeries of less than two percent. This documented mortality rate is less than mortality rates already realized in the management of wild horses and burros, which includes an average annual mortality rate of five percent in off-range corrals (EA, p. 65) and eight percent in long-term holding pastures (EA, p. 66).

As noted by the NRC Review (2013), the ideal fertility control method would not eliminate sexual behavior or change social structure substantially (EA, p. 72). Although Collins and Kasbohm (2016) did not collect data on inter- or intra-band behavior, still their results showed that treated individuals appeared to maintain group associations, there were no groups consisting only of treated females, and there were no solitary treated females (EA, p. 72). These results indicate that no unique or unknown risks related to behavior and social structure exist with spayed mares being part of a herd, similar to other population growth suppression methods currently being applied in HMAs.

## Population Growth

58. Comment: The highly questionable 20% growth estimate is further disproven in the following report – Gregg, K., L. LeBlanc, and J. Johnston. 2014. *Wild Horse Population Growth*. April 25, 2014.

Response: The June 2018 simultaneous double-observer survey conducted at Warm Springs HMA provided the estimated wild horse population of 694 adults and 158 foals (USGS unpublished data, 2018). The EA (Chapter III.B.1.a. Affected Environment) discusses the newly calculated population growth rate of Warm Springs HMA at 16 percent from 2016 to 2018; this is based on population estimates from both the 2016 and 2018 simultaneous double-observer surveys of the HMA. Several peer-reviewed publications in the scientific literature have demonstrated foaling rates and survival rates that are consistent with an approximation of 20 percent annual growth rate being reasonable (Ransom et al. 2016). The apparently self-published work by Gregg and others (2014) is not peer-reviewed science, it was not published in any scientific literature outlet, nor does it provide any information specific to the Warm Springs HMA. With

reference to management decisions, that document does not meet the BLM's principle and practice to "[u]se the best available scientific knowledge relevant to the problem or decision being addressed, relying on peer-reviewed literature when it exists" (Kitchell et al. 2015).

59. Comment: "A National Academy of Science report concluded that BLM's [']management practices are facilitating high horse population growth rates['] (NAS 2013). It explains that [']removals are likely to keep the population at a size that maximizes population growth rate, which in turn maximizes the number of animals that must be removed and processed through holding facilities. This will exacerbate all the negative impacts of roundups, by promoting population growth and requiring increased roundups. [']"

Response: The BLM interprets this comment to relate to the discussion in the NRC review (2013) regarding compensatory population growth following removals. A discussion on compensatory population growth is in the EA (Chapter III.B.1.b. No Action).

#### **Gather and Removal of Excess**

60. Comment: There is no finding in the Draft EA that a certain number of horses are "excess." That finding is a legal predicate to BLM's authority to remove all such wild horses from public lands.

Response: The proposed action has been clarified to specify that approximately 652 horses would be removed as excess animals.

61. Comment: "The EA fails to provide a complete analysis of the impacts of capture, removal, and warehousing of the horses permanently removed from outside the HMA."

Response: The "Environmental Consequences" section of the EA (Chapter III.B.1.b.) provides detailed analysis of the impacts to wild horses and burros of gathering, transport, and holding. This analysis includes statistics relating to possible animal injuries and mortalities as well as handling protocols in place to minimize these impacts.

62. Comment: "Sterilization is not the ultimate tool in reducing population numbers on the range. Reducing the on-range population to the low AML while conducting the spay and behavioral outcomes assessment portion of the study will be critical to its success. We request the continued removal of excess horses from ranges across all states while this study is being conducted."

Response: The BLM acknowledges that sterilization or temporary contraception alone (without removals) will not return the wild horse and burro population to

AML within Warm Springs HMA over any meaningful period of time. This decision includes gathering and removing excess animals from the range to move toward achieving AML in this HMA along with a method of sterilization intended to slow the population growth rate. Further knowledge on existing population growth suppression techniques, including spaying and temporary fertility control vaccinations, could assist BLM with reducing the number of excess animals that need to be removed from this HMA in the future. This decision is for management on the Warm Springs HMA and does not prevent the use of spaying as a management tool in other HMAs.

