

Virginia Range Feral/Estray Information

Animal Industry



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Attachment A – Applicable NRS

Applicable NRS 569

NRS 569.0075 "Estray" defined. "Estray" means any domesticated livestock or progeny of domesticated livestock showing signs of domestication, running at large upon public or private lands in the State of Nevada, whose owner is unknown in the section where the animal is found.

(Added to NRS by [2003, 2152](#))

NRS 569.008 "Feral livestock" defined. "Feral livestock" means any formerly domesticated livestock or progeny of domesticated livestock which have become wild and are running at large upon public or private lands in the State of Nevada, and which have no physical signs of domestication. The term does not include horses or burros that are subject to the jurisdiction of the Federal Government pursuant to the Wild Free-Roaming Horses and Burros Act, 16 U.S.C. §§ 1331 to 1340, inclusive, and any regulations adopted pursuant thereto, or any other federal statute or regulation.

(Added to NRS by [2003, 2152](#))

NRS 569.0085 "Livestock" defined. "Livestock" means:

1. All cattle or animals of the bovine species;
2. All horses, mules, burros and asses or animals of the equine species;
3. All swine or animals of the porcine species;
4. All goats or animals of the caprine species;
5. All sheep or animals of the ovine species;
6. All poultry or domesticated fowl or birds; and
7. All alternative livestock.

(Added to NRS by [2003, 2152](#))

NRS 569.010 Estrays and feral livestock deemed property of Department; management, control, placement and disposition of estrays and feral livestock; disposition of money; liability.

1. Except as otherwise provided by law, all estrays and feral livestock within this state shall be deemed for the purpose of this section to be the property of the Department.

2. The Department has all rights accruing pursuant to the laws of this state to owners of those animals, and may:

(a) Dispose of estrays and feral livestock by sale through an agent appointed by the Department; or

(b) Provide for the management, control, placement or disposition of estrays and feral livestock through cooperative agreements pursuant to [NRS 569.031](#).

3. Except as otherwise provided by law, all money collected for the sale or for the injury or killing of any such animals must be held for 1 year, subject to the claim of any person who can establish legal title to any animal concerned. All money remaining unclaimed must be deposited in the Livestock Inspection Account after 1 year. The Department may disallow all claims if it deems the claims illegal or not showing satisfactory evidence of title.

4. The Department or any political subdivision of this state is not liable for any trespass or other damage caused by any of those estrays or feral livestock.

[1:200:1925; NCL § 3993] — (NRS A [1959, 641](#); [1961, 546](#); [1991, 1794](#); [1993, 295, 1744](#); [1995, 579](#); [1997, 461](#); [1999, 3682](#); [2003, 2153](#); [2013, 1866](#))

NRS 569.031 Cooperative agreements for management, control, placement or disposition of livestock: Required provisions; annual review by Department; cancellation. The Department may enter into a cooperative agreement for the management, control, placement or disposition of the livestock with another agency of this state or with a county, city, town, township, peace officer, poundmaster or nonprofit organization. If an agreement is entered into, it must provide for:

Virginia Range estray/feral NRS Animal Industry



1. The responsibility for the payment of the expenses incurred in taking up, holding, advertising and making the disposition of the estray or feral livestock, and any damages for trespass allowed pursuant to [NRS 569.440](#);
 2. The disposition of any money received from the sale of the livestock;
 3. The protection of the rights of a lawful owner of an estray or feral livestock pursuant to [NRS 569.040](#) to [569.130](#), inclusive;
 4. The designation of the specific geographic area of this state to which the cooperative agreement applies; and
 5. The cooperating person or entity to hold the State of Nevada harmless from any claim or liability arising from an act or omission of the cooperating person or entity in carrying out the cooperative agreement.
- Ê The Department shall annually review the actions of the cooperating person or entity for compliance with the agreement. The Department may cancel the agreement upon a finding of noncompliant actions.
(Added to NRS by [1993, 294](#); A [1995, 649](#); [1997, 462](#); [1999, 3683](#); [2003, 2153](#); [2013, 1867](#))

NRS 569.075 Sale of feral livestock gathered by Department; publication of notice of sale of feral livestock; sale of injured or debilitated feral livestock.

1. The Department may sell all feral livestock which it has gathered if the Department determines that the sale of the feral livestock is necessary to facilitate the placement or other disposition of the feral livestock.
2. Except as otherwise provided in subsection 3, before the Department may sell feral livestock, the Department must publish notice of the sale of the feral livestock in a newspaper published at the county seat of the county in which the gathering of the feral livestock occurred. If there is no newspaper published at the county seat of the county, the notice must be published in the newspaper published at the nearest point to that county seat. A notice of a sale published pursuant to this section need not include full descriptions of the feral livestock, but may include such information and details as the Department determines necessary.
3. The Department may sell injured, sick or otherwise debilitated feral livestock if, as determined by the Department, the sale of the feral livestock is necessary to facilitate the placement or other disposition of the feral livestock. If feral livestock is sold pursuant to this subsection, the Department shall give a brand inspection clearance certificate to the purchaser.

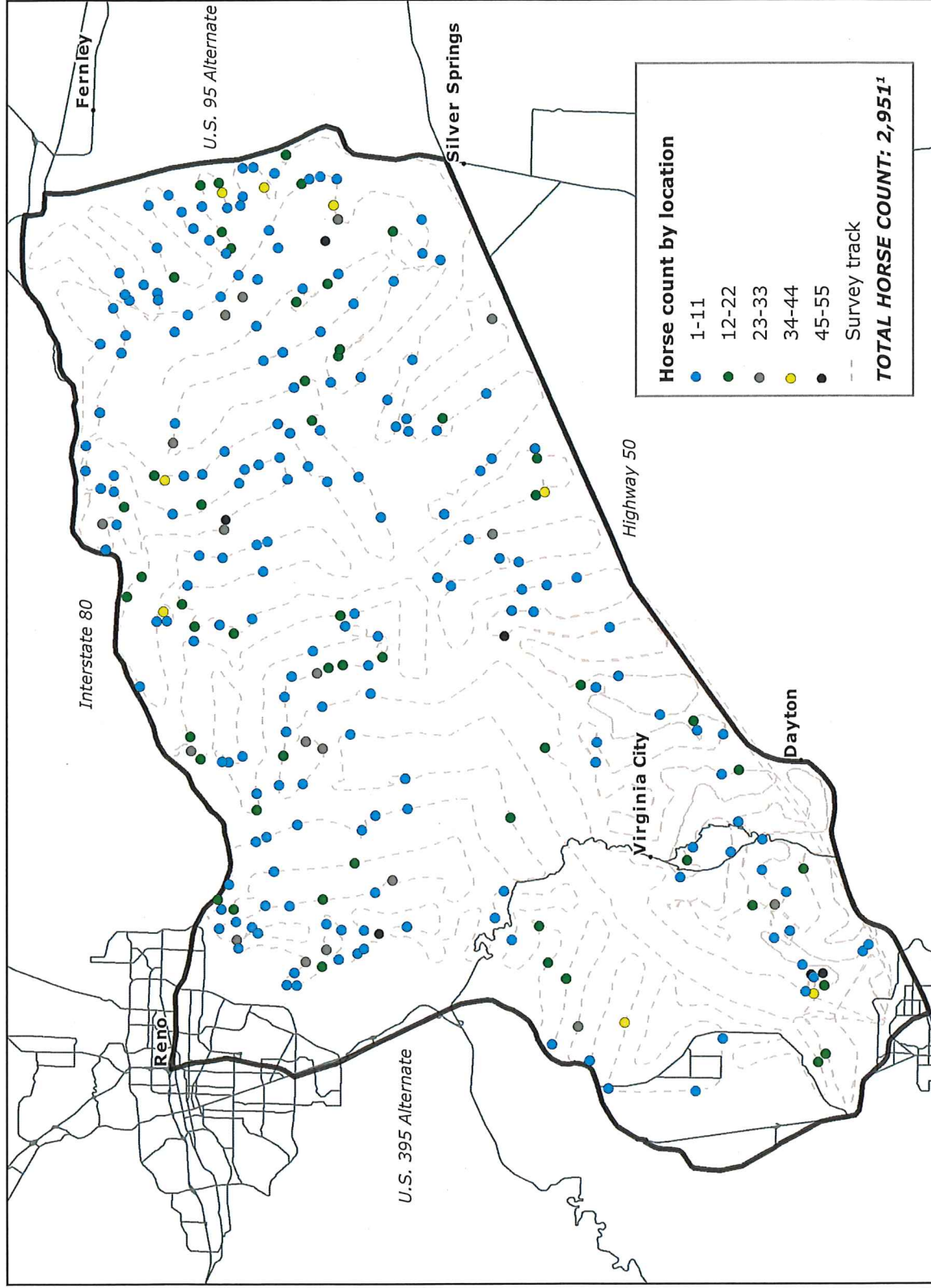
(Added to NRS by [2003, 2152](#))

Attachment B – Population census map



Virginia range feral horse population census

Nevada Department of Agriculture

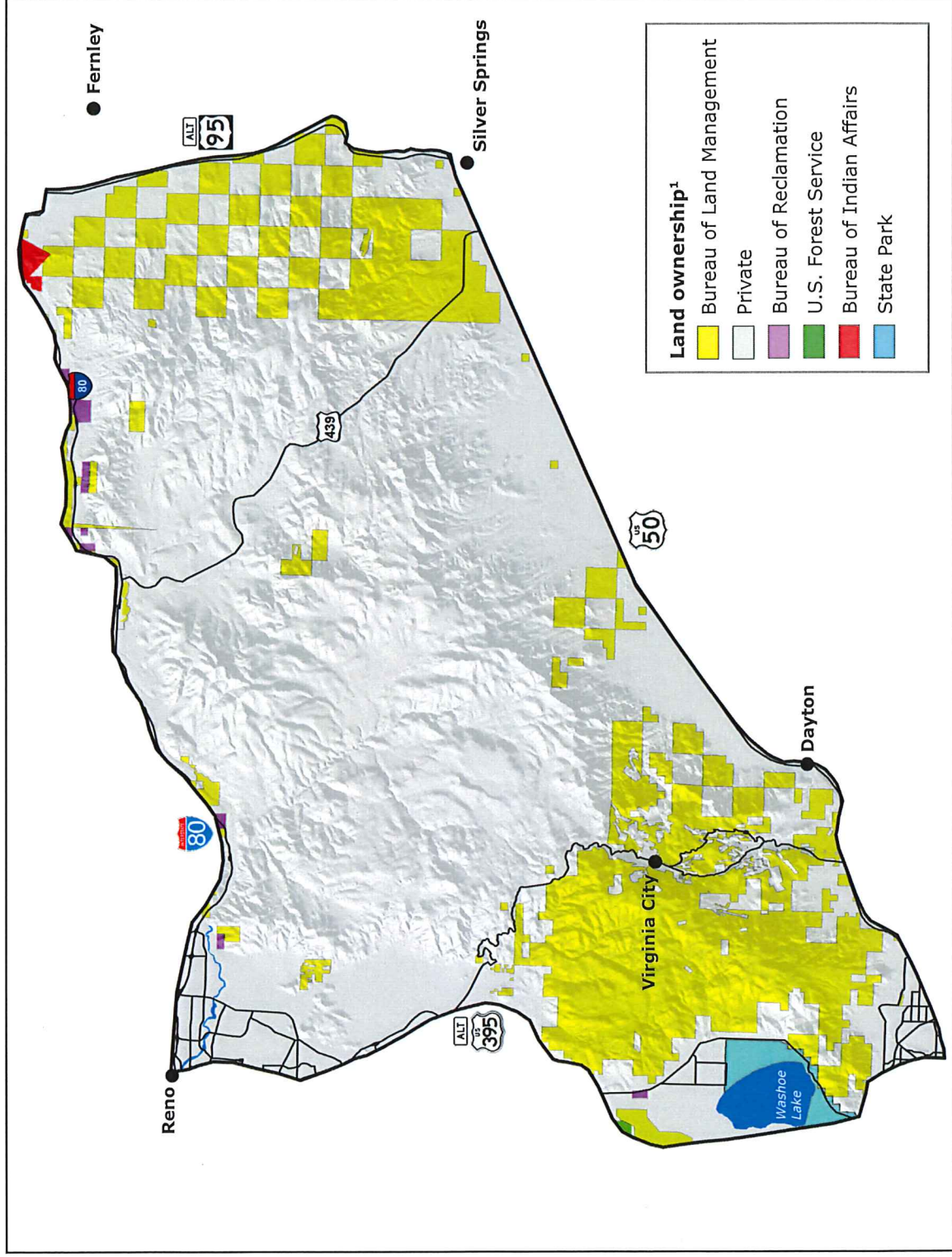


1. Horse count conducted January 2018 by a Bureau of Land Management Wild Horse and Burro specialist via helicopter fly-over.

