The Navajo Horse Policy Dilemma: Too Many Horses? *T'ooahayoo Nihilii*?¹

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Abstract: Wild horses have long been a symbol of the West. For Dine people on the Navajo Reservation, horses are at the center of multiple relationships for healing, cultural meanings and practical use. Today, the lines between wild horses and feral horses are blurred in federal policy and in tribal policy as horse populations seem to be growing. The numbers for the Navajo Reservation are unusually high, and tribal leaders have tried several policies. Policy fragmentation, lack of credible numbers, and unknown genetic and physical impacts to herds from removing horses create significant challenges for tribal leaders. Recent attempts to create partnership hold promise, but the way forward remains unclear and new strategies will need to be forged.

They Sing For Horses

The horse holds an important place in Dine³ culture and life on the 300,000-acre Navajo Reservation that spans four states in the Southwest. The Dine (Navajo) people became extraordinary horse people soon after the introduction of the European horse into North America. Some continue to argue that the horse preceded the Europeans. Paleontologists confirm that a type of equine was native to the Southwest. They believe that these horses became extinct in North America, though the early horses were still ranging over the West during the dates that they believe Native peoples were living on the North American Continent.

The horse is deeply woven into Dine value and belief systems. Navajo Nation governance recognizes relationships with other living beings through its legal system in natural and fundamental law. For the Dine, the Holy People established the Navajo fundamental law. The narrative behind this law emerges from the origin stories that bolster its spiritual and legal foundations. The very emergence of the horse, as recounted in Dine song and origin narratives, involved the most beautiful and powerful forces of nature. Horses came from the sun itself and were brought to the earth's surface by the

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³ Navajo Nation refers to the Navajo government in this paper. The term "Dine" is the term that is used to refer to the people of the Navajo Nation.

Twin Heroes. The very names of the horses' parts were given to the people for medicine rites by one of the Holy People, White Bead Woman:

The horses' hoofs are hada huniye (agate, the banded male stone). The hair of the mane and tail is called nltsa najin, little streaks of rain. The mane is called alinth chene. Horses' ears are the heat lightning, that which flashes in the night. The big stars that sparkle are their eyes. The different growing plants are their faces. The big bead, yo tso, is their lips. The white bead is the teeth. Tliene delne dil hilth, a black fluid, was put inside horses to make them whinny. (Clark, 1983, p. 178)

The horse was indeed a wonderful gift, broadening possibilities for travel, raiding and trading, and livestock husbandry. The horse soon became interwoven into the tapestry of traditional life. In her chapter on acquisition of the horse, Clark writes: "The very ownership of horses brought the individual Navajo and Apache added prestige and a place in society as warriors and wealthy men (*sic and women*)...A poor man was a man who possessed no horses" (1983 p.9).

The horse became a partner in successful practical adaptations to the changing world. Its sacred position in the culture remains in conflict with the category of "livestock." Leland Grass of Nohooka Dine, an organization of traditional cultural leaders around Black Mesa, Arizona, spoke out: "As traditional people we see every horse as sacred and when we treat them inhumanely we violate our own sacredness as human beings" (Indigenous Action Media, 2014). The way horses were used on the reservation began to change; motorized vehicles replaced some of their original functions. Even with these changes, the horse continues to hold an enduring relationship of respect and dignity with the Dine people.

Opinions differ on the identity and origins of the wild horse. There is significant scientific consensus based on the fossil record, mitochondrial DNA and micro-satellite data, that the evolution of the contemporary horse (Equus caballus) began in North America (Kirkpatrick and Fazio, 2010; Jenkins and Ashley, 2003; Hulbert, 1993) The last known species in North America, Equus lambie, is not genetically distinct from Equus caballus (Kirkpatrick and Fazio, 2010). Horses spread throughout Eurasia possibly migrating or being herded over a land bridge. Scientists believe horses were around 11,000-14,000 years ago, while others believe horses existed only as recently as 7,600 years ago: the general idea is that the horses became extinct in North America at least once (Hailes, J, Froese, D.G. MacPhee, R.D., Roberts, R.G. Arnold, L.J., 2009). Prehistoric petroglyphs show images of horses. Horses returned with the Spanish in the 1500s and escaped horses soon populated the West. The reintroduced horses quickly readapted to the North American continent. An estimated two to seven million wild horses populated the United States in 1900 (Ryden, 1999). The numbers have decreased since that time due to human exploitation (Ryden, 1999). Bureau of Land Management (BLM) policy defines wild horses as alien to the North American continent. They also distinguish between wild and feral horses.