### **Non-Reproducing Herd**

63. Comment: “BLM has not created a LUP specifying the criteria it used to determine that Warm Springs HMA *should* be a non-reproducing herd.”

Response: Our LUP does not specify, nor does it forbid, having non-reproducing horses in an HMA. The EA (Chapter I.E. Consistency with Laws, Regulations and Policies) does reference the sections of the WHB Handbook (H-4700-1, June 2010) defining non-reproducing wild horses and providing guidance that “LUPs *should* identify the HMAs to be managed for non-reproducing wild horses and the criteria for their selection.” This section of the Handbook (4.5.4.1) does not say *must* but *should*. This EA does not propose creating an entirely non-reproducing herd in Warm Springs HMA; it initiates the study of the feasibility of spaying and on-range behavioral outcomes in order to be better informed about available management actions using spaying as a method of population growth suppression. As indicated by Congress’s inclusion of sterilization as an appropriate method for achieving AML, spaying is an approved method.

### **Miscellaneous**

64. Comment: Why not conduct a research study on vasectomizing stallions? Why not use gelding of stallions as a population growth suppression method?

Response: Vasectomy is a method of fertility control that could be effective in reducing wild horse and burro reproductive rates in some circumstances. In principle, this method could be used as a part of herd management by itself or in conjunction with other fertility control methods. The use of vasectomy in wild or feral horses has been addressed in peer-reviewed scientific papers (e.g., Asa 1999, Scully et al. 2015, Collins and Kasbohm 2016). Previous work has shown that vasectomizing feral horses contributed to some degree of reduction in female fertility (Collins and Kasbohm 2016). However, a general concern with male-based fertility control for wild horses is the expectation that female fertility rates will not decline in direct proportion to the fraction of males treated (Garrott and Siniff 1990). Although sterilization of dominant males may be an effective treatment to reduce foaling in a small sample of bands selected from a population,



this treatment might not limit population growth (Eagle et al. 1993). That is to say, mares in bands with a vasectomized or gelded stallion can mate with multiple stallions and still get pregnant. In contrast, female-based fertility control (especially via spaying) leads to a direct reduction in the expected number of foals produced by a herd. In terms of the number of animals that would need to be sterilized to lead to a given reduction in growth rates, spaying is expected to be a more effective form of fertility control than vasectomy or gelding.

Because gelding could be a technique used in other HMAs, a similar on-range behavioral outcomes study where a portion of the stallions were gelded is currently being conducted in Utah (BLM Utah 2016).

65. Comment: “BLM researchers claim that [‘s]paying mares could be considered in the future if safe, effective and humane surgical methods and postoperative care procedures can be perfected for use on wild horses.[’] Draft EA at 9 (citing *Proposal for Research Effort: Evaluating behavior, demography, and ecology of spayed (ovariectomized) free-roaming mares* (May 18, 2018) and Supplemental Mare Spay Proposal (June 2018), from USGS (Appendix C- USGS Research Proposal 2018).”

Response: The Draft EA had a format error. The portion of this comment beginning at “Proposal for Research Effort:...” should have been the beginning of a new numbered item. This has been changed in the EA (Chapter I.E. Consistency with Laws, Regulations and Policies). The “Spaying mares could be considered...” text is quoted from the BLM Wild Horses and Burros Management Handbook, H-4700-1 (June 2010); not from the researchers involved in this project. Work by Collins and Kasbohm (2016) has now demonstrated that spaying mares is safe and effective in feral mares; results from that study support the conclusion that BLM may consider spaying in management of wild horse herds. This study at Warm Springs HMA could provide additional, more detailed information about the outcomes of spaying.

66. Comment: “The EA must consider the impacts of radio collars and tags on wild horses. The use of radio collars that release upon ‘remote detonation’ raises humanitarian and safety concerns and the potential impacts on horses have not been adequately evaluated in the EA.”

