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11-3-03

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Las Vegas Field Office
4701 N. Torrey Pines Drive
Las Vegas, Nevada 89130-2301

TAKE PRIDE IN AMERICA

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In Reply Refer To:
4710 (NV-052)

Dear Interested Party:

NOV 03 2003

Enclosed for your review and comment are the Environmental Assessment and a draft Finding of No Significant Impact covering the proposed gather of wild horses on the Nevada Test and Training Range. The BLM needs to take this action as wild horse numbers exceed the existing Appropriate Management Level (AML) of 600-1000 wild horses, established in October of 1996. The existing herd of approximately 1,800 horses is causing resource concerns such as over-utilizing forage around water sources, taxing limited water sources under drought conditions, and impacting the safety and mission requirements of Air Force operations.

Should you choose to provide comments on this gather, your comments must be received by this office no later than thirty calendar days from the date of this letter. Please mail your comments to:

Bureau of Land Management, Las Vegas Field Office
Attn: John Jamrog, Assistant Field Manager, Recreation and Renewable Resources
4701 Torrey Pines Drive
Las Vegas, Nevada 89130-2301

Your comments will be given full consideration prior to preparing the Decision Record for the gather proposal.

If you have any questions regarding this proposal, please contact Gary McFadden, Wild Horse and Burro Specialist, at 702-515-5024.

Sincerely,

John C. Jamrog
Assistant Field Manager
Division of Recreation and Renewable Resources

Enclosures:
1. Environmental Assessment
2. Draft Finding of No Significant Impact

NTTR

FY2004 Capture/Removal and Fertility Control
Las Vegas Field Office
November 3, 2003

Environmental Assessment
NV-052- 2004-74

INTRODUCTION

Background Information

With passage of the Wild Free-Roaming Horse and Burro Act of 1971 (Public Law 92-195), Congress found that: "Wild horses are living symbols of the pioneer spirit of the West". In addition, the Secretary of Interior was ordered to "manage wild free-roaming horses and burros in a manner that is designed to achieve and maintain a thriving natural ecological balance on the public lands". From the passage of the Act through present day, the Bureau of Land Management (BLM) Las Vegas Field Office (LVFO) has endeavored to meet the requirements of this portion of the Act. The procedures and policies implemented to accomplish this mandate have been constantly evolving over the years.

Throughout this period, BLM experience has grown, and the knowledge of the effects of current and past management on wild horses and burros has increased. For example, wild horses have been shown to be capable of 18 to 25% increases in numbers annually. This can result in a doubling of the wild horse population about every 3 years. At the same time, nationwide awareness and attention has grown. As these factors have come together, the emphasis of the wild horse and burro program has shifted. Program goals have expanded beyond simply establishing a "thriving natural ecological balance" by setting and achieving the Appropriate Management Level (AML) for individual herds. Goals now include achieving and maintaining viable, vigorous, and stable populations. One tool the Bureau uses to manage wild horse and burro populations is systematic removal or gather of excess animals.

This document has been prepared to assess environmental impacts associated with removing excess wild horses within the Nevada Test and Training Range (NTTR). This document also outlines the actions to be taken to correct the unequal age and sex ratio which resulted from prior selective removal policy. Also assessed are the impacts associated with application of fertility control to breeding mares which would be returned to the range following the gather.

The horse use area is contained within the north-central portion of the NTTR. The NTTR is located in south-central Nevada in Clark, Lincoln and Nye counties (see Map 1). The NTTR comprises 2,209,326 acres for use as a high-hazard military weapons testing and training facility. The portion of the NTTR used by the wild horses comprises approximately 1,300,000 acres of public land withdrawn for Air Force use. The LVFO has administrative responsibilities for all land resource management activities within the NTTR.

The Wild Horse Population Model Version 3.2 developed by Dr. Steve Jenkins, Associate Professor, University of Nevada Reno was used to predict populations under each alternative considered in this document. Appendix A contains population modeling data and parameters used for the modeling runs for this HMA.

An AML for wild horses within the NTTR was set in 1991 based on monitoring data following a thorough public review. The AML of 1000 horses was based upon the availability of forage and water from perennial sources within the NTTR. The AML was established by an EA/Gather Plan signed by Dean Stepanic, Acting BLM Director and David C. O'Neal, Assistant Secretary, Land and Minerals Management. The AML was adjusted by Full Force and Effect decision on October 16, 1996 to a range of 600 to 1000 head. The AML range was established to reduce animals 40 % below their maximum number and let them increase to AML over a 4 year period. The AML was adjusted to establish gather cycles and to balance the animals with the forage and water available at that time of drought. The AML for the NTTR was re-evaluated in 2003 based on water production, Air Force mission requirements and personnel safety. BLM proposes to further revise the AML to a range of 300-500 animals. This AML as proposed in the Proposed Nevada Test and Training Range Resource Management Plan and Final Environmental Impact Statement, May 2003, is currently under protest. As a result, wild horses proposed for removal in this document will be gathered in accordance with the existing AML of 600 to 1000 head. The lower and upper limit of the AML is hereafter defined as 600 and 1000 head, respectively. Documents containing the above information are available for public review at the LVFO.

Purpose and Need for Action

BLM must take action to capture and remove excess wild horses on the NTTR and implement fertility control on a portion of the remaining horse herd located on NTTR.

This action is needed at this time because the existing horse population exceeds carrying capacity and is affecting resource conditions (water and range) and impacting military operations. BLM must take this gather action to correct a problem of too many horses on the NTTR. The purpose of the Proposed Action is to achieve and maintain an AML of wild horses in a thriving natural ecological balance and multiple-use relationship, thus complying with the Wild Free-Roaming Horse and Burro Act of 1971. To accomplish this, the LVFO proposes to capture and remove excess wild horses from the NTTR in December 2003, while incorporating a fertility control treatment on mares released back to the range following the gather. This will help control recruitment and extend the Bureau's gather cycle to every 4 years, thus decreasing overall disturbance to the environment and wild horse social structure.

The current horse population, at about 1800 head, is 3 times higher than the lower AML limit of 600 head and 800 animals over the upper limit of 1000 head. Due to lack of winter moisture, horses are being forced to remain on their summer range, which consists of only 1/3 of the total use area. Drought conditions have reduced available forage and depleted water resources. BLM and the Air Force have been supplementing water at several locations since July 2002 to sustain the excess horses on the NTTR. A severe lack of water exists, causing horses to concentrate around few remaining water sources. These conditions are forcing horses to travel excessive distances from water to obtain forage and social space. The overall effect is damaging to the existing horse population on the NTTR. A gather of the NTTR needs to take place as soon as possible to achieve AML, prevent further resource degradation while ensuring an adequate balance between available water and a healthy horse herd on the NTTR. This action will achieve the following specific objectives:

a. Eliminate water hauling
b. Improve mission operations and safety concerns for the military

c. Achieve and maintain an AML of wild horses in a thriving natural ecological balance
d. Protect range vegetative conditions
e. Ensure an adequate balance between available water and a healthy horse herd on the NTTR
f. Reduce use around unfenced springs
g. Prevent further resource degradation
h. Extend the gather cycle
i. Start correcting the age structure for this herd

Conformance with Existing Land Use Plans

The management of wild horses is consistent with Wild Horse Management Direction 3 in the Nellis Air Force Resource Plan of 1992. Management Direction 3 states "Develop and implement a gathering plan for the removal of all wild horses outside the Nevada Wild Horse Range Herd Management Area". This plan is an incremental effort to implement Management Direction 3.

"The Proposed Action is in conformance with these Plans and consistent with federal, state, local laws, and regulations to the maximum extent possible."

Relationship to Statutes, Regulations, Policies, Plans, and Other Environmental Analyses

The Las Vegas Field Office will continue the fertility control research project initiated in 1996 (see EA-NV-055-06-01). The research is aimed at controlling the reproduction rate in wild horses through a collaborative effort to develop an immuno-contraceptive vaccine. The research will consist of testing a two year time released (pelleted) vaccine. The vaccine is a safe, and humane tool, which, when used with management prescriptions, may reduce the frequency of gathering excess wild horses. Studies have been conducted on a varied group of HMAs in Nevada and will be used to develop management strategies implementing fertility control treatment. The analysis of the use of this vaccine on wild horses within the NTTR is part of the Proposed Action. Previous gather plans and environmental assessments are available in the LVFO for public review.

ALTERNATIVES

The Proposed Action and Alternatives 2 and 3 represent a reasonable range of Alternatives based on the issues and goals identified through consultation with the affected interests. Comparison of the Alternatives is provided in Table 1. All activities will be conducted according to a specified set of standardized operation procedures (Appendix B).

Actions Common to Alternatives 1 and 2

Selective Removal Criteria

Animals would be removed utilizing a Selective Removal Strategy (*Gather Policy and Selective Removal Criteria for Wild Horses, Washington Office IM 2002-09).* Selective removal for the NTTR would prioritize removal of animals age 0-3 and age 20+ animals. Wild horses aged 6-9 years old would be removed only if the AML for the NTTR cannot be achieved. Sex and age ratios will be moved towards a more normal structure.

Gather Operations

Multiple gather sites (traps) may be used to gather wild horses from the NTTR. To the maximum extent possible, gather sites would be located in previously disturbed areas. All gather and handling activities (including gather site selections) would be conducted in accordance with the SOPs described in the Nevada Wild Horse Gather Contract. The helicopter drive trap gather technique would be utilized for this gather. It is estimated that five to eight trap sites would be required to complete the gather. When animals are released, every effort would be made to release them back into the same general area from which they were gathered.

As needed, an Animal and Plant Health Inspection Service (APHIS) Veterinarian may be on-site during gather operations to examine animals and make recommendations to the LVFO Wild Horse and Burro (WH&B) Specialists for care and treatment of the wild horses. Consultation with a veterinarian would take place prior to euthanasia in accordance with Washington Office Instruction Memorandum 2001-165.

Data Collection

Blood samples will be acquired for genetic analysis; sex, age and disposition (remove or release) for each animal. Information on reproduction and survival would be collected to the extent possible. Color and size of the animals, incidence of albinism, parrot mouth, club feet, severely crooked legs or any other negative trait believed to be genetic would be recorded, along with the disposition of that animal. Condition class would be recorded using the Henneke System. Other data collected may include parasite load, disease (from blood samples), percentage and age of pregnant mares, or other data.

Fertility Control

All mares released back to the HMA would be treated with an immuno-contraceptive vaccine, Porcine zona pellucidae (PZP), administered by trained BLM personnel. The inoculation of mares would consist of a liquid dose of PZP vaccine and a time released portion of the drug in the form of pellets. The approach incorporates the PZP into a non-toxic, biodegradable material which can be formed into small pellets. The pellets are injected with the liquid and are designed to release PZP at several points in time much the way time-release cold pills work. To date, one herd area has been studied using the 2-year PZP vaccine. The Clan Alpine study in Nevada was started in January 2000 with the treatment of 96 mares. The test resulted in fertility rates in treated mares of 6% in year one, 18% in year two and 32% in year three. Average fertility rates in untreated mares range between 50% and 60% in most populations. The Clan Alpine fertility rate in untreated mares, obtained from direct observation in September of each year, averaged 51% over the course of the study.

Delivery of the vaccine would be by means of syringe or dart with a 12 gauge needle or 1.5" barbless needle respectfully, 0.5 cubic centimeters (cc) of the PZP vaccine would be emulsified with 0.5 cc of adjuvant (a compound that stimulates antibody production) and loaded into the delivery system. The pellets would be placed in the barrel of the syringe or dart needle and would be injected with the liquid. Upon impact, the liquid in the chamber would be propelled into the muscle along with the pellets. This formulation would be delivered as an intramuscular injection by a jab stick syringe, while mares are restrained in the working chute. This delivery method has been used previously to deliver immuno-

contraceptive vaccine with acceptable results. Administration of this two-year vaccine to mares would be expected to be 94% effective the first year, 82% the second year, and 68% effective the third year.

At a minimum, monitoring of reproductive rates using helicopter flyovers will be conducted in years 2 through 4 by locating treated mares and checking for presence/absence of foals. The flight scheduled for year 4 will also assist in the determination of the percentage of mares that have returned to fertility. In addition, field monitoring will be routinely conducted as part of other regular ground-based monitoring activities.

Wild mares treated with PZP/and Freund's Complete Adjuvant (FCA) will be freeze-marked for identification purposes. The LVFO will assure that these animals do not enter the adoption market for three years following treatment. A field data sheet will be forwarded to the field from NPO prior to treatment. This form will be used to record all pertinent data relating to identification of the mare (including photo when possible), date of treatment, type of treatment (1yr, 2yr- and Adjuvant used), HMA, etc. The form and any photos will be maintained at the field office and a copy of the completed form will be sent to Ron Hall at the National Program Office (NPO), Reno NV.

A tracking system will be maintained by NPO detailing the quantity of PZP issued, the quantity used, the disposition of any unused PZP, and the number of treated mares by HMA, FO and State along with the freeze-mark applied by HMA. In the vast majority of cases, the released mares will never be gathered sooner than the mandatory three-year holding period. In those rare instances when, due to unforeseen circumstances, a treated mare(s) are removed from an HMA they will be maintained in either a BLM facility or a BLM-contracted Long Term Holding Facility until the expiration of the three year holding period. In the event that it is necessary to remove treated mares, their removal and disposition will be coordinated through NPO. After expiration of the three-year holding period, the animal may be placed in the adoption system.

Alternatives Considered In Detail

Three alternatives are considered in detail in this environmental assessment:

Removal to the Lower Limit of the Management Range with Fertility Control *(Alternative 1 Proposed Action).*

The Proposed Action would implement a population management strategy for the NTTR where wild horses will be managed in a range from 600 head to the AML of 1000 head. AML is the maximum number of wild horses for the NTTR. Part of the Proposed Action would be to capture about 1800 wild horses, remove about 1200 wild horses, and release about 600 head back into the NTTR. Also, the Bureau will assess sex, age, color and herd health. Blood samples would be acquired for genetic analysis, and individual animals would be sorted as to age, size, sex, temperament, and/or physical condition. Selected animals would then be returned to the range. Excess wild horses would be sent to Bureau facilities for adoption or long term holding.

Also proposed is continuing immuno-contraceptive research initiated in 1996 and monitoring the results as appropriate. The 1996 study indicated that the % of female reproductivity was reduced from 66% to 11.6% after using immuno-contraceptive. This study consisted of 191 mares that were branded and given immuno-contraceptives. The Proposed Action includes

the treatment of released mares with a revised immuno-contraceptive vaccine, Porcine zona pellucidae (PZP). The immuno-contraceptive vaccine would inhibit reproduction for two breeding seasons. All treated mares would be freeze marked on the hip to enable researchers to positively identify animals in the research project during the data collection phase.

Removal to the Upper Limit of the Management Range with Fertility Control (Alternative 2)

This alternative is similar to the Proposed Action; however, removal of excess wild horses would be to the upper limit of the management range (1000 head). Under this alternative, about 1800 head would be captured; 800 head removed, and 1000 released back into the HMA. Immuno-contraceptives would be administered to released mares as described in the Proposed Action.

No gather/removal of excess wild horses from the NWHR at this time

(Alternative 3 - No Action)

This alternative postpones direct management of the wild horse populations in the NTTR at this time.

Alternatives Considered But Dismissed From Detailed Study

Gathers to the upper and lower limits of AML without fertility control were considered; however, implementation of these would not accomplish Bureau mission or ensure the health of the horses or their environment. Further analysis of these alternatives was dismissed.

Table 1.

