

**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**

BACKGROUND

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 Warm Springs Herd Management Area (HMA) Population Management Plan. The United States Geological Survey (USGS) submitted a proposal to study the on-range behavioral impacts of spaying wild horse mares. 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.

ADDITIONAL INFORMATION RELATED TO DECISION DATED SEPTEMBER 12, 2018

The proposed action is described in the EA (p. 19) in two separate sections:

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

The only portions of the proposed action BLM is moving forward with under the decision dated September 12, 2018, include the Spay Feasibility and On-Range Behavioral Outcomes Assessment (2018–2022) and the portions of the 10-year Population Management Plan that provide direction on gathering and removal of excess wild horses in 2018.

These actions were chosen to provide further detail on the outcomes of spaying wild horse mares and associated on-range behavior. Once the study is complete and results have been analyzed, BLM would have a better understanding of the feasibility of this procedure, on-range behavioral impacts, and how this population growth suppression method could be used in Warm Springs HMA in the future. The EA was clear that some uncertainty related to the outcomes of the study exist.

EA (Chapter II.B.2. 10-Year Population Management Plan):

“After the gather to low AML following the completion of the study, potential population growth suppression actions that would be applied include spaying additional mares (assuming results of the spay procedure confirm previously published work that demonstrated that spaying is a feasible management tool) or PZP (if the results of the spay procedure indicate that spaying is *not* a feasible management tool for this HMA).”

“Following the completion of the on-range study, BLM would assess whether analysis in this EA adequately supports future population growth suppression actions (spay or PZP treatment) outlined in this plan, or if BLM needs to prepare new or supplemental analysis.”

The following section provides detail on BLM’s analysis of the context and intensity of the selected actions (spay study and 2018 gather to AML). However, despite the uncertainty indicated by the specific aims of the spay study, results that drastically differ from those anticipated and described in the EA would not rise to a level of significance that would require preparation of an environmental impact statement (EIS).

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 selected portions 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 selected actions only apply to one HMA out of 6 in Burns District, 17 in Oregon, and 177 in the United States.

2. Intensity

The following analyzes the intensity of the selected portions 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 the potential risks to horses, burros (if captured during the 2018 gather), and other resources as a result of the gather and removal of excess animals. 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 selected portions of 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 methods. Although this benefit is not, itself, an impact on the environment, it is expected to provide benefits for future wild horse management.

The EA demonstrates that the selected portions of the proposed action would—

- Eliminate or minimize trampling impacts 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;
- Manage the wild horse population in balance with available habitat and reduce the effects to horses and burros of climatic fluctuations such as drought and reductions in available forage and water;
- Reduce the population growth rate of wild horses within the HMA;
- 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 selected portions of the proposed action affect 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 instruction memorandum (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, parklands, 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 spay study and the gather are not significant because the gathering and removal of excess wild horses moves toward maintaining or improving rangeland conditions for GRSG and preventing or reducing trampling impacts to archaeological sites. The spay study does not impact any of the unique characteristics of the area.

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

Controversy in this context means scientific or technical controversy about the nature of the effects, not expressions of opposition to the proposed action(s) 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 difference in preference among possible management actions, not a controversy about effects 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.*

There are no uncertain or unknown risks to the human environment associated with the gather methods described in the EA. 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. Effects of gathering wild horses and burros can be found in the EA.

There are no uncertain or unknown risks to the human environment associated with the spay study. The EA (Chapter III.B.1. Wild Horses and Burros) explains how previous peer-reviewed studies on ovariectomy via colpotomy, various methods of ovariectomy in mares, a peer-reviewed study on ovariectomy via colpotomy on feral horse mares (Collins and Kasbohm 2016), and a thorough review of other methods of population growth suppression (including vaccines) provide the background to support the conclusion that no part of the ovariectomy via colpotomy study and on-range behavioral outcomes assessment would constitute a significant effect on the human environment. The specific aims of the spay feasibility and on-range

behavioral outcomes study are listed below followed by the rationale as to why there are no highly uncertain or unique/unknown risks:

- *Determine the approximate stage of gestation of the mares presented for surgery. Because a majority of mares are pregnant when gathered after July 1 of any year, it would be of interest to study how gestational stage affects the surgical procedure and how the surgical procedure affects maintenance of pregnancy.*

No mares over 250 days gestation are included in the study because of the difficulty of maneuvering inside the abdomen at that stage of pregnancy. It is also disclosed that mares in less than 120 days gestation would abort or resorb their fetus, and if performed on pregnancies after 120 days, the pregnancy should be maintained. No aspects of the maintenance of the pregnancy are highly uncertain or present unique/unknown risks.

