THE FOLLOWING REPORT WAS PREPARED BY THE INTERNATIONAL SOCIETY FOR THE PROTECTION OF MUSTANGS AND BURROS (ISPMB)

The oldest wild horse and burro organization in the United States and instrumental in the passage of P.L. 92-195, The Wild Free-Roaming Horses and Burros Act of 1971 (The Act.) The only organization in the U.S. to manage four herds of wild horses undisturbed for 17-years.

ISPMB's Gila Wild Horses

THERE ARE THREE CRITICAL AREAS OF FOCUS

1. **There must be a "NEW Management Model" implemented for wild horses and burros.**

2. **The Bureau of Land Management (BLM) and Forest Service (FS) must abide by the Act in determining "excess" animals which is the only lawful reason for removal. They have not done so since 1992.**

3. **ISPMB requests of the Honorable Tom Vilsack to declare the Heber Wild Horses in the Apache-Sitgreaves Forest of Arizona to be studied over the next several years creating a NEW Model for Management.**

EXECUTIVE SUMMMARY

ISPMB is the oldest wild horse and burro organization in the United States. ISPMB has worked tirelessly to try to improve the Agencies' Wild Horse and Burro Program since 1960 including being the instrumental force in the passage of the 1971 Wild Free-Roaming Wild Horses and Burros Act.

In 1999, ISPMB undertook a daunting task, developing a "model" for managing wild horses in the United States based on daily observations of its four wild horse herds and their behaviors which was done for more than seventeen years.

ISPMB's observation and data show that the Agencies' management of wild horses and burros is destroying the animals highly evolved social systems, which will lead to their eventual demise if management continues in the current direction. There must be a NEW management model for wild horses and burros in our country.

We suggest the Heber Herd be studied because they could serve as the New Model for Management. This is the *only* herd left that has not been disrupted through roundups in over 15 years, showing a growth of under 3%. ***(Please see end of executive summary page 5- Recommendations.)***

ISPMB would like to share our management plan with the BLM, FS and Congress so the future of wild horses will be preserved in a manner that promotes healthy behaviors; reduces fertility rates without intrusive management such as sterilizations, birth control or altering sex ratios; reduces the need to warehouse thousands of wild horses off the range because of constant removals; protects their habitat; saves taxpayers millions of dollars; and most importantly, protects and preserves these unique equids for their long-term survival.

Stable populations without roundups actually create stable 'minimal' growth and self-regulation of the herds as noted with ISPMB's herds. (Page 52)

The use of PZP should never be used on the herds to reduce populations because of its deleterious effects on wild horses. (Pages 30-41)

The Agencies' Wild Horse and Burro Program has been mired in controversy since the inception of the program. Yet, the program has the potential to be the most popular federal program in our country. Support for wild horses and burros includes approximately 96% of our population and can be found on all divides including social, political, religious, cultural and economic factions. Wild horses and burros can be uniters and not dividers.

Now in the 50th year of the BLM's management of wild horses and burros, we must ask why the program never gained the ground needed to make it the top-notch program it deserves. There are many reasons for this but *none that implicates the horses or burros themselves.* General philosophies of the Agencies show that management was more concerned about numbers and removals rather than understanding the wild horses and burros as wildlife species and managing them on their rightful lands.

The BLM's background or culture was predominately that of a livestock grazing agency. The forerunner of the BLM was known as the Grazing Service which was responsible for the extermination of tens of thousands of wild horses. This culture, to protect livestock over wild horses and burros, is still pervasive in the Agencies.

In 1980, the Director of the BLM told a colleague of ISPMB not to worry about the animals, because in ten years there will no longer be a Wild Horse and Burro program. This attitude prevails. At the turn of the 21st century, the Agencies' campaign was in full force marketing the idea that there is an over-population of wild horses and burros in our country; that populations double every four years; herds grow at a 20%-28% growth rate; and by 2030, there will be over one million wild horses on public lands. This marketing scheme was done to move Congress to allow for "sale authority" *meaning sale for slaughter.*

There has been an ongoing effort by the Agencies to change the Act and allow for sale authority of excess wild horses and burros. This failed in 1985. However, in the 2005 Appropriations Act, a clandestine rider was inserted, which was the agencies way of slowly dismantling the Act. This change allowed for the sale of horses over the age of ten and those who failed being adopted in three tries.

ISPMB was successful in stopping the Agencies by soliciting the assistance of the Ford Motor Company in 2005. This was the first time that a Fortune 500 Company was involved in saving wild horses and burros. That support still exists.

The History of the Wild Horse and Burro Program on pages 12-17 is well worth the read to see how wild horses and burros have been maligned since the inception of the Act.

The constant removal of wild horses and burros is the direct result of the Agencies' willful disregard of adherence to the Act, one of the most environmental laws on record. In 1989, a IBLA ruling stopped the Agencies from removing horses because they could not prove they were "excess." Proving "excess" is the only lawful reason to remove animals. This halted removals for three years until 1992. Because the Agencies were never taken to federal court in 1992, they continued their blatant disregard for the Act and continued to manage by numbers creating an Appropriate Management Level (AML) out of thin air but carved in stone and without regard to monitoring the habitat for damage and determining what herbivore is actually is causing damage. (Page 28-29)

Excess can only be determined by monitoring the impact of grazing on the current condition of the plant community. AML is the *outcome of monitoring,* not a set range of numbers carved in stone. Further, IBLA ruled that the Agencies must manage for "optimum" numbers.

The 1990 GAO report stated that unless cattle were to be removed in ratios to horses that the habitat would not be restored. Livestock are in nearly every herd area in the West at a ratio of upwards to 100 cows per wild horse. If ratios were used, then one horse would equal 100 cows. Further if 100 horses were removed than 1,000 cows would be removed. This has not ever happened. If the agencies truly did monitor the habitat and determine what herbivore is causing damage, there would be fewer wild horses removed and more livestock removed.

The need for a NEW management "model" rises out of the Agencies' lack of understanding the wild horses and burros as wildlife species.

This dates back to 1983 when the National Academy of Sciences called for a "long-term equid research program" and an "expanded in-house scientific staff" to provide a solid foundation of scientific data on which to base management decisions. However, the agencies felt that no further research would be needed partly due to financial constraints. Quoting the *Report to Congress June 1984, "The most pressing question concerning further research for the Agencies is whether the benefits of increased knowledge and efficiency will justify the costs."*

Had the above study been completed, management of wild horses and burros would have been at the *"minimal feasible level"* as required by the Act. There would be no wild horses in holding pastures today; habitat monitoring to determine excess wild horses and burros would have created a healthier ecosystem; and finally, the actual costs to complete these studies in 1983 would have been millions upon millions of dollars cheaper than the costs incurred by the agencies' mismanagement of the program today.

ISPMB asks that this study now be completed on the Heber Wild Horse Herd in Heber, Arizona. It is the *only* herd left on public lands that has not been disrupted over the past fifteen years. It shows a stable population with zero to 3% growth. (Page 7)

This herd could transform the way the Agencies manage wild horses and burros. This herd mimics ISPMB two herds that were not disrupted over seventeen years.

All that would be needed is a stroke of the pen by the Honorable Tom Vilsack recommending that this herd be studied over the next five to seven years. This, now, is a once-in-a-lifetime opportunity. The Heber Herd resides on 616,000 acres of the Apache-Sitgreaves Forest. It's history dates back well into the 1800s.

Section 10 of PL 92-95 (1971 Act) "The Secretaries are authorized and directed to undertake those studies of the habits of wild free-roaming horses and burros that they may deem necessary in order to carry out the provision of the Act."

ISPMB further asks that the study is done by qualified scientists including wild horse ecologists, behaviorists, habitat specialists independent of the FS and agreed upon by ISPMB and the FS.

If this does not happen, the course the herds are on now will lead to their demise caused by the agencies constant destabilization of band structures and truly "managing them to extinction."

RECOMMENDATIONS

ISPMB suggests that the Heber Wild Horse Herd in Heber, Arizona be declared a study area by Secretary of Agriculture fulfilling the 1980 Academy of Sciences suggested research. The NAS's final report called for a "long-term equid research program" and an "expanded in-house scientific staff" to provide a solid foundation of scientific data on which to base management decisions. There is no doubt that this study would create a NEW model for managing wild horses.

The Heber Herd of Arizona has been intact since 2006-2007 when the court issued an order preventing the Forest Service from removing any horses until they developed a Territory Plan. At that time 300-400 horses were estimated in the Apache-Sitgreaves Forest and today there is an estimated population of 350-450 animals showing that stable populations are equivalent to stable growth. The population has been stable for more than 15 years with either a zero or 3% growth of this herd.

Why do we suggest this particular herd? **This is the ONLY herd remaining on public lands whose band structures have not been disrupted over a long period of time.** This herd shows stable growth over 15 years. This herd is similar to ISPMB's two herds that had no disruptions over a long period of time with the exception to move them to ISPMB's ranch. It is a true miracle herd and the perfect herd to be studied. This opportunity will never come again because all of the Agencies' herds have been disrupted continually destroying the family structures that are so vital to their survival.

With just a signature of the Honorable Tom Vilsack, Secretary of Agriculture, this can be done. **Section 10 of PL 92-95 (1971 Act) "The Secretaries are authorized and directed to undertake those studies of the habits of wild free-roaming horses and burros that they may deem necessary in order to carry out the provision of the Act."**

This herd must be studied as first recommended by the NAS for the next five to seven years. The study must be contracted out to an outside source agreeable to the Forest Service and ISPMB, who sued the FS and stopped the removal of these horses in 2006-2007.
In understanding the history of the program narrated on pages 5 through 10 in this document, it is understandable that the selection of a university and scientists involved should be a joint decision, especially in view of the fact of ISPMB's current knowledge on managing wild horses Having agreed upon outside scientists, ecologists, behaviorists and habitat specialists will help to restore trust in the results of the monitoring data.
The Heber Herd has been residing on over 600,000 acres of land in the Apache-Sitgreaves forest and has a history that dates well back into the 1800s. Currently the Forest Service has proposed to cut the herd down to 56-110 animals (the AML carved in stone) and then inject the mares with the pesticide anti-fertility drug, PZP. This will destroy this herd which has so beautifully kept their numbers constant over all these years.

We expect that this herd could transform the management of all wild horses and burros on public lands. This herd represents what the Wild Horses and Burros Act declared for the horses *"protected from capture, branding, harassment, or death; and to accomplish this they are to be considered in the area where presently found, as an integral part of the natural system of public lands."*

A Band of Heber Wild Horses

HEBER HERD GROWTH BASED ON FOREST SERVICE CALCULATIONS PER THEIR FORMULA

YEAR:	NUMBER HORSES:	PERCENT:	NUMBER HORSES BASED ON DOUBLING Q4YRS:
2004	300	20	300
2005	360	20	
2006	432	20	
2007	519	20	
2008	623	20	600
2009	748	20	
2010	898	20	
2011	1078	20	
2012	1294	20	1200
2013	1553	20	
2014	1864	20	
2015	2237	20	
2016	2685	20	2400
2018	3008	20	
2019	3,610	20	
2020	4332	20	4800

ACTUAL GROWTH OF HEBER HORSES BASED ON COUNTS FROM FOREST SERVICE

2004	300	
2020	450	3

BLM STATES IN THEIR RECENT REPORT TO CONGRESS THAT BY YEAR 2030 THERE WILL BE OVER A MILLION HORSES ON PUBLIC LANDS.

One just has to note the growth of the Heber Herd and know that the above statement is false.

