



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Battle Mountain Field Office

50 Bastian Road  
Battle Mountain, Nevada 89820

<http://www.nv.blm.gov/battlemountain>

(775) 635-4000 or [bmfoweb@nv.blm.gov](mailto:bmfoweb@nv.blm.gov)



## Memorandum:

To: New pass/Ravenswood HMA Wild Horse Gather File

From: Shawna Richardson, Wild Horse and Burro Specialist,  
Battle Mountain Field Office

Subject: Wild Horse Gather Results, New Pass/Ravenswood HMA, November 2007

The New Pass/Ravenswood gather began July November 3, and was completed November 14, 2007. Cattoor Livestock Round-Up Inc. was the contractor for the gather. All wild horses removed from the range were shipped to the BLM WHB facility at Ridgecrest, CA, with the exception of 3 mares and 3 studs which were picked up and shipped to the BLM Palomino Valley Corrals, and 24 branded horses which were shipped to Fallon Livestock Exchange.

A pre gather census flight of the entire gather area was completed September 8-9, 2007.

The holding corrals were constructed at the NDOT gravel pit on SR 305 at the Boone Creek/Vaughn Ranch road. The solid, gravel base prevented problems with mud or dust, and was centrally located to the gather area.

**Gather Summary**

<b>Capture</b>	<b>622</b>
<b>Ship to Ridgecrest</b>	<b>420</b>
<b>Released</b>	<b>158</b>
<b>Ship to PVC</b>	<b>6</b>
<b>Orphan</b>	<b>1</b>
<b>Euthanized</b>	<b>10</b>
<b>Died</b>	<b>3</b>
<b>Branded</b>	<b>24 (12 mares, 11 studs and 1 suckling foal)</b>

**Actual removed from the range (JJ): 464**

	<b>New Pass/Ravenswood</b>
Planned Gather #	660 (648-713)
Actual Gathered #	622
Planned Removal #	429-494
Actual Removal #	464

Number left on range	208-268
Date completed	Nov. 13, 2007

The results for the pre-gather census gave a direct count of 648 wild horses. Given the likely sighting accuracy, 10% was added to the count to achieve a total population estimate and planned removal numbers for the gather. Given this information and the contractors post-gather estimate, the number remaining on the range was derived.

**Trapsites:**

1. North New Pass/Ravenswood, located east of the Willow Creek Road.
2. Central New Pass/Ravenswood, Ravenswood road.
3. Southern New Pass/Ravenswood and outside of HMA, Antelope Road from SR 305, behind the Racetrack Ranch.
4. Antelope Valley, Big Antelope Springs
5. New Pass Range, west slope, Carson City portion.

The northern trapsite was utilized November 3-4 to remove wild horses from in and around the areas recently burned by the Ravens fire. All of these horses were sorted to be shipped in order to remove wild horses from the burned areas. 157 horses were captured from this trap.

The Ravenswood trapsite was used November 5 to capture and remove an additional 49 wild horses from the northern portion of the HMA. All of these horses were again shipped.

The third trapsite was constructed on the eastern portion of the HMA on the road to access Antelope Valley from SR 305. This trap worked very well to capture the wild horses north and south of the area, including the 100+ located in the southeast portion of the HMA and outside of the HMA. This trap was used November 6-7 to capture 173 wild horses, which included 24 branded horses (see note below). A section of fence was let down to gather 16 wild horses from the Mt. Airy Allotment, outside of the HMA. Of the animals captured, 46 were selected for release back to the range. All horses captured from the Mt. Airy Allotment were shipped.

The Antelope Valley trap was constructed along the northern fence at Big Antelope Spring. This trap worked well to capture 165 wild horses from the southern and central portions of the HMA. Some wild horses were also captured from the northerly portion of the HMA north of the fence crossing Antelope Valley. Horses were also captured from the western portion of the HMA along the New Pass Range. Of the horses captured, 80 were selected for release back to the range.

As the use of this trap was finished, Dave Cattoor and Pilots Chad and Dee indicated on the map that approximately 50 wild horses were left in the captured portion of the HMA.

The last trap was established on a road within the foothills on the west face of the New Pass Range. Though it was estimated that only 50 would be captured from this area, the pilots were able to capture an additional 28 horses from the northern portion of the range. Of the 78 captured, 32 were selected to release back to the range.