Comparison of Alternatives Considered In Detail

Alternative	Gather HMA	Remove HMA	Post Gather Population	Data Collection	Fertility Control	Mares Treated With Fertility Control
1. Lower Management Range with Fertility Control (Proposed Action)	1800	1200	600	Yes	Yes	300
2. Upper Management Range with Fertility Control	1800	800	1000	Yes	Yes	500
3. No Action	0	0	1800	No	No	0

Comparison of the Alternatives Considered In Detail

ENVIRONMENTAL ANALYSIS

Direct impacts are those that result from the actual gather and removal of wild horses on the NTTR. Indirect impacts are those impacts to the environment that exist once the horses are removed.

The following critical elements of the human environment are not present and/or not affected by the Proposed Action: Areas of Critical Environmental Concern (ACECs), Environmental Justice, Prime or Unique Farmland, Flood Plains, Native American Religious Concerns, Threatened and Endangered Species, Water Quality or Wild and Scenic Rivers.

The following section discusses those elements of the human environment which are present (existing situation) and potentially affected (environmental consequences) by the Proposed Action and alternatives:

Air Quality

Existing Situation

Air Quality within the NTTR is considered good, and is typical of rural areas within southern Nevada.

Environmental Consequences

Direct impacts associated with the action alternatives would consist of a temporary increase in dust as wild horses are herded to temporary gather site(s) and transported by stock trailer(s) to a temporary holding facility. Dust caused by a concentration of animals at the temporary gather site(s) and at the temporary holding facility would be controlled by watering the areas, as needed, to keep dust to a minimum. In addition, there would be an increase in vehicle traffic as excess wild horses are transported from the temporary holding site to a BLM adoption preparation/holding facility. These impacts would be temporary, with a short duration, and minimal.

Impacts associated with the No Action Alternative 3 would include additional dust as a result of increased herd numbers.

Cultural Resources

Existing Situation

A complete inventory of archeological sites in the NTTR has not been completed. Previous inventories have identified pre-historic and historic sites in the NTTR. The highest concentration of prehistoric sites is in association with perennial and intermittent water sources.

Environmental Consequences

Under all alternatives (except No Action), no impacts to cultural resources would be expected. Gather sites and temporary holding facilities would be inventoried for cultural resources prior to construction. The Nellis AFB archeologist would review all proposed and previously used

gather sites and temporary holding facility locations to determine if these have had a cultural resources inventory and/or if a new inventory is required. If cultural resources are encountered at proposed gather sites or temporary holding facilities, these locations would not be utilized unless they could be modified to avoid impacts. No direct impacts are associated with the No Action Alternative (Alternative 3).

Indirect impacts of excess wild horses include trampling of cultural resource sites especially adjacent to water sources. The Proposed Action and Alternative 2 (except No Action) would lead to achieving AML on the NTTR. This would result in reduced trampling to cultural resource sites associated with perennial and intermittent water sources.

Wildlife

Existing Situation

Approximately 300 species of mammals, birds, amphibians, and reptiles are seasonal or yearlong residents of the NTTR. Mule deer (*Odocoileus hemionus)*, pronghorn antelope *(Antilocapra americana)*, mountain lion *(Felis concolor)*, coyote *(Canis latrans)*, and bobcat *(Lynx rufus)* are the main big game and fur bearing species present. Chukar *(Alectoris chukar)* and cottontail rabbit *(Sylvilagus sp)* constitute the major upland small game species. A variety of non-game mammals, birds, and reptiles also occur in the project area.

Environmental Consequences

Direct impacts associated with the Proposed Action and alternatives (except No Action), would consist primarily of disturbance and displacement to wildlife by the low-flying helicopter. Typically, the natural survival instinct to this type of disturbance results in fleeing from the perceived danger. Some mammals, reptiles, and birds may be temporarily displaced by the construction and use of temporary gather sites and holding facilities. These impacts would be temporary, with short duration, and minimal. A slight possibility exists that non-mobile or site-specific animals would be trampled. No direct impacts are associated with the No Action Alternative (Alternative 3).

Indirect impacts for all alternatives (except No Action) would result due to fewer wild horses competing with wildlife for available cover, space, forage, and water. Reduced forage utilization levels and hoof action would improve stream bank stability and riparian habitat condition and should allow for increased plant vigor, seed production, and seedling establishment supporting and sustaining the ecological health of the habitat.

Implementation of the Proposed Action and Alternative 2 would provide the opportunity for the greatest improvement of habitat and reduced competition for cover, space, forage, and water, which would positively affect wildlife. The opportunity for habitat improvement and reduced competition for cover, space, forage, and water decreases for each successive alternative. Implementation of Alternative 3 (No Action) would cause the greatest impacts to habitat and contribute to intense competition for cover, space, forage, and water. Impacts would increase each year that a gather is postponed, which would negatively impact ecological condition, wildlife populations, livestock production, and other resource values.

Migratory Birds

Existing Situation

A migratory bird inventory has not been completed for the NTTR. Common migratory birds which may use the area as habitat include: various song birds, blue birds, nighthawks, swallows, swifts, fly catchers, kingbirds, ravens, dippers, blackbirds, crows, raptors, various waterfowl and shorebirds, snipe, sandpipers, phalaropes, wading birds, hummingbirds, warblers, finches, doves, juncos, wrens, sparrows, killdeer, robins, and meadowlarks.

About 80% of all migratory birds depend on water in some way. Currently, too many horses limit available resources to migratory birds on the HMA. Trampling and forage utilization by excess horses have impacted herbaceous and woody vegetation valuable for bird nesting and foraging, and decreased water quality and availability. These impacts have been exacerbated by the drought, which has further concentrated horses around already depleted aquatic resources.

Environmental Consequences

None of the Alternatives would directly impact migratory bird populations with the exception of possible displacement from small areas of their habitat. This impact would be minimal, temporary, and short-term in nature.

Indirect impacts would be related to the wild horse/burro population size. Reduction of the current populations provides the opportunity for vegetative communities to progress toward achieving a thriving natural ecological balance. Implementation of the Proposed Alternative or Alternative 2 would result in a positive impact to migratory birds by creating a diverse vegetative structure through improvement and maintenance of healthy populations of native perennial plants. Implementation of the Proposed Action would provide the greatest opportunity for the improvement of vegetative communities. The opportunity for improvement decreases for each successive Alternative. Implementation of Alternative 3 (No Action) would allow impacts to vegetative communities to increase each year that a gather is postponed, which would be a potential negative impact to migratory bird habitat.

Special Status Species

Existing Situation

Two special status species are present in/near NTTR: Merriam bearpoppy, and white-margined penstemon. Currently, excess horses limit available resources to special status species on the HMA. Excess trampling and forage utilization have impacted vegetation, decreased water quality and availability, and increased sedimentation near water sources, which serve as important habitat for special status species. Negative impacts to current and proposed special status species have been exacerbated by the drought, which has further concentrated horses around aquatic areas and wildlife habitat.

Environmental Consequences

The potential direct and indirect impacts associated with the Proposed Action and Alternative 2 would be related to the wild horse population size. Reduction of the current wild horse population provides the best opportunity for conservation, and protection. Implementation of the Proposed Action and Alternative 2 would result in a positive impact to the sensitive and their

habitat. Implementation of the Proposed Action would provide the greatest opportunity for the conservation, protection, and preservation of these all the identified species and their habitats. The opportunity for improvement decreases for the other Alternative. Implementation of Alternative 3 (No Action) would allow potentially negative impacts to the identified species and their habitats to increase each year that a gather is postponed.

Water Quality, Wetlands, and Riparian Zones

Existing Situation

Perennial streams and riparian areas are limited within the NTTR and are generally associated with springs and seeps, (see Nevada Test & Training Range Management Plan 2001). Since July 2002, the Bureau has been supplementing water at Corral Trough which is piped from Silverbow #1 Spring. Historically, this spring runs from 1 to 5 gallons per minute; however since July 2002 the spring has been supplying only 1/10 gallon per minute. This is not enough water to satisfy the 300 to 500 head of horses that are present at this water. The results of the drought have been that the horses have not been able to transition to their winter range for 2 winters and possibly a third this year. This has transformed the NTTR from and area of slight use throughout to and area of heavy use around the limited water sources now present. Some of the riparian areas are fenced and remain in good condition; however those that are not fenced are receiving heavy use due to excess wild horses.

Environmental Consequences

There are no direct impacts associated with the Proposed Action and Alternative 2 concerning water quality, wetlands or riparian zones within the project area, with the exception of some wild horses crossing streams or springs as they are herded to temporary gather sites. This impact would be temporary and relatively short term in nature. Under Alternative 3, direct impacts would be the continued degradation of unfenced reparation areas resulting in an increase in water temperature and evaporation due to the lack of shading riparian foliage. Also wildlife species dependant on riparian vegetation woud be displaced or impacted.

Indirect impacts for the Proposed Action and Alternatives 2 would be related to wild horse population size. Reducing populations from current levels would decrease competition for available water sources, which should lead to a reduction in hoof action around unimproved springs, improvement in stream bank stability, and improved riparian habitat condition. Implementation of the Proposed Action would provide opportunity for the greatest improvement of riparian habitats and water quality. The opportunity for improvement decreases for each successive Alternative.

Alternative 3 (No Action) would allow degradation to riparian habitats and water quality to increase each year that a gather implementation is postponed.

Vegetation and Invasive Plant Species

Existing Situation

Currently drought conditions have not allowed the horses to transition to their winter range for 2 winters and possibly a third this year. This has transformed the NTTR from and area of slight use throughout to and area of heavy use around the limited water sources now present. Some of the riparian areas are fenced and remain in good condition; however those that are not fenced are receiving heavy use from excess wild horses. When the horses can not make use of their winter

range, two thirds of the horse use area goes unused. When at AML this will have no adverse affect on the existing environment, however, currently when AML is exceeded by 2 times, the NTTR can not exist in a thriving ecological balance.

Vegetation varies from salt desert shrub communities at lower elevations, to low and big sagebrush/grass communities at higher elevations. The lower elevations are comprised of salt tolerant plants such as bud sagebrush (*Artemisia spinescens*), shadscale (*Atriplex confertifolia*) and, baileys and black greasewood (*Sarcobatus spp.*). Mid-elevations and alluvial fans consist of Wyoming big sagebrush (*Artemisia tridentate wyomingensis*) or black sagebrush (*Artemisia arbuscula nova*), with an understory of Sandberg's bluegrass (*Poa secunda*), and bottlebrush squirreltail (*Sitanion hystrix).* Within the mid and higher elevations, there is an occurrence of Utah juniper (*Juniperus osteosperma*) and pinyon (*Pinus edulis*). The higher elevation sites are comprised of mountain big sagebrush (*Artemisia tridentate vaseyana*), bluebunch wheatgrass (*Agropyron spicatum).*

Noxious weed surveys, including invasive and non-native species have only been partially completed in the NTTR. These surveys indicate that the following state listed noxious weeds occur or are highly likely to occur: Russian Knapweed, Hoary Cress, Musk Thistle, Bull Thistle, Canada Thistle, Perennial Pepperweed, Scotch Thistle, Salt Cedar. These weeds occur in a variety of habitats including road side areas, rights-of-ways, wetland meadows, riparian areas, as well as in undisturbed upland range sites.

Environmental Consequences

Direct impacts to vegetation associated with the Proposed Action and Alternative 2 would consist of disturbance to vegetation and soils immediately in and around the temporary gather site(s) and holding facilities from vehicle traffic, hoof action, etc. Generally, these sites would be small (less than one half acre) in size. Any impacts would remain site specific and isolated in nature. In addition, most gather sites and holding facilities would be selected to enable easy access by transportation vehicles and logistical support equipment. Normally, they are located near or on roads, pullouts, water haul sites, or other flat areas, which have been previously disturbed. These common practices would minimize the cumulative effects of these impacts.

Indirect impacts would differ among the Alternatives. Implementation of the Proposed Action or Alternative 2 would reduce the current wild horse population and provide the opportunity for vegetative communities to progress toward achieving a thriving natural ecological balance. Reduced concentrations of wild horses would contribute to the recovery of the vegetative resource. Forage utilization levels would be reduced which would result in improved forage availability, vegetation density, increased plant vigor, seed production, seedling establishment, and forage production over current conditions.

The greatest opportunity for a positive impact to vegetation and soils would be provided by implementing the Proposed Action or Alternative 2.

Implementation of Alternative 3 (No Action) would allow herd populations to continue to grow. Animal impacts to vegetation and soils would increase each year the gather is postponed. Utilization levels would exceed objectives and progression toward achieving a thriving natural ecological balance would not be possible.

Direct impacts associated with the Proposed Action and Alternative 2 include the potential to

import or transport non-native species (noxious weeds) and/or spread existing noxious weed seeds and plant parts to new areas in the NTTR There are no direct impacts associated with Alternative 3 (No Action).

Indirect impacts include the potential increase in noxious weeds from increasing utilization levels and ground disturbance. Noxious weeds can increase with overuse of the range by grazing animals or through surface disturbance. Maintenance of healthy populations of native perennial plant species minimizes the establishment of invasive, non-native weeds. Implementation of the Proposed Action would provide the greatest opportunity for healthy plant communities and thus provide the lowest potential for invasive non-native species. The opportunity for improvement decreases for each successive Alternative. Implementation of Alternative 3 (No Action) would provide the highest potential for species to invade due to degraded native vegetative populations.

Wild Horses

Existing Situation

The NTTR is located approximately 150 miles north of Las Vegas, Nevada in Nye County. The horse use area encompasses a total of 1.3 million acres of public lands. Elevations range from approximately 5,360 feet at the valley floors to approximately 8,663 feet on the Kawich Range. Temperatures range from highs of around 105 degrees to lows of –20 degrees. Annual precipitation averages from 4 to 9 inches with a little more falling at upper elevations. The majority of horses in the NTTR exhibit a sorrel, bay, or brown color along with some black, dun, buckskin, and pintos.

Monitoring indicates there are two distinct breeding populations throughout the NTTR and that the horse herd is not isolated from other herds. Minimum numbers of animals to ensure genetic viability has not been determined by the Bureau; however, research indicates that 50 breeding age animals is the very minimum and that population number should have infusions of new animals occasionally. Other literature suggests that 150 head is the minimum number of animals needed when a population is geographically isolated and/or not able to have infusion of new genetics. The NTTR is not isolated (surrounded by several HMAs) and has a sufficient number of animals to avoid any inbreeding depression. The Bureau believes that, for NTTR, genetic viability could be maintained with a herd size between 300 and 500 animals.

The current estimated population for the NTTR is 1800 head. The HMA was gathered to AML (600 hd.) in 1997 and an emergency gather was conducted in Kawich Valley in 2000. In 1997, 926 horses were captured, and 543 animals were removed. A total of 526 head of horses were returned to the range; of these, 398 head were mares and 128 studs. Sex ratio was at a 3 mares to one stud to re-establish a band structure. At that time the age ratio was non-repairable; all animals released were over 20 years of age. Of the breeding mares returned to the range, 191 were treated with a one year immuno-contraceptive. Monitoring indicates effectiveness of the fertility control (study available at LVFO). The NTTR last censuses was in 2001, at that time 1204 animals were present on the range; this data suggests an annual population increase of up to 27%.

Currently drought has resulted in limited water supplies being available to horses and heavy use exists around these waters. Heavy use patterns extend beyond a quarter mile from water. For some use areas, and because no winter moisture has occurred for 3 years, the horses have been forced to remain on their summer range which has lead to overuse.