INDEX

The Need for a NEW Management Model for Wild Horses and Burros on Public Lands and why this will work best for the long-term preservation of the animals; while reducing the costs of the program; allowing the Bureau of Land Management (BLM) and Forest Service (FS) to optimize funding for monitoring the health of the ecosystem; protecting it for future generations to sustain life upon and enjoy the landscape.

A MODEL for MANAGING

AMERICA'S WILD HORSES

By

International Society for the Protection of Mustangs and Burros

OVERVIEW

In 1999, the International Society for the Protection of Mustangs and Burros (ISPMB) undertook a daunting task, developing a "model" for managing wild horses in the United States based on daily observations of wild horse herds and band behaviors. ISPMB is the only organization in the U.S. to have such data on wild horse behaviors observed on a *daily basis* for more than seventeen years.

ISPMB's observations and data show that the BLM and FS's management of wild horses and burros is destroying the animals highly evolved social systems which will lead to their eventual demise if management continues in the current direction. Stable populations without roundups actually create stable 'minimal' growth or self-regulation, as shown by ISPMB's herds. And finally, if any increase in population, does occur, it is due to the Agencies constant disruptions of these social systems and complete mismanagement of this program.

We would like to share our plan with the BLM, FS and Congress so the future of wild horses will be preserved in a manner that promotes healthy behaviors; reduces fertility rates without intrusive management such as sterilizations, birth control or altering sex ratios; reduces the need to warehouse thousands of wild horses off the range because of constant removals; protects their habitat; saves taxpayers millions of dollars; and most importantly, protects and preserves these unique equids for their long-term survival.

Following is a brief history about ISPMB's herds. Fortunately, the first herd acquired in 1999 by ISPMB came from the White Sands Missile Range where the horses lived for decades without any major manipulations until they were gathered and permanently removed into the hands of ISPMB.

ISPMB acquired a second herd, known as the Gila horses from the BLM in 2000. This herd was not recognized as a wild free-roaming herd until the Secretary of the Interior, Bruce Babbitt, declared the herd to be protected. The Arizona BLM placed the horses under the Painted Rock Herd Management Area (HMA) for burros in 1996. This declaration by the Secretary came after ISPMB submitted evidence following our three-month investigation that the herd existed on public lands since the advent of the Spanish missions in Arizona in the 1600s. This temporarily stopped the removal of these animals, which would have been sold at auction by the BLM and now they were to be protected under the law. The BLM, in fact, suggested that a local rancher write a nuisance complaint against the horses to have the BLM remove those animals. At that time, ranchers stated there were at least 75 animals roaming on 50,000 acres of land.

No census was done prior to the removal of thirty-one animals in 1999 and adopted by the ISPMB in an attempt to conserve this rare Spanish herd. The BLM completed a census afterward and it showed there were no more horses, eliminating a rare and endangered

Spanish herd from public lands. According to research by ISPMB, the last removal of the Gila horses in this area prior to their adoption by the ISPMB was by the local mustanger whose career ended in 1936. Since that time, the only reduction in herd size was accomplished by the local ranchers who shot the horses.

In 2004, ISPMB acquired its third herd, known at the Catnip Herd from the Sheldon Wildlife Refuge in northern Nevada. This herd was eventually zeroed out by U.S. Fish and Wildlife Service. The agency did multiple removals of these horses well before ISPMB adopted them creating multiple disruptions of their band structures.

In 2007, a fourth herd was acquired from the Cheyenne River Sioux Tribe when they could no longer care for them. These horses were gifted to the tribe in 2001 by ISPMB. The horses originated near Virginia City, Nevada and were under the control of the state of Nevada. They were the descendants of horses that Wild Horse Annie initiated the first protections for under the Wild Horse Annie Act of 1959, only to see in 1971, under federal law, these horses were no longer protected because they were not on public lands.

The baseline data received from our first two herds proved to be extremely valuable since the horses had almost no management by humankind and exhibited very healthy social behaviors. The third herd that had been overly managed and threatened with elimination *showed much different and untoward behaviors which resulted in a dramatic increase in their population.*

In 2010, ISPMB completed eleven years of behavioral studies on the four herds aforementioned. With this data in hand, ISPMB *began* to prepare the first "model for managing" America's wild equids in a manner that is conducive with their survival and compatible with maintaining their natural healthy behaviors. Yet, another seven years ensued in analyzing observations and adding to ISPMB's management model the deleterious effects of the birth control drug, Porcine Zona Pellucida (PZP), which was administered to the Catnip and Virginia Range herds.

White Sands Bachelors ISPMB Photo

HISTORY OF THE WILD HORSE AND BURRO PROGRAM

At one time, it is believed, 2 million wild horses roamed in the western states at the turn of the twentieth century. The horse, native to the North American continent, is thought to have died out in the Pre-Columbian period 8,000 years ago, which is "but a wink of the eye in geological time." Reintroduced by the Spaniards in the 1500s, the horses have returned to fill the same niche in the many areas they once inhabited. With mitochondrial-DNA testing, Equus Lambei, the most recent Equus species in North America prior to its disappearance at the end of the Ice Age, has the same molecular biology as Equus Caballus, our present-day horse. DNA testing provides undisputable evidence that horses are "native" to our continent. Recently horse bones have been found that now dispute the theory that horses died out in the Pre-Columbian period. Native beliefs agree that horses were always on this continent as noted in their songs through their oral histories.

According to Dr. Gus Cothran (Texas A & M University), wild horses contain the most genetic diversity compared to any breed of domestic horse in our country. This diversity comes from the large numbers of animals prior to their management by the Bureau of Land Management (BLM) and the animals' ability to be in command of their own breeding program.

Although the numbers of wild horses and burros were estimated at 17,000 in 1971, this was purely a guess as there were no official records showing this count as accurate. The first visual count from the ground was done in 1974 showing an approximate total of 45,000 wild horses and 14,500 wild burros on U.S. Forest Service (FS) and BLM lands. Visual counts notoriously undercount animals. Some studies show the undercount could be as high as 50%. A 1982 study by the National Academy of Sciences concluded that the population rate of wild horses was 7% further proving that the count of 17,000 was simply an arbitrary number. Today, we have fewer wild horses and burros than when the Act passed and stated that "wild horses and burros were fast disappearing from the American scene."

The BLM's Wild Horse and Burro program has been mired in controversy since the inception of the program. Yet it has the potential to be one of their greatest public relation's program that the BLM manages. In the 1990s the program was termed the "White Hat" program because the BLM could receive positive recognition from Americans in every part of our country. Adopted wild horses and burros were now found in every state on the mainland. Support for wild horses and burros includes approximately 96% of our population and can be found on all divides including social, political, religious, cultural and economic factions. Statistics show that the wild horses and burros were their own best marketing tool with evidence of repeat adopters who realized the splendor of these American icons.

Now in the 50th year of BLM's management of wild horses and burros, we must ask why the program never gained the ground needed to make it the top-notch program it deserves. There are many reasons for this but *none that implicates the horses or burros themselves*. General philosophies of the BLM show that management was more concerned about numbers and removals rather than understanding the wild horses and burros as wildlife species and managing them on their rightful lands.

The agency's background or culture was predominately that of a livestock grazing agency. In 1939, the Division of Grazing became the Grazing Service (the forerunner of the BLM). During the 1930s the Grazing Service ordered the extermination of tens of thousands of wild horses. This policy lasted nearly thirty years resulting in the near eradication of wild horses in the West. This negative attitude toward wild horses and burros does not change overnight with the stroke of a pen on paper (the 1971 Act) requiring BLM to protect and preserve wild horses and burros. In fact, currently, this attitude remains pervasive within both the BLM and FS. It has especially been noted over the past twenty-years with the *myth that there is an over-population* of wild horses; that they double every four-years; and by 2030, there will be over a million wild horses on public lands. When in fact, it is the Agencies' own management prescription that is destroying the true nature of wild horses which have the ability to self-regulate. *(See page 41)*

It was in 1971 that Velma Johnston, affectionately known as Wild Horse Annie and ISPMB's first president, was instrumental in getting the passage of P.L. 92-195, the Wild Free-Roaming Horses and Burros Act. The Act passed without one dissenting vote in both the Senate and House of Representatives and saved the wild horses and burros from obliteration. Americans wrote the most amounts of letters second only to the Vietnam War asking Congress to save America's great heritage – the wild horses and burros. Letter writing continues today mainly through electronic mediums such as the internet.

It was Velma Johnston's desire to have the Wild Horse and Burro program under the auspices of the National Park Service (NPS). At that time, it was rejected because it was thought that wild horses and burros were not native to the United States which was refuted over time.

Velma felt the wild horses and burros would be doomed in the hands of an Agency that was managed by those who wanted to rid the western rangelands of these animals. The Agency's focus was protecting livestock interests on public lands. When questioned shortly after the Act passed, Velma was asked if the Act could be effectively administered. "My reply was that it all depended on attitudes… attitudes of those actually involved in administering the Act, including those in the field level." She went on to say that statements by the BLM to the media "served to add fuel to an already volatile situation while disregarding the fact that the Act calls for the protection of wild horses and burros, as well as their management and control."

The Wild Horse and Burro Advisory Board in 1990-1992 made significant recommendations to the Secretary of the Interior and the Secretary of Agriculture, which many were not

implemented by the Agencies. Most important were the Monitoring and Inventorying recommendations listed later in this document. Critically important, the Board recognized that there was little consistency in the program throughout the states; that there was no training program for employees; and no significant marketing program. It is a known fact that a business is doomed to fail if employees are not trained and there is little marketing for a product. The board agreed strongly that the Wild Horse and Burro Program was in need of refocusing to the management of these animals on public lands; that large-scale warehousing of animals not adopted was symptomatic of a program out of balance. [1]

As the agency changed over time, more employees whose backgrounds were in wildlife rather than range were hired. However, the prevailing attitude that wild horses and burros were feral livestock, although in direct opposition to the law and now current DNA analysis, was pervasive among both range and wildlife employees. It was not until the early 1990s that the first person with a university background in horse management was hired as a Wild Horse and Burro Specialist. This was the attempt of the 1990 Wild Horse and Burro Advisory Board and the BLM Assistant Director to Lands and Renewable Resources to professionalize the program. It was realized that the preservation of the wild horses and burros required specialists who understood the true nature of the species such as Wild Horse and Wildlife Ecologists whose main thrust understands the species and their behaviors. To date, *no specialist in the program has these qualifications.*

The final blow in the agencies' lack of understanding wild horse management came in 1983 when they refused to complete the studies of wild horses and burros that was required of them under the Public Rangelands Improvement Act (PRIA) of 1978 which directed, in part, the BLM and the National Academy of Sciences (NAS) contract for performance of a research study on wild horses and burros. *(1980 "Wild and Free-Roaming Horses and Burros: Current Knowledge and Recommended Research" published by the U.S. Department of Commerce, National Technical Information Service.)*

Phase I recommended 18 research projects, some of which would require 7 to 10 years of study for valid results. Phase II was published in October, 1982 and synthesized the results of completed research on wild horses and burros. With the final report to Congress due on January 1, 1983, the NAS committee identified five of the eighteen projects as having priority for immediate study.

1. Had BLM hired professional ecologists as Specialists and focused their management on the preservation of wild horses and burros on public lands as required by the Act monitoring the habitat and determining what animals were really causing damage, there would be no crisis today. Our herds would be behaviorally healthy and population growth would be at 4-7%. Twenty years of studies would have produced the same results that the ISPMB has gleaned over the past twenty years of doing our studies. Preserving the integrity of the band structures would have preserved the recruitment rate of 4-7% resulting in more stable band structures and behaviorally healthy herds and fewer animals that would have had to be removed.