During completion of the Gather Plan, it was estimated that approximately 300 wild horses would be removed from the northern portion of the HMA. It was also estimated that of the remaining horses within the HMA, that only the horses ages 0-3 or 0-4 would need to be removed to attain the desired post gather population. Therefore, sorting of horses captured from traps 3, 4, and 5 involved marking horses that were primarily 4 and older for release, with the exception of horses of exceptional color or size.

This resulted in the following breakdown of ship and release animals sorted at the corrals

Trapsite	Release Mares	Release Studs	Total release	Ship mares	Ship studs	Ship foals	Total ship
1	0	0	0	73	45	39	157
2	0	0	0	19	21	6	46
3	38	23	61	35	23	40	98
4	40	34	74	25	19	21	65
5	16	15	31	20	12	15	47
Total	94	72	166	299	120	121	413

At trapsite 3, a total of 12 mares, and 11 foals were captured with MY, N – and bar H brands. One foal was with one of the mares. 10 animals were euthanized, and 3 died during capture operations.

All wild horses selected for release were transported to Big Antelope Springs and released utilizing the private loading chute at the corrals. The horses were allowed to leave the trucks slowly and fill up on water at the location before leaving the corral area.

### **Fertility Control and Genetics Analysis**

November 12, 92 mares were inoculated with a three-year fertility control prior to release. All mares were given an injection of liquid drug, and an injection of slow release pellets administered with a jab stick. The hip was shaved, and freezebranded with a large “EA” which should be visible from the air during subsequent census flights. Jim Johnson, WHB Specialist in Vale Oregon traveled to the gather location to administer the drugs. Refer to the fertility control report in the gather file.

### **Weather**

The November weather experienced during the gather was a mix of cold mornings, warm afternoons, and a few days of rain and overcast conditions. Most days reached 50-60 degrees. Nights were below freezing. Only one day of rain was received, which prevented the crew and staff from releasing the stud horses when planned. The rain however really settled the dust and was appreciated.

### **Media**

Jeff Brady of National Public Radio in Denver attended the gather on November 6. A radio story on the gather aired on Friday November 9 on the *Day to Day* mid-day radio news program.

### **Visitors**

Other visitors included:

Debbie Stringfellow (Animal communicator and Author) and John La Coq (Photographer),  
November 3

Dr. Mitch Wilkinson (researcher, Texas A&M), November 3-5

Brian Murphy (Retired CPA/photographer) November 3-4

All Farrar, Adopter from California, November 9-10.

### **Volunteers**

Drs. Patty and Dallas Maxwell (Volunteer Veterinarians), November 3-8

David Richardson (Volunteer), November 2-6

### **Animal Health**

Throughout the entire gather, wild horses came to the trap well, and did not appear to be overly stressed. Volunteer Veterinarians on site Nov. 3-8 were pleased with the condition of the animals in light of the drought and wild fires. The horses brought to traps 1 & 2 during the first 3 days of the gather were the thinnest captured. Most mares were on the lower end of condition class 4 (moderately thin), with a few near class 3 (thin). Backbone and ribs are clearly visible on most mares. Studs were in better condition, with most averaging class 5 (moderate), although many were class 4 with ribs clearly visible. Foals were all in fair/good condition.

Horses captured from traps 3, 4 and 5 were clearly in better body condition. Most mares were condition class 4.5-5, with few showing ribs or backbone. Most poor horses captured from these areas were very old horses. Several groups of horses captured at the Antelope Valley trap had come from the northern portion and were thinner. Additionally, several groups were captured from south and west of the trap, and in the New Pass Range, and were very large and fat. Foal size and condition followed that of the adults. The foals captured from the south and west portions of the HMA were the largest.

Overall, most foals were weanable, and of good size. A few small, younger foals were captured, and only one foal that was about 1 week of age. In most cases, the foals and mares were mixed so that foals could join up with their mothers. The only orphan encountered was that of an old thin mare that was euthanized. The foal was transported to Battle Mountain for fostering until old enough to wean without setbacks.