Attachment C – Land ownership map

Virginia range land ownership

Nevada Department of Agriculture



1. 2015 data from the Bureau of Land Management.

Attachment D – VRE historical timeline

Virginia Range Estray/Feral Timeline

Animal Industry Division

Historical Timeline

The Virginia Range area consists of approximately 283,769 \pm acres, with over 200,000 \pm acres being privately owned and roughly 80,000 acres public lands.

**Note: All information provided in this timeline has been gathered from public records and documents.*

- **In 1983 and 1984**, the Bureau of Land Management (BLM) gathered an undetermined amount of horses from the Virginia Range area. Upon BLM's removal of these horses, BLM declared the Virginia Range area to be "free of any wild horses." With the Virginia Range area being deemed wild horse free, the horses located in this area are not governed under the 1971 Wild Horse and Burro Act. Without being classified as "wild horses," the horses then fall under the jurisdiction of the Nevada Department of Agriculture (NDA) as estray and feral livestock. The Virginia Range estray/feral horses, referred to as VRE horses, have been under the jurisdiction of the NDA from this period in 1984 through present day.
- **In 1997**, due to increasing horse populations, the NDA implemented a VRE Horse Management Program. This program focused on:
 - 1) public safety and animal welfare;
 - 2) maintenance of a healthy and sustainable estray horse population in the Virginia Range; and
 - 3) establishment of cooperative agreements with non-profit groups to facilitate the adoption and proper care of the estray horses removed from the Virginia Range.
- **In 1999 and 2000**, the NDA and the Virginia Range Wildlife Protection Association (VRWPA) jointly commissioned the USDA Natural Resource Conservation Service (NRCS) to complete a comprehensive habitat capacity analysis on a portion of the Virginia Range herd area. NRCS estimated the maximum carrying capacity for the Virginia Range area to be between 500 and 600 horses. NRCS also recommended at this time that the population of horses be reduced to between 200 and 300 horses to allow for range rehabilitation.
- **In 2000**, the NDA and VRWPA agreed to a carrying capacity of 550 horses for the entire Virginia Range area.
- **Between 1999 and 2007**, 1,344 horses were removed from the Virginia Range area and passed through the Northern Nevada Correctional Center for adoptions with the cooperation of advocate groups.
- **In April 2008**, the Nevada Interim Finance Committee approved \$15,000 in general fund dollars for the NDA to add additional facilities for expected VRE horse needs. There is no record of how these funds were expended.
- **In June 2009**, the NDA lost the staff member serving as the Virginia Range Program Officer. Due to this staffing loss, the director transferred the responsibilities of the program to the animal identification and brand inspection divisions.

Virginia Range Estray/Feral Timeline

Animal Industry Division

- **In July 2009**, the entire VRE program was moved from NDA Animal Industry to NDA Livestock Identification. Note that, at the time, these were separate divisions within the department.
- **In September 2009**, the NDA drafted a Memorandum of Understanding (MOU) and accompanying policies and procedures with Storey County Sheriff's Office, which was approved by the Nevada Board of Agriculture (BOA). It is unknown to current NDA staff if this MOU was ever finalized and signed by both parties, as a signed copy has not been located.
- **In March 2010**, due to the downturn in the state's economy, the NDA incurred budgetary cuts department wide. The NDA's general funding was cut by almost \$89,000, most of which were in operating expenses and the VRE program.
- **In 2013**, the Nevada State Legislature amended NRS 569.031 and NRS 569.040. These amendments provided the department authority that it "may" enter into a cooperative agreement for management of estrays and feral livestock.
- **In March 2013**, the NDA entered into a cooperative agreement with Return to Freedom, Inc. (RTF), for the adoption and placement of VRE horses that were removed from the range. (Attached)
- **In March 2015**, the NDA entered into an additional cooperative agreement with RTF. While the original cooperative agreement saw to the adoption and placement of VRE horses, the additional cooperative agreement allowed for the management, control, placement, or disposition of Virginia Range estray/feral horses. (Attached)
- **In March 2016**, the NDA and RTF signed an amendment to the 2015 cooperative agreement transferring all responsibilities and obligations held by RTF to American Wild Horse Preservation Campaign, (AWHPC). (Attached)
- **In June 2016**, AWHPC provided the first-year annual progress report to the NDA. (Attached)
- **In July 2016**, AWHPC submitted an amendment to the NDA requesting that the 2015 cooperative agreement be amended to eliminate Section 5.1 and Section 6, which related to the trapping, adoption, or relocation of horses; and Section 8, which defined public safety categories and management action. ***Please note: This amendment was not signed or accepted by the NDA and is included only for informational purposes as it relates to this timeline.***
- **In 2017**, AWHPC failed to provide a second-year annual progress report, due after March 2017. They were notified of this failure to provide a progress report in writing.
- **In July 2017**, Deniz Bolbol, with AWHPC, advised the NDA that even though the July 2016 requested amendment had not been accepted by NDA, AWHPC had reduced their required amount of insurance policy and was only fulfilling the birth control portion of the 2015 cooperative agreement.
- **In October 2017**, the NDA issued notice to AWHPC cancelling both the 2013 and 2015 cooperative agreements.

Virginia Range Estray/Feral Timeline

Animal Industry Division

- **In December 2017**, BOA directed the NDA to pursue a Request for Proposals (RFP) to transfer ownership of the Virginia Range estray/feral horses to a qualified animal advocate group.
- **In January 2018**, the NDA released the RFP for non-profit animal advocacy groups to apply.
- **In April 2018**, RFP deadline for submissions passed, and the NDA did not receive any applications. NDA thereafter cancelled the RFP.
- **In August 2018**, currently there are no designated staff, general funds, or funding mechanisms to aid in the management of the VRE horses. Equipment intended for management is limited and aging and much is in disrepair. The NDA is still managing the VRE horses on the range for public safety, in cooperation, as needed, with a few local advocates.

Historical census

- 1997: 413 Head
- 2002: 1,274 Head
- 2008: 1,448 Head
- 2014: 1,959 Head
- 2018: 2,951 Head

Attachment E – 2013 cooperative agreement

Department of Agriculture Cooperative Agreement

This agreement is made between Return to Freedom, Inc., a non-profit organization located in Lompoc, CA, that is a sponsor of the American Wild Horse Preservation Campaign, hereinafter referred to as Cooperator; and the Nevada Department of Agriculture (NDA), hereinafter referred to as NDA.

Whereas, the NDA has management responsibilities under NRS Chapter 569 over the Virginia Range stray/feral horses, and, pursuant to the provisions contained in NRS 569.031, the NDA is authorized to enter into cooperative agreements for the control, placement or disposition of stray/feral horses;

Whereas, NDA management role includes picking up, for public safety reasons, Virginia Range stray/feral horses that have been forced into urban and heavily trafficked areas;

Whereas, Cooperator represents that it has the wherewithal to receive Virginia Range stray/feral horses and will use reasonable efforts to provide for their placement in a humane manner that nevertheless prevents their release to the Virginia Range; and

Whereas, NRS 569.031 requires that cooperating agreements "must provide for:

1. The responsibility for the payment of the expenses incurred in taking up, holding, advertising and making the disposition of the stray or feral livestock, and any damages for trespass allowed pursuant to NRS 569.440;
2. The disposition of any money received from the sale of the livestock;
3. The protection of the rights of a lawful owner of an stray or feral livestock pursuant to NRS 569.040 to 569.130, inclusive; and
4. The designation of the specific geographic area of this state to which the cooperative agreement applies.

Now, therefore, it is agreed:

1. Cooperator will be provided with the opportunity to purchase stray/feral horse(s) from NDA prior to being offered for sale at a livestock auction. Cooperator will pay \$100 per horse on an as-is basis and will make payment prior to taking delivery. After payment by NDA of the expenses incurred in taking up, holding, advertising and making the disposition of the stray or feral livestock, and any damages for trespass allowed pursuant to NRS 569.440 NDA shall retain the balance of the funds in an interest bearing account, for claim, if at all, within one year of NDA's receipt, by the prior owner of the stray or feral livestock as determined by the Department at that time.

2. NDA shall notify Cooperator of the capture and possible sale of horses at the time of initiating applicable notice requirements. Upon completion of applicable notice requirements for, as the case may be, estrays or feral livestock, NDA shall convey to Cooperator NDA's right, title and interest in the horse(s) under NRS Chapter 569 and shall furnish Cooperator a Brand Inspection Clearance Certificate that certifies Cooperator's ownership upon delivery of the horse.
3. NDA collection of horses being limited to urban areas and roadways, for public safety purposes. Cooperator may purchase all such horses collected and shall take delivery at an agreed location within the applicable geographical area. Any horses tendered to but not accepted by Cooperator within two business days after being notified shall be subject to disposition by NDA in any manner permitted by law.
4. Prior to delivery of studs, the Department will have the studs castrated. To cover castration costs, Cooperator shall pay an additional \$200 per castrated stud.
5. Cooperator shall provide yearly from the date of this agreement a report of all horses resold/or placed during the previous 12 months.
6. This agreement may be canceled immediately by either Cooperator or NDA if it is determined that the other party is not in compliance with this agreement. NDA may cancel immediately if Cooperator is not monitoring or capable of monitoring the welfare of the stray/feral horses sold or placed during the previous twelve months. Such cancellation shall be NDA's sole remedy in the event of an occurrence described in the immediately preceding sentence; Cooperator shall incur no liability in connection therewith unless such occurrence is the direct result of Cooperator's bad faith or willful misconduct. Cooperator does not make any warranties, express or implied, with respect to the placement of horses or their welfare thereafter. This agreement can be terminated by either party upon thirty (30) days written notice to the other party and the notification shall include the determination for the cancellation.
7. The Cooperator shall enter into a binding agreement with third-parties who adopt or purchase the horses ensuring that the horses purchased under this agreement shall not be purposefully released back on the Virginia Range in violation of the NRS.
8. This agreement applies to Washoe, Storey and Lyon Counties and the Consolidated Municipality of Carson City.
9. This agreement shall be effective from March 12, 2013 until March 11, 2014, and shall automatically renew from year-to-year thereafter until cancelled or terminated.

10. This agreement will be interpreted according to the laws of the State of Nevada. The parties consent to the exclusive jurisdiction of the First Judicial District Court, Carson City, Nevada for enforcement of this agreement.