Further, the NAS final report called for a "long-term equid research program" and an "expanded in-house scientific staff" to provide a solid foundation of scientific data on which to base management decisions. However, the agencies felt that no further research would be needed partly due to financial constraints. Quoting the *Report to Congress June 1984, "The most pressing question concerning further research for the Agencies is whether the benefits of increased knowledge and efficiency will justify the costs."*

Had the above study been completed, management of wild horses and burros would have been at the *"minimal feasible level"* as required by the Act. There would be no wild horses in holding pastures today; habitat monitoring to determine excess wild horses and burros would have created a healthier ecosystem; and finally, the actual costs to complete these studies in 1983 would have been millions upon millions of dollars cheaper than the costs incurred by the agencies' mismanagement of the program today.

The BLM identified 303 Herd Areas (HAs) in 1971 were wild horses and burros were found. Today the BLM is managing 177 Herd Management Areas (HMAs), a loss of nearly half the ranges while the FS has 47 ranges and are now down to 36. Originally wild horses and burros were found on 47 million acres of BLM land and since have lost over 21 million acres of land.

The Act clearly states the wild horses and burros are to be managed on their "ranges." However, the BLM devised the term Herd Area (HA) for "Range" allowing for the further reduction of their rightful ranges by managing them only in what they termed Herd Management Areas. This meant if the animals wandered back onto their HA and were off the HMA, they would be removed. The FS created the term Territory which is not in the Act.

The definition of "range" in the Act was specific – "means the amount of land necessary to sustain an existing herd or herds of wild free-roaming horses and burros, which does not exceed their territorial limits. And which is devoted principally but not necessarily exclusively to their welfare in keeping with the multiple-use management concept for public lands;" The term that is forgotten by the Agencies in the definition of "range" is the word "principally."

Livestock outcompete the use of the wild horse and burro ranges, now known as HMAs, by up to 100 cows to 1 horse. The 1990 Government Accountability Office (GAO) report stated that unless cattle were removed in ratios to horse removals that the habitat would not be restored. This was never done by the Agencies and the habitat remains in static trend and the Agencies' continue to remove wild horses and burros unnecessarily. *(If 100 wild horses were removed than 1,000 cows would have to be removed using the ratio concept.)*

Since 1985, the BLM has pushed for "sale authority" which is in direct violation of the Act. This would have given authority to sell wild horses and burros to highest bidder meaning those people who buy horses for slaughter, known as "kill" buyers. This language failed in the 1985 Range Omnibus.

However, a rider which would amend the 1971 Act was clandestinely inserted in the 4,000page Omnibus Appropriations Act for fiscal year 2005 without anyone's knowledge except the three Senators behind it. [Harry Reid (D-NV), Conrad Burns (R- MT), Byron Dorgan (D-ND)] This rider was not rescinded by Congress when Congress was quickly called back to Washington to vote against several other clandestine riders inserted in the Appropriations Act.

This latest amendment to the Act allowed for horses over the age of ten and horses that failed being adopted in three attempts to be sold to the highest bidder. It was then that ISPMB solicited the support of Ford Motor Company to intervene on behalf of the wild horses and burros. This was the first time in the history of the Wild Horse and Burro program that a Fortune 500 Company came to the defense of wild horses and burros. No action to sell horses was taken by the Agencies over the next several years that Ford was involved.

To date, each year a continuing resolution passes through Congress not to destroy excess wild horses and burros. This has been done since the 1971 Act passed. This continuing resolution protects excess wild horses and burros from being slaughtered.

In 1989, the Animal Protection Institute (API) successfully challenged in the Interior Board of Land Appeals (IBLA) the setting of (Appropriate Management Level) AML by the Agencies which was arbitrary and capricious. This halted removals of all wild horses and burros for three years. In 1992, API was notified that they would begin to lose their next cases. The first was in Wyoming and continued. The next step was to go to federal court to stop the BLM from setting AMLs and this was never done due to the costs of such action. The Agencies continue to NOT determine "excess" which is the only legal means of removing wild horses and burros from their "ranges." Excess can only be determined through monitoring and inventorying the habitat and determining what herbivore is causing damage and only those animals must be removed to restore a thriving ecological balance. The Agencies continue to set arbitrary numbers of wild horses and burros to be removed not based on monitoring the habitat. One just has to note how few dollars actually go toward monitoring and inventorying to see that this is true. *(Report to Congress – page 8)*

Overpopulation can only be determined by monitoring the impact of grazing on the current condition of the plant community. And AML is the *outcome* of monitoring, not a set range of numbers carved in stone. Monitoring habitat for "excess" is the strength of the 1971 Act because it requires the Agencies to fulfill their mandate as "stewards of the land." The Act was one of several environmental laws enacted in the 1960s and early 1970s.

In May of 1994, the U.S. Attorney in Del Rio, Texas accepted a case and impaneled a grand jury in October. It involved examination of the role BLM managers played in facilitating the trafficking of wild horses to slaughter. This case was brought about by BLM's own law enforcement agents. *(Read PEER White Paper attached.)* 1997_horses_to_slaughter.pdf (peer.org)

Wild horses are still going to slaughter while BLM and FS turn their heads. As recently as May 2021, the *New York Times* front page article exposed BLM paid adopters $1,000 to adopt a horse and then they turned around and sold the animal to slaughter, profiting twice off the animal and violating the 1971 Act. Wild Horses Adopted Under a Federal Program Are Going to Slaughter - The New York Times (nytimes.com)

1n 1990, ISPMB was instrumental in bringing the Arizona BLM together with the Assistant United State Attorney to reform the penalties of the 1971 Act which were $2,000 for killing a wild horse or burro. The fines were increased to $100,000 and up to one-year in jail. This was done through the Sentencing Reform Act of 1988. Although one can count on one hand how many people were ever convicted of a crime against wild horses and burros when there have been many over these years.

Over time trust among the American public that Agencies have the best interest of the wild horses and burros at heart has eroded to an all-time low. How does one change a "culture" within the BLM to accept the will of Congress and the people as stated below?

"Congress finds and declares that wild free-roaming horses and burros are living symbols of the historic and pioneer spirit of the West; that they contribute to the diversity of life forms within the Nation and enrich the lives of the American people."

It is the goal of the ISPMB that this management plan will give the Agencies the necessary tools to effectively manage wild horses and burros in a manner that protects and sustains their survival over the long-term; reduces the fertility and recruitment rates and the need for ever increasing removals; and restores the trust and credibility of the agency with the American people.

A Band of the Catnip Herd
ISPMB photo

WILD HORSE BEHAVIOR AND SOCIAL STRUCTURES

Understanding wild horse behaviors comes from constant observation and interpretation of data over time. Since each herd exhibits its own culture, it is important to understand how cultures affect behaviors and vice versa.

Since the passage of the Act, understanding behaviors of the wild horses and gearing BLM management practices and strategies toward this understanding has been sorely missing. Yet in managing any species, fully understanding every aspect of that species is of utmost importance in the species preservation and in creating the best management practices.

The first understanding of importance is that domestic horses are different than wild horses. The analogy can be made of the wolf and dog. They look alike but are different in many aspects. The dog is a domestic animal and the wolf is a wild animal and they cannot be managed in the same way.

The following behavioral observations are from eighteen years of observing two herds whose social structures had not been disturbed in decades of time with the exception to be removed into ISPMB's management. These observations must be complimented by all the studies of leading ecologists in the United States and the world to bring to the BLM the best management plan based on sound science. It would be wise to convene a panel of leading ecology scientists and experts to assist the BLM and FS in the development of a sound management prescription.

Wild horses exhibit strong social bonds with each other. If band structures are not disturbed, stallions retain their mares for a lifetime unless the stallion becomes infirmed from old age or is injured and unable to protect his mares.

Decision making is an important component of the herd. The horses experience every myriad of emotion as humans. One of the important aspects of wild horse behavior is their ability to express their emotions honestly. They understand and often accept help when injured. They are quite adaptable to human company within the herd and treat humans in a different manner than they do each other. Bands work together for the good of the entire herd as observed in eliminating potential predators by stampeding the predator. When the predator returned the entire herd again stampeded the animal. Also observed was a one-year-old filly in estrus approaching a young bachelor band whose interests were aroused by her behavior. Another family band stallion observing the filly's action came out of his band to discipline the filly and sent her down the hill toward her natal band. She still refused to go to her band and another family band stallion nearby chased her right back to her band. She never became pregnant until four years of age. The greatest understanding of this observation of working together for the good of the whole is how critical this behavior is to their future sustainability. This

observation has not been seen in other equid populations around the world according to other scientists who have so stated.
There is a dominance or hierarchy of bands within the herd. There is also a dominance of mature animals over younger animals. It has also been noted that family bands have hierarchy over bachelor bands. There is a greater foal survival with more dominant family bands than least dominant bands.

Mothers are very attentive to their new born foals for two weeks, never resting when the foal leaves the safety of the natal band. Thereafter, the mares allow the foals more independence and become less stressed about the foals cavorting within the herd.

A family band stallion was observed taking the role of a mother by bringing back a one-day-old foal into the natal band. The foal's mother had died a few hours earlier from complications of delivery. The foal was very playful running in and out of his band. The family band stallion exhibited very protective behavior over the foal. When the foal encountered another family band, the stallion challenged the other family band stallion and then returned the foal to his natal band with extreme gentleness. The foal was safely removed by our team when the family band stallion was fighting with another stallion and not observing the foal. The foal would not have survived unless there was a surrogate mare from which he could nurse. This behavior has also been observed in our herds where one foal nursed off of two mares due to one mare losing her foal. This was not a common occurrence but did occur in the herd that worked together for the good of the entire herd.

Generally, fillies do not foal until they are four years or older. When colts show any sexual prowess, they are asked to leave the band by the family band stallion. However, it has been noted that one colt remained in his natal band for over five years. This behavior could be due to the fact the colt was blind in one eye. Generally, bachelors do not become family band stallions until they reach maturity at the age of ten. However, there have been rare circumstances where younger stallions have exhibited great leadership skills and have commanded a family band at a younger age. The youngest noted was six years of age. He turned out to be an extraordinary stallion whose family had many of the older and wiser mares.

The stallion plays a major role in protecting his family and offspring. The wisdom of the stallion and mares creates good mentorship which is passed on to the offspring. The stallions appear to have a greater role in the stability of the band structures. The mares are content to be with wise, protective, nurturing, dominant stallions.

Observations of behaviors in ISPMB's third herd that had multiple gathers and removals showed untoward behaviors such as loose band structures, changing band structures and at times no band structures. According to the Sheldon Wildlife Preserve, there were very few horses over the age of ten years when we acquired this herd. (Catnip Herd)

Other behaviors noted in the Sheldon horses were: rogue stallions breeding fillies at the age of one-year.; young mothers under the age of four who walked away from their foals after birth; mothers who nursed their foals for up to three to six months and then abandoned them; mares who were chased my several stallions with a week to ten-day foal at her side, during her breed back time, while she had no family band stallion to protect her; increase in foal mortality.

However, our greatest observation among all the herds is the recruitment rate. In the first two years of observing the Sheldon horses, the recruitment rate for the first year was 31 foals from a herd of 82 horses. There were 32 stallions and 49 females with one unknown. Of the mix, there were 15 foals 4-8 months of age, 8 yearlings, and 59 animals were 2 years and older. The following year, the recruitment rate was 36 foals. At this time, we instituted a PZP program for all original mature mares with foals at their sides.

What ISPMB has determined after managing wild horses now for twenty-one years is the understanding of the above increase in fertility rates was actually due to the disruption of the family band structures during roundups. In hindsight, we wish we would not have given this herd birth control. It would have been better to determine how long it would take for the animals to "normalize" with their birth rates and to study behaviors of this disrupted herd. Since, ISPMB has noted deleterious effects of birth control on our two herds that received birth control, we are adamantly against its use. Over time, we also noticed an increase in foal mortality of this herd which will be discussed under "Deleterious Effect of PZP."

