

**UNITED STATES
DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Burns District Office
Three Rivers Resource Area
Finding of No Significant Impact**

**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**

INTRODUCTION

The Burns District Bureau of Land Management (BLM) has prepared an environmental assessment (EA) to analyze the environmental consequences of the Spay Feasibility and On-Range Behavioral Outcomes Assessment and Population Management Plan for Warm Springs Herd Management Area (HMA). The research project is proposed by the United States Geological Survey (USGS) in cooperation with the Burns District BLM.

The Burns District BLM proposes to evaluate the safety, complication rate, and feasibility of ovariectomy via colpotomy (spay) on wild horse mares and to allow the USGS to evaluate the impacts of spaying to mare and band behavior once returned to the range as compared with an untreated herd.

In conjunction with the BLM feasibility study and the USGS on-range behavioral outcomes study, Burns District BLM also proposes a 10-year population management plan for Warm Springs HMA. The plan includes BLM gathering the HMA and applying spaying as a population growth suppression tool, then the USGS on-range behavior study, followed by a gather to low appropriate management level (AML) at the completion of the study, and additional gathers and removals of excess wild horses and burros. Wild horse mares returned to the range following gathers would receive population growth treatments. The USGS on-range behavioral assessment is being initiated to document the BLM experience with this method for managing the population growth of wild horse herds on public lands. No burros would be spayed or be involved in the study. The population management plan is being proposed to achieve and maintain a thriving natural ecological balance and manage the wild horse and burro (WHB) populations within AML over a 10-year timeframe.

SUMMARY OF THE PROPOSED ACTION

The proposed action is summarized below. The full description can be found in the EA (p. 19).

The proposed action is described in two separate sections:

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

Implementation of the proposed action would begin in the fall of 2018. Only horses would be involved in the spay procedures and on-range behavioral outcomes study. Burro population management is incorporated in the 10-year population management plan.

1. Spay Feasibility and On-Range Behavioral Outcomes Assessment

In this portion of the proposed action, BLM is responsible for the gathering of wild horses, contracting to conduct ovariectomy via colpotomy, and monitoring the mortality and morbidity rates of mares treated. USGS is responsible for radio collaring/tagging horses, studying herd genetics (beyond BLM's Washington Office (WO) Instruction Memorandum (IM) 2009-062, Wild Horse and Burro Genetic Baseline Sampling), and on-range behavioral observations.

Specific aims of the study are outlined below:

- a. Determine the approximate stage of gestation of the mares presented for surgery. It would be of interest to document how gestational stage affects the surgical procedure and how the surgical procedure affects maintenance of pregnancy. (BLM)¹
- b. Determine the feasibility of performing ovariectomies via colpotomy in free-roaming wild horses. (BLM)
- c. Evaluate the immediate and short-term effects of the surgical procedure on free-roaming wild mares. (BLM)
- d. Measure rates of social and reproductive behavior and group cohesion in free-roaming male and female wild horses, evaluating individuals within and between treatment and control HMA segments and comparing their behavior. (USGS)
- e. Record body condition and mortality of females and their foals in both treatment and control herd segments to determine if these factors are affected by spay treatment. (USGS)
- f. Test for an effect of spay treatment on spatial ecology of free-roaming horses by monitoring the Global Positioning System (GPS) locations of individuals within treatment and control herd segments of the population (22 treatment herd females, 22 control herd females, and 12 stallions from each herd segment) throughout the year. (USGS)
- g. Measure demographic characteristics in both treated and untreated herd segments by monitoring foaling rates and natural mortality and by conducting aerial surveys once or twice annually to test for treatment effects on segment-level annual growth rates. (USGS)

To accomplish this study, up to 100 percent of the estimated 852 wild horses within the Warm Springs HMA would be gathered by helicopter during the fall of 2018 and transported to the Oregon Corral Facility in Hines, Oregon.

¹ Parenthesis after each specific aim indicates who would be responsible for each, BLM or USGS.