### **Veterinarian Services**

Veterinarians Patty and Dallas Maxwell were on site for the gather November 3-8, volunteering their services to assist the WHB staff assess wild horse body condition, injuries, health and to give recommendations for euthanasia. These folks are also interested in working within the BLM WHB program in the future, and were able to gain valuable experience while at the gather. They were extremely helpful, and well received by all staff and visitors at the gather. Patty assisted the Battle Mountain Field Office with the Fish Creek Complex gather in July 2005 while still a student.

### **Euthanasia Summary**

- 3 very old mares (20+) condition class 2
- Yearling filly with infected eye

- 2 mares with congenital defects to the spine
- 1 club foot (congenital defect) old mare condition class 2
- 1 very, very old mare (20+) condition class 2. This mare was involved in fertility control research on the Clan Alpine HMA back in the 80's as indicated by a four digit brand on the hip.

These animals were evaluated by Veterinarians Patty and Dallas Maxwell prior to being euthanized on November 7. It had been hoped that the filly with the injured eye could be treated, but the condition of the horse and eye deteriorated rapidly, and it was determined that the animals should be euthanized. The old mares were all 20+ years of age. These animals were captured from an area where no animals were to be returned to the range due to the wildfires. Staff considered releasing the animals into other locations, but determined that release of these animals in such poor condition to unfamiliar range would be inhumane. These animals would also not do well being transported to holding facility. Therefore, it was determined that they should be euthanized. This decision was also made following communication with Ridgecrest California facility manager Art Digrazia, and PVC manager John Neil.

- An old, completely blind stud
- An old mare, weak and unable to travel. Euthanized at release.

The blind stud was unable to travel at all without an animal to follow. The horse was also older (15-20 years of age). The mare was 20+ years of age and identified for release. Though weak, it was thought that she would be fine once released. At the release location, she was down on the truck and unable to stand, so was humanely euthanized.

The contractor was authorized to humanely euthanize all animals with the use of a firearm. The animals were transported to locations within the HMA and disposed of.

A total of three wild horses died during the capture operation. On November 8, an old bay stud refused the trap and was roped. Once roped, the horse collapsed and died. Cause unknown, heart failure suspected. BLM personnel did not observe any adverse actions by the crew that would have led to the horses death.

On the same day, a 3-4 month old bay foal was unable to keep up with the herd when being brought to the trap. After the adults were trapped, the crew went to retrieve the foal on horseback. It was given walked to the trap where it collapsed, seized and died after being administered electrolyte and a foal supplement. The crew stated that the foal may have been sickly, mentally impaired, or an orphan. The pilot stated that the foal kept tilting its head from side to side abnormally during the gather.

Andrea Felton was on-site this day, and reports that the pilots did an excellent job of bringing in the horses slowly. There were no signs of distress in these horses. A 1-week old foal was also brought into the trap this day, and was in excellent condition.

On November 10, a foal died after being roped in the wings of the trap. The foal had lagged behind the herd when brought to the trap. One of the crew attempted to rope the foal as it ran

into the mouth of the wings. At the same time, the foal collapsed. The foal's legs were tied to keep the foal on the ground briefly as another group of horses was brought to the trap, and was found to be dead minutes later. The horse was already stiff and had purple gums when examined by Andrea Felton. The crew and pilot stated that the group of horses had not been brought a long distance (1-2 miles), and had been near water when observed. The foal could have "tanked-up" on water prior to being herded to the trap and died as a result of a type of bloat. Numerous BLM onlookers and contractors crewmembers saw the foal roped, and did not observe any actions etc., that would have resulted in the foals death.

### **Archaeology**

Trap 1 was established in the same location as a trap used in 1999. Trap 2 was also in the same location as that used in 1999, but was inventoried by Jason Theodozio and Cliff Merriman. Jason and Cliff also inventoried trap 3 and trap 5. Trap 4 at Big Antelope Spring was not inventoried after consultation with BMFO Archeologist Chris Cook because of its repeated use for capturing horses in the past, and disturbed state.