Return to Freedom, Inc.

Neda Demayo
Signature

Neda Demayo
Name

President
Title

3/5/13
Date

PO Box 926
Mailing Address

Lompoc, CA 93436
City, State, Zip Code

805 735 3246 and 650-248-4489
Telephone Number

neda@rebirthtofreedom.org and deniz@wildhorsepreservation.org
E-mail Address

06-1484961
Non-Profit Tax ID Number

www.returntofreedom.org , www.wildhorsepreservation.org
Cooperator Web Site

Approved as to form by:

Date: 3/12/2013

/s/ Dennis L. Belcourt
Dennis L. Belcourt
Deputy Attorney General

Nevada Department of Agriculture

[Signature]
Signature

Jim R Barbee
Name

Director
Title

3/13/13
Date

Attachment F – 2015 cooperative agreement

**NEVADA DEPARTMENT OF AGRICULTURE
VIRGINIA RANGE COOPERATIVE AGREEMENT**

This Cooperative Agreement (hereinafter "Agreement") is made between Return to Freedom, Inc., a foreign non-profit corporation organized and existing under the laws of the State of Delaware, with its principal place of business in Lompoc, California and licensed to do business in the State of Nevada (hereinafter RTF), and the Nevada Department of Agriculture (hereinafter NDA).

RECITALS

WHEREAS, in the 2013 Legislative Session, A.B. 264 was enacted which permitted NDA to enter into cooperative agreements with non-profit organizations to develop procedures and policies for the management, control, placement or disposition of feral and stray horses inhabiting the lands commonly known as the Virginia Range Area ("VRA");

WHEREAS, NDA has management responsibilities under NRS Chapter 569 over the Virginia Range stray/feral horses (hereinafter VRE/FHs) and, pursuant to the provisions of NRS 561.218, the Director of NDA shall designate a manager or agent (hereinafter "Manager") to enter into any cooperative agreements for these purposes on behalf of NDA with any organization, individual or legal entity;

WHEREAS, RTF represents that it maintains legally binding agreements between itself, as principal, and certain designated individuals and/or non-profit organizations who shall carry out any activities, obligations or duties set forth in this agreement as agents on behalf of the principal RTF;

WHEREAS, NDA, RTF and the individuals and organizations working with RTF, recognize the historical significance of the VRE/FHs in this areas and desire to bring about and implement an effective management agreement(s) for the benefit of the horses and environment;

WHEREAS, the Parties acknowledge the need to review and address the ecological sustainability of the VRA, and recognize that horse populations are not the sole obligates of the VRA nor should the VRA be managed as such;

WHEREAS, the Parties recognize that reduction of VRE/FH population numbers ultimately will benefit the health of VRE/FHs as well as the ecological balance of the VRA; and

WHEREAS, the Parties acknowledge the need to cooperate in the development of strategies and practices to manage the VRE/FHs, with the goal of protecting public safety and reducing the population through the administration of fertility control measures, facilitating adoption and private placements; and implementing strategies to further reduce the number of human/horse conflicts, thereby improving public safety, the ecological balance of the VRA, and the health of horse populations.

NOW, THEREFORE, the Parties agree as follows:

1. DEFINITIONS

For purposes of this Agreement and in furtherance of NRS 569.031, the following definitions shall apply:

- 1.1. "Virginia Range Area" (VRA) shall be defined as that area contained by the following borders, roads and/or landmarks, which include the I-80 as the North boundary, Highway 95A as the East Boundary, Highway 50 as the South Boundary and (old) Highway 395 as the Western Boundary, more specifically set forth in the attached Map (Attachment 1).
- 1.2. "Feral Livestock" shall have the meaning as defined in NRS 569.008 and NRS 569.010.
- 1.3. "Estray" shall have the meaning as defined in NRS 569.0075 and NRS 569.010;
- 1.4. "Livestock" shall have the meaning as defined in NRS 569.0085.
- 1.5. "Private lands" shall mean real property owned by any individual, partnership, corporation, or other similar legal entity.
- 1.6. "State lands" shall mean lands which are currently, by law, under the operation, control, and/or management of the State of Nevada or a Nevada state agency.
- 1.7. "Public lands" shall have the meaning as defined in NRS 408.078.
- 1.8. "Federal lands" shall mean lands which are currently owned or managed by the federal government and under the jurisdiction of any federal agency or entity.
- 1.9. "Standard Operating Procedures" (SOPs) shall mean a set of written instructions approved by NDA that documents a routine or activity to be followed the NDA or RTF in concert with this Agreement.
- 1.10. "Legal fence" shall have the meaning as defined in NRS 569.431.
- 1.11. "Improved Road" or "Paved Road" shall have the meaning of an interstate highway, freeway, expressway, principal arterial, minor arterial, major collector, minor collector, or paved local roads as defined by the Nevada Department of Transportation. This definition shall not include unpaved or graded dirt roadways or trails.
- 1.12. "Trapping" shall mean any intentional action by either NDA or RTF resulting in the confinement of any number of VRE/FHs into holding pens, trailers or corrals.
- 1.13. "Diversionary feeding" shall mean providing food or nourishment to the VRE/FHs to encourage them to relocate to specific areas for purposes of implementing fertility control measures, trapping or public safety in accordance with RTF's SOPs.
- 1.14. "Encroachment area" in the context of an urban setting, shall mean the natural, undeveloped or vacant land immediately surrounding an urban area or developed areas containing works of improvements (e.g. improved or paved roads, landscaping, or public, residential or commercial structures).

- 1.15. "Fertility Control Measures" (FCM) shall mean established and recognized protocol and procedures for the administration of porcine zona pellucida (PZP) or similar variants approved by NDA, that reduce conception rates in horses utilizing recognized and approved delivery methods.

2. OBJECTIVE, SCOPE & DURATION OF THE AGREEMENT

- 2.1. This Agreement shall establish policies and procedures to address the management and/or disposition of the VRE/FHs in the VRA for the purpose of reducing the VRE/FH population so as to improve VRA rangeland and VRE/FH population health, to reduce conflicts involving horses and citizens, protect private and public property, and to remediate public safety issues.
- 2.2. This Agreement shall govern only stray and feral horses found within or strayed from the boundaries of the VRA as described in Definition 1.1.
- 2.3. This Agreement becomes effective when fully executed by all Parties hereto and shall remain in full force and effect until terminated by either party upon 30 days written notice pursuant to Section 9.3 "Cancellation" of this Agreement, or until the end of five years from the effective date of this Agreement.
- 2.4. This Agreement does not replace or supersede the previous Cooperative Agreement entered into on March 13, 2013.
- 2.5. This Agreement shall not pertain to, nor involve, any animals under the jurisdiction of the Federal Government pursuant to the Wild Free-Roaming Horses and Burros Act, 16 U.S.C. Section 1331 to 1340, inclusive, and any regulations adopted pursuant thereto or any other federal statute or regulation. This agreement does not in any way address, limit or forbid that RTF and/or its cooperators separately assist or work with federal agencies, Tribal Nations and other affected agencies.

3. MUTUAL OBLIGATIONS OF THE PARTIES

- 3.1. The Parties agree to designate one person to act as the Point of Contact (POC) for purposes of providing notice, as follows:

RTF

Name: Deniz Bolbol
Title: _____
Address: PO Box 5656
City: Redwood City State: CA Zip: 94063
Telephone: 650-248-4489
Email: deniz@wildhorsepreservation.org

NDA Manager

Name: _____
Title: _____
Address: _____
City: _____ State: _____ Zip: _____

Telephone: _____
Email: _____

The Parties agree to promptly notify each other in writing of any changes to the POC and/or their contact information.

- 3.2. The Parties agree to use their best efforts, act in good faith, and maintain open and ongoing communication with the other in a constructive and professional manner.
- 3.3. The Parties, through their respective POCs, agree to participate not less than quarterly in meetings to review issues, discuss any needs, evaluate and refine performance standards and benchmarks, obtain approvals as required, and make recommendations to improve this Agreement and the stated objectives.
- 3.4. Within 12 months from when this Agreement becomes effective, and consistent with NDA's duties set forth in NRS 561.218(2)(a) and (b), NDA and RTF agree to collaborate to provide, assemble and share data for use in the preparation of a multi-disciplinary rangeland and resource management plan that will help inform performance objectives, establish appropriate herd population numbers and evaluate the overall condition of the VRA ecosystem.
 - 3.4.1. Subject to paragraph 9.1, costs to develop a population and resource management plan and to conduct any range resource inventories and assessments, if any are incurred, shall be borne by the NDA; in the event that RTF wishes to engage additional or different Parties or organizations as part of this plan, RTF shall bear any associated costs.

4. OBLIGATIONS OF RTF

- 4.1. No later than three (3) months from the execution of this Agreement, and prior to undertaking any activities on the VRE pursuant to this Agreement, RTF agrees to provide to NDA SOPs that address any activities which will be undertaken pursuant to this Agreement by RTF or its agents, including, but not limited to procedures to implement any trapping, diversionary feeding, FCMs, and protocol for responding to complaints or calls. Further, SOPs shall include specific performance measures that demonstrate how RTF activities undertaken pursuant to this Agreement – including, but not limited to, FCMs – are intended to achieve overall VRE/FH population goals.
- 4.2. RTF agrees to maintain an insurance policy throughout the duration of this Agreement, listing the State of Nevada, its officers and employees as additional insureds, in the minimum sum of one million dollars to cover any claims, damages or injuries to persons or property, which may arise during the pendency of this Agreement. RTF and its agents, volunteers and employees, further agree to indemnify, defend and hold harmless the State of Nevada, from any damages, claims, or injuries which may arise related to or in furtherance of this Agreement. If this insurance at any time lapses, RTF shall immediately notify NDA and cease any activities under this Agreement. RTF shall provide or require insurance coverage for any participants under this Agreement to cover any claims, damages or injuries to any persons or property which may arise during the pendency of this Agreement.
- 4.3. Pursuant to NRS 569.031, RTF agrees to provide a year-end report to NDA setting forth all data collection, summary of activities, including but not limited to, efforts to administer

and track mares receiving birth control, relocation and fencing activities, SOPs, training of persons participating under this Agreement, after action reports (AARs), instances of feeding, year-end results of performance objectives and any recommendations or amendments to this Agreement.

- 4.4. Any actions undertaken by RTF or its agents involving responses to citizen complaints, fencing, implementing diversionary feeding or fertility control measures shall be in accordance with approved SOPs and followed by an AAR documenting and summarizing the activities of any responders. RTF shall notify NDA of any complaints from the public or other entities pertaining to the VRE/FHs as soon as possible but not more than one (1) business day after receipt, in accordance with approved SOPs; complainants may remain anonymous upon request.

5. OBLIGATIONS OF NDA

- 5.1. In accordance with approved SOPs, NDA shall notify RTF, as soon as possible but not more than one (1) business day after the conclusion of any trapping and removal of VRE/FHs conducted by NDA. NDA shall also notify RTF as soon as possible but not more than one (1) business day after receiving any complaints from the public or other entities pertaining to VRE/FHs; complainants may remain anonymous upon request.
- 5.2. NDA shall promptly review all RTF requests for approval or permission for fencing, trappings, FCMs, or implementation of diversionary feeding or other public safety interventions, and provide written response within three (3) business days. NDA may grant the request, deny the request with explanation, or grant a request with modifications.
- 5.3. Concurrent with the execution of this Agreement, NDA shall provide a permission or authorization form for use by RTF when seeking permission to conduct activities on private property or areas subject to livestock grazing permits.