Wild Horses in the West: Government Policy

The horse is nothing less than the great icon of the American West, but management of wild horses is a difficult business. The line between wild and feral horses is blurry at best for those agencies like BLM that attempt to make that distinction. An escaped or abandoned horse might join a wild horse herd, and a wild horse may be trained and domesticated. The increasing loss of wild horse habitat heightened conflict with tribal and nontribal livestock managers (Vandoor, 2013). Long-term drought and climate change added to the problem.

Today, the BLM protects and manages wild horses and burros under the 1971 Wild Free Roaming Horses and Burros Act, as amended. They are the only federal agency with authority to round up wild horses: unauthorized killing of a wild horse is a federal crime. Horses rounded up and held by the BLM may not be sold to anyone intending to slaughter them. This provision has been difficult to enforce: BLM continues to work at improving enforcement.

The BLM manages a number of wild horse herds that they attempt to keep in specific management areas with target populations. Scientific evidence suggests that the small size of the managed wild horse herds may lead to their eventual extinction. Scientists at the International Union of Concerned Species Survival Commission recommended base populations of 2500 mammals to maintain genetic diversity. Populations of less than 500 may lose 90% of their genetic diversity (Glover, 1999; Harris, 2014, p. 12), and 72% of the BLM managed herds have a population of fewer than 150. Since the 1971 Act, wild horses have lost 40% of their habitat due to various management actions and changes (Harris, p. 12, BLM, 2014). The BLM coordinates wild horse management with other agencies. However, BLM authority does not extend to Indian Country nor do they assist or support wild horse management on Indian lands under the 1971 law.

Loss of habitat and difficulty in establishing credible counts of wild horses has plagued the BLM. In 1971, wild horses were roaming across an estimated 53.8 million areas, of which 42.4 million acres were under BLM jurisdiction. Today, the BLM estimates that 40,815 wild horses and 8934 burros are roaming BLM-managed rangelands. They estimate that herd sizes could double about every four years (BLM, 2014). However, scientists challenge these projections and the methods used to arrive at the population estimates that formed the basis for the BLM roundups. The roundup program removes thousands of animals from the range each year to control herd sizes. Livestock interests wanted more: they sued and challenged the BLM in Nevada, asking for regular counts and roundups to remove horses. Still, lawsuits from activists, not livestock interests, seemed to prevail (Eatherton, March 2014). The number of wild horses seems smaller when gauged against the fact that about eight million cattle range on public lands, and since 1971, wild horses lost 40% of their range (BLM, 2014).

Credible counts may be difficult for the Navajo Nation, too, as they deal with multiple figures generated by different agencies. There may be 49,000 to 75,000 wild/unclaimed

horses on the reservation, more than the entire rest of the United States. With the price of a bale of hay rising to \$20 or more, they expect that more horses will be abandoned in the drought-stricken Southwest. Faced with undeniably large numbers, the Navajo Nation initiated roundups. While they were carrying out roundups, Navajo Nation policy resembled the BLM policy, except that the Nation did allow sales to slaughterhouses. Other tribes also reported problems with growing numbers of horses. In June 2013, the National Congress of American Indians passed a resolution opposing any anti-horse slaughter laws, indicating problems on other reservations.

Outside BLM jurisdiction, horse slaughter continued. Reports of inhumane practices surfaced, and Congress defunded horsemeat inspections that effectively created a ban on horse slaughter plants in 2005. In 2010, a General Accounting Office Report to Congress revealed egregious practices in U.S. horse slaughter plants including "multiple unsuccessful captive bolt stuns: and the lack of staff and strategy for enforcement" (GAO, 2010). Horses could go to slaughter fully conscious. Further, they suggested that funding for proper inspections and enforcement would cost taxpayers more than it could possibly benefit them.