Observations of recruitment rates in ISPMB's other herds mimic the National Academy of Sciences' data showing an average recruitment rate at 7%. The White Sands herd had 72 original horses and eleven years later were at 165 animals and eighteen years later there were 273. The Gila herd had 31 original animals and ten years later, we had 88 horses and sixteen years later there were only 137 horses.

The importance of stable band structures leads to a stable growth rate. Vegetation is plentiful for the herds and does not play a major factor in growth rates here. Weather conditions do play a factor in foal mortality. However, our observations maintain that the greatest factor in keeping low recruitment rates are based on the wisdom and stability of the bands.

Our assumption is that over the past twenty years of Selective Removals by the agencies, older stallions have been displaced by younger stallions who are opportunists breeding any age mares. With younger and younger stallions commanding family bands, there is a breakdown in the herd's social system. The best analogy is the university professors (old and wise family band stallions) have been replaced with high school children (6-10-year-old stallions) who are now trying to raise families without good parental mentoring. This has led to the increase in fertility rates among wild horses and an ever-increasing pregnancy rate of younger fillies under the age of four. *This however, does not mean the foals survive with younger fillies as mothers.*

The elder animals must never be captured and must be allowed to live out their lives with their band members. This leads to the greatest stability in band structures. There is a peaceful transfer of leadership when this is allowed as ISPMB noted in 2015 when instituting that policy. The eldest and most dominant stallion had the command of the largest number of mares in the White Sands herd. Knowing that this dominant stallion was aging, another stallion moved into the family band one year prior to the dominant stallion's death and together cared for the mares in a cooperative relationship. When the dominant stallion passed, the other stallion took over his mares in the most peaceful transfer with no stress on the mares.

With ISPMB's final change in management practices, allowing the horses to die within their own bands rather than rescuing them, another phenomenon occurred which cemented this practice to never remove horses from their family bands or bachelor bands. An older White Sands bachelor stallion was captured four to five years prior and placed on special feed as he was unable to keep weight on and no diagnosis was made as to why by the vet who attended to him. With special feed, he gained all his weight back and more. This stallion watched his herd daily from his corral for those many years. Captured on video is his release back into his herd in 2015 where he cavorted, bucked, whinnied, and joined his previous bachelor band and was extremely happy over the next year. To see him so happy was such a rewarding experience. He died within that year surrounded by his friends.

Finally, to end this cycle, BLM must no longer disrupt the social structures of the herds, and if removals are needed, that it must be done band by band either through bait or water trapping.

White Sands Bachelors in a Mock Fight - ISPMB Photo

HERD CULTURES

Although herd behaviors have similarities from herd to herd, we have noted that each herd has its own culture. We believe that these cultures are based on learned behaviors from generation to generation and were necessary in adaptation to their environments. Further exploration of herd cultures would prove interesting in the overall collection of behavioral data.

It would be important to preserve these cultures and the historical nature of the herds by not exchanging horses from one culture to another such as has been done in the Little Bookcliffs, Pryor Mountains, and other herd areas mainly to add "color" to the herds such as pintos and palominos. BLM's belief was "colored horses are more easily adopted," thus *not* managing for adaptability but adoptability.

In observation of four herds, we have noted the following differences in cultures: one herd exhibits a pugnacious attitude by stallions biting the hindquarters of the mares; it has been noted on another herd that stallions bite themselves first when they are angry before going after the aggressor; another herd demonstrates the stallions' peaceful approach to the management of their mares. It is important to sustain the different cultures and make sure that each herd has sufficient numbers to create a genetically viable herd.

AGE-SEX RATIOS

There is sufficient data available that shows that the majority of herds have more mares than stallions. This is also the case with ISPMB's herds. There is a reason that nature intended the ratios to be skewed in favor of the mares.

We know of one area in the Bordo Atravesado HMA in New Mexico, in the 1990s, the sex ratio was skewed well in favor of the stallions. What happened over time is the herd nearly was eradicated. No doubt many of the mares were injured and killed.

Understanding wild horse behaviors should be sufficient in stopping the skewing of sex ratios in favor of stallions over mares. For the following reasons, this should not be done.

1. First and foremost, the BLM should manage for the most natural behaviors exhibited by behaviorally healthy herds. Mainly, mares outnumber stallions 60% to 40%.

2. Greater numbers of stallions put tremendous pressure on the family band stallion to protect his mares:

    - This results in loss of weight of the family band stallion from having to defend his family band against rogue stallions.
    - This increases pressure on the mares with their band stallion constantly moving them away from other stallions.
    - This inability to escape pressures could result in potentially unhealthy behaviors.
    - This could lead to the inability to provide good mentorship behaviors to the family band's offspring.
    - This does result in increasing space between the bands resulting in the inability of the herd to act as a whole unit.
    - This will result in more injuries to both mares and band stallions.
    - This will result in the death of young foals.

3. Greater numbers of stallions put tremendous pressure on the mares.

    - If the family band stallion is unable to protect his mare while she is in estrus, there will be a push by the bachelors to breed her. This also happens with the use of PZP when mares are not impregnated and continue to cycle. In fact, family band stallions can be killed.
    - Observing bachelors in a herd with normal sex ratios when a family band stallion is not present, one can best describe bachelors like piranhas on a gold fish.

- It is likely that any offspring to the mares will be threatened when the mare is due to be bred back in ten days. More fighting to breed the mare not only could injure the foal but also the mare.
- Constant moving of the mares and foals by the stallion reduces the time that mares and foals can quietly graze. This could lead to loss of weight and potential death in older animals.

4. In non-disrupted herds, the bands act together for the good of the herd. Skewing the ratio could alter this behavior by increasing the distance between the bands so a family band stallion can protect his mares from rogue stallions. This reduces the herd's ability to act as whole unit. Cohesion of the herd is extremely important in fighting off predators.

Gila Wild Stallions Chase Bachelor stallions while Mares graze in the Background
ISPMB photo

SELECTIVE REMOVALS

Selective removal as a removal method is preferred over gate cuts which took whatever animals were captured regardless of age, thus removing large gaps in the gene pool. Selective removals were the concept of the 1990 Advisory Board and were implemented through the 1992 Strategic Plan. Although the BLM and Advisory Board differed on the goals of Selective Removals, ultimately each goal was achieved. BLM's goal was to bring only younger animals into the adoption program. The Board's goal was to leave the older and wiser animals within the gene pool to protect herd wisdom and integrity defined as unique genetic characteristics and collective herd behavioral wisdom that contributes to the herd's adaptability.

What was not understood at the time was *the importance in maintaining the integrity of the band structures by not separating the family band stallion from his band of mares.* Helicopter removals brought in large numbers of wild horses over the actual number of the animals to be removed to fulfill the age categories of removals. *(Bringing in more animals than those that are actually causing damage to their habitat is illegal.)* Stallions were separated from their mares. After age determinations were made, BLM released the older stallions and mares back to their home ranges in the Pryor Mountains. The ages of males returned were six years and older.

It was reported to ISPMB shortly after this program began by BLM's contractor that stallions were raping mares and that there was great chaos among the horses as they were released. Now after years of managing our own wild herds, this is completely understandable.

ISPMB has observed the same phenomenon when a family band stallion was removed along with his band of mares. During capture one mare did not enter the capture corral right away. Bachelor stallions vied for the mare resulting in bachelor stallion battles which could have created injuries to the mare. When the family band stallion was released to protect his mare, quiet ensued and the bachelors returned to their docile behaviors and maintained respect for the family band stallion.

This behavior leads us to believe that when there is opportunity, bachelors will steal mares. We have also observed that great respect is commanded by the family band stallions in our non-disrupted herds but missing in our herd that had sustained multiple removals leaving younger stallions in charge of mares and a dissociation of the integrity of the social structures.

The greatest opportunity for young stallions to take mares is in the release of mares and stallions in selective removals. In the Pryor Herd from Montana, it has been noted that family band stallions had fewer mares within their family bands once returned to their home ranges after a roundup. The mares were stolen by young bachelors.

ISPMB's observations show that the average age of stallions commanding new family bands is ten years of age although there are many other factors in determining leadership. It appears

that males mature emotionally at the age of ten while mares have to mature much quicker due to their responsibilities of motherhood at the age of four and five years.

It may be wise to take stallions into the adoption program under the age of ten reducing their ability to command family bands while emotionally immature. Again, it should be stressed that leadership capabilities are not solely based on age and more science is necessary to understand leadership qualities. This would prevent emotionally immature males from becoming family band leaders.

Selective removals should be continued but family bands must be kept intact throughout the capture. This can be done through bait or water trapping family bands. There should be no removals of animals that are at one year of age or younger. Yearlings will continue to nurse until the new foal is born. Allowing yearlings to continue to nurse may have some effect on the mother's hormones and reduce her ability to become pregnant every year.

A sufficient number of young animals should be maintained in the herd to offset mortality. These young animals should come from top hierarchies of bands.

Family Band of the Gila Wild Horse Herd ISPMB photo

MANAGEMENT PRESCRIPTIONS

To effectively manage America's wild horses, BLM must understand the behavior of these species and accept their wild nature. The adoption program must not drive the management of wild horses. The best management practices must be forward-thinking to the survival of their species on public lands over the next 500 years.

BLM should know the following about the herds:

- Band structures (family, natal, and bachelor bands)
- Identification of all horses within the band structures (photo ID)
- Movement of horses within the band structures
- Number of foals born each year
- Number of horses recruited into the herd
- Mortality
- Identify reasons for mortality
- Identify dominance or hierarchy order of the bands
- Age at which a mare becomes pregnant
- Note the number of pregnant mares within the family bands
- Note the ages of the fillies and colts when they leave their natal band
- Note behaviors of the bands that benefit the entire herd – working in concert with each other for the good of the whole
- Note all interesting behaviors

When removals are necessary:

- Only younger animals should be removed
- Removals should only be done by keeping the family bands intact through bait or water trapping
- Less dominant animals should be removed (they are more likely candidates for the adoption program because they will be more adaptable to domestication)
- Animals who are still nursing from their mothers should not be removed regardless of age
- Younger less dominant stallions should be preferred over females to keep ratios with the norm

All removals must be based on determining excess and only those animals impacting their habitat should be removed which will be discussed in the following Monitoring section.

DETERMING EXCESS AND ESTABLISHING AML

The Act is specific in determining what constitutes "excess" animals. A healthy habitat is based on maintaining a thriving ecological balance and only excess animals can be removed.

Excess is defined in the law as "those animals removed in order to preserve and maintain a thriving natural ecological balance and multiple use relationship in the area or pursuant to other applicable law."

Excess cannot be determined by numbers which is how the BLM and FS have managed wild horses and burros since 1992. This is arbitrary and capricious and has been ruled illegal in the Interior Board of Land Appeals (IBLA) case of Dahl v Clark 1984.

In 1989, Animal Protection Institute brought suit against the BLM in IBLA and *stopped all removals for three years*. What BLM failed to do was determine if the horses were causing damage because they had NO monitoring data. So therefore, they could not prove that the animals they wanted to remove were in "excess." The BLM and FS continue to NOT monitor the habitat and determine who is really causing damage. BLM and FS have gone back to managing by numbers (setting AML without monitoring) which is in violation of the PL 92-195, the Wild Free-Roaming Wild Horses and Burros Act of 1971 (Act).

This means that only those animals causing damage can be removed and, after that, the Appropriate Management Level (AML) can be determined which is a dynamic number depending on the health of the ecosystem. What the BLM and FS do not take into account are those other animals (livestock, wildlife) that actually cause damage.

