

Wild Horse Spay Feasibility Research Project Lead
BLM Burns District Office
28910 Highway 20 West
Hines, Oregon 97738

Re: DOI-BLM-ORWA-B050-2018-0016-EA (Spay Feasibility and On-Range Behavioral Outcomes Assessment and Warm Springs HMA Population Management Plan)

AFFIDAVIT OF MEREDITH HOU

1. I am submitting this affidavit in opposition to the Bureau of Land Management's Spay Feasibility and On-Range Behavioral Outcomes research project.
2. I am an equine veterinary technician by training with 21 years of experience in the horse industry and three years of ambulatory, hospital, and surgical (general anesthesia and standing) experience. I have assisted with colic surgery, arthroscopy, mandibular fracture reset, castration, mass removal, gastroscopy, guttural pouch endoscopy, tooth extraction, spinal tap, epidural catheter placement, hoof resection, de-rotational tenotomy, joint injections, PRP/IRAP/stem cell therapies, rectal exams, and more. Our clients range from top show horses to backyard companions, and include one mustang adopted through BLM's adoption program.
3. I oppose this research project because it (1) relies on insufficient sedation and pain management, (2) improperly uses drugs on pregnant mares, (3) creates dangerous herd dynamics, and (4) violates an Oregon state anti-cruelty statute.
4. As a veterinary technician, I am the primary person responsible for ensuring the horse is adequately sedated for the procedure. This is for the well-being of the horse and the safety of the veterinarian.
5. 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, in the absence of a handler, on a head rest. This setup prevents the horse from tipping forward, catching itself on the front bar of the stocks, and thereby startling itself. Horses can "come out of sedation" provided a strong

enough flight stimulus, which can be dangerous mid-procedure. The ears should be relaxed and to the sides, the eyes dull, and all four feet fully weight-bearing or in a resting position.

6. BLM's video¹ of the proposed procedure shows that none of these requirements have been satisfied. The horse is not provided any type of head-resting apparatus, perhaps because the horse is not sedated enough to require one. The horse is fully alert and aware of her surroundings: her head is held high, she is shifting her weight, her ears are actively scanning her surroundings, and she is looking behind her – all as the procedure is taking place. At 2:36, you see her stare straight into the camera behind her. In sum, the horse was not “deeply sedated” as Appendix D (IACUC Protocol: Procedure, 15) indicates she would be.

7. The video also shows a severe lack of pain management. The mare is highly reactive to outside stimuli: her flanks are trembling in pain and discomfort as the vet forcibly inserts his arm into her vagina without sufficient sterile lube. At 3:57, you see the mare drop her hind end as the veterinarian begins the transection of the ovarian pedicle. Again, she drops at 4:06. For the entirety of the procedure, the mare is shifting her body weight, attempting to move away from the veterinarian, and is reacting on impulse to pain stimuli. Her respiratory rate during the procedure is around 40 breaths per minute (normal/resting 8-12 breaths per minute), whereas adequate sedation and pain management should have led to a decreased respiratory rate. While the local use of lidocaine may alleviate some of the pain associated with transecting the ovarian pedicle, the video demonstrates that it is not providing sufficient pain relief.

8. Butorphanol tartrate (also known as Torbugesic, or Torb) is a commonly used opioid analgesic that provides pain relief four times the strength of morphine in horses, and is lauded for its ability to alleviate deep abdominal pain. Torb is administered alongside a sedative; the more sedative is administered, the higher the acceptable level of Torb. While its use is indicated in the Environmental Assessment (EA), the low level of sedation used here indicates a proportionally low level of Torb such that the mare does not feel its potential analgesic benefits.

¹ BLMOREGON, *Ovariectomy research project proposed for wild horses*, YouTube (June 29, 2018), <https://www.youtube.com/watch?v=rjxzcmjXGTI&feature=youtu.be>.

9. In addition to the direct welfare concerns associated with insufficient sedation and pain management, movement during such a procedure can have dire consequences for both horse and veterinarian. The colpotomy is performed blindly (the veterinarian has no means of visually observing where s/he is making incisions). With a moving patient, the veterinarian can accidentally perforate the rectum or bowels leading to hemorrhage and/or sepsis, which could lead to the mare's untimely death. Additionally, if the mare drops her hindquarters during the procedure, the veterinarian's arm could become seriously injured against the stocks.

10. As part of post-operative care, a veterinary technician will perform a "TPR" every 8 hours. A TPR (temperature-pulse-respiration) is a full-body scan of the horse's vitals used to monitor the horse's wellbeing and adjust pain medications or treatments as needed. A proper TPR includes assessment of the horse's temperature, pulse, respiration, digital pulses, mucus membrane, gut sounds of all four quadrants, jugular refill, water intake, urine / fecal production, and disposition (BAR (bright/alert/responsive), dull, etc.).

11. However, disposition and respiratory rate are the only factors BLM plans on monitoring with any accuracy. Without physical contact, assessment of the horse's temperature, pulse, digital pulses, mucus membrane, gut sounds, and jugular refill are all out of reach. Because the horses are housed as a herd, water intake and urine / fecal production cannot be individually measured. Furthermore, BLM does not plan on providing a full pain management series of flunixin meglumine (Banamine). Typically, a full day's dose (1.1mg/kg (0.5mg/lb) body weight) is provided before the procedure, followed by a series of doses beginning the day after the procedure: 0.55 mg/kg body weight 2x/day for 2-3 days, then brought down to 1x/day for 2 days. According to the EA, however, doses of Banamine beyond the first will only be provided at the veterinarian's discretion if the mare exhibits signs of abdominal pain. Given the inadequate post-operative monitoring, it is highly likely that many mares' pain will go unnoticed and untreated. If the pain goes unnoticed, so may serious underlying conditions.