NTTR Gather History

WILD HORSE REMOVAL HISTORY		
Date of Removal	Location	Animals Removed
June 1985	EC East	1498
June 1986	EC East	1043
July-August 1987	EC East and West	1210
December 1989	EC East and West	683
May and August 1991	EC East and West	2269 (includes 395 leppys)
January and February 1992	Kawich Valley	820
May-June 1992	EC East and West	730
January 1993	71 S.,71 N.,76,& EC West	563
September 1993	71S,71N,76,Kawich,EC E&W	872(includes126burros&mules)
December 1994	71S,71N,76,Kawich,EC E&W	743
December 1995	74 B&C, EC East, 71 N&S	
January 1996	4809, EC E&W, 76,75 E&W	1075
July-August 1996	4809, EC E&W, 71 N&S	556
January 1997	4809, ECE&W, 71N&S, 75E&W, 76, 74 B&C	429
June-July 1997	4809, 74B&C, EC E&W, 71N&S	543
August 2000	Kawich Valley,74 B&C, EC E	150
	Total	13,184

Environmental Consequences

Impacts Common to Alternatives 1 & 2

Direct impacts on individual horses may include stresses associated with the herding, capture, processing, and transportation of animals from the gather sites or temporary holding facilities to an adoption preparation facility. Mortality of wild horses captured during a gather may occur, but it is infrequent and typically occurs in less than one half percent of the animals captured. Direct impacts that occur after the initial stress of gather operations may include, in rare instances, spontaneous abortion in mares, social displacement, and conflict in studs. Injuries also may occur involving biting and/or kicking, which results in minor bruises and swelling. These types of injuries occur intermittently throughout capture operations.

Direct population-wide impacts may occur during or following implementation of the wild horse capture operation. These include displacement of bands during capture, modification of herd demographics (age and sex ratios), and separation of individual band members. Yet studies have shown that these impacts are temporary, with most impacts disappearing within several days of release. In fact, no observable impacts are expected within one month of release, although animals would continue to shy away from human contact.

Direct impacts following administration of the PZP contraceptive include minor swelling or injury (in rare instances). The intensity of these injuries varies by individual and is indicated by behaviors ranging from nervous agitation to physical distress. PZP contraception appears to be completely reversible and has no ill effects on ovarian function if mares are not vaccinated for more than 3 consecutive years. PZP will not affect normal development of the fetus, the health of offspring, hormone health of the mare, or behavioral responses to stallions

should the mare already be pregnant when vaccinated (Kirkpatrick 1995, Turner 1997). PZP will not have any long-term direct or indirect impacts to the NTTR population's genetic health, long-term viability, or future reproductive success of mares within the herd (EA-NV-055-06-01). Results from the population modeling indicate the action would decrease foal production for 2-3 years, but would not negatively impact the wild horse population in long-term management. The PZP vaccine is proven 94% effective the first year, 82% effective the second year, and 68% effective the third year if mares are inoculated during the winter months. Inoculated mares would foal normally in 2004. In 2005, the contraceptive would result in fertility control effectiveness of 94%, in 2006 82%, and in 2007 68%. Normal foaling rates are expected to resume in the spring of 2008.

Indirect impacts of fertility control include an improved condition of mares and foals and a healthier, more viable wild horse population. Specifically, growth rates will be reduced, and coupled with overall lower herd numbers, will reduce competition and utilization levels of resources. Reduced growth rates also will increase the time interval between gathers, thus decreasing the frequency of disturbance to the ecosystem. This would contribute to the achievement and maintenance of a thriving natural ecological balance by supporting a vigorous and viable breeding horse population while reducing stress on vegetative and wildlife communities. Hence, the Proposed Action alternative is the most compliant with the Wild Free-Roaming Horse and Burro Act, and Land Use Plan.

Indirect impacts associated with horse removal include more available resources and less long-term disturbance to wild horses on the NTTR. Maintaining an AML is crucial in achieving a natural thriving ecological balance on the NTTR. Only then will horses have the resources available, especially water and forage, during adverse climatic conditions such as drought. Thus, the possibility of large-scale die-offs will decrease. As well, the number of emergency gathers will decrease, which will reduce negative impacts to herd social structures. Alternative 1, which removes the greatest number of horses, provides the most benefits to the horse population on the NTTR. These benefits, however, decrease with Alternatives 2 & 3, with Alternative 3 causing the greatest negative impacts to horses. These impacts will accumulate each year that a horse removal is postponed.

Impacts of the Proposed Action Alternative

Implementation of this action will reduce the average annual growth rate to approximately 13% versus 20-25%. The reduction of growth rate will enhance the social structure of the wild horses by extending the gather cycle. Also, resource conditions will be enhanced by having fewer horses dependant on the herbaceous forage community. This will help control recruitment and extend the Bureau's gather cycle to every 4 years, thus decreasing overall disturbance to the environment and wild horse social structure.

The NTTR will have approximately 1800 animals gathered with 1200 head being removed. Currently the sex ratio is 3 to 1 (mares/studs) and the age class is 1 to 6 years of age and 20 plus years of age. The NTTR herd will be reduced to its lower AML limit of 600 head. The majority of animals to be removed from the NTTR will be in the 1 to 4 and 20 plus age category. The animals from 4 to 6 will be the priority for release along with a number of 20 plus years olds to help start balancing the age and sex ratio. Subsequent gathers will be needed before the age structure is corrected. All mares released will be treated with the two year immuno-contraceptive vaccine which has shown effectiveness of 94% in year one, 82% in year two and 68% in year three.

The Proposed Action would result in more forage being available to wild horses during drought or extreme winters than would be available under Alternative 2 which gathers to the upper limit of the management range and Alternative 3 which is No Action. Improved condition of mares and foals, as a result of the implementation of fertility control, would aid in the long-term health and viability of the NTTR wild horse population. Reduced growth rates would occur with the implementation of fertility control, reducing competition for resources and utilization levels of those resources. Reduced growth rates would increase the time interval between gathers, having overall beneficial impacts to wild horse populations, wildlife, and domestic livestock. It would also contribute to the achievement and maintenance of a thriving natural ecological balance. This action would support a vigorous and viable breeding population, reduce stress on vegetative communities and wildlife, and be in compliance with the Wild Free-Roaming Horse and Burro Act, and the Land Use Plan.

Each mare to be released would receive a single-dose of the two-year PZP contraceptive vaccine. When injected, PZP (antigen) causes the mare's immune system to produce antibodies that bind to her eggs, effectively blocking sperm penetration and fertilization (Zoo Montana, 2000). PZP is relatively inexpensive, meets BLM requirements for safety of mares and the environment, and can easily be administered in the field.

PZP contraception appears to be completely reversible and to have no ill effects on ovarian function if mares are not vaccinated for more than 3 consecutive years. PZP will not affect normal development of the fetus, hormone health of the mare, or behavioral responses to stallions should the mare already be pregnant when vaccinated (Kirkpatrick, 1995). Turner (1997) also found that the vaccine has proven to have no apparent affects on pregnancies in progress, the health of offspring, or on the behavior of treated mares.

The two-year vaccine has proven 94% effective in year one, 82% in year two, and 64% in year three if mares are inoculated during the winter months. Inoculated mares would foal normally in 2004 and the contraceptive would reduce foal production in years 2005, 2006, and 2007. Near normal foaling rates would be expected to resume in 2008.

Mares receiving the vaccine would experience slightly increased stress levels from additional handling while being inoculated and freeze marked. There may be some swelling at the injection site following the administration of the fertility control vaccine, but this would be a temporary, short term impact. Injection site injury associated with fertility control is extremely rare in treated mares. Injection of the vaccine would be controlled, handled and administered by a trained BLM employee, researcher or veterinarian. Any direct impacts associated with fertility control are expected to be minor in nature and of short duration. The mares would quickly recover once released.

Syringes, darts, needles, vaccine containers, etc. used in the administration of the immuno-contraceptive vaccine are considered regulated medical waste. Regulated medical waste must be placed in leak proof containers that are contained in a red plastic bag labeled medical waste. Medical waste must be handled and transported separately from other waste to an approved disposal facility (WFO Programmatic EA, 1999).

The use of fertility control is not expected to have any long-term direct or indirect impacts to the NTTR population's genetic health, long-term viability, or future reproductive success of mares within the herd (EA-NV-055-06-01). Implementation of fertility control is expected to

improve the health of mares and foals. Results from the population modeling indicate the action would decrease foal production for 2-3 years, but would not negatively impact the wild horse population in long-term management.

Removal to the Upper Limit of the Management Range With Fertility Control (Alternative 2)

Implementation of this action will reduce the average annual growth rate to at least 12% versus 20-25%. The reduction of growth rate will enhance the social structure of the wild horses by extending the gather cycle. Also, resource conditions will be enhanced by having fewer horses dependant on the herbaceous forage community.

Direct impacts associated with Alternative 2 include potential changes to herd demographics, stress associated with gathering, and the effects from implementing an immuno-contraceptive fertility control research project. The effect on herd demographics was discussed in the "Selective Removal Criteria" section (refer to Section IV.A.2) and the stress associated with gathering would be the same as those discussed under "Gather Operations" (refer to Section IV.A.3). Impacts associated with implementing an immuno-contraceptive fertility control research project are the same as discussed in the Proposed Action above.

Implementation of Alternative 2 involves gathering only to the upper limit of the management range (1000 horses). As soon as the gather is completed, mares will foal and the upper limit of the management range will be exceeded almost immediately. Overuse of forage and water resources will resume. Inoculated mares would foal normally in 2004 but the contraceptive would limit foal production between 2005 and 2007. Near normal foaling rates would be expected to resume in 2008. The population will increase each year (to a lesser degree due to fertility control) until the next gather is scheduled in approximately four years. A thriving natural ecological balance would not be maintained. Resource impact would include over-utilization of upland and riparian forage resources. Wild horses would contribute to impacts of upland pronghorn antelope, and mule deer forage species. Impacts to resources would increase as wild horse numbers increase. This impact would worsen during years affected by drought or other environmental extremes that cause additional stress to resources or shortages of resources to rangeland users.

Alternative 2 reflects a lower average growth rate due to more mares being treated, as compared to the Proposed Action or Alternative 3. The outcome of Alternative 3 would not ensure the NTTR would be a successful self-sustaining population of healthy animals in balance with other uses and the productive capacity of the habitat. The herd would be over the upper limit of the management level almost immediately after the action. The wild horse population would be at a higher risk of poor condition and disease, should elements of the habitat become limited due to drought or winter extremes. Fertility control would be implemented; however herd size would be over AML in the first post-gather year.

Alternative 3-No gather/removal of excess wild horses *(No Action).*

Direct impacts associated with Alternative 3 include potential changes to herd demographics and stress associated with overpopulation and habitat degradation. The current population of 1800 wild horses would continue to increase at 22% and exceed the carrying capacity of the range. Though it may require many years for the population to reach catastrophic levels, Alternative 3 poses the greatest risk to the long-term health and viability of the NTTR wild horse population, wildlife populations, vegetative health, habitat conditions, and water

resources.

Implementation of Alternative 3 would maximize competition for available water, forage resources, and space by wild horses and burros. Animals would move out of the NTTR into unmanaged areas. The areas closest to water sources would experience severe utilization and degradation of the range resource. Over the course of time, animals would deteriorate in condition as a result of declining forage availability and the increasing distance traveled between forage and water sources. Mares and foals would be affected most severely. The continued increase in population would eventually lead to catastrophic losses to the herd, as a result of extreme degradation to the available forage, water, and habitat. Additionally sensitive species and vegetation would be impacted and degraded. A point would be reached where the herd would surpass the ecological carrying capacity and both the habitat and the wild horse population would become critically unhealthy. Irreparable damage to the resources, which would include primarily vegetative, soil and riparian resources, would have obvious impacts to the future of the NTTR and all other uses of the resources, which depend upon them for survival.

Population modeling found Alternative 3, No Action, had the highest average population size in 5 years. The Average Median Trial reported a potential wild horse population of almost 4000 animals in 2007. This number is four times over AML for the NTTR. The average growth rate for this Alternative exceeds the fertility rates in the proposed action and Alternative 2 (See Table 3).

The outcome of Alternative 3 would not ensure the NTTR would be a successful self-sustaining population of healthy animals in balance with other uses and the productive capacity of the habitat. The wild horse population would be at a higher risk of ill fitness and disease should elements of the habitat become limiting due to drought or winter extremes. No gather action or fertility control would be implemented at this time.

Table 2 displays differences between the Proposed Action and Alternatives 2 and 3 based on the results of the population modeling. This table shows the average population size for the median trial in five years and average growth rate for the median trial in four years following a gather under different alternatives. Refer to Appendix A, Population Modeling for NTTR, for a complete summary of data and tables obtained from the wild horse population modeling.

Table 3.

Population Modeling: Average Population and Growth Rates

Alternative	Average Population Size	Average Growth Rate - %
Proposed Action (Lower limit of the management range with fertility control)	664	13
Alternative 2 (Upper limit of management range with fertility control)	760	12
Alternative 3– No Action	4000	22

Population modeling was completed for the Proposed Action and Alternatives 2 and 3. One objective of the modeling was to identify if any of the alternatives "crash" the population or

cause extremely low population numbers or growth rates. Modeling results do not indicate a crash is likely to occur under any of the alternatives. Minimum population levels and growth rates were found to be within reasonable levels and adverse impacts to the population are not likely. It is expected that implementation of any Alternative would not significantly impact the genetic viability or genetic health of the NTTR herd. At this time, there is no evidence to indicate that the NTTR herd would suffer from reduced genetic fitness in any way.

Implementation of the Proposed Action would likely prevent the wild horse population from increasing beyond the upper limit of the management range (1000 head) until 2007. This would allow implementation of a four-year gather cycle to maintain horse numbers within the management range.

Cumulative Impacts

Cumulative impacts are impacts on the environment, which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively major or problematic actions taking place over a period of time.

The area affected by the Alternatives is the NTTR (Refer to the *Project Location* map). Past, proposed, and reasonably foreseeable actions that may have similar effects to the wild horse population would include past and future wild horse gathers. Many gathers have been completed in the past, and future gathers would be scheduled on a 4 year gather cycle. However, the age ratio will not be restored on this gather or for several gather cycles. The impacts of this situation are unclear, as they affect social structure of the bands. Horses in the 2+ age group will need to be retained for several gather cycles along with all older age animals to correct this imbalance. Another possible action to correct this problem faster would be to transplant genetically similar excess older animals (9 to 20 years of age) onto the NTTR. As the wild horse population level is maintained in an acceptable management range, a thriving natural ecological balance would be achieved and maintained. Cumulative effects that may result would include continued improvement of range and riparian/wetland conditions. Cumulative beneficial effects from implementation of a gather go to wildlife, and wild horse population would occur as forage availability and quality is maintained and improved. Water quality and riparian habitat would also continually improve. The opportunity for cumulative beneficial effects decreases for each successive alternative (the Proposed Action through Alternative 3).

Cumulative impacts on natural resources would occur by degree depending on which alternative is selected. In general, adverse cumulative impacts increase for each successive Alternative (the Proposed Action through Alternative 3) since the modeled wild horse population is higher for each Alternative. Cumulative impacts would include periodic over-utilization of vegetative resources resulting in decreased vegetative density, plant vigor, seed production, seedling establishment, and forage production. This may result in periodic decreases of the ecological status of plant communities.