The ban affected the Navajo Nation, because excess horses could no longer be shipped to slaughterhouses in neighboring states: they had to ship them all the way to Mexico (Yurth, 2011). The demand for horsemeat in the U.S. is low, reducing any national economic benefit, so only export is left. The mere mention of horsemeat in food can cause a swirling negative media campaign as it did for two of Nestlé's pasta products found to contain horse DNA (Castle, 2013). Since it is difficult to make distinctions between feral and wild horses in a roundup, it is not possible to determine if the horses received medications for worming or diseases that would make the meat toxic to humans.

In 2011, Congress lifted the 2005 ban on funding horsemeat inspections that had effectively closed down American horse slaughter plants and meatpacking plants, because the sale of meat is illegal without inspections. Valley Meat and other meatpacking interests pushed to get the ban lifted. Valley Meat sought for years to open a horse slaughter plant in New Mexico. With the lifting of the federal ban, they put in a permit to open a plant in Roswell, N.M., in 2013. At this stage, they had the support of the official government of the Navajo Nation (Santos, 2013) The USDA seemed poised to grant the permit by the end of April 2013.

Here Comes the Calvary

Environmentalists, horse rescue organizations, and animal protection organizations quickly moved into the political arena. Robert Redford, leading the horse protection activists, along with former Governor Richardson of New Mexico, sued the USDA for failure to conduct an environmental review. The Obama Administration advocated reinstatement of the previous action to remove federal funding for slaughter plant inspections. The House and Senate voted to halt appropriations for inspections in fiscal year (FY 2014), effectively closing horse slaughter plants again. In New Mexico, State Lands Commissioner Ray Powell, Jr. was one of the first public officials to come out

opposing the horse slaughter plant. Attorney General Gary King sued to prevent the opening of a horse slaughter plan in New Mexico. The conservative, business-oriented Governor of New Mexico, Susana Martinez, spoke out against the horse slaughter plan (KAOS, 2010). On July 31, 2014, the attorney for Valley Meat, Senators Tom Udall and Martin Heinrich and Congressman Ben Ray Lujan and Congresswoman Michelle Lujan Grisham co-sponsored the Safeguard American Food Exports Act (SAFE Act) to end the export of American horses for slaughter. Other legislation to stop horse slaughtering was put on the floor. On June 10, 2014, the Cloud Foundation and Friends of Animals filed a petition to list wild horses as threatened and endangered species under the Endangered Species Act (Harris, 2014).

In the meantime, Navajo President Shelley gave the figure of 75,000 horses on the Navajo Nation, as he appealed to the federal government for assistance under the doctrine of the federal trust responsibility to tribes (Bitsoi, 2013). Besides conflicts with livestock management due to limited habitat and drought, wandering horses caused automobile accidents and some horses suffered starvation and lack of care. Because the 1971 Act leaves tribes out, they must develop their strategies with no clear lines to federal support, leaving only the trust doctrine to underlie their appeals. The basis for the count that preceded actions remained unclear. The BIA estimate of the horse population was 60,000. By October of 2013, Shelley withdrew support for the horse slaughter plant in Roswell.

Still, the problem of what to do with an estimated overpopulation of horses on the reservation remained unsolved. The Navajo Legislature passed the 2014 Range Improvement Act that defines horses as livestock. It can be extremely difficult to estimate how many were actually wild on the reservation, since domestic horses can also be free ranging. The Navajo Nation previously shipped excess feral horses to slaughterhouses in neighboring states. Due to the suspended operation of U.S. slaughterhouses, they would need to be trucked all the way to Mexico if they continued the previous policy of roundup and sale (Yurth, 2011). Governance units of the Navajo Nation like the Shiprock Chapter encountered problems as soon as they began horse round-ups. Methods used were in question, especially the use of ATVs and the resulting damage, especially to mares and foals.

While awaiting federal assistance, the Navajo Nation took the initiative and signed a Memorandum of Understanding with a foundation created by former New Mexico Governor Bill Richardson and actor Robert Redford to help control the horse population using humane means (Root, 2013). They agreed to end the roundups on the reservation and the sale of horses after which some of them went to slaughter.