Response: The “Environmental Consequences” section of the EA includes detailed analysis of potential impacts to wild horses resulting from radio collaring and tail tags (Chapter III.B.1.b. Risks Associated with Radio Collaring). As discussed in this analysis, over the past 3 years researchers have observed only minor rubbing abrasions resulting from collars and a few collars going over the horse’s ears. Because past research has shown the risk of collars going over the animals ears is more common in collared males, tail tags are being used on all male horses that are tagged. The remote release mechanism is a safety feature in

the event a collar needs to be removed. These collars do not include any detonation or explosives. The collars are released when an internal device rotates, so that two sides of the collar are no longer connected. There have been no documented “humanitarian or safety concerns” associated with the use of this mechanism as suggested by the comment.

67. Comment: The wild horses that undergo surgery will be given drugs and antibiotics. What are the possible adverse effects on the other scavenger wildlife and the ecosystem when they are released?

Response: Given the low volumes of the medications used in the mares undergoing surgery (including the sedatives, pain medication, and antibiotic) and the 7-day observation period before the mares will be returned to the range, most of the medications are expected to be metabolized prior to turnout. No effects on scavenger wildlife from feeding on carcasses or on the environment from residues in soil or water are expected.

68. Comment: “BLM should consider less invasive methods of gathering data, including field observation and the use of GPS-tracking microchips implanted under the skin or glued into tails, to gather data without endangering horses.”

Response: As discussed in the description of the proposed action, researchers will utilize field observation, radio collars, and GPS tail tags to gather spatial and behavioral research data on a portion of the horses involved with this research (EA, Chapter II.B.1.d–g.). It is not possible to collect a large volume of unbiased data from field observations alone because it can be difficult to locate a given individual horse at will. For example, it would be virtually impossible at present to record the spatial locations of wild horses at night using field observations, yet horses do move and make habitat use choices at night. The BLM and the research team are unaware of any GPS-tracking microchip implants that have been successfully used to remotely locate and record the spatial distribution of wild horses. Prior to their use, it would be beneficial to be able to refer to peer-reviewed studies of the effectiveness, safety, and battery life of subcutaneous GPS microchips.

69. Comment: BLM did not adequately analyze the stress of capture and captivity on a horse. Dr. Bruce Nock described the physical events that take place within a wild horse subjected to roundups and captivity. The stress of capture and captivity can put the horse on a path of accelerated deterioration leading to long-term physical and mental health problems and a shortened life expectancy.

Response: The commenter did not provide any new suggestions on how to make capture and removal of wild horses less stressful. The section of the EA titled “Effects of Gathers” (Chapter III.B.1.b. Proposed Action) describes the potential for stress associated with the roundup, capture, sorting, handling, and transport.

The EA then points to BLM's policy in place for gathers to enable efficient and successful gather operations while ensuring humane care and treatment of the animals gathered (IM 2015-151). The EA (Chapter III.B.1.b. Movement, Body Condition, and Survival of Ovariectomized Mares) references Collins and Kasbohm (2016) who conducted the same surgical procedure on recently gathered feral horse mares. This section of the EA explains that the results of this study showed there was no difference in survival rates between treated and untreated mares because their recapture rates several years post release were similar. The opinion article by Nock (2010) was not peer reviewed nor was it based on research in wild or domestic horses, so it does not meet the BLM's standard for "best available science" on which to base management decisions (Kitchell et al. 2015).

70. Comment: BLM's analysis ignores scientific information about the positive impacts of wild horses... "Studies demonstrate that wild horses support healthy ecosystems on public land if given sufficient habitat and left alone (Downer 2014). For example, wild horses help to spread plant seeds over large areas where they roam. Wild horses do not decompose the vegetation they ingest as thoroughly as ruminant grazers, such as cattle or sheep, which allows the seeds of many plant species to pass through their digestive tract intact into the soil that the wild horses fertilize by their droppings. Wild horses also help to prevent catastrophic fires and help to build more moisture-retaining soils.... Horses and burros are much better equipped for this increasingly important service to all the life community, including man, than ruminant grazers, particularly domesticated ones... Additionally, wild horses have beneficial relationships with other wildlife, such as bighorn sheep (Coates and Schemnitz 1994). Unlike cattle, wild horses do not stay at water sources, but rather move after drinking and will travel long distances from water (Ganskopp and Vavra 1986)."