For the study, a total of 200 horses would be returned to the HMA: 100 on either side of a north-south division fence that would allow researchers to study a control herd segment (no treatment) and a treatment herd segment. A 50:50 sex ratio would be returned to each side with all classes represented. All horses would receive an individual freeze mark on their neck with a unique BLM identifier using the International Alpha Angle System. In addition to the neck freeze mark, all animals returned to the range would receive a microchip implanted in a ligament in their neck for improved individual identification purposes and would receive a freeze mark on their left hip with the last four numbers of their BLM identifier. This would aid in identification during the field observations portion of the study.

At the Oregon Corral Facility, up to 84 horses returning to the range would be fit with GPS radio collars or GPS/Very High Frequency (VHF) radio tags. Collar and tag fitting would be completed by USGS. GPS radio collars would be placed on up to 30 females per herd segment (up to 60 total), and up to 20 stallions per herd segment (up to 40 total) would be fitted with tail tags. After being returned to the range, all animals wearing a collar would be visually observed at least once a month during winter (October to February) and twice a month during spring and summer (March to September). This welfare monitoring is to ensure collars remain in proper positioning on the animals' necks and do not cause any unforeseen problems for mares. In addition to having a drop-off mechanism with a release date scheduled to coincide with the end of the study (about October 2021), each radio collar would be equipped with a remotely triggerable emergency release mechanism in case the collar needs to be removed.

For the surgical procedures, monitoring, and after-care, BLM would contract with veterinarians experienced in performing ovariectomy via colpotomy and standing sedation on at least 100 ungentled, wild horse mares. Approximately 28–34 mares of various gestational stages would receive ovariectomy via colpotomy treatment and, after recovery (approximately 7 days), would be returned to the HMA for the behavioral and spatial ecology portion of the study. In addition to the mares that would return to the HMA, approximately 70 more mares would receive ovariectomy treatment in order to improve the quantification of the complication rate of the surgical procedure. Following the surgery, mares would be assessed from a distance three times a day for a week by the veterinarians involved in the study. Any horses that show signs of abdominal distress, lack of appetite, or rapid respiratory rate would be more closely evaluated, and further analgesia may be given at the veterinarian's discretion. Approximately 30 days post surgery and 60 days post surgery, the 70 mares treated but not returned to the range would be monitored by ultrasound to evaluate pregnancy status. This data would aid in quantification of pregnancy loss related to performing this procedure on mares in early to mid-gestational stages.

In addition, while at the Oregon Corral Facility, hair follicles would be collected from all individuals returning to the range. Also, fecal samples from new foals (and from any individuals that were not captured during the gather) would be collected throughout the study. DNA from these samples would be analyzed to form a pedigree of both herd segments, enabling researchers to assess paternity of foals born during the study and to understand kinship between mares. Genetic data would allow researchers to test whether or

not mares move with more closely related individuals and whether or not having spayed individuals within the population influences foal paternity by non-harem stallions.

The control and treatment herd segments would be returned to their respective sides of the HMA as soon as possible following the 7-day post-surgery welfare monitoring. On-range behavioral observations would be conducted during the breeding season (March to September) each year, beginning the March after animals are returned to the range. Fitted collars and tags allow researchers to locate horses for observations and welfare checks in this relatively large HMA. Behavioral observations would be conducted on focal animals and their social groups, using focal animals to determine groups observed rather than selecting focal groups, as horses are likely to change groups during the study. Behavior of all animals within a social group would be recorded. These data would allow researchers to test whether spaying affects social behavior of treated mares and the animals with which they associate.

After completion of the study, papers are anticipated to be published by August 2022.

2. Ten-Year Population Management Plan

Following the completion of the research study and during the remainder of the 10-year timeframe of this plan, BLM would conduct additional helicopter gathers of wild horses each time the high end of AML is exceeded. Smaller wild horse bait/water/horseback-drive trapping gathers would occur as needed between normal helicopter-drive gather cycles as a tool to remove excess animals in areas where concentrations are detrimental to habitat conditions or other resources within the HMA, to remove animals from private lands or public lands outside the HMA boundary, to selectively remove a portion of excess horses for placement into the adoption program, or to capture, treat, and release horses for application of fertility treatment. Burros would be gathered via bait/water/horseback-drive trapping.