Cumulative impacts on natural resources for Alternative 3, No Action, would include continued heavy over-utilization of vegetative resources which would result in decreased vegetative density, plant vigor, seed production, seedling establishment, and forage production. A potential

increase of non-native species in new areas of the NTTR may result. Continued overuse of the vegetative community would result in a loss of ecological status of the plant communities, which may take decades to restore. Decreased vegetative density would result in an increase of bare ground, which may lead to increased erosion and increased negative impacts to stream banks and riparian habitat condition. Wildlife, migratory birds, livestock, and wild horses would all be negatively affected by these adverse cumulative impacts to the natural resources.

Based upon these considerations, the effects of other existing and reasonably foreseeable future activities including the Proposed Action and Alternatives 2 or 3 would not cause a major affect to the environment. Alternative 3, No Action, may cause a greater impact to the environment depending on how long a gather is deferred.

There would be no known cumulative impacts to any of the resources analyzed in this document as a result of the Proposed Action or Alternative 2. Adverse cumulative impacts to vegetation, soils, and riparian habitat would occur from Alternative 3, No Action.

CONSULTATION AND COORDINATION

Intensity of Public Interest and Record of Contacts

The issue of wild horses and their management has intense public interest.

Since the public interest is high and the wild horse program is often controversial, public notification of this EA will be given and public comments will be solicited.
Comments received will be considered in finalizing the Gather Plan and associated EA.

The following individuals or groups to be notified:

- American Horse Protection Association
- Animal Protection Institute of America
- Commission for the Preservation of Wild Horses and Burros
- International Society for the Protection of Wild Horses and Burros
- National Mustang Association
- National Wild Horse Association
- Nevada Department of Wildlife
- Nevada State Department of Agriculture
- U.S. Humane Society
- United States Wild Horse and Burro Foundation
- Nevada State Clearing House
- Wild Horse Organized Assistance
- Bureau of Land Management - Nevada State Director

Many other individuals and groups will be notified that the Gather Plan and EA are available for their review if they request a copy.

Internal District Review
Gary McFadden, Wild Horse and Burro Specialist
Jeff Steinmetz, Environmental Coordinator
Stan Rolf, Cultural/Land Use Planning
David Waller, Wildlife/Threatened and Endangered Species
John C. Jamrog, Assistant Field Manager, Division of Recreation and Renewable Resources
Mark Morse, Field Manager

SIGNATURES

Prepared by:

Gary McFadden
for Wild Horse & Burro Specialist
Las Vegas Field Office

11/3/03
Date

Reviewed by:

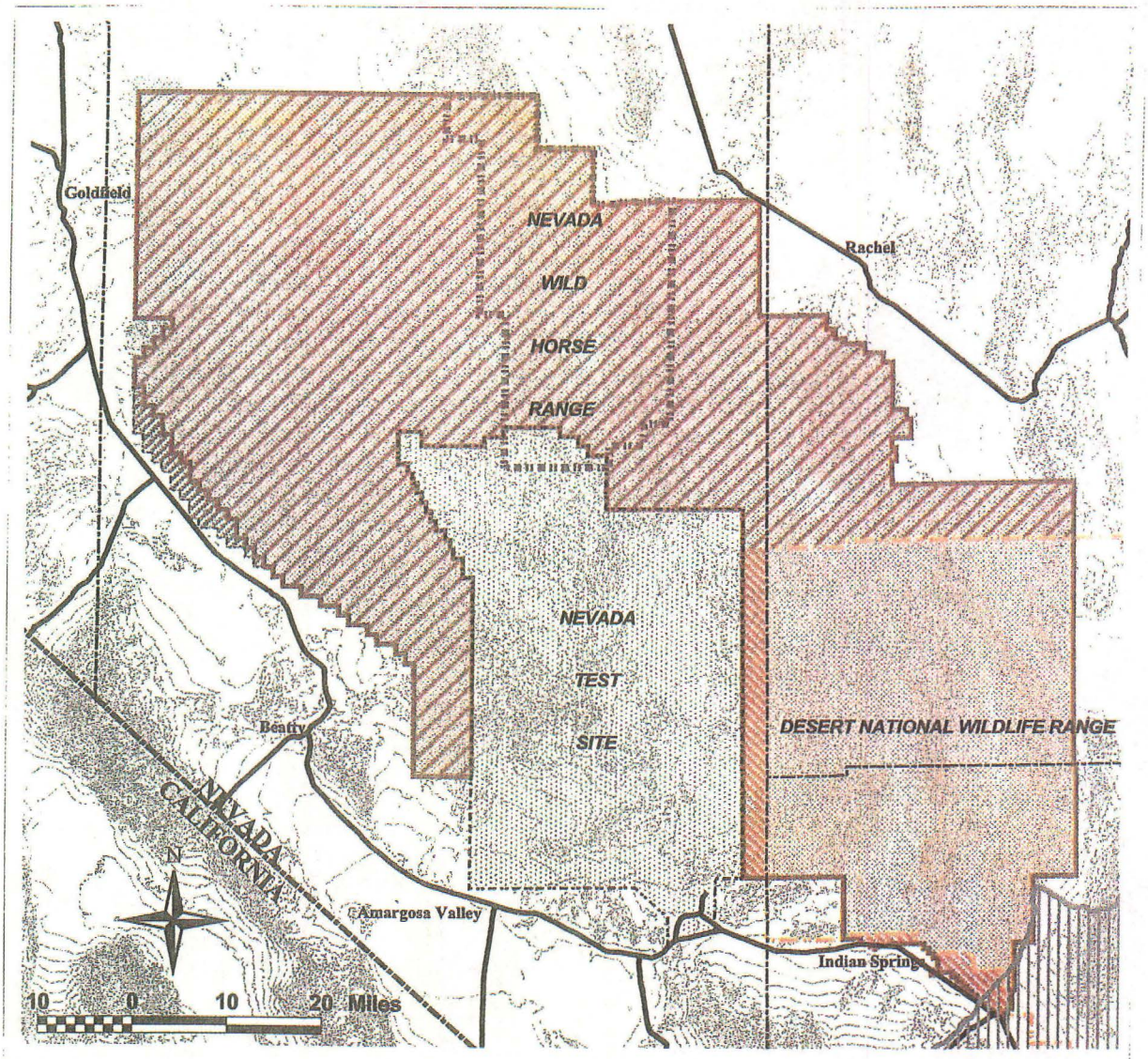
Jeff Steinmetz
Environmental Coordinator
Las Vegas Field Office

11/3/03
Date

Linda A. Cardenas
Supervisor, Renewable Resources
Las Vegas Field Office

11/3/03
Date

Map 1. NTTR General Area

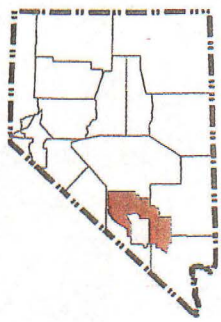


Nevada Test and Training Range

- NTTR withdrawal area
- Non-renewal area
- Nevada Test Site
- Desert National Wildlife Range
- Nevada Wild Horse Range
- Air quality nonattainmnt area

NTTR planning areas

- North planning area
- South planning area
- Major Roads and Highways

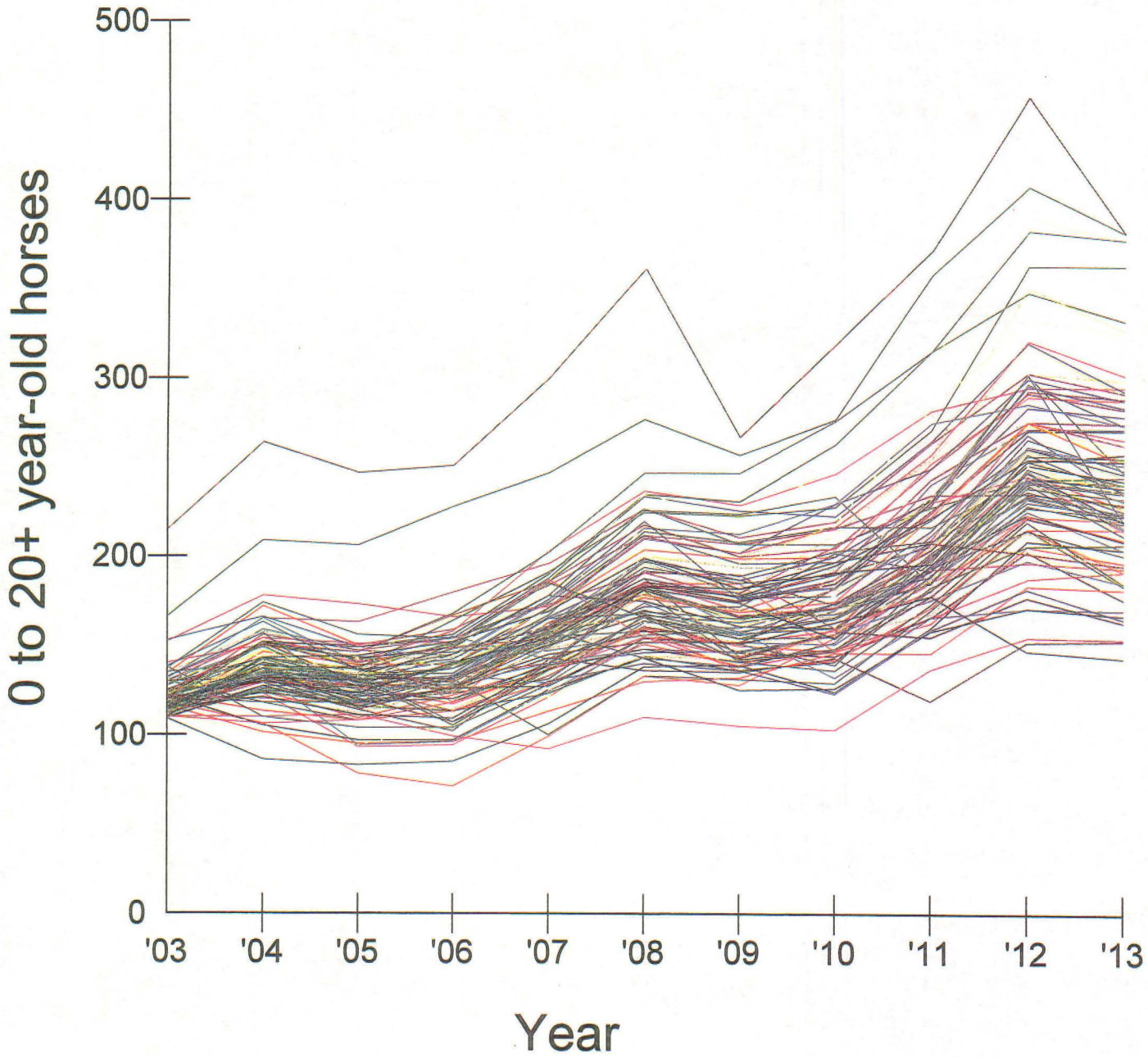


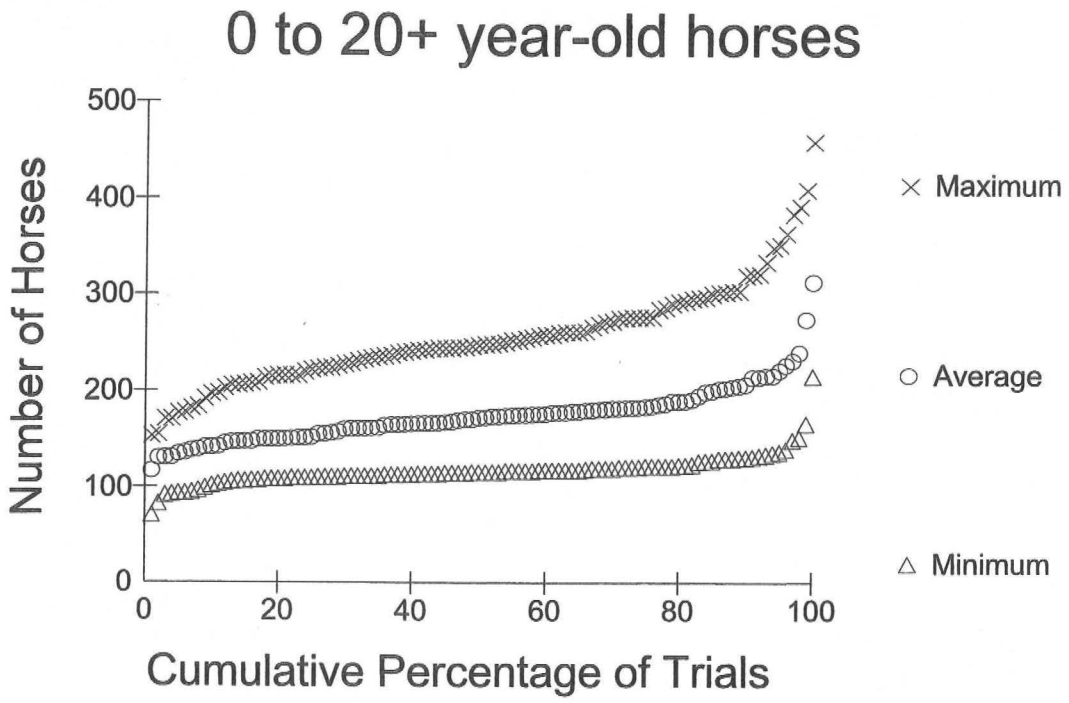
APPENDIX A

Population Modeling for NTTR

PROPOSED ALTERNATIVE

Proposed Alternative. Population Modeling Data for NTTR (600-1000 hd).