The status of wild, free-roaming horses and burros is as "part of the biological diversity of the land" to be managed "as integral components of the natural system." Overpopulation can only be determined by monitoring the impact of grazing on the current condition of the plant community.

And finally, AML is the **outcome of monitoring,** not a set range of numbers carved in stone.

Quoting the Interior Board of Land Appeals 16 U.S.C. 1333(b)(2) (1982)

"In examining this statute, we also concluded that the statutory term 'appropriate management level' (AML) has a very specific meaning in regard to removing wild horses or burros from public range. It is synonymous with restoring the range to a thriving natural ecological balance and protecting the range from deterioration. Thus, the number of "excess" animals the Secretary is authorized to remove is that which exceeds *the AML, which is the*

optimum number of wild horses and burros that results in a thriving natural ecological balance and avoids deterioration of the range." (Italics -emphasis by ISPMB)

The IBLA further concludes, "An AML established purely for administrative reasons because it was the level of wild horse use at a particular point in time cannot be justified under the statute. Accordingly, we also held that 'the Act' does not authorize the removal of wild horses in order to achieve an AML which has been established for administrative reasons, rather than in terms of the optimum number which results in a thriving ecological balance and avoids a deterioration of the range."

The definition of "optimum" is "the most favorable condition for the growth and reproduction of an organism." Meaning, the most favorable condition for the growth and reproduction of wild horses and burros.

That the Agencies have determined that the AML should be 26,715 animals on public lands is illegal. It is a set number "carved in stone" without determining if the current population of animals are causing damage. And further this does not constitute the "optimum number" of animals.

The Agencies have NO monitoring data and if they did, there would be far less livestock on public lands.

WHY MANAGEMENT SHOULD HAVE OPTIMUM NUMBERS OF HORSES AND BURROS

The future survival of wild horses and burros requires optimum numbers to protect these animals in many situations to come. For one, it is critical that they maintain their rich genetic diversity. The Agencies should not manage for "minimum" diversity, which they continue to do. Based on blood samples of the animals, the Agencies determined how low populations can be driven before inbreeding becomes prevalent. This is in direct violation of the Act.

With weather changes experienced recently in South Dakota, it is critical that we manage for optimum levels of wild horses and burros as the law so states. In 2013, South Dakota experienced the "Atlas" storm dropping temperatures in October 80 degrees. The animals experienced no transition in gradual cooling of temperatures which would signal to them to start to develop their winter coats in preparation for winter. Over 42,000 animals died during this storm due to hypothermia because they did not have their winter coats. Animals can withstand temperatures as low as -60 degrees with proper insulation from their long, hairy coats. The warming of temperatures through September and October of 90 degrees gave these animals no forewarning. Animals prepare for winter not by the shortening of daylight but by the gradual dropping of temperatures.

We can expect more of these climate changes and extremes which threaten all populations.

THE DELETERIOUS EFFECTS OF PZP ON WILD HORSES AND BURROS

The following report was completed by Marybeth Devlin on December 24, 2015

EXPANDED SUMMARY OF PZP'S ADVERSE EFFECTS, INCLUDING REFERENCES PZP — The Pesticide

Porcine zona pellucida (PZP aka ZonaStat-H or Native PZP) is an EPA-registered pesticide derived from the ovaries of slaughtered pigs. PZP is approved for use on wild horses "in areas where they have become a nuisance …." [20]

Some persons argue that, because PZP does not kill the mare, it is not really a "pesticide." Actually, PZP does kill. As will be documented in this report, its use is associated with stillborn foals. In the long term, PZP will weaken a herd immunologically, which could swiftly lead to its extinction. So, yes, PZP is a real pesticide.

PZP — an Anti-Vaccine

While touted as a "vaccine," PZP is actually a perversion of what a true vaccine is supposed to be. Instead of preventing disease, PZP causes disease — auto-immune disease. Thus, PZP is an anti-vaccine.

PZP's Mode of Action as Stated in the Pesticide Registration Is a Disproved Hypothesis

The registrant of PZP advised the Environmental Protection Agency (EPA) that, based on information from the pesticide's researcher-manufacturer, PZP works by generating antibodies that "block sperm attachment." This representation of PZP as a sort of chemical condom was not fact but merely an untested hypothesis, postulated three decades ago. The old hypothesis was disproved by subsequent research. PZP's manufacturer knew, or should have known, this. The manufacturer should also have been informed and up-to-date regarding the side effects and unintended consequences of PZP. Yet, the manufacturer continued to cite the disproved hypothesis and to deny that PZP has any adverse effects. [7 and 13]

PZP's True Mode-of-Action

So how does PZP really work? PZP tricks the immune system into waging war on the ovaries. In a meta-analysis of ZP-type contraceptives, Kaur & Prabha (2014) reported that the infertility brought on by such products is " … a consequence of ovarian dystrophy rather than inhibition of sperm-oocyte interaction." Thus, PZP's antibodies "work" not by blocking sperm attachment but by destroying the ovaries. Kaur & Prabha further disclosed that " … histological examination of ovaries of immunized animals revealed the presence of atretic follicles with degenerating oocytes." [5] [Atretic follicles are ovarian follicles in an undeveloped state due to immaturity, poor nutrition or systemic disease; manifested by prolonged anestrus.]

Kaur & Prabha's review concluded that PZP's antibodies induce ovarian dystrophy, oophoritis (inflammation of the ovaries), destruction of oocytes in all growing follicles, and depletion of resting follicles. The manufacturer of PZP as well as Bureau of Land Management (BLM) should have been aware of these and other findings about the pesticide. Yet they ignored or disregarded any information that was contrary to their personally-preferred but obsolete and false description of PZP's mode-of-action.

PZP Manufacturer's Own Research Found Markedly Depressed Estrogen Secretion In a telling study published back in 1992, the manufacturer of Native PZP, along with colleagues, reported that " … three consecutive years of PZP treatment may interfere with normal ovarian function as shown by markedly depressed oestrogen secretion." [6] Thus, despite all the hype about PZP being non-hormonal, the manufacturer knew that ZonaStatH has an adverse hormonal effect, causing significantly-lowered estrogen. Thus, PZP is an endocrine disruptor. [21] The plummeting estrogen-levels may also reflect the ovarian dystrophy and oophoritis now known to be caused by PZP. Despite personally discovering negative hormonal impacts 23 years ago, PZP's manufacturer continued to cite misinformation regarding the product's mode-of-action and endocrine-disruptor sideeffects.

PZP Causes Ovarian Cysts
In their 2010 meta-analysis, Gray & Cameron cited a number of studies that found " … alterations to ovarian function, oophoritis, and cyst formation with PZP treatment (MahiBrown et al.1988, Sehgal et al. 1989, Rhim et al. 1992, Stoops et al. 2006, Curtis et al. 2007)." [4] These findings support those of Kaur & Prabha while introducing yet another adverse effect: ovarian cysts. Gray & Cameron's review also noted that increased irritability, aggression, and masculine behavior had been observed in females following PZP-treatment.

PZP → Endocrine Disruptor → Elevated Testosterone → Masculinizing Effects
Recall that PZP has endocrine-disrupting effects that result in lowered estrogen. Per the observed masculine behavior of treated mares, PZP seems to have a testosterone-elevating effect too. A deficit of estrogen alone would not necessarily manifest in the masculinization of treated females, but an excess of testosterone would. So, it appears that PZP disrupts at least two hormones: estrogen — by substantially lowering it — and testosterone — by substantially elevating it. Adverse effect: Unnatural behavior.

PZP → Ovarian Cysts → Elevated Testosterone → Masculinizing Effects As discussed above, PZP correlates with abnormal masculine behavior on the part of treated females, a side-effect likely due to elevated testosterone. But in addition to the endocrine-disruption caused by PZP, there could be a second way for testosterone levels to become elevated. Recall that PZP causes ovarian cysts. An Internet search on "ovarian cysts and testosterone" yielded results for polycystic ovary syndrome (PCOS) in women. Interestingly, one of the symptoms of PCOS is high testosterone levels. [12 and 22] The connection between ovarian

cysts and elevated testosterone suggest that the ovarian cysts caused by PZP could — either alone or in combination with PZP's endocrine-disruptor effects — lead to high testosterone levels in treated females, as evidenced by their masculinized behavior.

PZP Causes Additional Adverse Effects

Gray & Cameron's review also disclosed that, when PZP was administered to the females of a herd, males lost body condition while the oft-claimed improvement in female body condition did not hold up. Further, mares remained sexually active beyond the normal breeding season and had more estrus events.

PZP Selects for Weak Immune Function

Gray & Cameron's analysis raised the possibility of PZP selecting for immuno-compromised individuals. Here's why. Because PZP stimulates the immune system, it ironically works "best" — sterilizes faster — in mares that have strong immune-function. Such mares respond to the anti-vaccine and produce quantities of PZP antibodies that destroy their ovaries. But, conversely, PZP may not work at all in mares whose immune-function is weak or depressed. Those mares fail to respond to PZP. They keep getting pregnant and producing foals who, like their dam, suffer from weak immune-function. So, the PZP pesticide works against the very horses that Nature has best equipped for survival against disease while favoring and selecting for the immuno-compromised. Thus, a herd being treated with PZP is undergoing selective breeding for weak immunity, which puts the population at risk for disease — and ultimately, for extinction.

PZP Confers Dubious "Benefit" of Increased Longevity

Gray & Cameron also cited a study that found that "… PZP treated feral horse mares lived longer, resulting in a new age class (>25 years) not present before treatment …." Exceptionally-long life is an ironic effect of PZP treatments. PZP's manufacturer actually boasts about it, as if the anomaly were a good thing. However, Gray & Cameron questioned the supposed benefit of mares living much longer than their normal life expectancy. Indeed, such mares take up scarce slots within size-restricted populations. The ultra-elderly mares continue to consume resources for many years, but they no longer contribute to the genepool. It is detrimental to a population's genetic viability to carry significant numbers of sterile herd-members way beyond their normal life-span.

Research on Wildlife Contraceptives Revealed Stillbirths and Auto-Immune Oophoritis from PZP

There was an even earlier, definitive meta-analysis on wildlife contraceptives. Nettles (1997) reviewed 75 studies available at that time on the subject. Among his findings regarding PZP-use across different species, including horses, were: Stillbirths; altered ovarian structure and cyclicity; interference with normal ovarian function; permanent ovarian damage; and some cases of irreversible sterility due to auto-immune oophoritis,

which suggested that PZP can be selective against a certain genotype in a population. [10] Many of these findings were confirmed by Kaur & Prabha as well as by Gray & Cameron. Please keep in mind these key findings: Stillbirths, and auto-immune oophoritis.

Recent Stillbirths Correlated with PZP

There is recent evidence confirming Nettles' finding of a correlation between PZP treatments and subsequent stillbirths. In June 2015, Karen Sussman, President of the International Society for the Protection of Mustangs and Burros, reported that 7 mares previously treated with PZP at ISPMB, when taken off PZP, were able to get pregnant. However, 6 of those 7 mares — that is, 86 percent — produced foals that were stillborn. All other ISPMB mares that had not been injected with PZP successfully birthed healthy foals. Thus, given that environmental and other conditions were identical, the only variable was PZP. The dead foals have been sent to a university pathology department for autopsy. [18]

Autoimmune Oophoritis Induced by PZP

Research by the Rose-Cihakova-Caturegli Laboratory at Johns Hopkins Pathology found: "Automimmune oophoritis can be induced by immunization with testis and ovarian antigen murine human zona pellucida 3 peptide (pZP3) in adjuvant." [16] Here again, is causation of autoimmune disease by a ZP-type product. This finding confirms other research cited herein.