### **Trespass horses**

At trap 3 located on the east side of the HMA, a total of 12 mares and 11 studs were captured with various brands belonging to Ellen Blair, sister of Jimmy Williams, and Ben Williams, Ellen's son. One un-weanable foal was with one of the branded mares. The presence of these horses had been known for a few years. Several of them were observed during the September 2005 census flight. Subsequent conversations with Special Agent Brian Richards confirmed that the BLM knew of the horses and had been documenting them. Unfortunately, disagreements between the BLM and Nevada State Brand Office resulted in the horses needing to be held at the Holding Corrals until November 15, when they were all shipped to the Fallon Livestock Exchange. Evidently, because the BLM did not have a criminal trespass conviction on the owners, or an order from a Judge for removal from public lands, the Brand Office would not sign the horses over to the BLM for impound. Nevada State took possession of the animals, and planned to give proceeds from the sale to Ellen Blair. Ellen requested that a mare and foal, another mare and a palomino stud be returned to her, which the Brand Inspector granted. See additional documentation in the file.

## 2007 New Pass/Ravenswood HMA Genetic Report

Hair samples were pulled from 25 mares and 25 studs for genetic analysis. This is the first time that animals from this herd have been sampled, and the first time that the BMFO had pulled hair samples for genetics analysis. The samples taken were representative of the animals released back to the range. During past gathers of this HMA, census flights and field observations, the general description of the wild horses from this HMA have been of primarily solid colored horses including sorrel, bay, brown and black. Recently (within the last year), the permittee reports an influx of “light” colored horses such as grey and palomino. Additionally, trespass pinto horses have been documented within the HMA since at least 2005. The gather results reflect this variation in color (refer to data analysis). The conformation of the horses within this herd has historically been average, with most horses reaching 14 – 14.2 hands. A few curly horses have been captured in past years. No congenital defects have been noted with the exception of one club foot horse captured in 2007, which was euthanized.

During the 2007 gather, approximately 206 wild horses captured from the northern portion of the HMA (traps 1 and 2) were removed and shipped as a result of the acreages that burned in July 2007. These animals were typical of the NPR HMA, and consisted of smaller animals that were bay, brown, buckskin, and black (Refer to data analysis) Many of these animals were also in poor condition. None of these animals were released.

Wild horses were also captured from the southeast portion of the HMA (trap 3) which included some horses that were residing outside of the HMA, and some trespass horses that were branded. At this trap site, 173 horses were captured. Horses selected for release included some horses with inconsistent markings from the typical NPR horses (refer to data analysis). These horses included pinto colorings, and some grey and palomino horses. A total of 22 studs and 25 mares were selected from horses captured at this trap. Horses captured from the various trapsites were not marked or identified. The following is an *estimate* of the horses released from this trap that were sampled:

Sample number	Color	Age
Studs		
1	Gray	10
2	Bay	11
3	Sorrel paint	12
4	Bay	4
6	Black	13
3	Sorrel Paint	3
18	Buckskin/Dun	13
20	Gray	12
21	Sorrel Paint	7
22	Buckskin/Dun	6
23	Palomino	13
Mares		
29	Red Roan Paint	8

30	Grey	9
35	Sorrel Paint	2
36	Sorrel paint	6
40	Blue Roan	12
41	Gray	7
44	Brown	14

At this trap site, (trap 3) 23 branded horses were captured that included a bay paint stud, palomino stud, and sorrel paint mare. It is thought that these branded animals contributed to the colorings of the horses captured from this site, in addition to other unbranded suspected domestic paint horses, but released illegally onto public land. All horses selected for release from this area were released with the rest of the wild horses in the central portion of the HMA. It is assumed that some of these horses will move back to the east portion of the HMA, but also hoped that they will mix with the other horses captured from the rest of the HMA, and influence traits of the future herd.

The fourth trap site was located in the central portion of the HMA, and in general, horses captured from this location were very typical of NPR wild horses. Colorings included primarily solid bay, brown, and black, with some gray and dun horses (refer to data analysis). Horses captured from this area were larger and healthier than those captured from the northern portion of the HMA. A total of 35 studs and 45 mares were selected for release of the 163 captured from this location. Although these horses were not marked for trap site identification, the following is an *estimate* of the horses released that were sampled:

Sample number	Color	Age
Studs		
5	Gray	7 (trap 3 or 4)*
7	Bay	12 (trap 4 or 5)*
8	Sorrel	6 (trap 3 or 4)*
9	Bay	5
10	Sorrel	4
14	Bay	8 (trap 4 or 5)*
15	Bay	5
16	Brown	9
24	Sorrel	10
25	Brown	11
Mares		
28	Bay	9
32	Black	20+ (trap 3 or 4)*
33	Bay	7 (trap 4 or 5)*
39	Brown	4
43	Palomino	6
47	Bay	4
48	Bay	20

49	Red Dun	8
50	Black	20 (trap 3 or 4)*

\*Because we did not mark each horse for each trap site, we are unsure on these. Provided for information purposes if some comparisons can be made.