6. TRAPPING, ADOPTION OR RELOCATION

- 6.1. The Parties recognize that trapping may be required as a result of an emergency condition, citizen or public agency complaint(s), or for planned activities that may be authorized by NDA such as the implementation of fertility control measures. The Parties acknowledge that this Agreement does not operate to limit NDA's statutory management authority or powers for the VRE/FHs except as specifically provided for herein.
- 6.2. RTF may trap, remove, relocate VRE/FHs only after first obtaining the approval of NDA and in accordance with approved SOPs, unless an urgent public safety condition exists and certain factors are met as explained in 6.2.3.
 - 6.2.1. Any VRE/FHs so removed by RTF or its agents shall be subject to either relocation to lands approved by NDA and the appropriate entity or individual which controls said lands or shall be placed in accordance with the previous Cooperative Agreement, with a finalized date of March 13, 2013 (hereinafter the "3-2013 Cooperative Agreement").
 - 6.2.2. The 3-2013 Cooperative Agreement is hereby modified as followed:

Reduced Purchase Price: If NDA authorizes RTF to conduct a Trapping and removal pursuant to this section, and RTF utilizes its own resources to remove, transport, house, feed and treat any VRE/FH, NDA shall, after compliance with the requirements of NRS 569.070-.080, sell any unclaimed VRE/FH to RTF for the sum of \$0.00 (zero) dollars. RTF shall pay the costs for castration and other agreed upon expenses.

- 6.2.3. When an urgent public safety condition exists as described in 8.1.1 and officials having statutory responsibility for public safety determine that immediate action is warranted for the protection of public safety, and upon determination made in accordance with SOPs that NDA personnel or resources are not available to respond in a timely manner, the RTF may trap, remove or relocate the relevant VRE/FHs to resolve the urgent public safety threat. Any failure to adequately resolve or mitigate such threat in accordance with applicable laws, this agreement, and SOPs shall not subject RTF to any liability.

7. FERTILITY CONTROL MEASURES

- 7.1. RTF proposes and agrees to implement humane fertility control measures (FCMs) to reduce the VRE/FH population in accordance with approved SOPs. Both Parties acknowledge that for FCMs to be effective, they must be administered according to industry best practices, including unique identification and documentation of mares receiving treatment in order to facilitate consistent treatment.
- 7.2. Performance goal and measures: Both Parties acknowledge the need for clear goals and measures in order to understand the efficacy of efforts and to inform adaptive management. Both Parties acknowledge that these numbers may be revised as necessary.
- 7.2.1. RTF has set as its goal to treat the following number of mares per year:
- Year 1: At least 150 mares
 - Year 2: At least 250 mares
 - Year 3: At least 400 mares
 - Year 4: At least 550 mares
 - Year 5: At least 750 mares
- 7.2.2. The objective of these treatments is that at least seventy-five percent (75%) of mares treated under the approved FCMs do not produce foals in the foaling period in which the treatment should have prevented conception.

8. PUBLIC SAFETY

- 8.1. The Parties agree to the following public safety incident categories relating to VRE/FHs, corresponding management actions, and response times. The parties agree to establish baseline criteria for number of horse incidents (e.g. safety concerns, accidents, etc.) as described in the following categories where management activity is conducted. The initial objective shall be the reduction of such incidents by a minimum of a fifty percent (50%) from the respective baseline.
- 8.1.1. Category 1 – Urgent – Requires immediate removal of horses; determined by NDA and/or state, tribal or local law enforcement; RTF shall be notified as soon as possible but no later than one (1) business day.
- 8.1.2. Category 2 – Priority – Potential public safety issue; if no immediate public safety concern identified by local law enforcement, NDA notifies RTF to assist in implementing diversionary feeding, relocation and identification of possible issues (e.g. failed fencing, illegal feeding, etc.); RTF or NDA, as appropriate, notified within one (1) business day.
- 8.1.3. Category 3 – Preventative – RTF will survey, consistent with approved SOPs, respective areas for potential Category 1 and/or 2 situations. Prioritize Category 3

situations to utilize available resources to minimize or prevent future Category 1 or 2 situations; RTF or NDA, as appropriate, notified within three (3) business days.

- 8.2. The RTF may implement fencing projects and/or repairs to help manage and control VRE/FHs on the VRA in accordance with the established SOPs.
 - 8.2.1. Cost for such repairs and/or the installation of fencing shall be borne by RTF and/or its agents, and/or the agency or entity requesting the construction of said fencing. NDA shall not incur any financial obligation for any such project unless explicitly agreed to in writing by an authorized NDA representative.
- 8.3. This Agreement shall not be construed as a delegation of any statutory duties of NDA that are mandated by NRS 569, *et seq.* concerning feral and estray horses. NDA shall retain its full authority to manage and control any property of the Department and to respond to citizen complaints or calls involving horses in urban areas and all emergency situations. The responsibility for ensuring public safety shall lie exclusively with NDA and local law enforcement.
- 8.4. Both Parties agree to engage in ongoing collaboration to reasonably pursue methods that may improve the public awareness concerning horse and public safety issues, and reduce human-horse incidents, including but not limited to placement of additional signage, lights, fencing, and promoting public education campaigns to deter inappropriate, unnatural or undesirable interactions between humans and VRE/FHs, subject to funding, staff and resource limitations.

9. GENERAL PROVISIONS

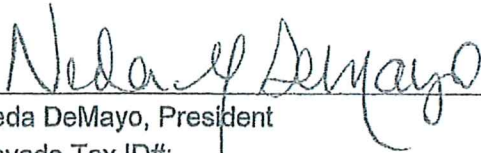
- 9.1. Any costs incurred by RTF incurred in the performance of this agreement shall be chargeable to NDA only if NDA has given prior express approval by executing a contract or other obligating document. Unless otherwise specified in this agreement or provided for by contract or other obligating document, costs incurred by each party shall be borne by that party.
- 9.2. Indemnity and Insurance: As required pursuant to NRS 569.031(5), RTF, its agents, assigns and all persons acting in concert with RTF on activities set forth herein, agree to indemnify, defend and hold harmless the State of Nevada from any claim or liability arising from any act or omission of the cooperating person(s) or entity arising from this Agreement, and agree that all volunteers shall have appropriate and sufficient insurance to address any claims, injuries, or damages that may arise under this Agreement. Proof of insurance covering RTF, its agents and any activities to be carried out under this Agreement shall be a condition precedent to any obligation or duty by NDA.
- 9.3. Cancellation: This agreement may be canceled by either party without cause upon thirty (30) days written notice to the other party. Further, pursuant to NRS 569.031, NDA may cancel this Agreement upon finding that RTFs actions are noncompliant with the Agreement. Any Notice of Cancellation may only be revoked in writing upon delivery to the other party. Neither party shall incur any liability absent a finding of malfeasance or willful misconduct.
- 9.4. Warranties: Neither party makes any warranties nor promises, express or implied, with respect to the management and control of horses on the range except as set forth herein.
- 9.5. Choice of Law: Should any dispute arise concerning the terms and conditions herein, the Parties agree that this agreement shall be interpreted according the laws of the State of Nevada, and the Parties further consent to the exclusive jurisdiction in the Second Judicial

District in Washoe County, Nevada for any enforcement or interpretation of this Agreement.

- 9.6. Compliance with Applicable Laws: Both NDA and RTF, its agents and assigns shall, at all times in the performance of its duties and obligations, comply with all applicable laws, statutes, ordinances, and rules.
- 9.7. Good Faith: Each party agrees to act in good faith and use their best efforts to comply with this Agreement and privately resolve issues or disagreements. Libelous statements issued to the media by either party may be considered grounds for termination of this Agreement. This shall not be construed as a limitation of any First Amendment rights of either party or their agents.
- 9.8. No Other Inducement: The making, execution and delivery of this Agreement by the Parties hereto has been induced by no representation, statement, warrantee or other agreement other than those as written herein.
- 9.9. Assignments: Neither party shall assign this Agreement or any rights, duties, or obligations hereunder without the prior written consent of the other Parties. Any unconsented assignment shall be null and void *ab initio*.
- 9.10. Successors: All of the terms and conditions of this Agreement shall be binding upon, inure to the benefit of, and be enforceable by the Parties hereto and their respective heirs, legal representatives, successors, and permitted assigns. Any transfer or responsibilities from RTF to another entity shall be subject to written approval by NDA.
- 9.11. Further Assurances: The Parties agree to take such further action and execute such further documents and instruments as may be reasonably necessary in order to effectively carry out the terms of this Agreement and the intentions of the Parties hereto.
- 9.12. Entire Agreement: Each party acknowledges that they have read and understand this Agreement, that it constitutes the entire understanding between Parties, and agree to be bound by the terms hereof. This Agreement is likewise binding on the respective agents, legal representatives, successors and assigns of the Parties, if any.
- 9.13. Amendments: Any amendments to this Agreement must be reduced to writing and signed by the Parties hereto; amendments to associated SOPs must be reduced to writing and approved by the Parties hereto.
- 9.14. Consultation with Counsel: Each party acknowledges it has had the opportunity to consult with counsel prior to execution of this Agreement, and as such, acknowledges that he has been fully advised of each party's respective rights, duties and obligations.
- 9.15. Counterparts: This Agreement may be signed and delivered in separate counterpart originals. All such counterparts will be deemed to constitute one and the same instrument. Delivery of a counterpart may be effectuated by transmitting a signed signature page by hardcopy, e-mail PDF, or other electronic transmission means.
- 9.16. Authorization to Sign: Each individual signing the Agreement on behalf of an organization represents that they have authority to bind the principal as well as any agents and cooperators acting in furtherance of this Agreement.


IN WITNESS THEREOF, each of us acknowledge receipt of a copy of this Agreement and have entered into this Agreement on the date set forth below.

RETURN TO FREEDOM, INC.


Neda DeMayo, President
Nevada Tax ID#: _____

Dated: 3/12/15
Federal 06-1484961

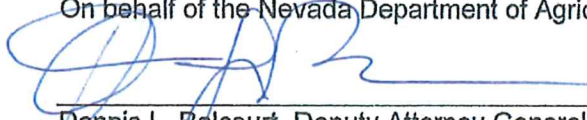
NEVADA DEPARTMENT OF AGRICULTURE


Jim Barbee, Director

Dated: 3/10/2015

APPROVED AS TO FORM AND CONTENT:

OFFICE OF THE ATTORNEY GENERAL
On behalf of the Nevada Department of Agriculture


Dennis L. Belcourt, Deputy Attorney General

Dated: 3/19/15

Attachment G – 2016 signed amendment

**AMENDMENT TO
NEVADA DEPARTMENT OF AGRICULTURE
VIRGINIA RANGE COOPERATIVE AGREEMENT**

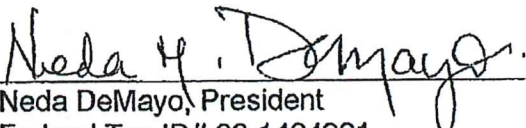
This **AMENDMENT** is made to the Cooperative Agreement (hereinafter "Agreement") between Return to Freedom, Inc. (hereinafter RTF), a foreign non-profit corporation, and the Nevada Department of Agriculture (hereinafter NDA) which was signed on March 19, 2015 and is attached hereto.

Pursuant to the **AGREEMENT SECTION 9.13: AMENDMENTS** the Agreement shall be amended to transfer all responsibilities and obligations held by RTF, as outlined in the Agreement, to the American Wild Horse Preservation Campaign (hereinafter AWHPC), a foreign non-profit corporation organized and existing under the laws of the State of California, with its principal place of business in Belmont, California. From this date forward, all references to RTF in the Agreement shall now apply to AWHPC.