Autoimmune Oophoritis and Risk of Other Autoimmune Diseases

A study by Varras et al. disclosed that, in humans, autoimmune oophoritis carries the risk of the patient developing other autoimmune diseases. [23] The correlation between autoimmune oophoritis and subsequent other autoimmune disorders weighs against injecting fillies and mares with PZP repeatedly and en masse.

Prolonged Breeding Season, Unusually-late Parturition Dates with PZP

Nettles' meta-analysis on PZP disclosed other adverse effects: A prolonged breeding season and unusually-late parturition dates. (Parturition is the formal term for "giving birth.") These findings have recently been confirmed, as is discussed below.

Parturition-Season Extends to Nearly Year-Round When a Herd Is Treated with PZP

A longitudinal study (Ransom et al. 2013) of three herds currently being managed by PZP — Little Book Cliffs, McCullough Peaks, and Pryor Mountain — found that the parturition season lasted 341 days. [15] Ransom et al.'s finding of a nearly year-round birthing season supports the earlier finding by Nettles. Thus, during its period of potential reversibility, PZP's effects wear off unpredictably. Out-of-season births put the life of both the mare and the foal in jeopardy. Nature designed the equine birthing-season to occur in Spring, not year-round, and certainly not in the dead of Winter.

Prolonged Delay in Recovery of Fertility
The same longitudinal study by Ransom et al. found that, after suspension of PZP, there was a delay lasting 411.3 days (1.13 years) per each year-of-treatment before mares recovered their fertility. What this means is that it takes that long, on average, for the ovaries to heal, to clear out all those cysts, and to regain some degree of normal hormonal function.

The question is: How is the delay in recovery-of-fertility addressed by BLM management practices? Answer: BLM ignores it. For instance, BLM currently administers PZP to Pryor Mountain's fillies and mares starting at age 1½ — whom BLM artfully describes in the Environmental Assessment as fillies "becoming two- year -olds" — through age four. Thus, these fillies and mares receive intentional treatments for four consecutive years before being allowed the privilege of reproductive potentiality. Per Ransom et al.'s study, the Pryor Mountain fillies and mares would be expected to need 1,645.2 days (4.51 years) to regain reproductive capacity. But BLM gives the Pryor Mountain mares only 5 years off PZP before they are put back on it again — for the rest of their life. Thus, these fillies and mares might have just a six-month window — at best — in which to conceive. Due to the unpredictable timing of PZP's wearing off, for some mares that window of fertility will close before they get a chance to produce a foal. Those mares' genetic contribution will be zero.

As if the above scenario were not bad enough, PZP's manufacturer conceded that it could take up to eight years to recover fertility after just three consecutive PZP treatments. [13]

Ransom Advises Proceeding with Caution regarding PZP
The Ransom et al. study warned: "Humans are increasingly attempting to manage the planet's wildlife and habitats with new tools that are often not fully understood. The transient nature of the immunocontraceptive PZP can manifest into extraordinary persistence of infertility with repeated vaccinations, and ultimately can alter birth phenology in horses. This persistence may be of benefit for managing overabundant wildlife, but also suggests caution for use in small refugia or breeding facilities maintained for repatriation of rare species." [15]

Because BLM keeps over 70 percent of the herds at levels below minimum-viable population (MVP), most herds qualify as "small refugia." Pryor Mountain WHR is a small, isolated refuge, and its wild horses carry genes with rare alleles.

Ransom's Exclusion of Seven Mares Evidences PZP's Non-Effect on Immunocompromised Mares
In the "Data Collection" methodology section of the Ransom et al. report, the authors advised: "We omitted data for one female from the Little Book Cliffs and six females from McCullough Peaks because they produced offspring in every treatment year and thus were never effectively contracepted."

This fact is important because it evidences PZP's lack-of-efficacy on immunocompromised fillies and mares. To review: Because PZP activates the immune system, mares with naturally-low or depressed immune function do not "respond" to the treatment. It's as if they had been injected with saline — their immune system is so weak that it does not react to the PZP by producing antibodies. The good news is such mares' ovaries are saved from PZP's destructive effects. The bad news is that these mares continue to become pregnant year after year, producing foals that will also tend to inherit low immune-function. Over time, the herd will become populated with more such low-immune horses because those with strong immunity get sterilized. Thus, PZP selects for horses with low immune function, which is bad for a herd in the long term. Even a routine infection could spread quickly and wipe out a population of horses with weak immune-function. If the goal is to preserve a herd, the use of PZP constitutes a worst management-practice.

BLM Was Fully-Aware of the Ransom Study but Suppressed the Findings

In their report, the authors of the Ransom et al. study gave a shout-out to BLM "for administrative and technical support throughout this project." Thus, BLM was fully aware of the multi-year study while it was in progress and even lent support to it administratively and technically. Yet, in the case of the Pryor Mountain herd, BLM omitted this important report as a reference for the 2015 Environmental Assessment, which proposed intensifying the PZP "prescription." Thus, BLM pretended that there was no such report and unethically suppressed it. Consequently, the public could not comment knowledgeably and appropriately on the continued use of — let alone the accelerated application of — PZP.

Three PZP Injections Can Trigger Sterility in Mares, or Just One Shot in Fillies Before Puberty

Disturbingly, another recent study on PZP (Knight & Rubenstein, 2014) found that " … three or more consecutive years of treatment or administration of the first dose before sexual maturity may have triggered infertility in some mares. [9]

These findings are particularly troubling. They suggest that, actually, only two consecutive PZP-treatments may be reversible. Except, that is, in the case of fillies who have not yet reached puberty — they could be sterilized by just one injection. Recall the Pryor Mountain fillies, whose PZP treatments begin when they are just 1½ years old. They may not have reached puberty when they are initially treated. [1] And as we shall see later in this report, that first shot of PZP may not be their first shot of PZP.

Researchers Again Express Concerns about the Abnormal Life-Spans of Sterilized Mares

Knight & Rubenstein warned: "Inducing sterility, while relieving the mares from the energetic costs of lactation and reducing the stress from harem switching, may have unintended consequences on population dynamics by increasing longevity and eliminating the mares' ability to contribute genetically."

Knight & Rubenstein's concerns support those of Gray & Cameron, who also questioned the supposed benefit of sterile mares' extended life-spans. The abnormal numbers of aged, sterile mares count for census-purposes; but their presence disadvantages the younger horses, who become targeted for removal in order for BLM to achieve arbitrary management levels. Further, such mares no longer belong to the viable gene-pool.

PZP's Destructive Antibodies Are Transmitted via the Placenta and Mother's Milk It gets worse. Sacco et al. reported that, per radioimmunoassay, PZP antibodies are transferred from mother to young via the placenta and milk. The transferred antibodies cross-react with and bind to the zonae pellucidae of female offspring, as demonstrated by immunofluorescent techniques. [17] These findings were disclosed in 1981. PZP's manufacturer must have known about this dangerous effect, and certainly BLM should have investigated on its own whether there was any risk to the unborn or the nursing foal. Yet, the manufacturer continued to insist that there was no danger to the foal, whether born or unborn. [7 and 13] And in fact, BLM regularly administers PZP to pregnant and lactating mares, who transfer the destructive antibodies to their fetus, via the placenta, and to their foal, via mother's milk.

Recall again the Pryor Mountain fillies. If their dams were injected with PZP while pregnant or nursing, such fillies will already have PZP antibodies cross-reacted with and bound to their zonae. Therefore, when those same fillies are injected at age 1½, it will be their second treatment, or potentially even their third. In fact, they could already have been sterilized in utero or while nursing, the treatment having been received prior to puberty, about which Knight & Rubenstein warned.

PZP Weakens Herd-Immunity, Posing Risk of Stochastic Events Leading to Herd Extinction

To be self-sustaining, a herd needs to possess good immunity to withstand random catastrophes — known as stochastic events — such as contagious infections. There was such an event recently in Kazakhstan, where 120,000 endangered Saiga antelope — half the world's population — died off suddenly and inexplicably within a two-week period. Scientists think a common bacterial infection was the cause of this mass-mortality event, but are unsure why the antelope were unable to fight off the disease immunologically. [14]

Imagine if such a catastrophe were to befall the Pryor Mountain horses, whose herd-immunity is being eroded by PZP. Note that the Saiga deaths involved antelope-mothers and their calves. If Pryor Mountain's few fertile mares and their foals perished all of a sudden, that would leave just stallions and sterile old mares. The herd would be composed of the living dead, reproductively speaking, its rare alleles extinguished. BLM is failing to proactively manage the Pryor Mountain herd with stochastic events taken into consideration. That is malfeasance. PZP is a tool of immunological destruction, not of proper management.

PZP Continues the Use of Roundups and Removals
If the promise of PZP were true — if PZP really did eliminate the need to remove "excess" wild horses from the range — removals would have ended long ago in the Pryor Mountain Wild Horse Range, where PZP has been in use for approximately two decades. Yet removals are scheduled there with regularity every three years, the latest one in 2015.

Risks to Humans Who Administer PZP Injections
For staff and volunteers who inject wild horses with PZP, EPA's Pesticide Fact Sheet advises that Personal Protective Equipment requirements include long sleeved shirt and long pants, gloves and shoes plus socks to mitigate occupational exposure. EPA specifically warns that pregnant women must not be involved in handling or injecting ZonaStat-H, and that all women should be aware that accidental self-injection may cause infertility. [20]

However, EPA's Fact Sheet, the manufacturer's training, and BLM's operating procedures fail to inform pregnant women why it is so important that they strictly avoid PZP — because PZP's antibodies cross the placenta and cross-react with and bind to an unborn female child's own little zonae pellucidae. The baby-girl could be "anti-vaccinated" with PZP and even sterilized before birth.

EPA's Fact Sheet, the manufacturer's training, and BLM's operating procedures fail to warn lactating women to avoid PZP and why — because PZP's destructive antibodies would be passed along to a nursing female child via mother's milk. The baby-girl could be "anti-vaccinated" with PZP and possibly sterilized simply from nursing.

EPA's Fact Sheet, the manufacturer's training, and BLM's operating procedures fail to warn all women of the risk of ovarian dystrophy, oophoritis, ovarian cysts, and elevated testosterone-levels — in addition to infertility and, potentially, sterility — from unintentional self-injection.

EPA's Fact Sheet, the manufacturer's training, and BLM's operating procedures fail to emphasize the magnitude of the risk — the PZP-in-question is a horse-size dose.

But Is There a Mandate to Practice Scientific Integrity?
Yes. The Department of the Interior's (DOI) Code of Scientific and Scholarly Conduct applies to all staff members as well as to contractors, partners, permittees, and volunteers. The Code states: "Scholarly information considered in Departmental decision making must be robust, of the highest quality, and the result of as rigorous scientific and scholarly processes as can be achieved. Most importantly, it must be trustworthy." [19]

BLM has ignored and suppressed independent scientific findings about PZP's adverse effects and unintended consequences. Instead, BLM continues to rely almost exclusively on the manufacturer's claims — shown and known to be false — regarding PZP's safety for use

on horses and for handling by humans. BLM is thus non-compliant with the Policy and malfeasant in its responsibilities to protect staff, volunteers, and the wild horses under its jurisdiction. BLM is also misleading and disinforming Congress and the American public about the PZP pesticide.