The last trap site (trap 5) was located on the far west side of the HMA on the west side of the New Pass Range. This area is very close to the Clan Alpine HMA. Several pinto horses were captured in this location including black and white paints, bay paints and sorrel paints. We were told that these pinto horses have been in this area for many years. Of the 78 wild horses trapped in this location, 15 studs and 16 mares were selected for release, which included many paint horses as well as solid colored horses. These horses were also released in the central portion of the HMA with all other release horses, as no major barriers exist to preclude return to the capture location. It is also hoped that some of the traits of these horses will expand into the rest of the NPR herd.

The following is an *estimate* of the horses released from this area that were sampled:

Sample number	Color	Age
Studs		
7	Bay	12 (trap 4 or 5)*
11	Black	4
13	Gray paint/sevina	3
14	Bay	8 (trap 4 or 5)*
Mares		
33	Bay	7 (trap 4 or 5)*
34	Bay Paint	3
37	Sorrel	8
38	Sorrel	10
45	Black/white Paint	13

\* See note above

Between July 28-August 30, 1996, 54 wild horses were captured from drought stressed HMAs managed by the Tonopah Field Station and transported and released within the New Pass/Ravenswood HMA. These horses were captured from the **Goldfield, Gold Mountain, and Montezuma Peak HMAs**. It is assumed that the horses were all older than 9 years of age. The influx of additional genetics from these horses has likely increased the genetic diversity of the New Pass/Ravenswood HMA. The genetics of the NPR wild horses should be compared to any data for these HMAs.

Additionally, the NPR HMA is in close proximity and shares a portion of its northwest boundary with the **Clan Alpine HMA** administered by the Carson City Field Office. The northwest boundary is also shared with a portion of the **Augusta Mountains HMA** administered by the Winnemucca Field Office. Movement is possible between these HMAs. The Analysis should consider any genetic information from these HMAs.

The NPR HMA is also in close proximity to the **Callaghan** and **South Shoshone HMAs** administered by the Battle Mountain Field Office. Prior to the highway right-of-way fence being constructed along SR 305, wild horse movement was possible between all three of these HMAs. The Analysis should consider any genetic information from these HMAs as well. Callaghan HMA was analyzed in 2002, and South Shoshone HMA will be gathered in January 2008.

### Data Analysis

All data from the corral sheets were entered into an Excell spreadsheet for analysis. Information included the age, color, lactation status, condition and disposition of each horse captured. From this information, Pivot Tables were constructed to display the data by age or color, disposition etc. Charts were created from the data. Comparisons were made with the data between trapsites, capture areas and sex of the horses. Sets of data were modified to remove unaged, branded, or euthanized horses from the analysis. The following displays this information.

Total captured: 622

Released: 158

Shipped 425

583

Other

Euthanized/Died 13 (2 foals/11 adults)

Branded 24 (1 foal/23 adults)

Burro 1

Orphan 1

39

Un-aged 8 (adults)

6 mares/2 studs, 7 branded/1 unbranded and released

Age tables utilizing the ship and release data may reflect 582 horses total due to one non-aged horse excluded from the table.