The first gather to low AML (111 horses and burros) following the completion of the USGS study would be scheduled for 2022. The number of horses and burros gathered and excess removed would be adjusted based upon the estimated herd size and the number of excess animals determined at the time of the gather. In the absence of an initial gather for the study or consecutive years, the proposed action includes gathering to low AML regardless of population size. For example, if the first gather happened in 2028, up to 5,300 horses and burros could be removed (see description of the no action alternative in chapter II). All other project design features related to gathers would be the same irrespective of the number of animals gathered and removed.

In order to maintain a reduced population growth rate during the 10-year timeframe, adaptive management would be incorporated to use the most promising methods of fertility control that maintain a self-sustaining herd within AML and that maintain the free-roaming behavior of the animals. Potential population growth suppression actions that would be applied following the study include spaying additional mares (assuming results of the spay procedure confirm previously published work that demonstrated that spaying is a feasible management tool) and PZP (if the results of the spay procedure indicate that spaying is *not* a feasible management tool for this HMA). PZP treatment would follow BLM's protocol in IM 2009-

090 (Appendix F), or updated policy. No fertility control treatments are proposed for burros. Unless immediate removal is required (e.g. private land, public safety, emergency situation), a notice to the public would be sent out 30 days prior to any future gather.

In addition to AML helicopter gathers, smaller bait/water, horseback-drive, or helicopter-drive trapping operations would be conducted as needed between normal helicopter-drive gather cycles. These trapping methods would be used as tools to remove excess animals in areas where concentrations are detrimental to habitat conditions or other resources within the HMA, to remove animals from private lands or public lands outside the HMA boundary, to selectively remove a portion of excess horses for placement into the adoption program, or to capture, treat, and release horses for application of fertility treatment.

A list of criteria for releasing wild horses back to the range is included in the proposed action of the EA along with a list of project design features included to reduce potential impacts of the proposed action. Monitoring activities that would be implemented are outlined in the proposed action as well.

DETERMINATION OF SIGNIFICANCE

The Council on Environmental Quality's (CEQ) regulations provide that the significance of impacts must be determined in terms of both context and intensity (40 CFR 1508.27). An analysis of the context and intensity of the selected alternative follows.

1. Context

In accordance with CEQ regulations found at 40 CFR 1508.27(a), the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

The BLM has determined that the context of the proposed action is approximately 991,186 acres (all land ownerships), which include the Warm Springs HMA and a 5-mile buffer surrounding the HMA boundary. This area includes interspersed private land, BLM-managed lands, Oregon Department of State lands, and U.S. Fish and Wildlife Service managed lands. The proposed action only applies to one HMA out of 6 in Burns District, 17 in Oregon, and 179 in the United States.

2. Intensity

The following analyzes the intensity of the proposed action utilizing the ten significance criteria described in CEQ regulations found at 40 CFR 1508.27(b):

The CEQ's ten considerations for evaluating intensity (severity of effect):

a. *Impacts that may be both beneficial and adverse.*

The EA (chapter III) considered potential beneficial and adverse effects. Project design features were incorporated to reduce impacts associated with implementation of actions described in the 10-year population management plan (EA, p. 37).

The potential risks to horses, burros, and other resources under the proposed action have been examined in detail in the attached EA. Most of these risks revolve around the actions taken during gather activities. Where potential risk is identified, project design features were incorporated to mitigate that risk. The EA, chapter III, explains that most resources would receive beneficial impacts with the reduction and maintenance of the wild horse and burro population within AML.

Wild horses are the only resource measurably affected by the proposed surgical procedure and research project. The potential impacts of the proposed surgical procedure and behavioral study are provided in Chapter III.B.1.b. Proposed Action. The proposed action would create beneficial impacts as compared to the no action alternative (no gathers, removals, or treatments), which would increase adverse impacts to all resources in the project area.