- *Determine the feasibility of performing ovariectomies via colpotomy in free-roaming wild horses.*

Feasibility would 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. Of all the references in the EA, the study by Collins and Kasbohm (2016) and the panel review of surgical mare sterilization techniques (Bowen 2015) both relate most to spaying of wild mares and provide a clear indication of the outcomes of each of the feasibility factors. These references show that if proper handling and equipment is provided then the procedure is safe for the mare and veterinarian, there is a less than 2 percent mortality rate associated with the procedure, and the procedure takes approximately 15 minutes per mare. Based on this available information, no potential aspect of the feasibility of the procedure is highly uncertain or presents unique/unknown risks.

- *Evaluate the immediate and short-term effects of the surgical procedure on free-roaming wild mares.*

The immediate and short-term effects of the procedure are disclosed in the EA (starting on p. 68) as hemorrhage, intestinal trauma, peritonitis, adhesions, death, delayed vaginal healing, evisceration of the bowel, incisional site hematoma, lumbar and bilateral hind limb pain, shock, and complications associated with loss of pregnancy. All surgeries are associated with some risk. The risk specific to feral horse mares receiving a similar ovariectomy via colpotomy procedure is quantified in Collins and Kasbohm (2016) with a less than 2 percent mortality rate. This would equate to 2 or less of the 100 mares that would be treated in this study, 2 or less of the approximately 852 horses currently residing in the HMA, or 2 or less of the over 81,000 wild horses and burros on-range across the western United States. No evidence available to the BLM suggests that the mortality rate of ovariectomy via colpotomy in this case should exceed the rate quantified in Collins and Kasbohm (2016) or present any other unique or unknown risks.

- *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.*

As noted by the National Research Council (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, 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 highly uncertain or unique/unknown risks related to social and reproductive behavior or group cohesion exist with spayed mares being part of a herd, similar to other population growth suppression methods currently being applied in HMAs. 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.

- *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.*

As explained in the EA (starting on p. 74), the body condition of spayed mares is expected to increase due to being free of the constraints of lactation. Collins and Kasbohm (2016) showed ovariectomized mares were returned to the range along with untreated mares and that the long-term survival rate of treated mares appeared to be the same as that of untreated mares. It is anticipated that because body conditions of spayed mares should improve and survival rates of treated and untreated mares should remain the same, then the survival rate of foals in both treatment and control herd segments would also remain the same. Therefore, there are no highly uncertain or unique/unknown risks.

- *Test for an effect of spay treatment on spatial ecology of free-roaming horses by monitoring the Global Positioning System (GPS) locations of individuals (22 treatment herd females, 22 control herd females, and 12 stallions from each herd segment) within treatment and control herd segments of the population throughout the year.*

Spatial ecology is not anticipated to be significantly different between the treatment and control herd segments. It is unlikely that spayed mares will change their spatial ecology, but being emancipated from constraints of lactation may mean they can spend more time away from water sources and increase their home range size. Since Collins and Kasbohm (2016) showed that treated females maintained group associations, this indicates that their movement patterns and distances may be unchanged. Potential differences do not rise to the level of significance.

- *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 herd segment annual growth rates.

WinEquus Population Modelling was conducted for both treatment and control segments from 2018 through 2022, the extent of the study (EA p. 56–57). Results of this modelling show the control segment having an average population growth rate of 19.5 percent while the treatment segment had a 14.0 percent average population growth rate. Aerial surveys conducted once or twice annually would not be significantly different than conducted surveys every 2–3 years as is standard practice on Burns District. Therefore, there are no highly uncertain or unique/unknown risks.

- 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 2018 gather and spay study portions of the proposed action only apply to wild horses and burros from Warm Springs HMA. The outcome of the spay 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 is 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 gather or spay study actions are 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 for the gather 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 gather and spay study.

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

The gather and spay study do not threaten to violate any law. These actions are 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 gather and spay study 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 gather and spay study are in conformance with the Three Rivers RMP/ROD (1992) as amended by the Oregon GRSG Approved RMP (2015).
3. The gather to remove excess wild horses would aid in achievement of GRSG habitat objectives and respond to the threat of wild horses influencing the decline in GRSG populations in PHMAs.
4. There will be no adverse societal or regional impacts and no adverse impacts to affected interests; and
5. 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