### Age Structure Analysis

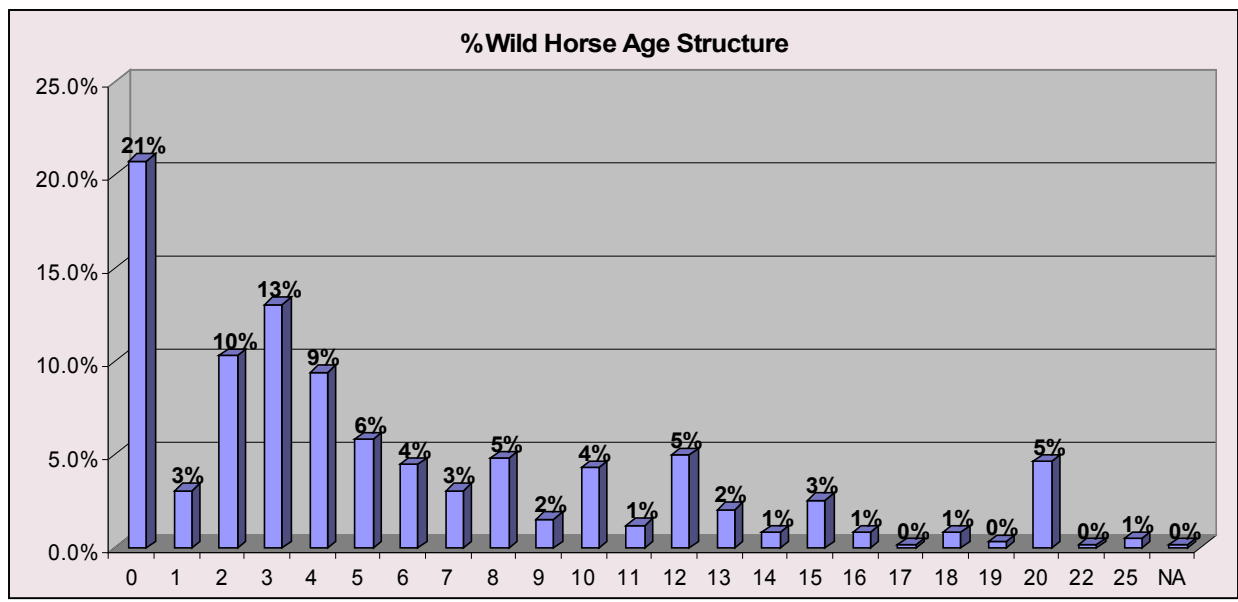
Across the trap-sties, wild horse age structure was similar, with differences that could have been attributed to aging personnel, or progress of the capture. The two traps that exhibited the largest variation from the average were traps 2 (49 captures) and 5 (78 captured). Wild horses captured from Trap 2 in the Ravenswood area exhibited low % of foals, and 2, 4, and 5 year olds, with higher than average percentages noted in the 8, 13, 16, 20 and 25 year olds. Overall, it appears that older horses were captured from this trapsite, which could have been caused from horses moving east while the Trap 1 area was being gathered.

Trap 5 was likely not influenced as much by the rest of the gather operations. The age structure for this trap shows a much higher average of 3 year old horses, and slightly higher 5 and 8 year old horses. In contrast, the 2 year and 4 year old horse groups were slightly lower. This could have been the result of age estimates of the younger horses.

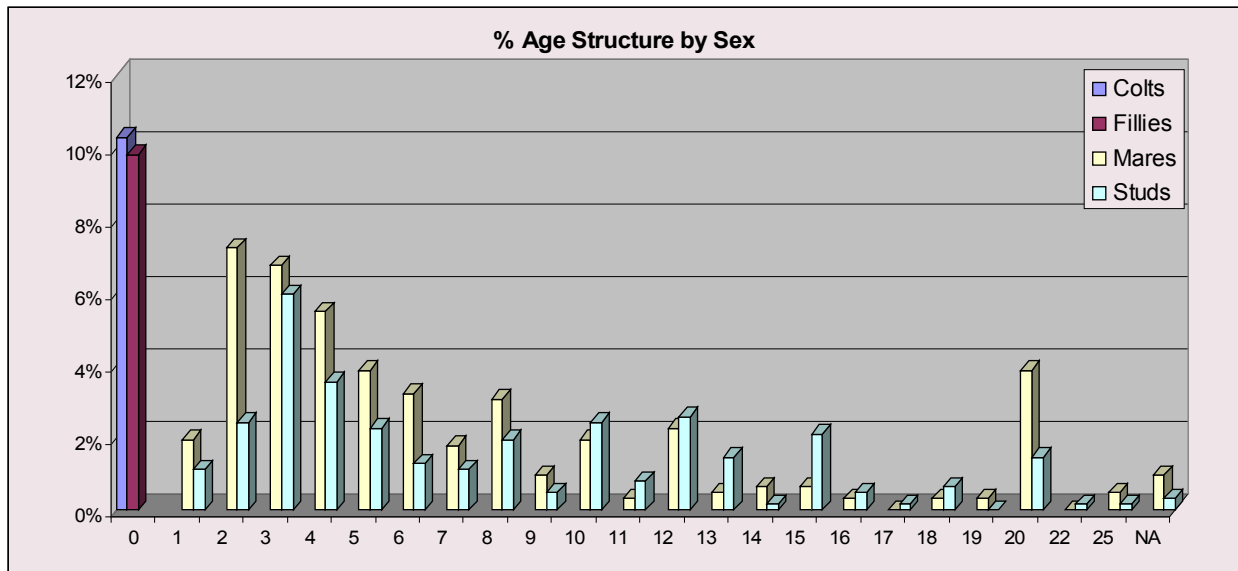
The following table displays the wild horse age structure for all animals captured, minus branded, orphaned and euthanized animals (39 total).