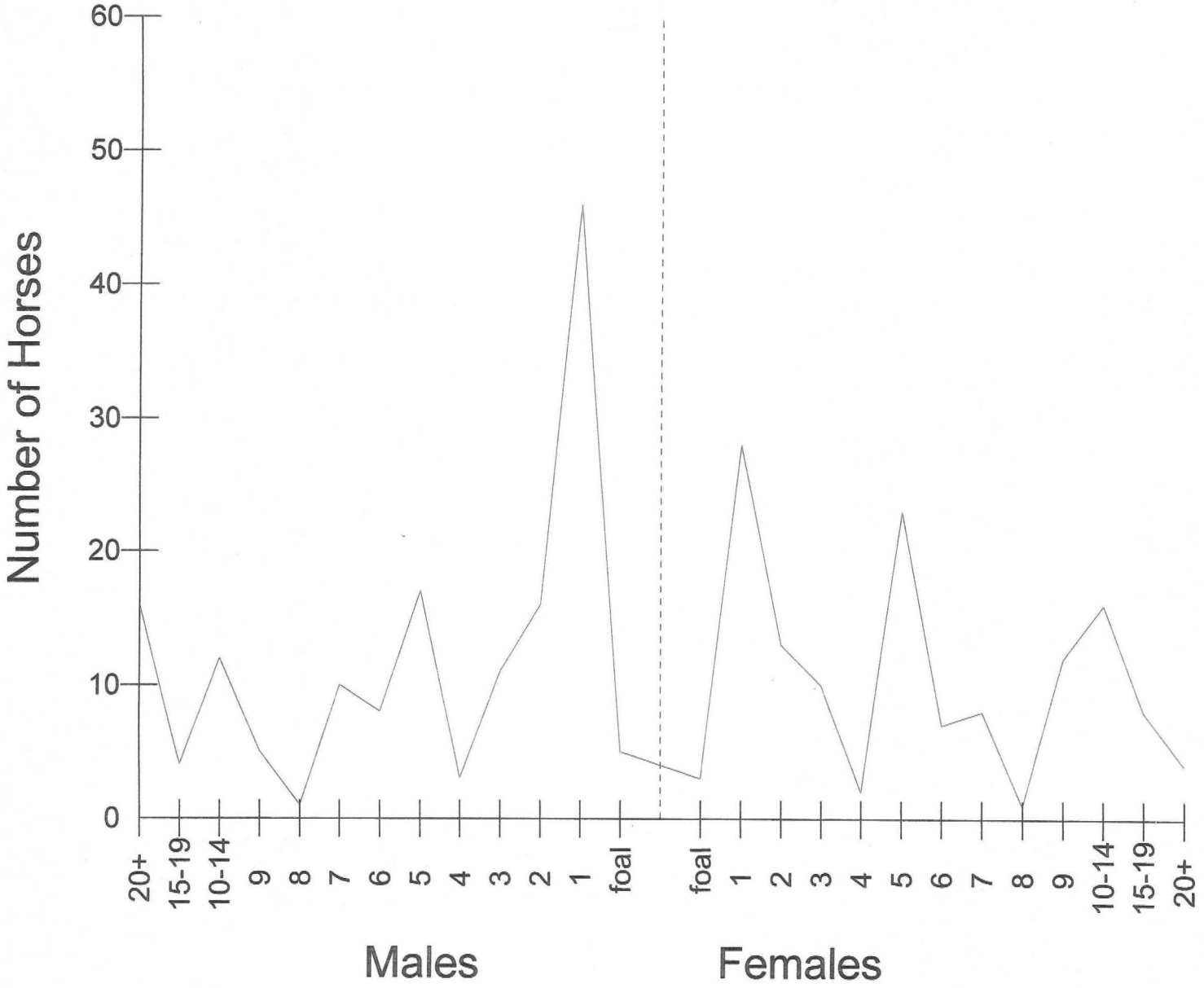


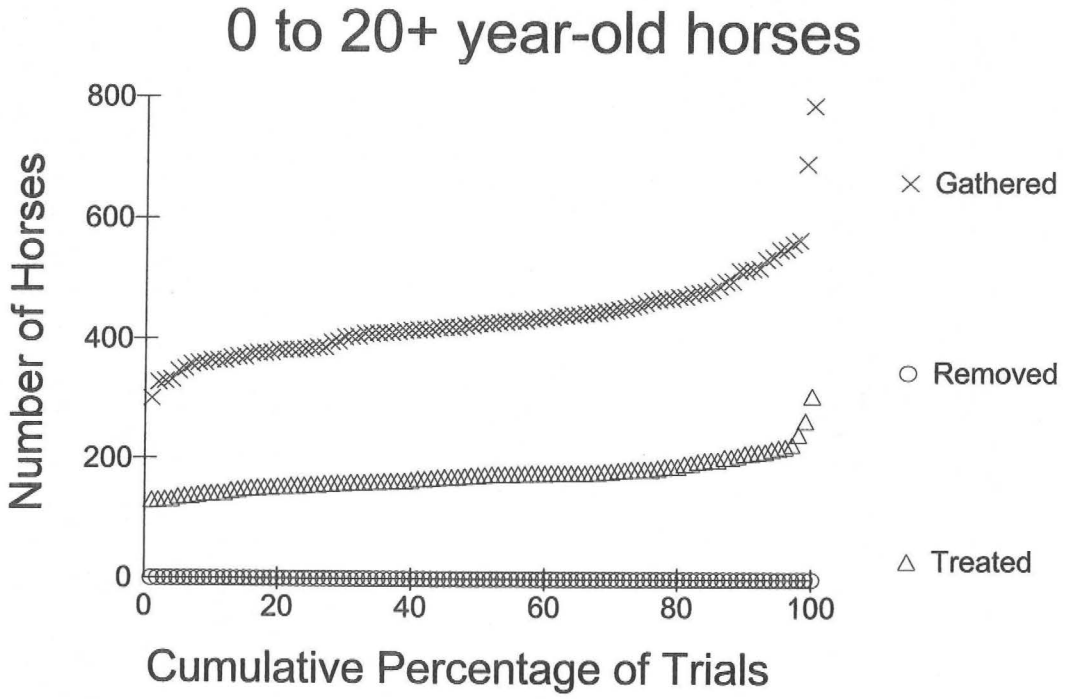


	Population Sizes in 11 Years*		
	Minimum	Average	Maximum
Lowest Trial	71	117	153
10th Percentile	103	142	198
25th Percentile	110	154	222
Median Trial	116	172	248
75th Percentile	122	184	276
90th Percentile	132	210	320
Highest Trial	215	312	458

* 0 to 20+ year-old horses

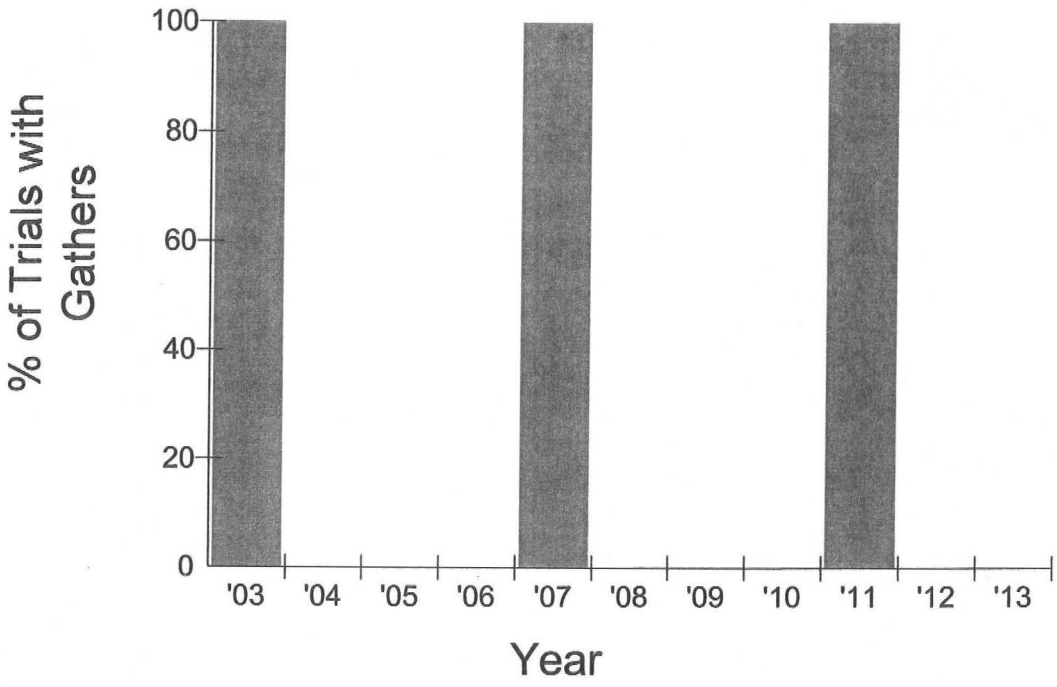
Trial 50, 2013

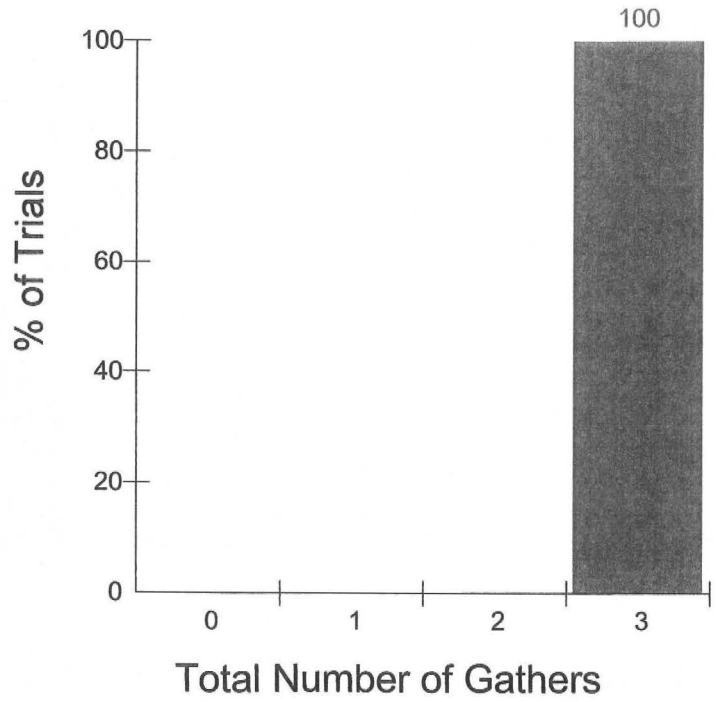


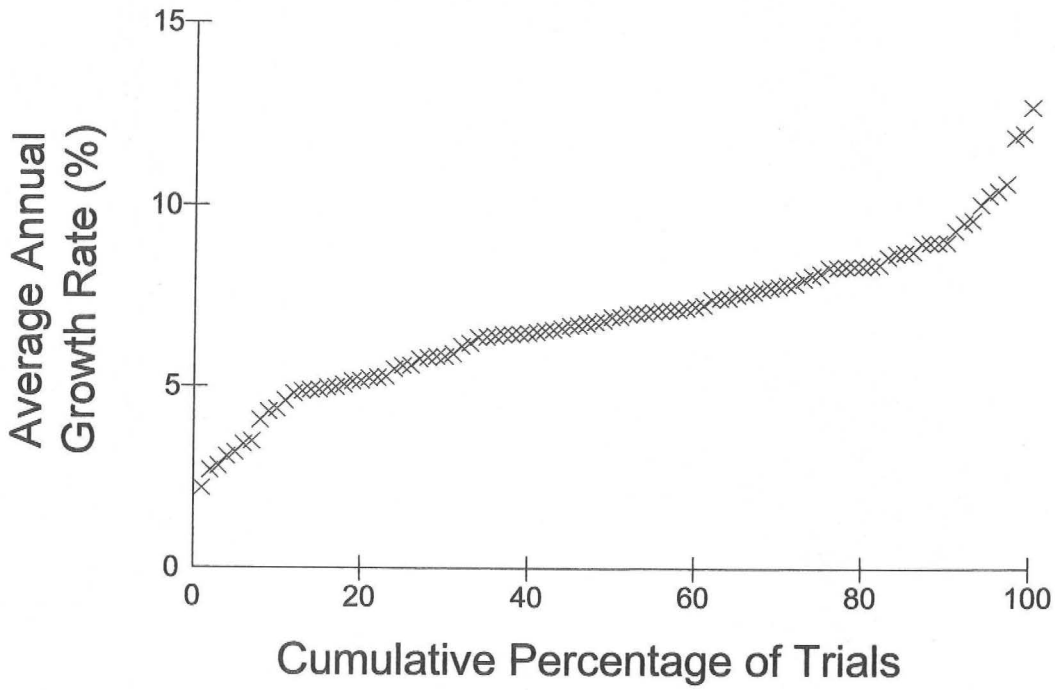


	Totals in 11 Years*		
	Gathered	Removed	Treated
Lowest Trial	300	0	130
10th Percentile	364	0	142
25th Percentile	386	0	157
Median Trial	426	0	174
75th Percentile	463	0	184
90th Percentile	517	0	212
Highest Trial	788	0	307

* 0 to 20+ year-old horses


% of Trials with Gathers
100
80
60
40
20
0
'03
'04
'05
'06
'07
'08
'09
'10
'11
'12
'13
Year

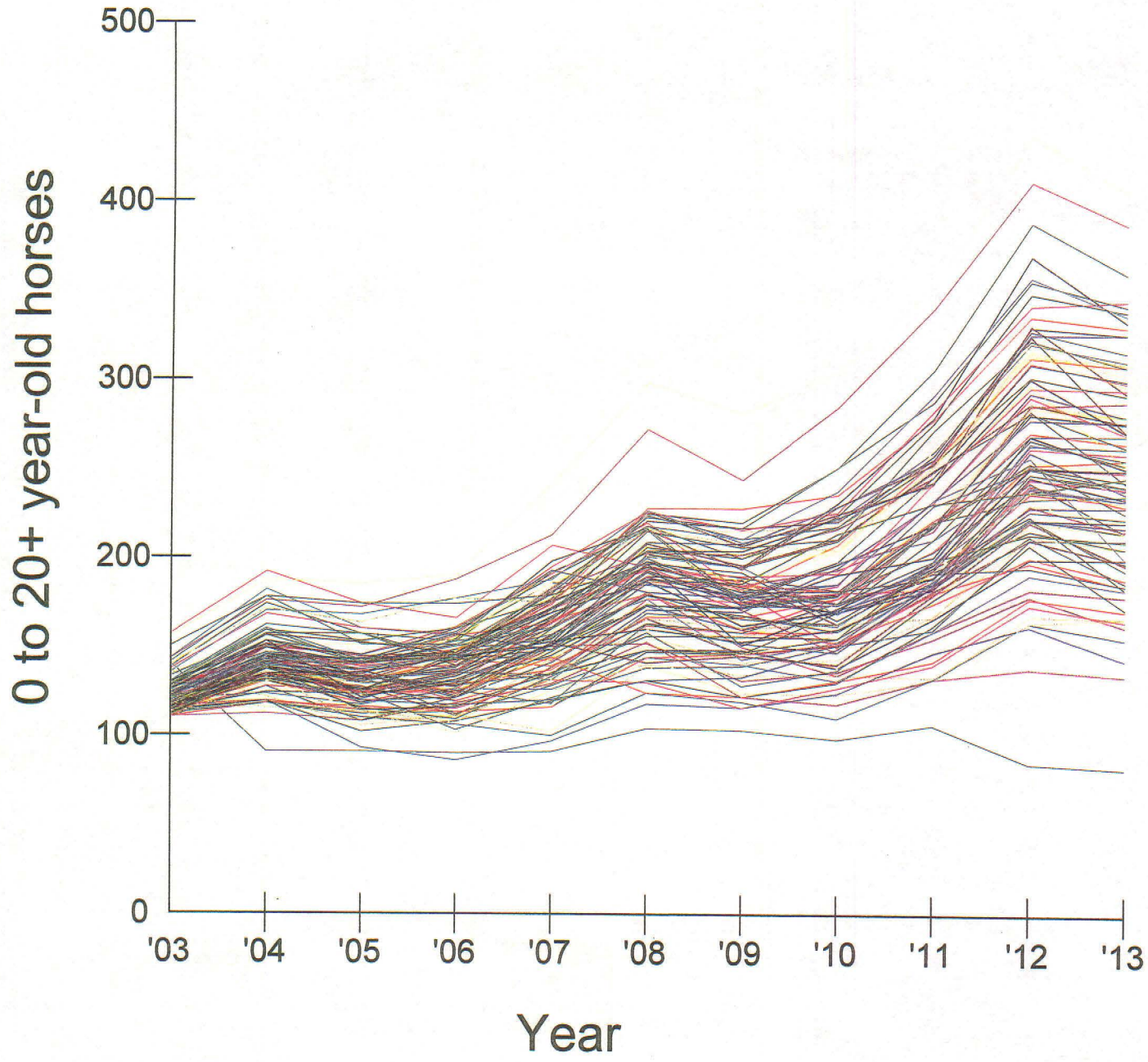

100
% of Trials
100
80
60
40
20
0
0
1
2
3
Total Number of Gathers

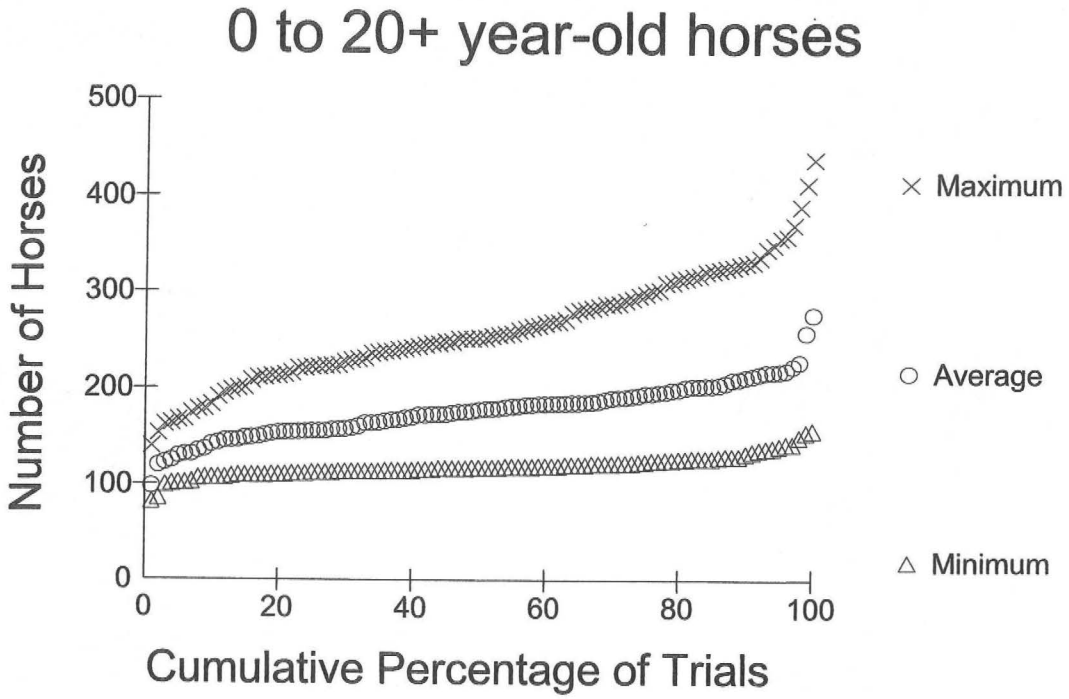


	Average Growth Rate in 10 Years
Lowest Trial	2.2%
10th Percentile	4.5%
25th Percentile	5.6%
Median Trial	6.9%
75th Percentile	8.2%
90th Percentile	9.2%
Highest Trial	12.7%