12. An anecdote to demonstrate my point: We once took on a horse with an extremely high fever (106°F; normal is 99-101.5°F), pulse (65bpm; normal is 28-36bpm) and digital pulses. The horse was standing calmly in his stall with his head up, his eyes bright, and had a mildly elevated

respiratory rate – all external signs indicated that he was fine, or “within normal limits.” Diagnostics, however, told a different story. Necropsy confirmed that the horse had a twelve-inch rupture of his stomach and his fever was a result of sepsis. Without the ability to take his temperature and pulse, this horse would have slid under the radar of any observing veterinarian.

13. The second issue I take with the proposed procedure is the improper use of drugs on pregnant mares. According to the prescribing label for Torb (mentioned earlier), “[t]here are no well-controlled studies using butorphanol in breeding horses, weanlings and foals. Therefore, the drug should not be used in these groups.” Additionally, the Health Products Regulatory Authority (HPRA) cautions that the combination of detomidine hydrochloride (Dormosedan, or Dorm), a common sedative, and Torb should not be used in pregnant mares. This is the same combination referenced in the EA. Xylazine hydrochloride (Xylazine) is a short-acting sedative which is known to increase intrauterine pressure. Finally, the proposed antibiotic, ceftiofur crystalline free acid (Excede), has not been evaluated in pregnant mares. While many of these drugs may be used on domestic mares for ovariectomies, these domestic mares are not pregnant at the time of the procedure. Typically, veterinary clinics avoid using sedatives and opioids on pregnant mares unless an emergency situation arises. Elective procedures requiring sedation are put on hold until after the foal has been born; ovariectomy is an elective procedure.

14. Third, 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 (OVX) mares do not allow copulation (as is suggested may happen), stallions will fight over the “remaining” available mares. In the proposed case, roughly 35-40 stallions (50 males, discounting 10-15 juveniles and foals) would be fighting over eight (8) mares. It is my understanding that fights over reproductive rights may commonly be fatal. Additionally, one can expect the rate of infanticide – the killing of foals not one’s own – to increase given the disproportionate stallion-to-foal ratio. This is not in line with the definition of a “healthy herd” BLM is tasked with upholding.

15. Lastly, the Spay Feasibility research project proposes animal abuse by knowingly and recklessly causing substantial pain to animals. Under Oregon law, a person commits animal abuse in the second degree if s/he intentionally, knowingly, or recklessly causes physical injury to an animal, including substantial pain. Or. Rev. Stat. § 167.315 (2018). Under all surgical procedures, sedation and analgesia should be employed to minimize stress and pain. Zero or inadequate sedation and pain management during an invasive surgical procedure, as shown from BLM's video, would lead to the precise "substantial pain" Oregon legislators have aimed to prevent. I am concerned that BLM and the veterinarians employed during this study are knowingly and/or recklessly providing inadequate sedation because of an ulterior motive (be it minimizing cost, post-op recovery time, or something else) at the expense of the horse's welfare.

16. "Wildlife management practices under color of law" and "good veterinary practices" are exempt from the aforementioned anti-cruelty statutes unless gross negligence can be shown. § 167.335(8). While not specifically defined within § 167, Oregon appears to recognize the Restatement of Torts definition of "gross negligence" as:

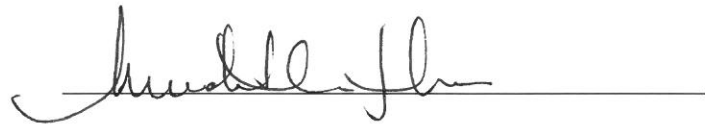
"... reckless disregard of the safety of another if he intentionally does an act or fails to do an act which it is his duty to the other to do, knowing or having reason to know of facts which would lead a reasonable man to realize that the actor's conduct not only creates an unreasonable risk of bodily harm to the other but also involves a high degree of probability that substantial harm will result to him."

2 Restatement, Torts, § 500. If BLM carries forward the proposed research project, it would demonstrate a conscious indifference and reckless disregard to the welfare of the mares who, with a high degree of probability, will suffer substantial pain (due to inadequate sedation and pain management), harm (from the procedure itself, or from the drugs being administered), and potentially death, as a direct result of the ovariectomy via colpotomy.

17. Female sterilization of horses is incredibly rare. In my lifetime, I have only come across one sterilized mare. In my capacity as equine veterinary technician, only one mare was a candidate for ovariectomy (potential granulosa cell tumor) – colpotomy was never suggested as a

viable option. It is my belief that the proposed research project is significantly outside the scope of veterinary ethics and human morals. While I sympathize with the frustration of finding an effective “population management” tool, ovariectomy via colpotomy far exceeds the minimum feasible method required of BLM.

Pursuant to 28 U.S.C. § 1746, I hereby declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

A handwritten signature in cursive script, appearing to read 'Meredith Hou', is written over a solid horizontal line.

Meredith Hou

Executed on this 30th day of July 2018.