Response: The commenter referenced an article by Downer (2014). This article was not based on research Downer conducted but a review of other studies. There are many scientific, peer-reviewed studies available that document the impacts of wild horses on western rangelands. These studies are referenced in the EA, Chapter III. The article by Downer (2014) does not meet the BLM's standard for "best available science" on which to base decisions (Kitchell et al. 2015), because its publisher (Science Publishing Group) is regarded to be a "predatory open access publisher" that does not engage in credible peer review (Bohannon 2013). The BLM is not aware of credible literature that shows that horses reduce fire risk, unless that is through the action of severe overgrazing. For further response regarding the commenter's statement about spreading plant seeds and preventing catastrophic fires, a recent study has shown that cheatgrass germinated from 8 percent of wild horse fecal samples collected from Little Book Cliffs HMA, whereas native bluegrass germinated from 5 percent. Invasive mustards also germinated from horse fecal samples (King and Schoenecker, *in review a*). While many native species from the same area were consumed (King and Schoenecker,

*in review b*), few others germinated. As is commonly known and discussed in the EA (Chapter III.B.5–6.), invasive annuals such as cheatgrass are a major factor in the increase of fire return intervals and catastrophic wildfires in areas such as the Great Basin.

The data of Coates and Schemnitz (1994) supported Berger's (1986) hypothesis that feral horses may perhaps serve either as competitor or as facilitator for mountain sheep, depending on ecological conditions. "In this case they served as competitor for a patchy supply of grasses, but possibly also as facilitator by increasing foraging efficiency in insecure habitat" (Coates and Schemnitz 1994). This study was not discussed in this EA because in Warm Springs HMA, and in the area where bighorn sheep forage, grass abundance is not "patchy" but quite abundant. As discussed many places in the EA, water availability is the main limiting factor in this HMA for all users, wildlife included. There are multiple studies showing negative interactions between wildlife (even bighorn sheep) and wild horses, especially when wild horse populations are in excess of AML (e.g. Frid and Dill 2002, Ostermann-Kelm et al. 2008, Perry et al. 2015, Hall et al. 2016a, Gooch et al. 2017—all referenced in EA, Chapter III.B.1. Wild Horses and Burros, a. Affected Environment).

The EA includes several publications documenting the distances travelled by horses to water and forage (Chapter III.B.1. Wild Horses and Burros, a. Affected Environment). Ganskopp and Vavra's study (1986) took place south of Vale, Oregon in a 312-km<sup>2</sup> area bordering the east bank of the Owyhee Reservoir. The BLM guidelines at the time specified maintenance between 90 and 180 horses. The population at the time of the study estimated at 133 horses. "Year-around sources of adequate forage and water probably contributed to the strong fidelity of these animals to their respective home ranges or herds." "Water sources were plentiful and generally well dispersed about the area when compared to other ranges supporting horses in the western United States" (Berger 1977, Miller 1980, Ganskopp and Vavra 1986). The setting of that study is in an HMA that is within AML and with plentiful water. This is quite different than the current situation in Warm Springs HMA and is why the study by Ganskopp and Vavra (1986) was not referenced.

71. Comment: "With this EA, the BLM is adopting the new, and significantly untested, approach of ovariectomy by colpotomy. This study, and the attached Population Management Plan, could set precedent for how future actions proceed."

Response: This decision implements a one-time gather and removal of excess horses and a spay feasibility and behavioral outcome research project specific to the Warm Springs HMA in Oregon. As discussed in the EA (Chapter I.C. Decision to be Made), this study represents a feasibility approach, and the results are not policy setting for BLM. The surgical approach considered is over 100



years old, and has been shown to be safe and effective at the Sheldon National Wildlife Refuge (Collins and Kasbohm 2016). Results from that study have already demonstrated that spaying via colpotomy could be a useful and humane fertility control method for wild horses, and BLM may choose to use that method in some other area or areas independent of and prior to the completion of the Warm Springs HMA study. "Any future proposal by BLM to utilize the spay method analyzed in this EA would be subject to NEPA compliance" (EA, "Decision to be Made" section).

72. Comment: Spaying is an already proven method for population control and it is our comment that the Oregon BLM, and all BLM States with excess horses, should immediately implement an aggressive spay program as outline in the recent report from the Secretary of the Interior to Congress on this subject. We support a study of the on-range behavior of horses in HMAs that receive a spay program so long as a behavior does not delay an immediate effective spay in the field program.