There is always a risk of mortality associated with surgical procedures and the handling of wild animals. The anticipated risk of mortality associated with this procedure is less than two percent. The proposed surgical procedure, ovariectomy via colpotomy, has the potential to cause discomfort for each mare following surgery, as does any surgery. Details are incorporated into the procedure protocol to address pain management (e.g. Banamine, local anesthesia) and to reduce the risks to the mare and the veterinarian performing the procedure (e.g. fully padded chute, only one internal incision, removing contraindicated mares from the study, padded bumper above rump of the mare, Chlorhexidine soak and sterile saline rinse of instruments). These details are described in the proposed action beginning on page 19 of the EA. The results of the research would provide a better understanding of the beneficial and adverse effects of the ovariectomy via colpotomy procedure, both on- and off-range, and allow for more informed decision making in the future regarding wild horse population management techniques.

The EA demonstrates that the proposed action would—

- eliminate or minimize additional effects to archaeological sites;
- reduce and minimize potential effects on riparian zones and wetlands;
- reduce or prevent forage and water competition with permitted livestock and wildlife use;
- reduce threats to sage-grouse habitat;
- reduce the potential for noxious weed introduction and spread;
- provide BLM with a better understanding of the feasibility, costs, and on-range behavioral effects of spaying as a tool for population management;

- reduce soil loss and maintain or improve the condition of upland vegetation; and
- have no effect on wilderness character.

Overall improvements in rangeland conditions provide for a thriving natural ecological balance within the HMA.

b. *Degree to which the proposed action affects public health and safety.*

Wild horse gather operations involve some level of inherent risk due to both the nature of working with wild animals and risks associated with normal helicopter operations. Risks are highest near the trap-site area. The BLM generally allows members of the public an opportunity to safely view gather operations from designated observation areas near the trap site and at temporary holding facilities, but they must be escorted to those areas by BLM personnel. The BLM follows the policy and procedures established in IM 2013-058, Wild Horse and Burro Gathers: Public and Media Management, for safe and transparent visitation by the public and media at wild horse and burro gather operations.

For the surgeries associated with this project, BLM is providing public viewing in a location that would minimize safety risk to the public observers, horses, handlers, and the veterinarian performing the procedures. Observation would follow the procedures outlined in the EA Chapter II.B.1.c. Opportunity for Public Observation, which includes language that all visitors to the Oregon Wild Horse Corral Facility must follow the instructions outlined in Burns District IM ORB-000-2018-004, Oregon Wild Horse and Burro Corral Facility Access for Visitors (EA, Appendix E).

c. *Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.*

Unique characteristics of the Warm Springs HMA include priority habitat management areas (PHMA) and the Dry Valley/Jack Mountain Priority Area of Conservation (PAC) for Greater Sage-Grouse (GRSG), archaeological sites, the Foster Flat Research Natural Area (RNA), and South Narrows Area of Critical Environmental Concern (ACEC). The RNA and ACEC are both excluded from livestock and wild horse and burro grazing. The impacts to the PHMAs and PAC for GRSG and archaeological sites from the proposed action were disclosed in chapter III of the attached EA. Effects of the proposed action were not significant.

d. *The degree to which effects on the quality of the human environment are likely to be highly controversial.*

Controversy in this context means disagreement about the nature of the effects, not expressions of opposition to the proposed action or preference among the alternatives. The most common disagreement identified through scoping was that porcine zona

pellucida (PZP) should be used in place of permanent sterilization because it is less invasive. This is a disagreement, not a controversy as defined in this context. The anticipated effects of ovariectomy via colpotomy on the mare, behavioral effects of ovariectomized mares returned to the range, and treating mares with PZP are analyzed in the Wild Horse and Burro section of chapter III in the attached EA. Intensive fertility control using PZP vaccine via remote darting was an alternative considered but eliminated from further analysis in chapter II of the EA.

- e. *Degree to which possible effects on the human environment are highly uncertain or involve unique or unknown risks.*

Helicopter-drive trapping as well as bait/water and horseback-drive trapping are not new methods of capturing wild horses and have been successfully completed for decades. There are no uncertain or unknown risks to the human environment associated with these capture methods. Effects of gathering wild horses and burros can be found in the EA.