The Points of Contact identified in the **AGREEMENT SECTION 3.1** shall remain the same.

Each individual signing this **AMENDMENT** on behalf of an organization represents that he or she has the authority to bind the principal as well as any agents and cooperators acting in furtherance of this amendment.

RETURN TO FREEDOM, INC.


Neda DeMayo, President
Federal Tax ID# 06-1484961

Dated: 3-31-16

AMERICAN WILD HORSE PRESERVATION CAMPAIGN


Suzanne Roy, Executive Director
Federal Tax ID# 47-4016989

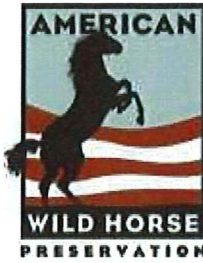
Dated: 3-31-16

NEVADA DEPARTMENT OF AGRICULTURE


Flint Wright, Administrator

Dated: 4-1-16

Attachment H – 2016 cooperative agreement progress report



Nevada Department of Agriculture Virginia Range Cooperative Agreement Annual Progress Report – Year 1 (March 2015 – March 2016)

The Virginia Range Horse Cooperative Agreement (herein after referred to as the Cooperative) was signed on March 19, 2015 between the Nevada Department of Agriculture (NDA) and Return to Freedom/American Wild Horse Preservation Campaign (AWHPC); on April 1, 2016 the Cooperative was wholly transferred to AWHPC.

The Cooperative Section 4.3 states that pursuant to NRS 569.031, AWHPC agrees to provide this year-end report to NDA setting forth all data collection, summary of activities, including but not limited to, efforts to administer and track mares receiving birth control, relocation and fencing activities, SOPs, training of persons participating under this Agreement, after action reports (AARs), instances of feeding, year-end results of performance objectives and any recommendations or amendments to this Agreement.

SUMMARY

We are happy to report a positive experience and positive results stemming from the Cooperative. We have four (4) local cooperating non-profit organizations assisting with the efforts to humanely manage the Virginia Range horses in cooperation with the NDA:

1. Virginia Range Wildlife Protection Association (VRWPA)
2. Hidden Valley Wild Horse Preservation Fund (HVWHPF)
3. Wild Horse Connection (WHC)
4. Wild Horse Preservation League (WHPL)

Each of these organizations, as well as AWHPC, has maintained the required one million dollar insurance policies to cover their volunteers while working on activities under the Cooperative. This means that the Cooperative Section 4.2 regarding the requirement that AWHPC maintain one million dollar insurance coverage was more than doubled to indemnify the State of Nevada and its officers and/or employees. Additional individual volunteers associated with other local non-profit organizations participated and were insured by joining one of the four above-listed organizations.

Approval of each activity performed under the Cooperative is coordinated between Deniz Bolbol (AWHPC) and the NDA. Each activity performed is then managed by the AWHPC Project Manager, see below or an assigned leader from one of the cooperating local non-profit organizations.

Activities Include:

- Community education via door-to-door distribution of flyers in neighborhoods;
- Diversionary feeding and watering;
- Documentation of horses in Wild Horse Identification Management System (WHIMS) database;
- Fencing and cattle guard construction, cleaning and repair;
- Administering PZP fertility control via darting;
- Moving horses away from streets, highways and neighborhoods for public and horse safety;
- Securing private property owner approval for diversionary feeding, darting & fencing activities;
- Raising funds through individual and corporate support.

PROJECT MANAGER

AWHPC hired a local project manager in January 2016 who reports to Deniz Bolbol. The project manager is a hands-on manager coordinating Cooperative efforts locally, in addition to other AWHPC responsibilities. The project manager attends local non-profit meetings and coordinates between groups to understand the totality of the non-profit efforts pertaining to the management and overall initiatives in support of the Virginia Range horses. In addition, the project manager is the most active darter and also conducts on-the-range training of other PZP fertility control darters.

YEAR-END REPORT

1. Standard Operating Protocols (SOPs) (Cooperative Section 4.1)

As per Cooperative Section 4.1, in cooperation with the NDA, SOPs were developed and are utilized for the following:

- Proactive Diversionary Feeding
- Humane Fertility Control (Liquid PZP vaccine)
- Trapping & Relocation

The protocol for responding to complaints or calls was included in Cooperative Section 8.

2. Year 1 Fertility Control (Cooperative Section 7.1 – 7.2.1)

Goal: The goal of treating at least 150 mares with PZP fertility control was achieved. More than 150 mares were treated with PZP fertility control including all mares, one year and older, involved in diversionary feeding programs.

Performance: The humane fertility control project for the Virginia Range is a critical component for the effective management of the Virginia Range horses. AWHPC sponsored four volunteers to travel to the Science and Conservation Center in Montana

to be certified in the application and remote delivery of the Porcine Zona Pellucida (PZP) vaccine. Certification was complete on August 13, 2015 and darting began in September 2016.

As of June 2016, 232 horses were inoculated with the PZP Primer vaccine and 152 of those horses were inoculated with the PZP Booster vaccine.

Note: The PZP Primer is only required in the first year that a mare receives the inoculation. In subsequent years, each mare already in the fertility control program receives only one dart of the PZP booster vaccine.

As expected, because PZP does not interfere with existing pregnancies, mares that were darted while in foal have successfully given birth to healthy foals in Spring 2016. After the 2017 foaling season, AWHPC will report whether the 75% PZP efficacy target that was established in Cooperative Section 7.2.2 was achieved.

3. DATA COLLECTION (Cooperative Section 4.3 and 7.1)

AWHPC purchased the Wild Horse Identification Management System (WHIMS), a wild horse identification database that is used to record information such as horse ID number, alias, sex, band affiliation, age (if possible), physical color and markings, and general range/territory as reported by volunteers, PZP application and other pertinent information about individuals or bands. WHIMS is the tracking database used for the PZP fertility program to track all information relating to PZP application, foaling rates and details such information as date of darting, darter, darting location on each horse, distance from horse when darted, CO2 level, primer vs. booster vaccine, PZP lot number, as well as dart performance and recovery status.

As of June 5, 2016, over 1,250 horses from the Virginia Range have been documented in the WHIMS database. This represents over 50% of the estimated 2,000 horses currently on the Virginia Range.

4. DIVERSIONARY FEEDING (Cooperative Section 4.3)

Diversionary feeding was authorized and implemented as follows:

- The "D" behind Damonte High School – to keep horses out of Damonte and Brown School areas and for fertility darting. 70-100 horses.

Performance: For the most part, successfully prevented horses from coming into the neighborhood and roadways.

- Toll Road (off Geiger Grade, at back of Westwind Circle and back of Bain Spring Rd) – to keep horses out of Toll Road and Geiger Road areas and for fertility darting. 20-50 horses.

Performance: For the most part, successfully prevented horses from coming into the neighborhood and roadways.

- Orchard property off of Geiger Grade – to keep horses off of Geiger Grade, Foothills and Toll Road areas. 15-25 horses.

Performance: For the most part, successfully prevented horses from coming into the neighborhood and roadways.

- Willamena property off of Rhodes Road – to keep horses out of Toll Road, Rhodes Road and Hwy. 395 areas. Up to 150 horses.

Performance: For the most part, successfully prevented horses from coming into the neighborhood and roadways.

- Virginia Highlands (Henderson & Senko properties) – primarily for fertility control darting but also assisted to keep horses off of Geiger Grade. 45-50 horses.

Performance: Enabled the application of the PZP Booster to more than 15 mares who had previously been administered the PZP Primer. Once mares received PZP Booster, diversionary feeding ended.

Not Implemented or Very Limited Implementation

- Mark Twain, Edith – to keep horses out of roadways and neighborhoods. 25-50 horses. Limited to 2-4 feedings.
- Hidden Valley Hills – to keep horses out of neighborhood and for fertility control darting. 50-70 horses. Not implemented.
- Carson City, East of Eagle Valley Golf Course – to keep horses out on the range and out of roadways and neighborhoods. 25-50 horses. Not implemented.

5. FENCING ACTIVITIES (Cooperative Section 8.2)

- Lockwood – ongoing work with private property owners and Storey County to clean cattle guards and reinforce fencing to prevent horses from going in to Lockwood.
- Hidden Valley Park – work with Washoe County Parks Department to reinforce fencing, remove horse manure and post signage to keep gates closed to prevent horses from entering the Park.

6. RELOCATION (Cooperative Section 6.2)

In cooperation with the NDA, one attempt was made in collaboration with NDA in the winter of 2015 to relocate the Lightning band that frequented the areas of Toll Road,

Curti Ranch, Veteran's roundabout. NDA moved the band to the "Cottonwood area" on the range behind the Highlands. Unfortunately, most relocations are not successful without fencing improvements to prevent the undesirable movement patterns – this was true for this relocation attempt. In the Spring of 2016, the Lightning band moved up to "The D" area on their own and out of the streets, which is a typical seasonal movement for this band. To date, this band remains up on the range.

7. TRAINING (Cooperative Section 4.3)

Below is a list of training that Cooperative volunteers participated in throughout the past year.

1. **Fertility Control (PZP) Darting Certification** – conducted by the Science and Conservation Center in Billings, Montana.
Four volunteers were certified in August 2015.
2. **Large Animal Rescue** – conducted by Nevada Department of Emergency Management.
Four volunteers were certified in October 2015.
3. **Worktraits** (communication & team building workshop) – conducted by Bob Maccario and Rene Klein
Ten volunteers were certified in February 2016.
4. **Large Animal Rescue Basic** – conducted by LRTC
Three volunteers were certified in April 2016.

ADDITIONAL ACTIVITIES

VOLUNTEER RECRUITMENT

Each of the local non-profits recruits volunteers under their own program and to participate in activities conducted under the Cooperative. Due to the numerous activities that are required this year and going forward to support the overall efforts on the range, this has been a priority for all members of the coalition, including AWHPC. This will continue to be a priority for 2016.

"VIRGINIA RANGE WILD HORSE CONFERENCE" AT TAHOE-RENO INDUSTRIAL PARK (TRI)

Lance Gilman and Kris Thompson gathered a group of interested parties for a first-of-its-kind meeting to discuss safety and management of the horses in the TRI area, located off of USA Parkway in Story County. There is also a significant highway extension of USA Parkway from the TRI to U.S. 50 that is in the planning process that was discussed in relationship to how to provide for the safety of wildlife/horses and drivers as this area is heavily grazed by horses. Participants included TRI management, local businesses, wild horse advocates, the NDA and other government agencies.

2016 GOALS

Below are the goals for furthering the establishment and expansion of the Cooperative.

- Strengthen communication protocols and implementation with NDA to address horse activities that fall under the Cooperative.
- Recruit additional 3-5 darters to be certified for PZP fertility control application.
- Expand PZP fertility control program to include at least 250 horses.
- Expand community relations & education efforts in cooperation with the NDA.
- Continue and expand documentation of individual Virginia Range horses and bands.
- Recruit and train new volunteers to participate in Cooperative.
- Secure additional sponsorship support for Cooperative activities.
- Continue and expand training opportunities for volunteers.
- Initiate fencing and cattle guard projects to prevent horses from entering roadways and neighborhoods.