Response: Conducting the spay feasibility study in Warm Springs HMA will not prevent or delay BLM in Oregon or in other states from using spaying as a management tool on other HMAs. Nothing requires BLM to wait for the study's completion before using spay treatments in other wild horse herds following adequate NEPA analysis. The study in Warm Springs HMA is expected to provide more detailed information about the outcomes of spaying.

73. Comment: There is concern with the current efforts of hauling water to excess horses and burros as it compounds the overgrazing by excessive numbers near limited water sources. Additional documented effects include competition with and avoidance by wildlife of water sources (Miller 1983, Ostermann-Kelm et al. 2008, Perry et al. 2015, Hall et al. 2016, Gooch et al. 2017), forage loss and altered plant communities (Beever and Brussard 2000, Davies et al. 2014, Scasta et al. 2016), altered avian (bird) communities (Zalba and Cozzani 2004), altered small mammal communities (Beever and Brussard 2004), impacts to soils and insects (Beever and Herrick 2006), and sagebrush (*Artemisia* spp.) ecosystems (Beever and Aldridge 2011, Boyd et al. 2017). Examples of wildlife potentially impacted by WHB include species of conservation concern like the greater sage-grouse.

Response: The commenter is correct in that hauling water to a specific location compounds effects on rangeland and habitat conditions. Hauling water is not part of the proposed action and therefore is not a viable long-term management action. The present water hauling effort is temporary in nature and intended to sustain animals in good condition leading into the fall 2018 gather and provide a water source for those animals that will be returned to the range. Well dispersed reliable water sources would be ideal in any HMA, however persistent drought along with a wild horse population well over high AML are contributing to the reduced

availability of water going into fall and winter. Refer to comments 11 and 12 regarding development of range improvement projects, specifically new water sources for long-term management.

74. Comment: In the BLM's 2018 Report to Congress, "Management Options for a Sustainable Wild Horse and Burro Program," the BLM stated that each of its four proposed management options, some implementing the use of mass sterilization, it provided in the report "would require new legal authorities, or benefit from clarified legal authorities." The agency itself understands that the legal authority to sterilize wild free-roaming horses is not clear and requires clarification from Congress.

Response: As discussed in the EA (page 8) the legal authority to sterilize wild horses is provided for in section 1333 of the Wild Free-Roaming Horses and Burros Act of 1971. The section of BLM's 2018 Report to Congress referenced in the comment relates to BLM's recommendation that certain wild horse and burro management actions (including sterilization) should be categorically excluded from detailed NEPA analysis. This recommendation is based on over 40 years of environmental analysis documents that routinely conclude such management actions do not have a significant effect on the quality of the human environment and therefore should be excluded from further environmental review.

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**Appendix B – Form 1842-1 – Information on Taking Appeals to the Interior Board  
of Land Appeals.**







UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

INFORMATION ON TAKING APPEALS TO THE INTERIOR BOARD OF LAND APPEALS

DO NOT APPEAL UNLESS

1. This decision is adverse to you,  
AND
2. You believe it is incorrect

IF YOU APPEAL, THE FOLLOWING PROCEDURES MUST BE FOLLOWED

- |   |   |
|---|---|
| <b>1. NOTICE OF APPEAL</b> .....  | A person who wishes to appeal to the Interior Board of Land Appeals must file in the office of the officer who made the decision (not the Interior Board of Land Appeals) a notice that he wishes to appeal. A person served with the decision being appealed must transmit the <i>Notice of Appeal</i> in time for it to be filed in the office where it is required to be filed within 30 days after the date of service. If a decision is published in the FEDERAL REGISTER, a person not served with the decision must transmit a <i>Notice of Appeal</i> in time for it to be filed within 30 days after the date of publication (43 CFR 4.411 and 4.413).   |
| <b>2. WHERE TO FILE</b><br><br>NOTICE OF APPEAL.....<br><br><br>WITH COPY TO SOLICITOR..... | Jeffrey Rose, District Manager, Burns District BLM<br>28910 Hwy 20 W.<br>Hines, Oregon 97738<br><br><br>Office of the Regional Solicitor:<br>Pacific Northwest Region<br>601 SW 2nd Ave., Suite 1950<br>Portland, OR 97204  |
| <b>3. STATEMENT OF REASONS</b><br><br><br>WITH COPY TO SOLICITOR.....                       | Within 30 days after filing the <i>Notice of Appeal</i> , file a complete statement of the reasons why you are appealing. This must be filed with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. If you fully stated your reasons for appealing when filing the <i>Notice of Appeal</i> , no additional statement is necessary (43 CFR 4.412 and 4.413).<br><br>Office of the Regional Solicitor:<br>Pacific Northwest Region<br>601 SW 2nd Ave., Suite 1950<br>Portland, OR 97204   |
| <b>4. ADVERSE PARTIES</b> .....   | Within 15 days after each document is filed, each adverse party named in the decision and the Regional Solicitor or Field Solicitor having jurisdiction over the State in which the appeal arose must be served with a copy of: (a) the <i>Notice of Appeal</i> , (b) the Statement of Reasons, and (c) any other documents filed (43 CFR 4.413).   |
| <b>5. PROOF OF SERVICE</b> .....  | Within 15 days after any document is served on an adverse party, file proof of that service with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. This may consist of a certified or registered mail "Return Receipt Card" signed by the adverse party (43 CFR 4.401(c)).  |
| <b>6. REQUEST FOR STAY</b> .....  | Except where program-specific regulations place this decision in full force and effect or provide for an automatic stay, the decision becomes effective upon the expiration of the time allowed for filing an appeal unless a petition for a stay is timely filed together with a <i>Notice of Appeal</i> (43 CFR 4.21). If you wish to file a petition for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Interior Board of Land Appeals, the petition for a stay must accompany your <i>Notice of Appeal</i> (43 CFR 4.21 or 43 CFR 2801.10 or 43 CFR 2881.10). A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the <i>Notice of Appeal</i> and Petition for a Stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.<br><br><b>Standards for Obtaining a Stay.</b> Except as otherwise provided by law or other pertinent regulations, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards: (1) the relative harm to the parties if the stay is granted or denied, (2) the likelihood of the appellant's success on the merits, (3) the likelihood of immediate and irreparable harm if the stay is not granted, and (4) whether the public interest favors granting the stay. |

Unless these procedures are followed, your appeal will be subject to dismissal (43 CFR 4.402). Be certain that all communications are identified by serial number of the case being appealed.

**NOTE:** A document is not filed until it is actually received in the proper office (43 CFR 4.401(a)). See 43 CFR Part 4, Subpart B for general rules relating to procedures and practice involving appeals.

#### 43 CFR SUBPART 1821--GENERAL INFORMATION

Sec. 1821.10 Where are BLM offices located? (a) In addition to the Headquarters Office in Washington, D.C. and seven national level support and service centers, BLM operates 12 State Offices each having several subsidiary offices called Field Offices. The addresses of the State Offices can be found in the most recent edition of 43 CFR 1821.10. The State Office geographical areas of jurisdiction are as follows:

##### STATE OFFICES AND AREAS OF JURISDICTION:

Alaska State Office ----- Alaska  
Arizona State Office ----- Arizona  
California State Office ----- California  
Colorado State Office ----- Colorado  
Eastern States Office ----- Arkansas, Iowa, Louisiana, Minnesota, Missouri  
and, all States east of the Mississippi River  
Idaho State Office ----- Idaho  
Montana State Office ----- Montana, North Dakota and South Dakota  
Nevada State Office ----- Nevada  
New Mexico State Office ----- New Mexico, Kansas, Oklahoma and Texas  
Oregon State Office ----- Oregon and Washington  
Utah State Office ----- Utah  
Wyoming State Office ----- Wyoming and Nebraska

(b) A list of the names, addresses, and geographical areas of jurisdiction of all Field Offices of the Bureau of Land Management can be obtained at the above addresses or any office of the Bureau of Land Management, including the Washington Office, Bureau of Land Management, 1849 C Street, NW, Washington, DC 20240.

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(Form 1842-1, September 2006)