ALTERNATIVE 2

Alternative 2. Population Modeling Data for NTTR (1000 hd).

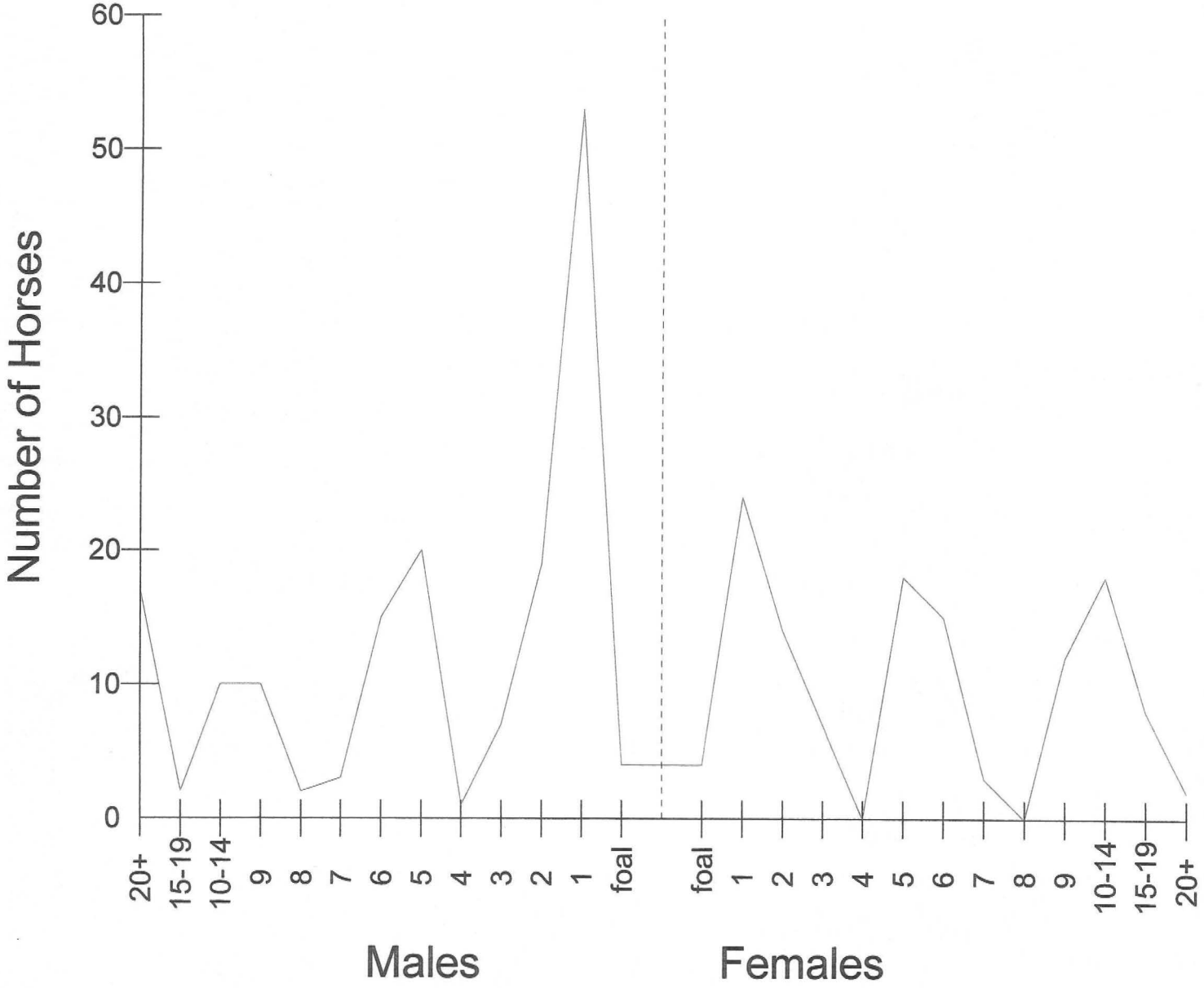


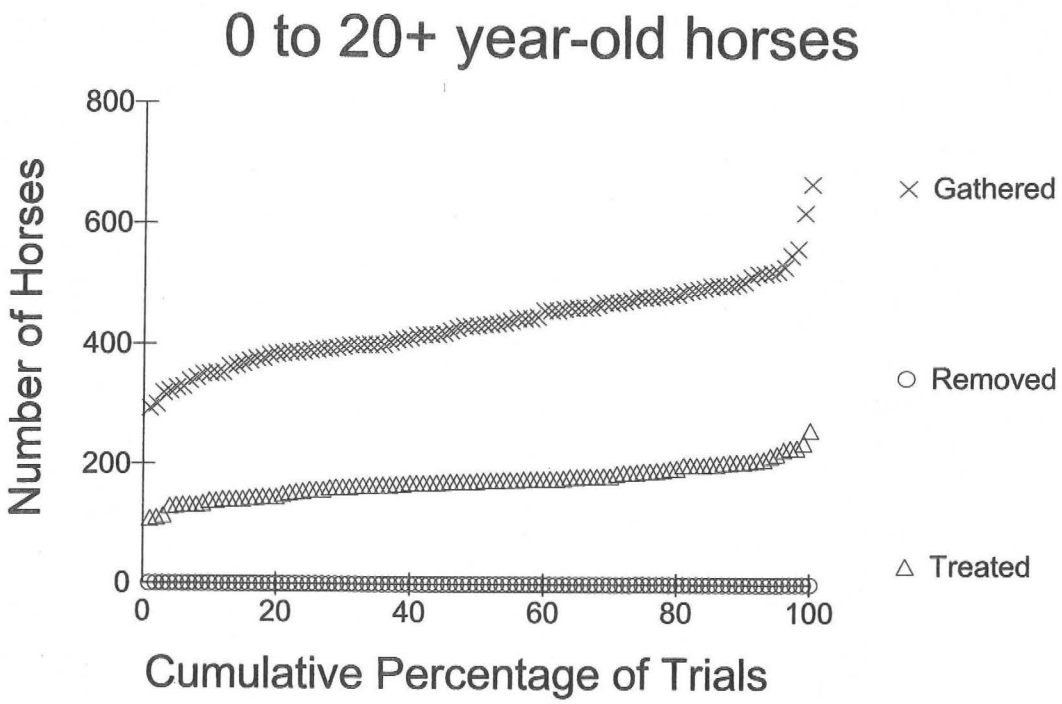


	Population Sizes in 11 Years*		
	Minimum	Average	Maximum
Lowest Trial	82	98	140
10th Percentile	108	143	187
25th Percentile	113	156	222
Median Trial	118	178	252
75th Percentile	124	194	300
90th Percentile	134	212	330
Highest Trial	157	276	438

* 0 to 20+ year-old horses

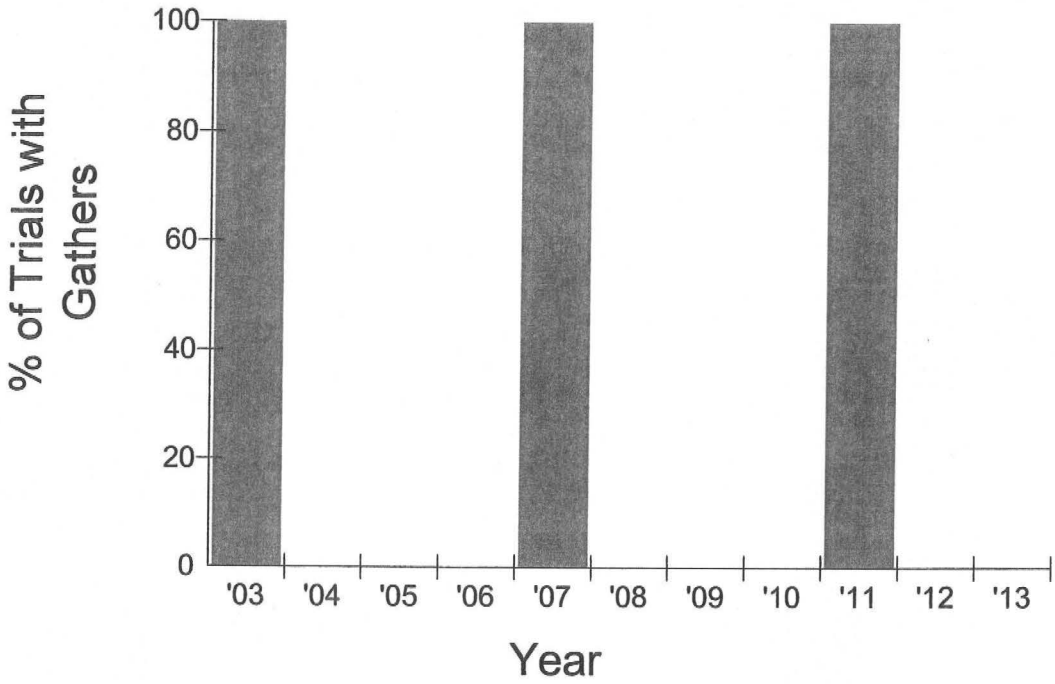
Trial 50, 2013





	Totals in 11 Years*		
	Gathered	Removed	Treated
Lowest Trial	293	0	108
10th Percentile	352	0	139
25th Percentile	390	0	158
Median Trial	432	0	174
75th Percentile	478	0	190
90th Percentile	508	0	206
Highest Trial	667	0	259

* 0 to 20+ year-old horses


% of Trials with Gathers
100
80
60
40
20
0
'03
'04
'05
'06
'07
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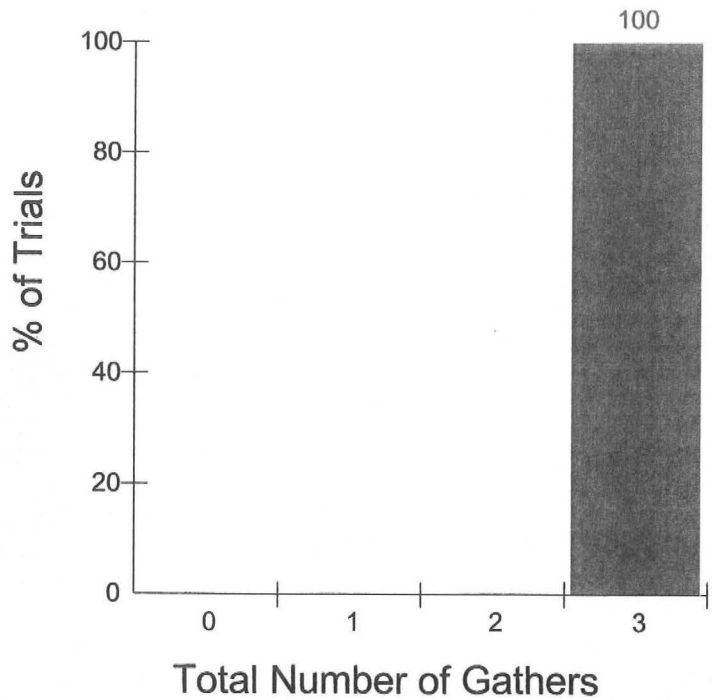
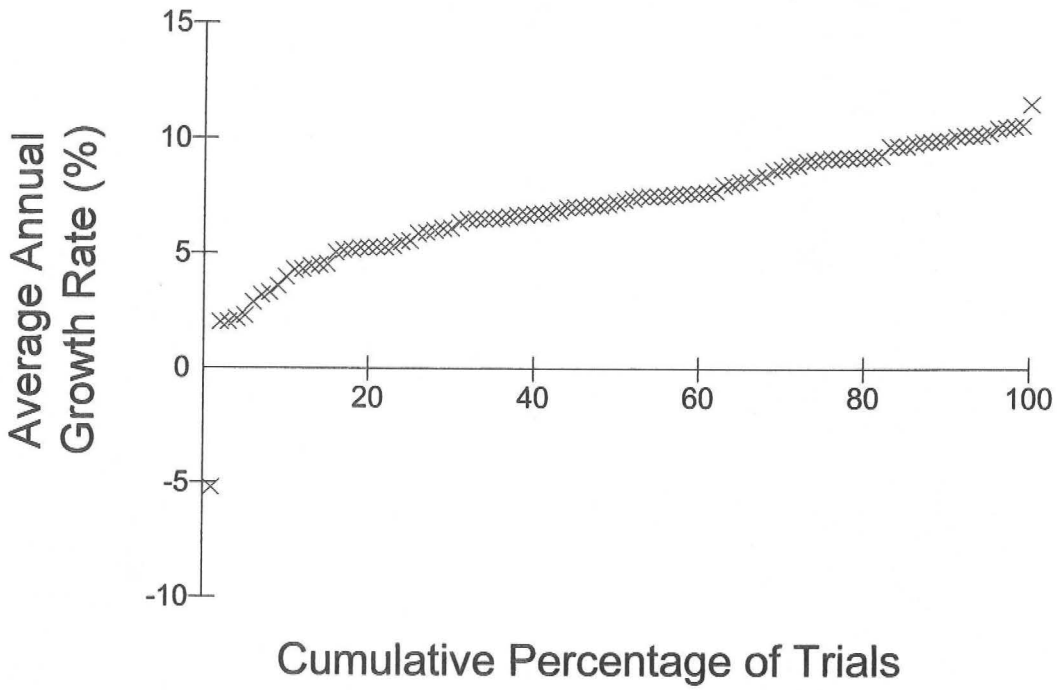
'10
'11
'12
'13
Year