Dine cultural leaders spoke out. On June 24, 2014 the Dine Hataalii (medicine peoples') Association and the Nohooka' Dine passed a joint resolution "advising the Navajo Nation to adhere to Dine spiritual traditions and culture to insure the humane treatment of horses and completely halt the NN roundups" (Indigenous Action Media, 2014). They connected recent fires on the reservation with the treatment of horses under current policy on the Navajo Reservation. There is some evidence that horses can act to reduce fire

danger because their upper and lower incisors allow them to nip dry, parched and flammable vegetation. The resolution also expressed opposition to the Navajo Nation Rangeland Improvement Act of 2014, stating:

This Act defined horses as "livestock" or an "animal unit" without regard to the sacred place that horses have in our healing ceremonies, prayers and way of life. This attempt to diminish or prohibit our spiritual way of life and understandings is a direct violation of the Navajo Nations bill of rights under freedom of religion.(Indigenous Action Media, 2014)

They protested the process of passing the law and the lack of consultation about the Act's purpose, intent and impacts (Indigenous Action Media, 2014). They brought up allegations of horse theft of horses with brands during the round-ups. They voiced concerns about the Memorandum of Understanding between Robert Redford, Bill Richardson and the Navajo Nation, because it lacked both participation and acknowledgement of "our sacred way of life and custom of the Dine People" (Indigenous Action Media, 2014). Again, they brought up the lack of free and informed consent for the Navajo People.

Finally, on July 31, 2014, the attorney for Valley Meat withdrew the application for a wastewater discharge permit in New Mexico (Hernandez, 2014). They could not begin operations without the permit. They realized that they did not hold a single winning card in their hand.

What are the Alternatives for the Navajo Nation? Ups and Downs

Alternative: Employ BLM Roundup Strategy with Auctions and Adoptions

Ups: Established through the Wild Free-Roaming Horse and Burro Act of 1971, the BLM conducts roundups. They determine the herd numbers consistent with the land's capacity to support them. They have a combined figure of 47,612 animals in holding as of August 2014, just short of their total capacity of 52,508. (BLM, 2014) The justification for roundups is based on their estimates of herd numbers and the estimate that herd sizes can double every four years. (BLM, 2014) They hold auctions and arrange adoptions to place the horses: they do not sell horses or burros for slaughter. As of August 2014, they have adopted out more than 230,000 horses and burros. (BLM, 2014)

Downs: In recent years, the methods used by the BLM have received criticism from the Government Accounting Office on management objectives and from the National Academy of Sciences (NAS 2013) based on scientific method. The NAS found that:

The Wild Horse and Burro Program has not used scientifically rigorous methods to estimate the population sizes of horses and burros to model the effects of management actions on the animals, or to assess the availability and use of forage on rangelands....science-based methods exist for improving population estimates, predicting the effects of management practices in order

to maintain genetically diverse, healthy population and estimating the productivity of rangelands. (NAS, 2013)

As a result of the lack of applying any consistent scientific method, the NAS determined that not only was there a "lack of consistent, documented survey methods, but the links between BLM'S estimates of the national population size and its actual population surveys....are obscure" (NAS 2013). This is a diplomatic way of saying the list of counts, developed by subjective means, didn't add up. Due to the lack of scientifically credible data, the NAS was only able to indirectly estimate a possible growth rate based on the ages of horses removed from the range from 1989-2011. Conversely, environmental organizations pointed to the 50% survival rate of foals as a more relevant figure leading to an estimate of a 10% or less increase that would need to be adjusted for adult mortality (Gregg, K, Leblanc, L, Johnston, J. 2014).

Establishing the makeup of the herd is another key to understanding management options. The use of the WinEquus computer program for simulations like how populations change with fertility control or removal of horses depends on having the correct values for the input parameters. The NAS blasted the current use of this model for decision-making, since the results depend on the values of the input parameters like age-specific foaling rates or the sex and age composition of the herd. (NAS, 2013) Further, they note it is unclear how it is actually used in decision-making. Put simply, the BLM lacks credible data, so the use of the computer model fails—garbage in, garbage out. The monitoring of range management conditions was no better—it lacked specificity in definitions and sufficient detail on how to monitor populations (NAS, 2013). They also note that no figures on wolf-predation of wild horses are available (NAS, 2013).

In order to successfully implement this alternative, the Navajo Nation would have to develop and implement a science-based method of counting and defining the herd makeup. In addition, solving problems of identifying ownership of free-ranging horses and assuring roundups and other interactions with horses are within acceptable limits of Dine culture creates additional challenges.