The manufacturer of PZP — a partner to BLM — misrepresented the pesticide as safe for use on animals by humans. The manufacturer knew or should have known that the former hypothesis regarding PZP's mode-of-action had been disproved, and that PZP has dangerous side effects, safety-issues, and unintended consequences. Yet he hid and denied that information and failed to warn about PZP's adverse effects. The manufacturer cited his own research as if it were definitive, and aggressively criticized independent researchers whose findings did not fully support his claims. Indeed, he recently submitted an Op-ed to The Salt Lake Tribune wherein he belittled the research of fellow scientists whose studies on PZP yielded results somewhat different from his own. [8] His accusations were so unreasonable that the scientists felt it necessary to submit an Op-ed in response to defend the integrity and validity of their work. [11] The manufacturer also disparaged members of the public — one of whom was a member of the Pennsylvania Game Commission — who expressed concerns about PZP. He dismissively accused them of "an attempt to mislead," of "hyperbole," of "knowingly manipulating information," of "attempts to frighten people," and of indulging in an "anti-intellectual approach to debates." [7] By these actions, the manufacturer violated the DOI's Code of Scientific and Scholarly Conduct.

PZP Manufacturer Misled Trainees into Believing that PZP Was Safe

BLM staff and volunteers receive their training from PZP's manufacturer in how to handle and administer the pesticide. BLM is remiss in delegating the training to the manufacturer without verifying the adequacy of the instruction and the truthfulness of it. Two comments recorded recently in the media suggest that PZP's manufacturer misled not just the public-at-large but those who received training therefrom in how to administer PZP.

First, the manufacturer has been quoted as saying that PZP is "so safe it is boring." [3] Independent research shows otherwise — that PZP is a powerful hormone disruptor that could sterilize a female with just one injection. If trainees believe that PZP is boringly safe, they will be less likely to protect themselves adequately from this dangerous pesticide. Indeed, many of the trainees are women and, therefore, particularly at risk. Likewise, wild horse advocates are lulled into complacency, trusting that PZP is harmless to the Pryor Mountain horses and their rare genetic alleles. Of course, none of that is true.

Second, a PZP supporter, who self-identified as a recent completer of the PZP-darting training program conducted by the manufacturer, said in a comment posted to a news article: "I just received my FDA certification to handle and administer Native PZP. Would you be so kind to provide a link to the study you keep referencing? To my knowledge, and those teaching the Native PZP certification class, there are no side effects of the PZP produced by Dr. Kirkpatrick and his team, which is Native PZP." [2] Key words: "no side

effects." It is disturbing that a person who was, no doubt, motivated by a desire to help the horses has been disinformed regarding PZP's safety-hazards to humans as well as to horses.

BLM Fails to Maintain Proper Supervision of the PZP Volunteers

The issue of safety is not the only concern. As BLM has admitted, volunteers darted the wrong mares on Pryor Mountain. These errors evidence that BLM has failed to maintain supervisory control over the volunteer-inoculators, allowing them to conduct the PZP darting by themselves. The mistakes further evidence that the volunteers do not understand what is expected of them. Who can say whether other procedures were not complied with either. The fact that mares were darted who were ineligible for PZP per the then-current protocol, but who would be eligible under the proposed-but-not-yet promulgated new "prescription," suggests that the volunteers may have concluded — from BLM's open contempt for the Constitution and disrespect for the NEPA process — that was okay for them to start darting otherwise-ineligible mares right away. Not surprisingly, BLM blames the volunteers for these mistakes, but probably has not informed them that they are being made to take the rap for management's shortcomings.

Conclusions

PZP is appropriately categorized as a pesticide by the EPA. PZP "works" by tricking the immune system into attacking and destroying the ovaries. PZP has many adverse effects as well as unintended consequences. PZP presents safety-hazards to humans who handle it. PZP is a dangerous pesticide whose use is antithetical to the spirit and intent of the Wild and Free-Roaming Horses and Burros Act. BLM's continuing to use PZP while ignoring and suppressing the evidence of its harmful effects constitutes malfeasance.

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The above report on PZP was completed by Marybeth Devlin on December 24, 2015.

OBSERVATIONS OF DELETERIOUS EFFECTS OF PZP BY ISPMB

ISPMB instituted the use of PZP on two of its four herds. According to the registration of PZP with the EPA, permanent sterility was not to commence until seven years of repeated use. However, our mares in our Catnip herd were infertile after just five years of use. Therefore, we immediately stopped the use of PZP on our Virginia Range herd at four years.

It took an additional four years for nine mares out of approximately 36 mares to cycle again and have foals. Out of the nine Virginia Range mares, seven lost their foals. The six foals died within the first day of birth while the seventh foal died at age six months. He appeared to be a "failure to thrive" foal; thin, retaining a heavy thick coat in the heat of the summer, and suffered from malaise.

We also witnessed an accidental darting of a filly, who was observed over the next several years. She never became pregnant, while her cohorts that were not given PZP, were able to get pregnant. All the conditions were the same regarding hay, water, and space. The only exception was her inoculation with PZP.

We also noted repeated breeding of one of our mares multiple times during the day. Because she did not get pregnant, she was ostracized from her band. When she was able to get pregnant after only one year of PZP, she lost her foal within the first day of birth.

One of the most devastating effects of permanent infertility from PZP were the mares, that for many years previously had foals, began stealing foals from first-time mothers. The desire to have foals was so great that one mare stole five foals in one year.

Stealing foals happened consistently with at least six mares from both herds. There is no doubt that this happens on public lands but there is no one there who monitors herds like ISPMB has been able to do on a daily basis. Foals are unable to live without the first 24 hours of their mother's milk known as colostrum which contains antibodies that protect the foals from developing sepsis which is lethal.

Sterilizations of any kind do not create "optimum" populations.

Gila Filly
Photo- ISPMB

Planning, Monitoring and Inventorying Populations and Habitat

(This document was written by Karen Sussman and approved by the National Wild Horse and Burro Advisory Board upon which she served in 1990. This was submitted to the Secretaries of Agriculture and Interior.)

BACKGROUND

The Board reviewed current program guidance and procedures to determine if they are effective for the implementing program policy. In order for the program to succeed, a focus must be placed on management on the range that includes a monitoring and inventorying of both the populations and habitat

RECOMMENDATION

We recommend to the Secretaries of Agriculture and Interior that the BLM and Forest Service implement consistent inventorying and monitoring procedures that will provide information to determine wild horse and burro populations and herbivore impacts to achieve habitat objectives and desired plant communities as described in the following guidelines.

Planning and Monitoring Populations

That wild horses and burros are an integral part of public lands and must be managed under the principal of multiple-use with integrated, coordinated decision making.

That multiple-use, sustained yield management objective must be stated in Resource Management Plans (RMPs) and focus on achieving, maintaining or restoring a thriving range condition that contributes to species diversity.

Objectives must be based on public input, existing resource conditions and issues, and must be measurable, attainable, and realistic.

That population and habitat are so intertwined that planning and monitoring must include the following:

a. Behavioral observation of wild horses, burros and other herbivores.

b. Map spatial overlap information for the purpose of showing where competition occurs in juxtaposition to damaged areas; map 1 to include seasonal movement and distribution of wild horses and burros; map 2 to include distribution of livestock;

map 3 to include the use pattern map of vegetation; map 4 to include seasonal movements and distribution of major wildlife species.

c. Collection of consistent census data on a regular basis using the most appropriate wildlife censusing method for the habitat and situation.

d. Determination of minimum population levels to serve as a threshold (based on viable gene pools, herd integrity, and population dynamics information) below which the population in a given area cannot be removed.

e. Age structure and sex ratio information which would assist in making determinations for population adjustments. The information should not only determine what to take off but, more importantly, what should be left behind.

f. Update land-use plans as needed based on current monitoring data.

Monitoring and Inventorying Habitat

That the purpose of monitoring is to measure the impacts of wild horses and burros and other grazers on rangelands in order to provide information that allows sound management decisions.

That habitat must be managed as an ecosystem which takes into account all components, and the vegetation is to be managed not only for its forage value but its values as watershed protection and fish-and-wildlife habitat.

That BLM field manuals and program guidance's be reviewed for compliance with actions set forth by the Interior Board of Land Appeals.

That habitat monitoring must include the following:

a. Assess utilization by each herbivore species in terms of area of use and seasons of use.

b. Collect quantifiable data which will determine where and when competition occurs.

c. Collect technical data which will identify range conflicts and areas of actual competition and initiate a coordinated, integrated management approach.

d. Establish timeframes for evaluating monitoring data that results in multiple-use decision making, planning, and management.

e. Categorize objectives, moving from broad objectives (goals) to quantifiable objectives. Monitoring requires sound objectives and management constraints, which must be expressed in the Range Management Plan (RMP), quantified objectives in the Allotment Management Plan (AMP), and all management practices in the field manual.

f. Develop species-specific habitat evaluation standards and practices handbook agency-wide.

RATIONALE

We recognize that the Bureau of Land Management and the Forest Service can manage the range ecosystem with all its unique and diverse forms of plants, animals, terrain, and climate, given proper methodology and adequate qualified staff. With that recognition comes the need for improved and formative management of wild horses and burros and its resulting contribution to the animal diversity of the public lands within the established Wild Horse and Burro Management Areas.

Proper management plans for a given area require a strong information base. Monitoring should focus on the overall impact of grazing pressures on the many components of the watershed. The utilization levels obtained should be used as one of the tools to achieve established goals and objectives in the agencies' desired plant community. There is a need for the Bureau of Land Management and the Forest Service to apply established methods with a consistency that can be recognized, understood, and defended.

It is assumed that the increased expenditure for on-the-ground data and information will reduce the verbal and legal conflicts.

THE SIGNIFICANCE OF REINSTITUTING SUITABILITY CRITERIA IN MONITORING DATA

Because this form of monitoring actually supports more wild horses and burros on the land, the BLM dropped this important data from its monitoring scheme.

By applying suitability criteria to the carrying capacity calculations….that included distance from water, steepness of slope, type of terrain, and elevation….BLM calculated how much forage was *actually* available to livestock. When doing this calculation, BLM determined that the amount of forage allocated on the existing grazing permits needed to be reduced 60-70% and in some cases up to 90%. When the 1980 National Academy of Sciences field studies for wild horses presented their Phase I Report, one of the finds was that HOW and WHERE wild horses graze in relation to available forage was the key to wild horse management. Wild horses and burros graze further from water, on steeper slopes, and higher elevations, and on more rugged terrain than pregnant or lactating cows. The high mobility of wild horses and burros and the immobility of cow/calf herds makes a crucial difference with regard to the impact of each on the range condition. Wild horses live in bands spaced from each other. Cows congregate within a mile of water chewing their cud.

Suitability criteria showed that the amount of forage actually available to wild horses and burros is far greater than that available to cows. This criterion must be reinstituted in habitat monitoring.

FUTURE RESEARCH

The destiny of America's wild horses and burros now lies in understanding these animals as wildlife including their behaviors, biotic needs, social habits and habitat needs.

To make this section brief, we propose that selected scientists study a herd that has not been captured or disrupted in a long period of years (10-20 years) in juxtaposition to a herd that has been constantly disrupted through removals (every 4 years).

Studies must show how wild horse and burro populations normalize again after constant destruction of their social structures from multiple roundups, separation of stallions from mares to inject the pesticide PZP, and the total mismanagement of the Wild Horses and Burro Program by the Agencies.

RECOMMENDATIONS

ISPMB suggests that the Heber Wild Horse Herd in Heber, Arizona be declared a study area by Secretary of Agriculture fulfilling the 1980 Academy of Sciences suggested research. The NAS's final report called for a "long-term equid research program" and an "expanded in-house scientific staff" to provide a solid foundation of scientific data on which to base management decisions. There is no doubt that this study would create a NEW model for managing wild horses.

The Heber Herd of Arizona has been intact since 2006-2007 when the court issued an order preventing the Forest Service from removing any horses until they developed a Territory Plan. At that time 300-400 horses were estimated in the Apache-Sitgreaves Forest and today there is an estimated population of 350-450 animals showing that stable populations are equivalent to stable growth. The population has been stable for more than 15 years with either a zero or 3% growth of this herd.