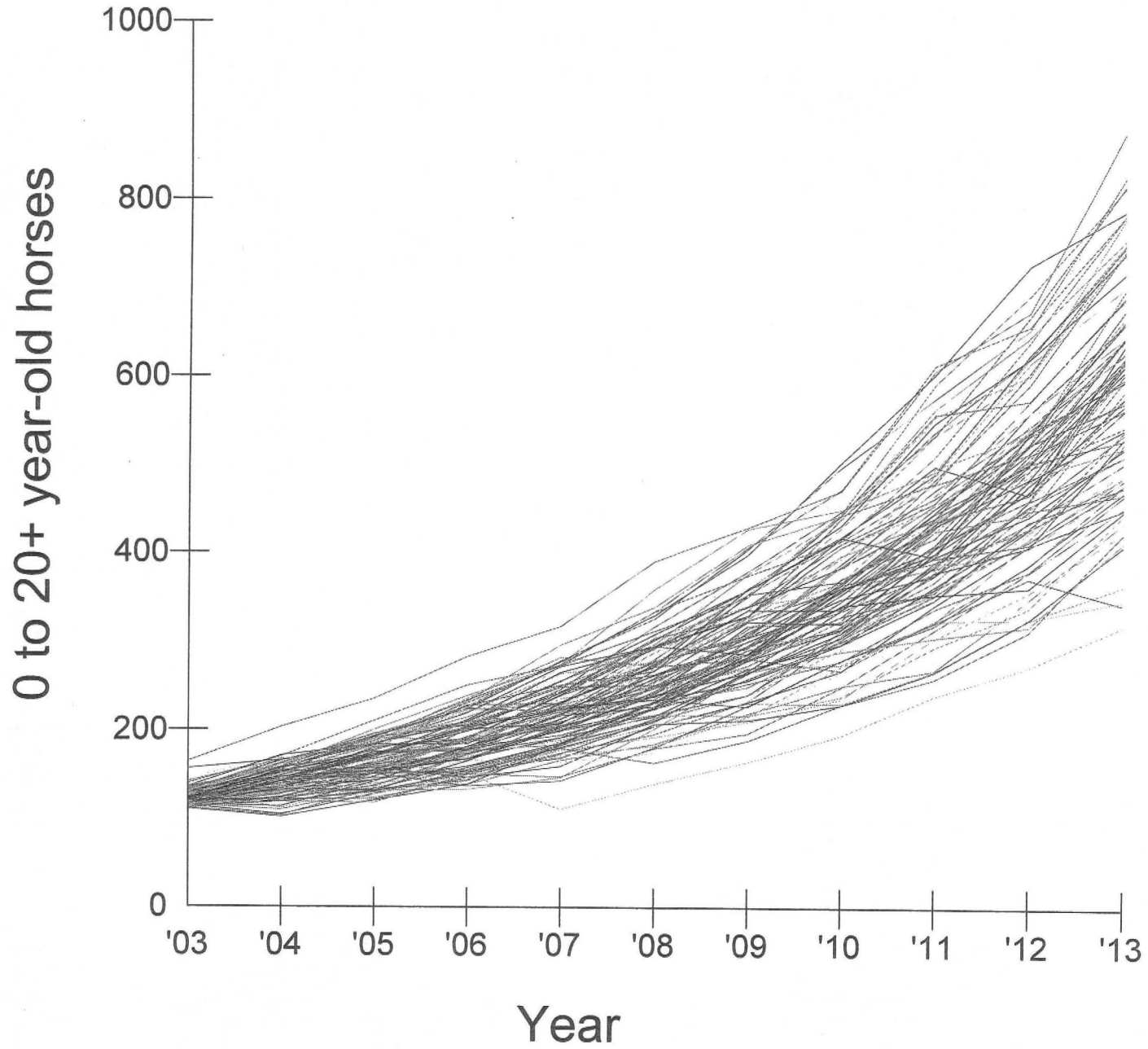

% of Trials
100
80
60
40
20
0
100
0
1
2
3
Total Number of Gathers



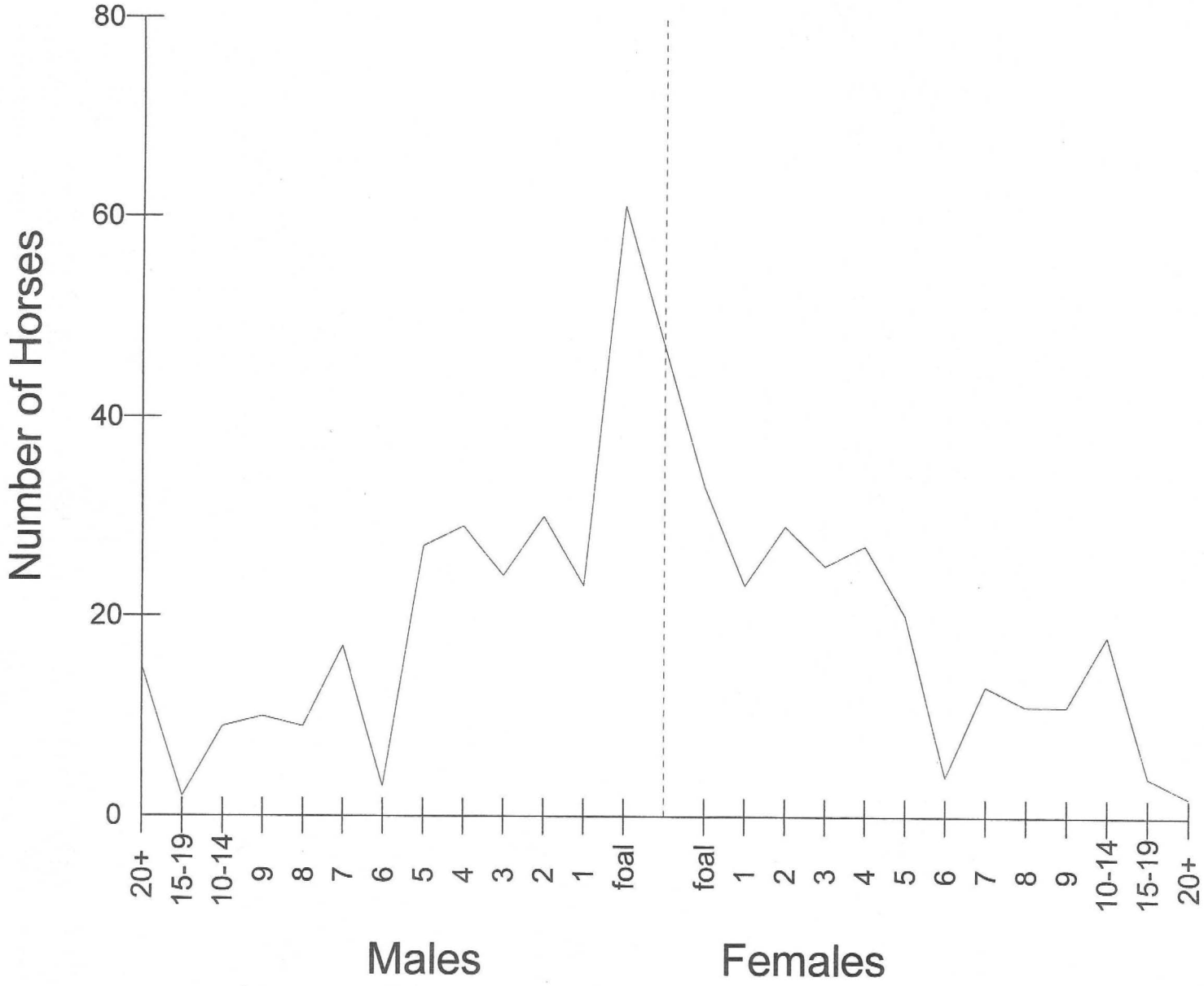
	Average Growth Rate in 10 Years
Lowest Trial	-5.2%
10th Percentile	4.1%
25th Percentile	5.7%
Median Trial	7.3%
75th Percentile	9.1%
90th Percentile	10.0%
Highest Trial	11.5%

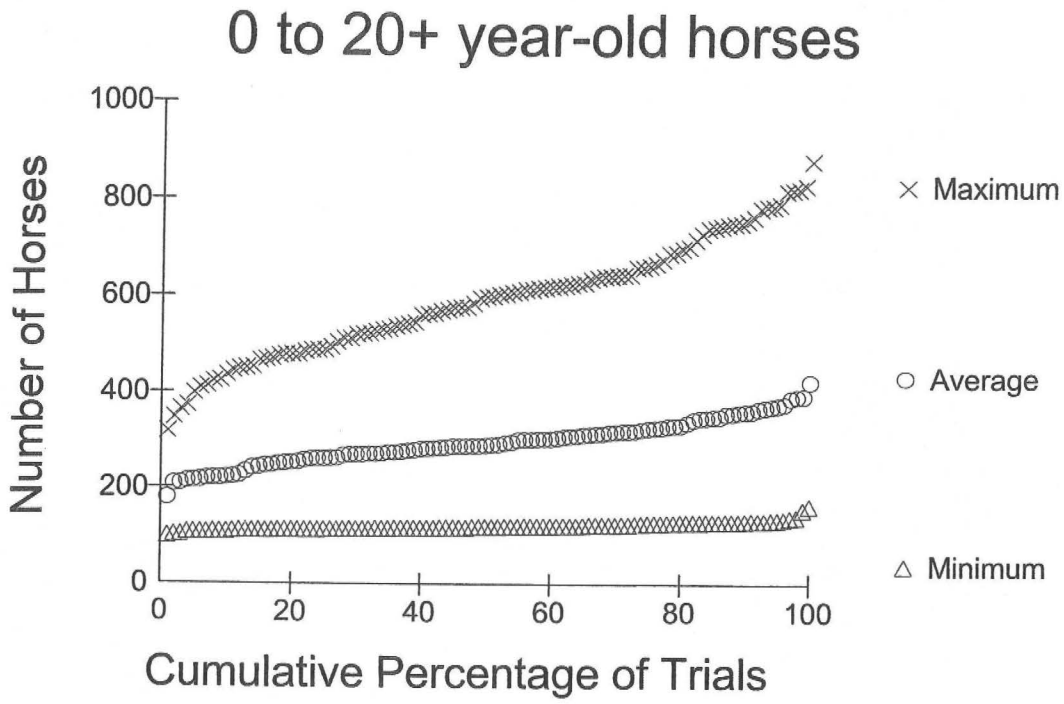
NO ACTION ALTERNATIVE

No Action Alternative. Population Modeling for NTTR (No Action).



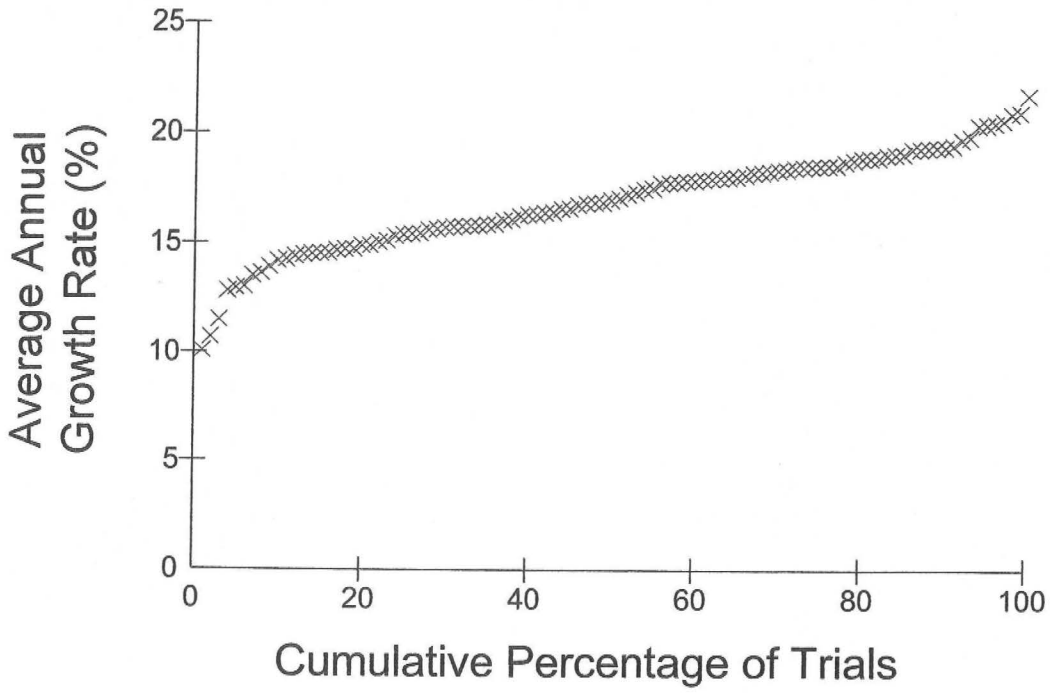
Trial 50, 2013





	Population Sizes in 11 Years*		
	Minimum	Average	Maximum
Lowest Trial	101	179	318
10th Percentile	110	223	440
25th Percentile	114	261	492
Median Trial	119	290	598
75th Percentile	127	326	665
90th Percentile	132	361	760
Highest Trial	164	423	877

* 0 to 20+ year-old horses



	Average Growth Rate in 10 Years
Lowest Trial	10.1%
10th Percentile	14.2%
25th Percentile	15.4%
Median Trial	17.0%
75th Percentile	18.5%
90th Percentile	19.4%
Highest Trial	21.8%

DRAFT
FINDING OF NO SIGNIFICANT IMPACT
FOR
The Nellis Test and Training Range (NTTR) FY2004 Capture/Removal and Fertility Control
Las Vegas Field Office (LVFO)

I have reviewed Environmental Assessment (EA) NV-052-2004-74, dated November 3, 2003. After consideration of the environmental effects as described in the EA, I have determined that the proposed action identified in the EA will not significantly affect the quality of the human environment and that an Environmental Impact Statement (EIS) is not required to be prepared.

I have determined the proposed action is consistent with the Nellis Air Force Resource Plan of 1992. Specifically, Management Direction 3 (three) of the Plan states "Develop and implement a gathering plan for the removal of all wild horses outside the Nevada Wild Horse Range Herd Management Area". This gather and fertility control treatment is an incremental effort to implement this management direction. It is consistent with the plans and policies of neighboring local, county, state, tribal and federal agencies and governments.

The area to be gathered is within the north-central portion of the NTTR in central Nye County, Nevada, approximately fifty miles southeast of Tonopah, Nevada. This portion of the NTTR comprises about 1,300,000 acres of public land withdrawn for use by the United States Air Force. The LVFO has administrative responsibility for all land resource management activities within the NTTR. The EA describes the gather and fertility control measures to be taken to correct the unequal age and sex ratio which exists in the herd as a result of the prior application of a selective removal policy. The document also addresses the environmental impacts associated with removing excess wild horses within the NTTR, as well as the affects the fertility control will have on breeding mares returned to the range following the gather and treatment.

The environmental assessment has considered both beneficial and adverse impacts of the wild horse gather and fertility control. On the whole, the project will sustain vegetative and animal health which will promote overall habitat improvement, increased biodiversity of native plants and animals, improved water quality and a thriving ecological balance between the wild horse's and their habitat over time. Sustaining favorable ecological conditions is considered as improving the quality of the human environment through proactive wild horse management, and is not considered a significant effect both in the short or long term.