2015-2016 HISTORICAL TIMELINE

Mar 19, 2015	Cooperative Signed
Apr 18, 2015	Standard Operating Protocol's Approved
Jul 30, 2015	Diversionary feeding started (at "The D" and later at other locations)
Aug 13, 2015	Four (4) PZP darters certified by the Science and Conservation Center in Billings, MT
Sep 14, 2015	Humane fertility control begins with remote delivery (darting) initial "primer" inoculations of Porcine Zona Pellucida (PZP)
Jan 21, 2016	First fertility "booster" inoculations of PZP begin (research shows boosters are most effective when administered as close as possible to foaling season)

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Attachment I – 2016 unsigned amendment

**AMENDMENT TO
NEVADA DEPARTMENT OF AGRICULTURE
VIRGINIA RANE COOPERATIVE AGREEMENT**

This **AMENDMENT** is made to the Cooperative Agreement (hereinafter "Agreement") between the American Wild Horse Preservation Campaign (hereinafter AWHPC), a foreign non-profit corporation, and the Nevada Department of Agriculture (hereinafter NDA), which was signed on March 19, 2015 and amended on April 1, 2016, and is attached hereto.

Pursuant to the **AGREEMENT SECTION 9.13: AMENDMENTS**, the Agreement shall be amended to eliminate **SECTION 5.1** and **6** of the Agreement, which relate to the trapping, adoption or relocation of horses. Additionally, this **AMENDMENT** shall eliminate **Section 8**, which defines public safety categories and outlines management actions.

Each individual signing this **AMENDMENT** on behalf of an organization represents that he or she has the authority to bind the principal as well as any agents and cooperators acting in furtherance of this amendment.

AMERICAN WILD HORSE PRESERVATION CAMPAIGN



Suzanne Roy, Executive Director
Federal Tax ID# 47-4016989

Dated: July 18, 2016

NEVADA DEPARTMENT OF AGRICULTURE

Flint Wright, Administrator

Dated: _____

Attachment J – NDA VRE management proposal (2007)

Virginia Range Estray Program Management Proposal



Prepared by the Nevada Department of Agriculture

October 2007

History of the Virginia Range Estray Program

In 1997 the Nevada State Legislature enacted Assembly Bill No. 619, which placed the management of the Virginia Range Estray Horse Herd under the jurisdiction of the Nevada Department of Agriculture (NDOA). The Nevada Department of Agriculture also administers the 'Estray' livestock provisions of NRS 569, which are applicable to feral¹ livestock, including horses.

Between 1971, when Congress passed the Wild Free-Roaming Horse and Burro Act and 1984 the Bureau of Land Management (BLM) managed all wild horse and burro populations in Nevada. The majority of the Virginia Range is privately owned and therefore was not designated a herd area under the Wild Free-Roaming Horse and Burro Act. The BLM conducted the Stockton Flat/Horse Springs and Jumbo capture programs in 1983 and 1984 and declared the Virginia Range essentially wild horse free, at which point the responsibility of managing remaining horses fell to the Nevada Department of Agriculture. In 1997 the Department commissioned a first census of the Virginia Range Estray population, which established the presence of 413 horses. By June of 2002 the population had increased to 1,200. Such an increase in population size has significant ramifications for the horses' habitat. In 1999 a range assessment was commissioned by the Department in collaboration with the Virginia Range Wildlife Protection Association. The study was initiated in November 1999 and at its conclusion in 2000 it was determined that the management target for the Virginia Range should be set at 500 to 600 head. A definitive number of horses that could be sustained on the existing range could not be determined however. To evaluate carrying capacity the target population size has to be obtained and range conditions have to be monitored over time.

A total of 1,344 horses have been removed from the range and passed through Northern Nevada Correctional Center since August 1999. Due to lack of adoption opportunities, funding challenges, and a priority shift to concentrate on 'at risk horses' a population size of below 600 has, so far, been unattainable.

Since the inception of the capture and adoption program, the Department has worked with many organizations and individuals including Lifesavers, Inc.; Mustang Spirit; Least Resistance Training Concepts, Inc. (LRTC); Wild Horse Foundation; Virginia Range Wildlife Protection Agency (VRWPA); Wild Horse Organized Assistance, Inc. (WHOA); Silver Wolf Sanctuary; and the National Wild Horse Center (affiliated with the Save A Life Wild Horse Training Program) in an ongoing effort to place as many estray horses as possible.

The Comstock Wild Horse Training Program is a joint effort of the Nevada Department of Agriculture and the Nevada Department of Prisons and is located inside the Warm Springs Correctional Center in Carson City, Nevada. As horses are gathered, they are brought to a holding facility at the Stewart Conservation Camp, a facility of the Department of Prisons. From there, approximately 15 horses a year are transported to the Warm Springs Correctional Center where inmates, working under the guidance of a professional horse trainer, learn and practice "resistance free" training methods. Gentled horses are offered to the public during auction days held at the correctional center every fourth

¹ The term 'feral' means non-native/previously domesticated and will mostly be used synonymously with 'estrays' in this document.

months. Virginia Range Estray horses are trained together with BLM horses, and go to auction at the same time. The Virginia Range Estray horses do not compete well because the public does not perceive these horses to be attractive, largely due to size and stature. Since January 2006 the Department has placed 23 horses through auction and an additional 29 horses with local horse advocacy groups. In 2006 a total of 72 horses were sent to non profit organizations out of state.

In December 2006 the Nevada Department of Agriculture suspended cooperation with its major recipient of Virginia Range Estray horses since the cooperator is currently under federal investigation. Nationwide adoption and placement of wild and rescued horses has slowed down considerably because the market is entirely saturated. More than 90,000 horses have been sold annually for slaughter in the United States. It is expected that in the future a lot of horses will be abandoned if the option of selling them for slaughter is abolished. These horses could significantly contribute to the currently existing feral horse issue.

BLM, Partner and Competitor in placing the Virginia Range Estray Horses

The Bureau of Land Management (BLM) carries out its responsibilities under the 1971 Wild Free-Roaming Horses and Burros Act. The law mandates the protection, management, and control of free-roaming horses and burros in a manner that ensures healthy herds at levels consistent with the land's capacity to support them. The BLM manages about 29,000 wild horses and burros that roam BLM-managed rangelands in 10 western states. Since 1973, the BLM has, through adoption, placed more than 216,000 horses and burros into private care. Collaborators in this effort include the Ford Motor Company, Take Pride in America, a national partnership program, and the Mustang Heritage Foundation, which organizes events such as the Extreme Mustang Makeover.

The Extreme Mustang Makeover is a competition to train wild horses, in which up to 100 trainers from 29 states show case their skills and compete for up to \$25,000. This event takes place at the Will Rogers Equestrian Center, Watt Arena, in Fort Worth, Texas. The trained mustangs are judged on conditioning, groundwork, and a "Horse Course" that requires maneuvers and includes obstacles found in trail and recreational riding situations. At the conclusion of the program, the competing mustangs are available for adoption through an oral bid at the Will Rogers Center. Adoption fees are set by competitive oral bid with initial fees being determined by the level and quality of training each horse has received. To qualify to adopt, one must be at least 18 years of age and have no record of animal abuse. Adopters must have suitable facilities and can adopt no more than four animals. Adoption applications may be obtained and approved on the spot by the BLM.

Despite significant efforts and investments, 28,500 BLM horses are currently in BLM holding facilities. This utilizes close to half of the BLM's wild horse and burro operating budget.

The BLM briefly suspended its wild horse sales program from April 25, 2005 to May 19, 2005, to revise their bill of sale in an effort to strengthen its ability to find good homes for the animals that had to be sold. The temporary suspension of sales was prompted by two incidents in April 2005 involving the commercial processing of 41 horses that had been re-sold or traded after being bought from the BLM. At that time, the BLM contacted all three

U.S. horse processing plants in operation, in an effort to restrict the possibility that BLM freeze-branded horses sold under the law (Public Law 108-447) would be received or processed by those slaughter plants. Cavel International in DeKalb, Ill., the last U.S. horse slaughterhouse, closed on July 6, 2007.

Virginia Range Estray Horse Area - Range Description

The Virginia Range herd area consists of approximately 283,769± acres located east of Reno, NV. The Virginia Range herd area is situated between Reno and Carson City on the west and Fernley and Silver Springs on the east. The boundaries are roughly delineated by the Storey County line on the west; alternate Highway 95 on the east; the Truckee River on the north and the Carson River on the south. Within this area the majority of land is privately owned (over 160,000± acres). Roughly 80,000 acres are public lands managed by the Bureau of Land Management (BLM), Carson City District. The area is predominantly mountainous terrain extending down to the river drainages of the Truckee and Carson.

Given the areas high degree of variation in precipitation, soils, altitude, slope, aspect, and degree of historical and current disturbance, the natural vegetation in the Virginia Range herd area is consequently very diverse. Extremes of vegetation and ecological sites range from very productive sites with vegetation production of 3,800 - 6,000 lbs. /ac. /yr. in small stringer wet meadows to very unproductive sites with production of 25 - 125 lbs./ac./yr. in pinion/juniper dominated woodlands. Availability of water is a limiting factor in the number of horses or cattle the Virginia Range herd area can sustain.

The Virginia Range herd area has been invaded by cheatgrass (*Bromus tectorum*). Cheatgrass is an introduced annual grass species that does provide some nutrition to horses, however, forage production by cheatgrass is unpredictable (dependent upon precipitation, temperature and many other factors) and, because it matures early and dries out, is only a good source of nutrition early in the spring. Cheatgrass is very tolerant of fire and heavy grazing and prolifically seeds early in the growing season. With excessive grazing or fire, cheatgrass quickly becomes the dominant vegetation. Once cheatgrass becomes the dominant vegetative species it is extremely difficult and expensive to

VIRGINIA RANGE
ESTRAY HORSE
AREA

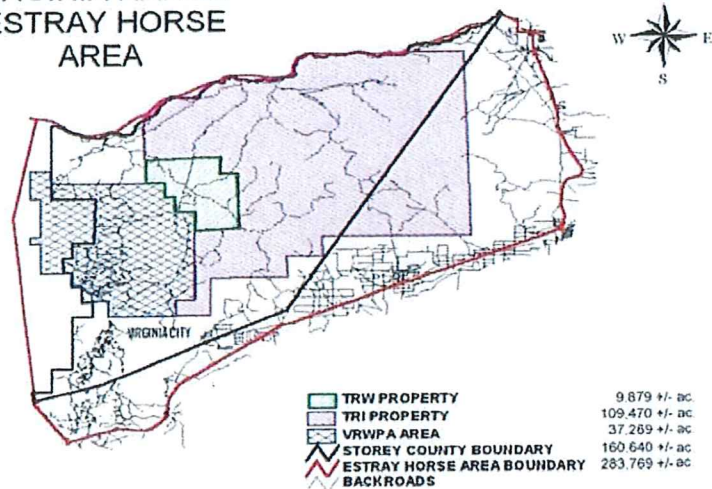


Photo courtesy of Meeghan Gray
University of Nevada, Reno

rehabilitate arid rangelands back to desirable native perennial vegetation. Dominance of any vegetative species reduces biodiversity at the vegetative level, thus reducing biodiversity of wildlife.

Many wildlife species have historically been found in the Virginia Range herd area. Predators are mainly coyotes. Additionally four to six mountain lions hunt in the Virginia Range herd area and are known to prey on horses. Mule deer are the largest wild herbivores occupying the Virginia Range herd area. There is a small resident herd of mule deer in the Virginia Range herd area. Deer do not usually directly compete with horse for forage as they are browsers (using woody shrub species). Reports of visual sightings of deer have decreased over the last ten years in the Virginia Range herd area. Other herbivorous species include jackrabbits, cottontail, and rodents. Numerous non-game bird species occupy the various vegetative communities from sage brush to pinion/juniper. Game birds are limited to dove, chukkar and sage grouse.