This study 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. The Wild Horse and Burro section of the EA (p. 45) discusses the known risks associated with the procedure and anticipated behavior on the range. Fertility control treatments, including PZP, may involve disagreements among members of the public (see question 4 above) but there are no highly uncertain or unknown risks to the human environment associated with their application.

- f. *Degree to which the action may establish a precedent for future actions with significant impacts or represents a decision in principle about a future consideration.*

The proposed action only applies to wild horses and burros from Warm Springs HMA over a 10-year time period. The outcome of the study would influence BLM in assessing whether or not this method of population growth suppression could, in the future, be applied safely and efficiently on wild horse mares on other lands administered by BLM. However, “[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” (EA, p. 6). Gathering, removal, and other approved methods for wild horse and burro population control are ongoing and expected actions as outlined in the Three Rivers Resource

Management Plan (RMP)/Record of Decision (ROD) (1992). No long-term commitment of resources causing significant impacts was noted in the EA.

- g. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

The EA did not reveal that the action is related to other actions with individually insignificant but cumulatively significant impacts.

- h. *Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places.*

There are no historic properties within the project area listed on the National Register of Historic Places. However, as part of the project design features identified in the attached EA, trap sites would be inventoried for cultural resources prior to being set up. Sites eligible for listing in the National Register of Historic Places would be avoided as trap sites to mitigate potential effects.

- i. *The degree to which the action may adversely affect an endangered or threatened species or its habitat.*

There are no known threatened or endangered species or their habitat affected by the proposed action.

- j. *Whether an action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.*

The proposed action and action alternatives do not threaten to violate any law. The proposed action is in compliance with the Three Rivers RMP/ROD (1992), which provides direction for the protection of the environment on public lands; the Federal Land Policy and Management Act (FLPMA) of 1976, which establishes the agency's multiple-use and sustained yield mandate; the Public Rangelands Improvement Act (43 U.S.C. 1901) (1978), which establishes a policy and commitment to manage, maintain, and improve the condition of the public rangelands so that they become as productive as feasible for all rangeland values; and the Wild Free-Roaming Horses and Burros Act (WHB Act) of 1971 (Pub. L. 92-195) as amended, specifically, but not limited to, the following sections:

1333. Powers and duties of the Secretary.

* * * * *

(b) Inventory and determinations; consultation; overpopulations; research study; submittal to Congress. (1) The Secretary shall maintain a current inventory of wild free-roaming horses and burros on given areas of the public lands. The purpose of such inventory shall be to: make determinations as to whether and where an overpopulation exists and whether action should be taken to remove excess animals; determine appropriate management levels of

wild free-roaming horses and burros on these areas of the public lands; and determine whether appropriate management levels should be achieved by the removal or destruction of excess animals, or other options (such as sterilization, or natural controls on population levels). In making such determinations the Secretary shall consult with the United States Fish and Wildlife Service, wildlife agencies of the State or States wherein wild free-roaming horses and burros are located, such individuals independent of Federal and State government as have been recommended by the National Academy of Sciences, and such other individuals whom he determines have scientific expertise and special knowledge of wild horse and burro protection, wild-life management and animal husbandry as related to rangeland management.

* * * * *

(3) For the purpose of furthering knowledge of wild horse and burro population dynamics and their interrelationship with wildlife, forage and water resources, and assisting him in making his determination as to what constitutes excess animals, the Secretary shall contract for a research study of such animals with such individuals independent of Federal and State government as may be recommended by the National Academy of Sciences for having scientific expertise and special knowledge of wild horse and burro protection, wildlife management and animal husbandry as related to rangeland management.

On the basis of the information contained in the EA and all other information available to me, it is my determination that: 1) The implementation of the proposed action will not have significant environmental impacts beyond those already addressed in the Three Rivers Proposed Resource Management Plan (PRMP)/Final Environmental Impact Statement (FEIS) (1991); 2) The proposed action is in conformance with the Three Rivers RMP/ROD (1992); 3) There will be no adverse societal or regional impacts and no adverse impacts to affected interests; and 4) The 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.

Jeffrey A. Rose
District Manager
Burns District BLM

Date