Why do we suggest this particular herd? **This is the ONLY herd remaining on public lands whose band structures have not been disrupted over a long period of time.** This herd shows stable growth over 15 years. This herd is similar to ISPMB's two herds that had no disruptions over a long period of time with the exception to move them to ISPMB's ranch. It is a true miracle herd and the perfect herd to be studied. This opportunity will never come again because all of the Agencies' herds have been disrupted continually destroying the family structures that are so vital to their survival.

With just a signature of the Honorable Tom Vilsack, Secretary of Agriculture, this can be done. **Section 10 of PL 92-95 (1971 Act) "The Secretaries are authorized and directed to undertake those studies of the habits of wild free-roaming horses and burros that they may deem necessary in order to carry out the provision of the Act."**

This herd must be studied as first recommended by the NAS over for the next five to seven years. The study must be contracted out to an outside source agreeable to the Forest Service and ISPMB, who sued the FS and stopped the removal of these horses in 2006-2007.
In understanding the history of the program narrated on pages 5 through 10 in this document, it is understandable that the selection of a university and scientists involved should be a joint decision, especially in view of the fact of ISPMB's current knowledge on managing wild horses Having agreed upon outside scientists, ecologists, behaviorists and habitat specialists will help to restore trust in the results of the monitoring data.

The Heber Herd has been residing on over 300,000 acres of land in the Apache-Sitgreaves forest and has a history that dates well back into the 1800s.

Currently the Forest Service has proposed to cut the herd down to 56-110 animals (the AML carved in stone) and then inject the mares with the pesticide anti-fertility drug, PZP. This will destroy this herd which has so beautifully kept their numbers constant over all these years.

We expect that this herd could transform the management of all wild horses and burros on public lands. This herd represents what the Wild Horses and Burros Act declared for the horses *"protected from capture, branding, harassment, or death; and to accomplish this they are to be considered in the area where presently found, as an integral part of the natural system of public lands."*

Heber Wild Horses – Arizona

HEBER HERD GROWTH BASED ON FOREST SERVICE CALCULATIONS PER THEIR FORMULA

YEAR:	NUMBER HORSES:	PERCENT:	NUMBER HORSES BASED ON DOUBLING Q4YRS:
2004	300	20	300
2005	360	20	
2006	432	20	
2007	519	20	
2008	623	20	600
2009	748	20	
2010	898	20	
2011	1078	20	
2012	1294	20	1200
2013	1553	20	
2014	1864	20	
2015	2237	20	
2016	2685	20	2400
2018	3008	20	
2019	3,610	20	
2020	4332	20	4800

ACTUAL GROWTH OF HEBER HORSES BASED ON COUNTS FROM FOREST SERVICE

2004	300	
2020	450	3

BLM STATES IN THEIR RECENT REPORT TO CONGRESS THAT BY YEAR 2030 THERE WILL BE OVER A MILLION HORSES ON PUBLIC LANDS.

One just has to note the growth of the Heber Herd and know that the above statement is false.

Photo credit: Robert Hutchison

The Heber Horses Graze in the Forest

While a Bald Eagle Observes from High Up in the Tree

ABOUT THE INTERNATIONAL SOCIETY FOR THE PROTECTION OF MUSTANGS AND BURROS (ISPMB)

BACKGROUND:

The International Society for the Protection of Mustangs and Burros (ISPMB) is the oldest wild horse and burro advocacy organization in the United States. The organization has a long history in assisting the BLM and FS in the management of wild horses and burros as noted in the following:

- ISPMB was the instrumental force, along with our first president Velma Johnston, affectionately known as Wild Horse Annie, in moving Congress to provide permanent protection from slaughter of all wild horses and burros on public lands in 1971 with the passage of the Wild Horses and Burros Act.
- Prior to the Act, recognizing the heritage of wild horses and burros, Wild Horse Annie and ISPMB were instrumental in encouraging the federal government to establish protective ranges for wild horses. The first range was established in 1962 on Nellis Air Force Base in southern Nevada followed by Montana's Pryor Mountain Refuge in 1968. Since this time, two more ranges have been identified, The Little Bookcliffs Refuge in Colorado in 1985 and dedicated to ISPMB's first president, Wild Horse Annie, and the Marietta Wild Burro Range in Nevada, dedicated in 1991.
- In 1968, under a custodial agreement with the BLM, ISPMB and Wild Horse Annie accepted orphaned foals from the Pryor Mountains in Montana and found homes for them. This unprecedented agreement gave birth to the federal Adopt-A-Horse/Burro program in 1976 now administered by the BLM. (*Today more than 250,000 animals have been adopted in the program according to the BLM.)*
- 1988, ISPMB was commissioned by the BLM to evaluate three wild horse prison training programs in New Mexico which resulted in creating a coordinated program for training wild horses in all prisons in the United States. ISPMB's report was quoted in the 1990 GAO Report.
- ISPMB signed a historic national volunteer compliance agreement with the BLM in 1989 checking on the welfare of adopted animals making sure that adopters were in compliance with federal regulations. Prior to this, ISPMB checked on the welfare of all adopted animals in Arizona for five years in cooperation with the BLM.
- 1990, ISPMB initiated the meeting between BLM Law Enforcement and the Arizona Federal District Attorney which resulted in the increase in maximum fines for crimes against wild horses and burros through the Sentencing Reform Act of 1988. Fines were increased from the maximum of $2,000 to $100,000 for killing a wild horse or burro.

- In 1992, ISPMB participated in one of the first eco-system collaborative teams created by the then Secretary of Interior, Bruce Babbitt. This team was created to quell the tensions of the management of the Black Mountain Burro Herd Management Area (HMA) in Kingman, Arizona. Prior to the team's meeting, tensions were extremely volatile after 49 burros were killed on Good Friday known as the *Good Friday Massacre.*
- 1996, ISPMB and participants of the Black Mountain Eco-team received the Health of the Land Award from the Department of the Interior for their outstanding five-years of work in the development of a "gold standard" model for managing wild burros.
- 1996, ISPMB was instrumental in achieving protection of the Gila wild horses in Arizona that were never recognized in 1971 as wild and free-roaming. This was after several months of research of the herd and ISPMB presented the case to then Secretary Babbitt based on fact. Secretary Babbitt ordered the Phoenix, Arizona BLM to manage the wild horses under the 1971 Act. The wild horses were placed into an already existing burro herd known as the Painted Rock herd.
- 1999, ISPMB became the first privately-funded organization to manage a wild freeroaming wild horse herd. ISPMB relocated the last of the White Sands Herd in New Mexico from the White Sands Missile Range to South Dakota on the Pine Ridge Indian Reservation where they were managed by ISPMB and subsequently moved to private land on the Cheyenne River Sioux Reservation. There were 70 horses that carried a unique genetic marker which was a rare pacing gene found in North American gaited horses according to Dr. E. Gus Cothran, a leading equine geneticist.
- 2000 ISPMB adopted 31 BLM wild horses from the Gila herd in Arizona which was just federally recognized and moved them to South Dakota creating ISPMB's Conservation program, conserving rare and endangered wild horse herds.
- 2000-2017, ISPMB has observed and gathered information on four wild herds, two that received the pesticide fertility control drug PZP and two other herds that had not been gathered in nearly 25-50 years prior to coming to ISPMB. These two herds gave ISPMB a baseline understanding of behaviors of animals whose social structures were not disrupted with the exception of their removal to ISPMB's ranch which is quite important to our studies.

In ISPMB's analysis of the BLM's program, it became quite evident that management of wild horses and burros was not based on understanding the animals as wildlife species but more an attempt to manage them as if they were domestic livestock.

It was then in the year 1999 that ISPMB began its new program with every intent to share our knowledge with the BLM – that of managing our own herds and creating a "model to manage" wild horses that could be instituted on public lands.

ISPMB's Herd Information:

White Sands Herd:

- ISPMB started with 70 wild horses in 1999.
- In 2016, the final count of wild horses was 273 horses representing 17 years of growth • Growth rate of 8.33%

Gila Herd:

- ISPMB started with 31 wild horses in 2000
- In 2016 the final count was 137 wild horses representing 16 years of growth
- Growth rate 9.73%

ISPMB has witnessed leaving stable bands intact with their wild band stallions and wise mares leads to a *stabilization of growth,* and more importantly, protects their highly evolved social structures that includes passing on their survival instincts to their off-spring which will protect wild horses for eons of time.

The course the herds are on now will lead to their demise caused by the agencies' constant destabilization of band structures and truly "managing them to extinction."

www.ispmb.org

Rico and His Band of Mares -Gila Herd- ISPMB photo

ABOUT KAREN SUSSMAN – PRESIDENT ISPMB

Karen Sussman and Ian
A Magnificent Gila Family Band Stallion

Karen Sussman has dedicated more than forty years to the protection of wild horses and burros in America. In 1989, she took up the reins as President of the International Society for the Protection of Mustangs and Burros (ISPMB) – following in the footsteps of Helen Reilly and the legendary Velma Johnston (Wild Horse Annie).

She was appointed to the National Wild Horse and Burro Advisory Board from 1990 to 1992 – one of nine members reporting to the Secretary of Interior and Secretary of Agriculture. In 1996, she received the prestigious Health of the Land Award from the Department of the Interior. And in 2006, Karen was inducted into the Mustang Hall of Fame by the Wild Horse Expo.

She was called in by the Governor Carruthers of New Mexico in 1989 to negotiate a peaceful resolution to the White Sands wild horse issue in 1989.

For the next ten years, Karen worked with three military generals on White Sands and helped to negotiate the adoption of the wild horses on White Sands preventing the sale for slaughter.

In 1999, ISPMB took the remaining 71 wild horses and placed them in ISPMB's newly created Conservation program.
In 2009, she organized an educational summit in Las Vegas bringing together the BLM and all the humane groups.

She helped to organize the transfer of buffalo from the Catalina Islands to both the Rosebud and Cheyenne River Sioux Reservations and resided on the latter reservation for nearly 20 years.

Under her leadership, ISPMB adopted 225 horses with many going to Native American children's schools in 2007. She also initiated the first wild horse rescue program in Arizona, saving more than 100 previously adopted horses from slaughter.

Karen is now a leading authority in the management and behavior of wild horses from her research and work with the four wild herds that were under ISPMB's supervision for seventeen years.

She is highly sought after to help mediate positive solutions, from nearly impossible circumstances, which has helped to save thousands of other wild horse and burros in the United States.

Over the years, Karen has appeared on many radio and TV shows, including: NBC Evening News with Tom Brokaw, Good Morning America, Fox News, CNN News, Inside Edition, Animal Planet's Wild Rescues, and NPR. She has been interviewed and featured in many national publications, including: The New York Times, Dallas Morning News, Life Magazine, Audubon Society, Western Styles, Sports Illustrated, Christian Science Monitor, Western Horseman, Horse Illustrated, Persimmon Hill, South Dakota Magazine, Vanity Fair and ISPMB's horses were featured in National Geographic.

In 2002, Karen assisted in the promotion of Steven Spielberg's movie, "Spirit, Wild Mustang of the Cimarron," that aired on Animal Planet.

Karen Sussman served on the board of the League of Women Voters in Arizona and is a founding member of the National Women's History Museum in Alexandria, Virginia. She graduated from Temple University, College of Nursing in 1967 and became an ACLS critical care nurse. Ms. Sussman also taught classical music in Arizona for twelve years and was an accredited pre-collegiate piano instructor. She currently has been called to duty nearly full-time at Monument Health's Covid Triage Call Center in western South Dakota assisting in the pandemic ravaging the state. She has served the public for her entire lifetime.