Livestock utilize portions of the Virginia Range herd area through private lease on the TRI lands and permits on BLM lands. TRI lease their rangelands to a local cattleman. Typically cattle numbers have been fewer than 200 head in the TRI owned rangelands. This year, however, the lessee has sublet the TRI range to another individual that has placed approximately 800 head of cattle on the range. Cattle have used the range year-around with a minimal degree of rotation. BLM permits both cattle and sheep on a portion of the land they administer in the Virginia Range herd area. The permits have been used on a sporadic basis. Cattle and horses directly compete for forage and water in this area. This has resulted in significant degradation of the vegetation. In addition cheatgrass has become the dominante vegetative species.

The most detailed ecological information available for the Virginia Range herd area can be found in a resource inventory (range assessment) completed by the Natural Resource Conservation Service (NRCS) in 2000. This study was jointly commissioned by the Virginia Range Wildlife Protection Association and the Nevada Department of Agriculture. The NRCS commission was to complete a comprehensive habitat capacity analysis on a portion of the Virginia Range herd area consisting of 85,130+/- acres, predominantly in western Storey County and a small portion of adjoining Washoe County.

The study area included those properties delineated on the attached map as TRW (9,789 ac.), Virginia Range Wildlife Protection Association (37,289 ac.), and public land administered by the BLM within the study area. The BLM portion of the study area is insignificant in size and therefore does not qualify as a herd management area (HMA). The study area is located on the western portion of the Virginia Range herd area, generally at higher elevations (>6,000 feet) and typically receives more precipitation than the balance of the Virginia Range herd area. **Therefore, the study area comprises the most productive and well watered rangelands within the Virginia Range herd area. This area has the greatest ability to withstand excessive year-long grazing and has the most potential for recovery.**

The primary objective of the inventory was to "gather sufficient information to make an estimate of the carrying capacity (grazing capacity) for horses that graze year-around within the area evaluated." Field investigations were performed to determine the amount of herbaceous production, levels of utilization, and the degree of variance of existing plant species from expected historic climax community or potential natural community (PNC) to

provide an estimate of range condition. Of 144 ecological sites studied; 8% were rated excellent; 32% rated good; 40% rated fair and 20% rated poor.

This metric provides some insight as to the ecological health of the Virginia Range herd area, but does not tell the whole story. Sagebrush, rabbit brush and pinion/ juniper are all native species that contribute to a particular ecological sites ability to rate high in a similarity index and ecological status rating. However, these species do not contribute to the forage base for horses. Vegetation types in the sites were skewed with a high component of shrubs and woody vegetation (>50%). The herbaceous or grass and forb components were at the low end of the expected range. The most desirable grass species, needlegrass and ricegrass, were present at only trace levels in many sites. Sandberg's bluegrass was more prevalent, but is less palatable and, therefore, less desirable for horses and cattle than needle or rice grass. **Thus, the ecological status rating overestimates range condition in relation to forage production for horses and other livestock and does not capture the shift in plant communities from grasses to shrubs.**

The Department of Agriculture and the Virginia Range Wildlife Protection Association agreed to a carrying capacity of 550 horses for the entire Virginia Range herd area of 283,769 acres in a public meeting held shortly after the study was released. The primary reasons for selecting a carrying capacity of 550 head for the entire Virginia Range herd area based upon only the forage capacity estimated for the study area (85,000 acres) was that the remainder of the Virginia Range herd area is privately owned by TRI, in development of industrial use with plans for significant residential development. Additionally, the communities of Fernley, Silver Springs, Stage Coach and Dayton Valley are experiencing rapid residential development and expansion into the Virginia Range herd area. There was recognition that the rangelands in Virginia Range herd area are experiencing heavy use, are in poor condition, and cheatgrass is the primary forage outside the study area in the Virginia Range herd area.

The Department of Agriculture proposes this management plan in order to preserve this habitat both for the VRE horses and indigenous wildlife.

Data was collected on the amount or degree of utilization of the vegetation by horses within the study area. The study documented heavy utilization (60% - 70%) throughout most of the study area and east of the study area. Severe use (>70% of current years growth) was recorded in all riparian and surrounding areas. Light use (< 25%) was recorded in the southwestern portion of the study area between Virginia City, Carson City, and Dayton. The attached map (page 5) illustrates the area and degree of utilization in the study area. At the time of the study, the horse population was estimated to be in excess of 1,000 horses. The population of horses in the Virginia Range herd area has been in excess of 700 head for more than a decade. Several years during this period the horse population was in excess of 1,000. It is safe to say that the utilization levels found in 1999-2000 are the norm and not the exception. Utilization at these levels year after year will completely eliminate the native perennial grasses in the Virginia Range herd area. The unknown is when (which year) degradation will be complete.

For horse populations to be sustainable over the long term, use of forage must be in balance with the physiological requirements and precipitation available to the forage plants. Domestic livestock can be moved and rotated through rangelands to meet vegetation requirements in conjunction with the time and timing of precipitation. Wild

horses are difficult to rotate on the range and consume forage every day of the year. The level of utilization present in the Virginia Range herd area is similar to what was common throughout the west during settlement. Heavy and severe utilization year-around and year after year is what decimated western rangelands during settlement and led to regulation of public lands by the federal government. It is not necessary to repeat history to determine if the Virginia Range herd area rangelands are in trouble.

Discussion with the NRCS personnel that performed the study revealed that they were appalled at the condition of the Virginia Range herd area at the time they collected data. They witnessed horses eating rabbit brush and sage brush which can be toxic to horses, an extremely unusual behavior. They also stated that most of the horses they observed were in poor physical condition and witnessed one animal dying of starvation. In order to accommodate the physiological requirements of the rangeland vegetation, population numbers of wild horses must be kept low enough in relation to the area horses graze to minimize the destructive impact on vegetation. Five hundred to 600 head has been the negotiated population, range scientists would decrease this number to 200 – 300 head for the entire range for a starting point to give the range time for rehabilitation.

There has been minimal competition for feed between cattle, sheep and horses in the study area. Outside the study area there has been moderate competition. This year, with the very large number of cattle being placed on the TRI property, there is an extreme amount of competition. Due to drought, there has been minimal production of any perennial forage or cheatgrass. A large area of the TRI and BLM lands east of the TRI property burned in 2006 eliminating any remnant cheatgrass in the burned area. The heavy stocking of cattle and horses has created a critical shortage of forage in the eastern portion of the Virginia Range herd area that could result in a crisis situation if the winter is unusually cold or there is significant snow pack on the ground for extended periods. The eastern portion of the Virginia Range herd area is important in relation to the carrying capacity of the study area for winter use. When snowfall covers the higher elevation rangelands horses need to get to warmer lower elevations and open feed. If there is no cheatgrass available in the low country due to excessive grazing during the growing season; exclusion due to development; elimination by fire; or covered by heavy snow pack. Mass starvation will be the result. Horses can and do winter in the upper elevations, but not when heavy snowfall occurs. Winter carrying capacity in the higher elevations is also skewed by the feeding of hay to horses in the Virginia Range Wildlife Protection Association by horse advocacy groups.

In 2000 there was still a sufficient native plant community in a high enough precipitation area to recover. However, to recover, utilization would have to be dramatically reduced as discussed previously.

At the time of submission of this management plan (October 2007) the situation on the VRE has deteriorated to the point that winter feeding of the horses through the NDOA should receive consideration to prevent mass starvation, population level infectious diseases and mass die-offs as currently experienced in BLM horses which were removed from one of the central Nevada HMAs.

Proposed Population Control Measures

Background

Immuno-contraception has been proposed as a technique for managing wildlife populations and populations of feral animals in urban and suburban settings where traditional (lethal) control methods may not be publicly acceptable. Immuno-contraception uses an animal's own immune response to disrupt reproductive function at different levels. Surface proteins of eggs, sperm, and fertilized eggs, in addition to reproductive hormones; have been proposed for use in developing a contraceptive vaccine. The most widely tested immuno-contraceptive vaccine for wild species is based on developing antibodies to the zona pellucida (ZP) that surrounds the mammalian egg cell. This vaccine has successfully caused infertility in some individual animals, but requires multiple treatments. Alternatively, different hormonal pathways can be targeted. Gonadotropin Releasing Hormone (GnRH) is a component of the estrus pathway. Equine Chorionic Gonadotropin (ECG) or pregnant mare's Gonadotropin is part of the pregnancy pathway. An enhancement of the immune response has been accomplished by coupling substances to the target molecules. All of the above vaccines are injectables; development of oral vaccines is under way. Intrauterine devices (IUDs) have a very poor retention rate and require general anesthesia or heavy sedation of feral horses and large marble like objects. These are 40-70% effective in delaying cycle, but no studies exist which evaluated fertility. Surgical spaying or neutering or chemical vasectomies have also been considered.

Contraceptive treatment may alter the health and behavior of wildlife populations and therefore must be monitored closely. Behavioral studies on the VRE horses have been conducted since 2004 and will be published as part of graduate student thesis.

Dr. David Thain (Nevada State Veterinarian from June 1998 to January 2006) initiated population control research at the Nevada Department of Agriculture in 2002. Dr. Thain currently holds the position of Extension Veterinarian at the College of Agriculture, Biotechnology and Natural Resources at the University of Nevada Reno and is still actively involved in the Virginia Range Estray program. Preliminary safety trials for immuno-contraception products and IUDs were conducted on six mares at the Carson Prison Farm. In 2003 both GnRH and Zona pellucida targeted immuno-contraception products as well as IUDs were taken to pen trials at the farm. The following year this trial continued at the farm and was expanded to a field trial. Both trials are still ongoing in 2007. Results from these trials have been submitted for publication.

Immuno-contraception using GnRH vaccine

Horses on the Virginia range reproduce year round and do not show seasonality or a definitive mating season as many other mammalian species do that occupy temperate habitats. Their reproductive system is always "turned on." When animals are 'in heat' testosterone levels rise in males, and females begin estrous cycling ("going into heat"). Gonadotropin-releasing hormone (GnRH) is the initial step of the pathway that signals the body to produce sex hormones. GnRH is produced by the hypothalamus, a major organ in the brain. Without GnRH, insufficient estrogen, progesterone, or testosterone are made and reproduction ceases.

The goal of a GnRH vaccine is to bind the GnRH produced in the animal's body so that it does not trigger reproduction. The vaccine induces the body to make antibodies against and subsequently inhibit its own GnRH. To that effect, GnRH is synthesized and linked to a foreign protein. This new material (called a conjugate because it is made up of two components) represents a large new molecule that the animal's immune system has never encountered. As a result, when the GnRH vaccine is injected into the animal's body, the body's immune response neutralizes the hormone's function, resulting in infertility in both males and females. We are proposing to use a product named GonaCon™ developed by National Wildlife Research Center scientist Dr. Lowell Miller that shows great promise as a wildlife infertility agent. GonaCon™ has been tested in laboratory and field studies in a variety of species such as California ground squirrels, captive Norway rats, domestic and feral swine, white-tailed deer, and feral horses. In some species the vaccine showed good results with just one application. Infertility among treated female swine and white-tailed deer, for example, lasted up to two years without requiring a booster vaccination. This method is widely used by the BLM throughout the western United States.

No fertility control agents have been approved by the Food and Drug Administration (FDA) for non-investigational use on wildlife populations in the United States. Several materials, however, including GnRH have been classified as investigational drugs that may only be used in rigidly-controlled research studies. The approval process for GonaCon™ vaccine began in 1998 when the FDA established an Investigational New Animal Drug (INAD) exemption for the GnRH vaccine. All research studies, including the Virginia Range Estray study, of GnRH vaccine have been conducted under this exemption (INAD – 10006). A development plan for GonaCon™ was prepared by National Wildlife Research Center staff during June of 2004. The plan provides guidance for National Wildlife Research Center's efforts to take the immuno-contraceptive vaccine to market. All vaccines used up to date in the Virginia Range Estray program were available to the Department free of charge.