The proposed action will result in improved public health and safety by reducing the risk of unwanted interaction between wild horses and U.S. Air Force military training operations. The gather and fertility control will be conducted according to BLM safety standards.

The project area is representative of the Great Basin in vegetative condition and ecological functionality. The most unique characteristic of the project area is its status as a secure air force military test and training range which affords the wild horse and native wild life populations a degree of isolation from other forms of human activity associated with other surrounding public land. Any historical and cultural resources will be avoided during the project and the area does not contain park lands, prime farmlands, or wetlands. The project area is not considered an ecologically critical area.

The effects of wild horse gathers are well known and documented and are not highly controversial. Fertility control is administered under strict guidelines using approved research methods and protocol set by the Bureau of Land Management's National Program Office. These are scientifically accepted, state-of-the art methods and are known and documented. They are not considered to be highly controversial.

There are no known effects of the proposed action identified in the EA which are considered uncertain or involve unique or unknown risks. All gather and fertility control methods proposed to be employed are accepted standard practices.

The proposed action does not establish a precedent for future actions with significant effects and does not represent a decision in principle about a future consideration. All future wild horse gathers and fertility control applications, if they occur would be subject to the same environmental assessment standards and independent decision making.

No significant cumulative impacts have been identified in the EA.

The proposed action will not cause the loss or destruction of significant scientific, cultural or historical resources.

No significant or adverse impacts would result to any Federally Threatened or Endangered species or critical habitat from implementing the proposed action.

The proposed action will not violate or threaten to violate any Federal, State, or local law or requirement imposed for the protection of the environment.

_____ _____

John C. Jamrog, Assistant Field Manager, Recreation and Renewable Resources **Date**

FINDING OF NO SIGNIFICANT IMPACT
FOR
The Nellis Test and Training Range (NTTR) FY2004
Capture/Removal and Fertility Control
Las Vegas Field Office (LVFO)

I have reviewed Environmental Assessment (EA) NV-052-2004-74, dated November 3, 2003. After consideration of the environmental effects as described in the EA, I have determined that the proposed action identified in the EA will not significantly affect the quality of the human environment and that an Environmental Impact Statement (IES) is not required to be prepared.

I have determined the proposed action is consistent with the Nellis Air Force Resource Plan of 1992. Specifically, Management Direction 3 (three) of the Plan states "Develop and implement a gathering plan for the removal of all wild horses outside the Nevada Wild Horse Range Herd Management Area." This gather and fertility control treatment is an incremental effort to implement this management direction. It is consistent with the plans and policies of neighboring local, county, state, tribal and federal agencies and governments.

The area to be gathered is within the north-central portion of the NTTR in central Nye County, Nevada, approximately fifty miles southeast of Tonopah, Nevada. This portion of the NTTR comprises about 1,300,000 acres of public land withdrawn for use by the United States Air Force. The LVFO has administrative responsibility for all land resource management activities within the NTTR. The EA describes the gather and fertility control measures to be taken to correct the unequal age and sex ration which exists in the herd as a result of the prior application of a selective removal policy. The document also addresses the environmental impacts associated with removing excess wild horses within the NTTR, as well as the affects the fertility control will have on breeding mares returned to the range following the gather and treatment.

The environmental assessment has considered both beneficial and adverse impacts of the wild horse gather and fertility control. On the whole, the project will sustain vegetative and animal health which will promote overall habitat improvement, increased biodiversity of native plants and animals, improved water quality and a thriving ecological balance between the wild horses and their habitat over time. Sustaining favorable ecological conditions is considered as improving the quality of the human environment through proactive wild horse management, and is not considered a significant effect both in the short or long term.

The proposed action will result in improved public health and safety by reducing the risk of unwanted interaction between wild horses and U.S. Air Force military training operations. The gather and fertility control will be conducted according to BLM safety standards.

The project area is representative of the Great Basin in vegetative condition and ecological functionality. The most unique characteristic of the project area is its status as a secure air force military test and training range which affords the wild horse and native wild life populations a degree of isolation from other forms of human activity associated with other surrounding public land. Any historical and cultural resources will be avoided during the project and the area does not contain park lands, prime farmlands, or wetlands. The project area is not considered an ecologically critical area.

The effects of wild horse gathers are well known and documented and are not highly controversial. Fertility control is administered under strict guidelines using approved research methods and protocol set by the Bureau of Land Managements' National Program Office. These are scientifically accepted, state-of-the-art methods and are known and documented. They are not considered to be highly controversial.

There are no known effects of the proposed action identified in the EA which are considered uncertain or involved unique or unknown risks. All gather and fertility control methods proposed to be employed are accepted standard practices.

The proposed action does not establish a precedent for future actions with significant effects and does not represent a decision in principle about a future consideration. All future wild horse gathers and fertility control applications, if they occur would be subject to the same environmental assessment standards and independent decision making.

No significant cumulative impacts have been identified in the EA.

The proposed action will not cause the loss or destruction of significant scientific, cultural or historical resources.

No significant or adverse impacts would result to any Federally Threatened or Endangered species or critical habitat from implementing the proposed action.

The proposed action will not violate or threaten to violate any Federal, State, or local law or requirement imposed for the protection of the environment.

John C Jamrog

Dec. 9, 2003

John C. Jamrog, Assistant Field Manger
Recreation and Renewable Resources

Date

UNITED STATES DEPARTMENT of the INTERIOR
BUREAU OF LAND MANAGEMENT
Las Vegas District Office
4701 N. Torrey Pines Drive
Las Vegas, Nevada 89130

In Reply Refer To:
4700
(NV-052)

December 9, 2004

NOTICE OF FULL FORCE AND EFFECT DECISION
NELLIS TEST AND TRAINING RANGE HERD MANAGEMENT AREA EMERGENCY CAPTURE/REMOVAL AND FERTILITY CONTROL

MANAGEMENT ACTION: The action is to gather approximately 1,800 horses remove 1,200 horses and return 600 head from the Nevada Test and Training Range (NTTR). BLM will also fertility treat 300 mares being returned after capture. The action would implement the Proposed Action of Environmental Assessment (NV-052-2004-74), NTTR FY2004 Capture/Removal and Fertility Control Environmental Assessment, dated November 3, 2003.

BACKGROUND INFORMATION: Water and forage conditions in the NTTR HMA are closely monitored. Nellis is currently hauling water, due to too many horses for the currently limited supply of water. The lack of precipitation during 2001-03 provided limited to no recharge for the springs. Forage is not limited overall, however recent use pattern mapping showed use is concentrated around the water sources and is heavy even one-half a mile from the sources. As the forage and water supply decrease, horse condition will further deteriorate making gather operations more difficult and detrimental to animal health.

DECISION: It is my decision to authorize the gather of wild horses and contraception of mares returned to the Nevada Test and Training Range (NTTR), Alternative 1 which removes 1200 horses from the NTTR and releases 300 fertility treated mares and 300 studs back onto the NTTR. The action as proposed is in conformance with the approved 1992 Nellis Air Force Range Resource Plan and Record of Decision.

Enclosed with this Decision Record is a Finding of No Significant Impact and the Environmental Assessment (NV-052-2004-74) that analyzes the impacts of removing wild horses and burros within the proposed gather areas. Given the information contained in these documents, it is my decision to remove approximately 1200 horses from the NTTR and return 300 fertility treated mares and 300 studs and this action will not cause a significant impact to the human environment.

I have reviewed and considered all comments provided by interested parties and have included my responses as part of this decision record. See Attachment 1 Response to public and agency comments.

The project will sustain vegetation and improve animal health which will promote overall habitat improvement, increased biodiversity of native plants and animals, improve water quality and help attain a thriving natural ecological balance between the wild horses and their habitat.

This action is necessary to reduce the need to haul water, reduce the impact to vegetation around the limited water sources and to improve the potential safety concerns for Nellis staff that work in the area.

METHODS: The method of capture will be to use a helicopter to herd the animals to portable wing traps. The BLM will conduct the removal through a private contractor under the current requirements contract and supervised by a Contracting Officer's Representative. It is estimated that 5-8 trap site locations will be required.

DATES: The action is scheduled to begin on December 12, 2004, and will likely be 21 days in duration.

LOCATION: The action will occur on the NTTR Herd Management Area.

AUTHORITY: The authority for this decision is contained in Sec. 3 (a) and (b) and Sec. 4 of the Wild Free Roaming Horse and Burro Act (P.L. 92-195), as amended, and Title 43 of the Code of Federal Regulations. The authority for the Full Force and Effect decision can be found at 43 CFR 4770.3(c) which states:

> "The authorized officer may place in full force and effect decisions to remove wild horses or burros from public lands if removal is required by applicable law or to preserve or maintain a thriving ecological balance and multiple use relationship. Full force and effect decision shall take effect on the date specified, regardless of an appeal. Appeals and petitions for stay of decision shall be filed with the Interior Board of Land Appeals, as specified in the part."

APPEALS: Within 30 days of receipt of this decision, you have the right to appeal to the Board of Land Appeals, Office of the Secretary, in accordance with the regulation at 43 CFR, Part 4, Subpart E and 43 CFR 4770.3(a) and (c). Within 30 days after filing a Notice of Appeal, you are required to provide a complete statement of the reasons why you are appealing. The appellant has the burden of showing that the decision appealed from is in error. If you wish to file an appeal and petition for a stay, the petition for a stay must accompany your notice of appeal and be in accordance with 43 CFR, Part 4, Subpart E and 43 CFR 4770.3(c). Copies of the Notice of Appeal and Petition for a Stay must be submitted to (1) the Interior Board of Land Appeals, Office of Hearings and Appeals, 4015 Wilson Boulevard, Arlington, VA 22203, (2) the Regional Solicitor's Office, Western Region, U.S. Department of the Interior, Federal Building, Suite 6201, 125 S. State Street, Salt Lake City, UT 84138-1180, and (3) Las Vegas Field Office, 4701 N. Torrey Pines Drive, Las Vegas, NV 89130. The original documents should be filed with this office.

If you request a stay, you have the burden of proof to demonstrate that a stay should be granted. A petition for a stay of a decision pending appeals shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied,

2. The likelihood of the appellant's success on the merits,

3. The likelihood of immediate and irreparable harm if the stay is not granted, and

4. Whether the public interest favors granting the stay.

ADDITIONAL INFORMATION: Contact Gary McFadden or Amy Torres of my staff, at (702) 515-5000 or write to the above address.

John C. Jamrog
Assistant Field Manager
Recreation and Renewable Resources
Bureau of Land Management
Las Vegas Field Office

Dec. 9, 2003
Date

ATTACHMENT 1

RESPONSE TO PUBLIC AND AGENCY COMMENTS

Nellis Air Force Range, 99 CES/CEVN:

1. Acreage total is noted corrected.
2. Hauling water from July 2003 is noted and corrected.
3. The BLM noted the number is about 1,800 which is an estimate.
4. You are correct, BLM plans to do birth control in the action alternatives.
5. BLM and Nellis Cultural staff were consulted and no issues were identified.
6. BLM and Nellis cultural resource specialists will determine the need to survey prior to the gather.
7. The species identified were noted in the TNC study. The study is referenced in the NTTR EIS. That is the source of the information contained in the EA.
8. Comment noted that Nellis is hauling water not BLM.
9. BLM has proposed to fence more springs in the NTTR RMP. When horses live year round in an area, it is standard procedure to fence the water source and provided water outside for horses.
10. We could not determine what this comment related to as the referenced paragraph does not deal with horse movement.
11. Comment noted: NTTR is fenced, however we have heard on a number of occasions that the fence on the north boundary was cut in a number of locations. The HMA can be considered isolated as long as the fence remains in repair.
12. BLM completed use pattern maps of the area. The paragraph in the EA reflects the results of the use pattern mapping.
13. It is not know at this time how many future gathers it will take to correct the age structure problem. An assessment will be made during each future gather and animals will be removed or returned to the range based on the age noted during each gather.

Nevada Division of Wildlife

1. By removing horses outside the Nevada Wild Horse Range, BLM is in conformance with the 1992 Resource Plan. BLM is in conformance with the existing Resource Plan by removing animals in excess of the defined AML outside the Nevada Wild Horse Range.
2. Actions necessary to attain management Direction 3 are specified in the 1992 Plan. The intent of this gather is to remove animals.
3. The EA does not say that BLM would not consider limiting animal use to the Nevada Wild Horse Range, once their numbers are reduced.
4. Use pattern mapping identified problem areas as stated in the EA. This gather is predicated on hauling water for the high number of animals on the range, some forage use problem areas and military safety concerns. Any animal removal in the NTTR is warranted by the current situation.
5. The Las Vegas Field Office is following approved standard management procedures for wild horse management. Contraceptives will be very important to keeping heard numbers down while we strive to meet a healthy age structure.
6. BLM strongly feels that as we reach AML the costs for managing wild horses on the NTTR will be significantly reduced. The concern over funding is noted.

7. If BLM determines that the herd needs some genetic balance, we would propose to add animals that would strengthen the herds overall genetic make-up. This is a standard practice for proper herd management and if needed would be proposed. BLM would complete all necessary NEPA documentation prior to the release of animals from outside sources.

Nevada Division of Water Resources

1. All water being used as part of the gather will be trucked in from outside sources. No natural water sources will be used or impacted by the gather operation.

Nevada Heritage Program

1. Thank you for your support of the proposed gather.

Nellis

11-24-03

KENNY C. GUINN
Governor

STATE OF NEVADA

CATHERINE BARCOMB
Administrator

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

COMMISSION FOR THE
PRESERVATION OF WILD HORSES

885 Eastlake Boulevard
Carson City, Nevada 89704
Phone (775) 849-3625 • Fax (775) 849-2391

November 24, 2003

Mark Morse, Field Office Manager
Las Vegas Field Office
4701 N. Torrey Pine Dr
Las Vegas, NV 89130

RE: Nellis Gather

Dear Mark,

It is our understanding that the Nellis gather, of approximately 1,500 horses to be removed, will be starting on December 13, 2003. Also, that a fertility control program is anticipated to be used on these horses.

As in the past, my Commissioners and myself have been involved in the operations on Nellis for many years. We have attended field tours and previous gathers with BLM, as time has permitted. Especially with this gather and the anticipation of the fertility control program being used, my Commissioners and myself would like to attend the gather. I am contacting my Commissioners and trying to coordinate dates with them right now. At our last Commission meeting, Commissioners Brehm, Gleason, Kirk, and Uhalde expressed an interest in attending. They may or may not all be on the same day but I will get you that information as soon as I can coordinate with them. I just wanted to write to you as early as possible to let you know of our request to attend. Are any of the gather dates better than others for BLM? I will endeavor to work with your staff to coordinate dates with them to insure that we do not cause any extra work for your staff.

All of us have previously been given security clearance to enter Nellis. I will contact Roger Scofield and supply updated personal information to him as needed. I know Commissioners Brehm, Uhalde, and Gleason have recently been on Nellis, but Dr. Kirk and myself have been longer.

Do you have any specific idea when the fertility control injections may be given during the gather as I am sure Dr. Kirk would like to be present for that.

I thank you in advance for your time in helping us arrange this and if you have any questions, please don't hesitate to contact me. Also, please let me know which member of your staff you would prefer for me to contact to make arrangements. I am guessing Linda Cardenas or John Jamrog but would like direction from you as to who I should contact. Thank you

Sincerely,

CATHERINE BARCOMB
Administrator

cc: Wild Horse Commissioners
Bob Abbey, State Director, BLM
Roger Scofield, Nellis