Alternative 2: Veterinary Model: Sterilization and Euthanasia

Ups: Many sources have suggested the use of PZP (Porcine Zona Pellucia), a drug that sterilizes horses. The NAS Report mentions chemical sterilization as a possible solution, once credible numbers could be established for the herds.

Veterinary-assisted, humane methods exist for euthanasia for those horses with painful, terminal conditions. Working with cultural leaders, the Nation might create a program that allows Dine people to ask for this assistance. Although there is a cost, it is negligible compared to keeping horses with terminal conditions in long-term holding.

Downs: This option is not without drawbacks. Currently, PZP can be applied with a dart, a relatively safe and humane method. However, it means obtaining access to the mares at

close quarters and it lasts for just two years. Nevertheless, it is a more efficient option than holding thousands of horses. But is PZP a safe immunocontraceptive, or is it an unpredictable pesticide? EPA permits PZP as a limited use pesticide. Some equine reproductive immunologists point to possible side effects such as long-term destabilization of mare's seasonal cycling, thus impacting foal survival rates (DeCarlo, 2010). A 10-year moratorium to test the drug was recommended.

Current information suggests that most of the 102 BLM wild horse herds sampled show genetic diversity similar to other healthy populations of mammals (NAS, 2013). Sterilization methods could change that balance and remove the evolutionary sources of natural selection, especially in many small herds. In addition, recommendations to move horses to maximize genetic diversity can generate unplanned effects similar to moving other highly social wild herds like bison that have unique, strong family structures (Stumpff, 2011).

Chemical sterilization of stallions seems more efficient. However, this can have genetic drawbacks. The agencies have no consistent and credible information on DNA from wild horse herds. Further genetic studies would be needed to assure that the selection of stallions for castration was not affecting the genetic viability of herds, or that it would not be likely to lead to negative inherited traits and diseases. Even so, if we assume that natural selection means that the reigning stallion is the fittest, sterilizing the fittest animals hardly seems a good long-term strategy

Alternative 3: The Ecology and Education Model

Ups: Another option on the table is to increase habitat through ecology, education and partnerships. One component of this strategy is the establishment of "Eco sanctuaries" for Navajo horses on the property of large landowners, with some initial support from the federal government (Vandoor, 2013). With cattle profits down and an unstable and possibly shrinking meat market for beef, the federal government might buy back grazing permits as an additional incentive to private owners, including tribal members, who could use these federal permits. The development of eco sanctuaries as centers for tourism would be similar to the Nature Conservancy's successful developed tourist facilities and the ability to open up fundraising opportunities around areas of special ecological and species interest. This adds an economic incentive. These areas could also have a research function, allowing the agencies to develop better information for future management.

Horse adoptions are made more difficult by the fact the wild horses are untrained, or sometimes just green-broke. Prisons could develop horse-training centers and teach prisoners horse-training skills. Working with animals and nature has proven to be a positive psychological experience for prisoners as well as an opportunity to develop skills.

Finally, the horses might be used in youth programs, especially for at-risk youth. Youth program development can teach culture in ways that increase pride and opportunities for

youth. They might even create a program for developing a Navajo horse as a specific breed. Though this option has high costs, it may not exceed the costs of keeping thousands of horses in holding. With several wolf-reintroduction programs in progress, this may be a natural means of population control that is worthy of study. Coordination between agencies and tribes is critical to this method.

Downs: Coordination of the multiple partner strategy has high costs in staff time, particularly if the Nation is to assure that methods meet the Dine cultural standards for proper care of horses. Tribal governments are often underfunded and understaffed. At a minimum, one new professional position and an assistant or two would need to be funded, plus a grant writer/fundraising coordinator. In addition, coordination can be slow in the first stages, as parties learn to trust each other and learn about the possibilities and limitations of their organizations. So far, horse adoptions have not been fast enough to effectively reduce numbers of horses in holding, although the numbers are impressive. Genetic analysis, accurate counts and all the rest are needed for this alternative, especially if horses are to be moved to other locations.

Given that the wild horse population on the Navajo Reservation is as large as has been estimated, the challenge will be great no matter what alternative is chosen.

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