Advantages of GnRH

National Wildlife Research Center scientists are hopeful that the GnRH vaccine will soon be developed and approved for use for wildlife fertility control. GnRH vaccines have an advantage over other products because they prevent eggs from being released from the ovaries, thereby eliminating estrus and some undesirable behaviors (e.g., chasing of mares in developed areas and on public roads) associated with it since the vaccine indirectly blocks the production of sex hormones (e.g., estrogen and testosterone) which contribute to the expression of such behaviors.

Current Status of the Virginia Range Estray horse population

Approximately 1,100 horses are currently found on the Virginia Range. Of these more than 600 are considered brood mares. Under Nevada conditions feral horses foal on average of three times in four years. Mares are often bred for the first time before they are two years old. An average foal survival rate of 30% is expected for Nevada conditions. An estimated 450 foals were born on the Virginia Range in 2006, of which, close to 120 survived.

At the inception of the program it was expected that an average of 150 horses per year could be placed in private homes through capture, gentling and adoption. In December 2006 the Department lost its single significant outlet for feral horses after the receiving organization became the target of a federal investigation. Currently only between 20 and 25 horses can be placed through adoption after they have graduated from the Carson City gentling program.

Silver State Industries provides training services to both the BLM and the Virginia Range Estray horse program. BLM pays Silver State Industries \$800 for training in addition to a \$3 per diem per day. BLM horses sell at auction for an average of \$1,200 dollars. Virginia Range Estray horses sell for an average of \$250 (maximum of \$1,800). The proceeds from a Virginia Range Estray horse stay with Silver State Industries to compensate for training costs. Virginia Range Estray horses are conformationally quite different from the average BLM horse; they average 13 hands and ~800 lbs as opposed to BLM horses which average 15 hands and 1,200 lbs.

At present one Program Officer (Mike Holmes) is the only full time employee on the Virginia Range Estray project. One officer can capture 150 – 200 horses per year. In year one, the program officer would capture 200 horses, of which 100 are brood mares, and 80% would be treated with contraceptive vaccine (GnRH).

No treatment (\$77,911 total operating appropriation)

600 mares x .75 reproduction x .3 survival rate= 135 foal crop

Given a five percent (5%) attrition rate, in year two the population would be estimated to be 1,180 (1,100 x .95 = 1,045 adult survivors + 135 foals).

With 80 % GnRH treatment

500 mares x .75 reproduction x .3 survival rate= 113 foal crop

100 mares x .20 reproduction x .3 survival rate= 6 foal crop, total of 119 foals

Given a five percent (5%) attrition rate, in year two the population would be estimated to be 1,164 (1,100 x .95 = 1,045 adult survivors + 119 foals)

Basic Estray Program Costs:

Program officer	\$57,310
200 horses x \$2.8 per diem x 42 days	\$23,520
Hay, delivered	\$17,010
200 horses x \$150 veterinarian costs/horse	\$30,000
Replacements, repairs, supplies	<u>\$15,000</u>
Total	\$142,840

Proposal 1:

All management plans that are based on a high rate of immuno-contraception will alter the age distribution of the Virginia Range Estray herd starting in the second year of plan implementation. To achieve the maximum possible treatment rate all animals would be captured twice in two years to avoid costs associated with transport and holding at the Northern Nevada Correctional Center (NNCC) facility. Pregnant mares treated with GnRH vaccine carry the existing pregnancy to term. However, over time the public will notice a significantly reduced number of foals.

Air capture (\$250 per horse) and release on site for 75% of the Virginia Range Estray horses, GnRH treatment and micro chipping/ freeze branding only (\$30/each) of all mares two days to 30 years old, without transfer to NNCC or any other holding facility is suggested in this proposal. Approximately 25% of the horses will have to be captured in traps since they are not accessible to air gather. Horses captured in traps will be taken to the NNCC facility and kept for six weeks (\$2.80 per diem per day). All mares will be treated twice with contraceptive vaccine and all animals will receive veterinary care according to the Department's program (GnRH vaccination, Coggins testing, vaccinations, deworming, micro chipping, castrations, euthanasia and disposal, where applicable, at an average cost of \$150/horse). Starting in year three all female foals should be treated at a rate which will maintain the reproduction rate at a level below the natural attrition rate. This regimen can be adjusted easily and the Department can allow increase in population rates if adoptions become possible again, or die offs/predations cause undesirable population size. In case of significant losses due to inclement weather, treatment of foals can be completely suspended for several years. Dr. Lowell Miller, NWRC, a long time cooperator of Dr. David Thain will provide the GnRH vaccine at no cost. This contribution is based on the condition that horses are monitored and statistical data compiled. This project would therefore be considered a scientific study (INAD - 10006). Due diligence requires the Department to collect that same data to facilitate herd management; hence no additional work would have to be performed. Once the GnRH vaccine has received FDA approval it is expected to sell at approximately \$100 per dose. The calculations below are based on a no cost acquisition of the vaccine.

Year 1

1,100 horses x .75 (825) capture x \$250	206,250
413 mares x \$30	\$12,390
.25 ground capture (275 x \$2.8 per diem x 42 days)	\$32,340
Hay, delivered (18lbs/day/horse)	\$23,400
Veterinary costs for 275 horses x \$150	\$41,250
2 Program officers (\$57,310)	\$114,620
Truck	\$30,000
Trailer	\$12,000
Pens and capture supplies	<u>\$70,000</u>
Year 1 Sub Total	\$542,250

Year 2

1,250 horses x .75 (937) capture x \$250	\$234,250
469 mares x \$30	\$14,070
.25 ground capture (312 x \$2.8 per diem x 42 days)	\$36,691
Hay, delivered (18lbs/day/horse)	\$26,550
Veterinary costs for 312 horses x \$150	\$46,800
2 Program officers (\$59,029)	\$118,059
Pens and capture supplies	<u>\$20,000</u>
Year 2: Sub Total	\$496,420

Proposal 1 Total Cost

\$1,038,670

Starting in year three the surviving foal crop should be approximately 38 animals, up to a maximum of 125 ($1,250 \times 0.5 \times .2 \times .3$). It is not known if and how the presence of less foals in a herd will affect the survival rate. If we assume a natural attrition rate of 5% and an average foal survival rate, the population will start to decline very slowly starting in year 3. In those horse bands which have adapted to suburban living and pose the biggest threat to traffic, up to 95% of the mares should be treated. Those mares and their offspring will have to be relocated since the foals are trained by their dams to become suburban dwellers and scavengers. Only animals which are attractive in color and have desirable conformation should not be treated to produce a more desirable horse.

Proposal 2:

If the Department chooses to exercise its sale authority, the management target of 550 to 600 animals could be reached during the 1st year. Horses would have to be held for 60 days and offered for adoption. After that time they could be sold directly from the facility or sent to auction.

Year 1

Capture 550 horses for sale (x \$250)	\$137,500
Hold for 60 days prior to sale (550 x \$2.8 x 60days)	\$92,400
Hay, delivered (18lbs/day/horse)	\$66,825
13 shipments of 45 animals, shipping paid by buyer	\$0
CVI for shipping to Canada/ Mexico (\$60 + \$36.50 + \$3/hrs)	\$2,970
Coggins testing (\$25)	\$13,750
275 horses x \$2.8 x 42 days	\$32,340
Hay, delivered (18lbs/day/horse)	\$23,390
275 horses x (\$150 veterinary costs)	\$41,250
Program Officer	\$57,310
Computer, software tracking program, Repairs, misc.	<u>\$10,000</u>
Year 1 Sub Total	\$477,735

Year 2

(Including 62 new foals)	
337 horses x \$2.8 per diem x 42 days	\$39,631
Hay, delivered (18lbs/day/horse)	\$28,800
337 horse x \$150	\$50,550
Program Officer	\$59,029
Repairs, misc.	<u>\$10,000</u>
Year 2 Sub Total	\$188,010

Proposal 2 Total Costs **\$665,745**

In the third year, of the approximately 612 remaining horses, 306 would be mares, 20% of which are untreated which could produce 47 (75%) foals, of which 14 (30%) would most likely survive until year four. Considering a 5% natural attrition rate the population at the beginning of year four would be 581 adult and 14 foals surviving, total population size 595. This corresponds to a 2.25% foal crop balanced by a 5% natural attrition rate. Targeted treatment of fillies would allow for selection for healthier horses with better conformation and color, enhancing Nevada range horse adoptability.

This option may have very significant consequences. Once horses are sold at auction some large landowners may back away from cooperation with the Department for future population control measures. This would complicate long term planning, cooperation and population management at every perceivable level. For example, cooperation with neighborhoods with public safety horse problems will deteriorate significantly. Currently our staff is able to assure residents that all horses will be adopted or sent to a refuge, however, once a sale takes place many of these individuals will refuse to cooperate and deny trespass rights to our staff. This situation will likely lead to public safety hazards.

It is to be expected that Horse Advocacy groups as well as organizations such as PETA (People for the Ethical Treatment of Animals) and ALF (Animal Liberation Front) would focus significant negative activity on the department.

Emergency Winter Feeding 2007/2008

Feeding a full ration requires 18 lbs of hay per day per horse. After reducing the VRE population by 50% to approx. 550 horses that would require feeding of almost 5 tons of hay per day, at \$225/ton (\$1,125 per day). It would take the program officer 8 to 10 hours per day to feed on the ground in two locations which are accessible by truck and trailer. After significant snowfall feeding by helicopter/air drop might be required (\$1,500/hr). We currently anticipate that feeding will be necessary for a minimum of 135 days (mid November '07 to end of March '08), possibly up to 200 days (10/15/07 to 4/30/08).

Summary

Management of the Virginia Range Estray Horse Program has reached a critical stage. The population currently exceeds 1,100. Equine populations can double once every four years. The currently available range is shrinking rapidly due to urban encroachment in all three counties. Range deterioration was first documented and has significantly increased since 2000. Continuing deterioration of the Virginia Range will not only affect stray horses but also destroys the habitat of all the native species in the area.

Nationally the ability to place horses for adoption has reached complete saturation and both the Nevada Department of Agriculture and the BLM are currently unable to adopt out the required number of horses to meet management objectives. Even under ideal conditions we will be able to place less than 10% of the animals that need to be taken off the range. The Department has explored the feasibility of using immuno-contraception to control population growth. Funding constraints have prevented application of this approach on a population scale.

The currently existing horse population is not sustainable under the best of environmental conditions. A significant reduction in herd size should be the target. This is achievable, but at significant cost to the tax payer. A rapid reduction can be achieved if the Department decides to exercise its sale authority. Public acceptance of that approach is expected to be low and large scale capture involving air capture will be costly.



The alternative is a much slower reduction of population density based on a combination of natural attrition, small numbers of adoptions and extensive use of immuno-contraception. This option is exceedingly costly and also carries the certainty of further destruction of habitat. At current conditions winter feeding will become necessary no later than November 2007 to avoid population level disease events and starvation.

Catastrophic events such as wildfires, extreme winters or drought will either result in a mass die off or public demand for a feeding program or the construction of a state owned long term holding facility.

Appendix A

Governing Legislation

The Wild Free-Roaming Horses and Burros Act of 1971 (Public Law 92-195)

Federal No Slaughter Legislation

***Assembly Bill No. 619-Committee on Natural Resources, Agriculture, and Mining,
CHAPTER 610 (Statute Placing the Estray Program in the Department)***