Wild Horse Age Structure by Disposition						
Age	Actual Count			Percentage of total (583)		
	Release	Ship	Total	Release	Ship	Totals
0		121	121	0.0%	100.0%	20.8%
1		18	18	0.0%	100.0%	3.1%
2	2	58	60	3.3%	96.7%	10.3%
3	7	69	76	9.2%	90.8%	13.0%
4	17	38	55	30.9%	69.1%	9.4%
5	21	13	34	61.8%	38.2%	5.8%
6	13	13	26	50.0%	50.0%	4.5%
7	14	4	18	77.8%	22.2%	3.1%
8	13	15	28	46.4%	53.6%	4.8%
9	5	4	9	55.6%	44.4%	1.5%
10	12	13	25	48.0%	52.0%	4.3%
11	3	4	7	42.9%	57.1%	1.2%
12	16	13	29	55.2%	44.8%	5.0%
13	7	5	12	58.3%	41.7%	2.1%
14	3	2	5	60.0%	40.0%	0.9%
15	9	6	15	60.0%	40.0%	2.6%
16	1	4	5	20.0%	80.0%	0.9%
17	1		1	100.0%	0.0%	0.2%
18	1	4	5	20.0%	80.0%	0.9%
19		2	2	0.0%	100.0%	0.3%
20	12	15	27	44.4%	55.6%	4.6%
22		1	1	0.0%	100.0%	0.2%
25		3	3	0.0%	100.0%	0.5%
NA	1		1	100.0%	0.0%	0.2%
Grand Total	158	425	583	27.1%	72.9%	100%

**The following chart displays the total age structure for the gather (583)**

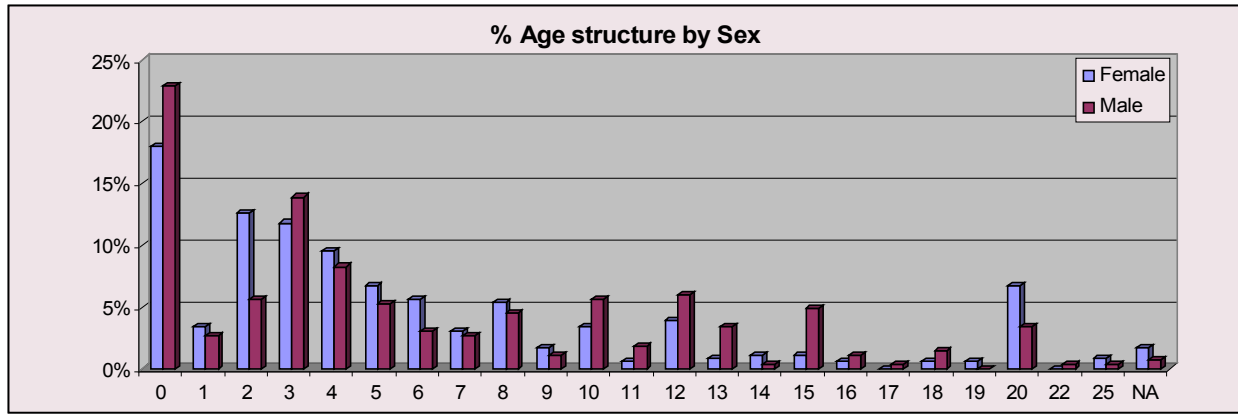


This chart displays the age structure by sex for the entire 621 captured.



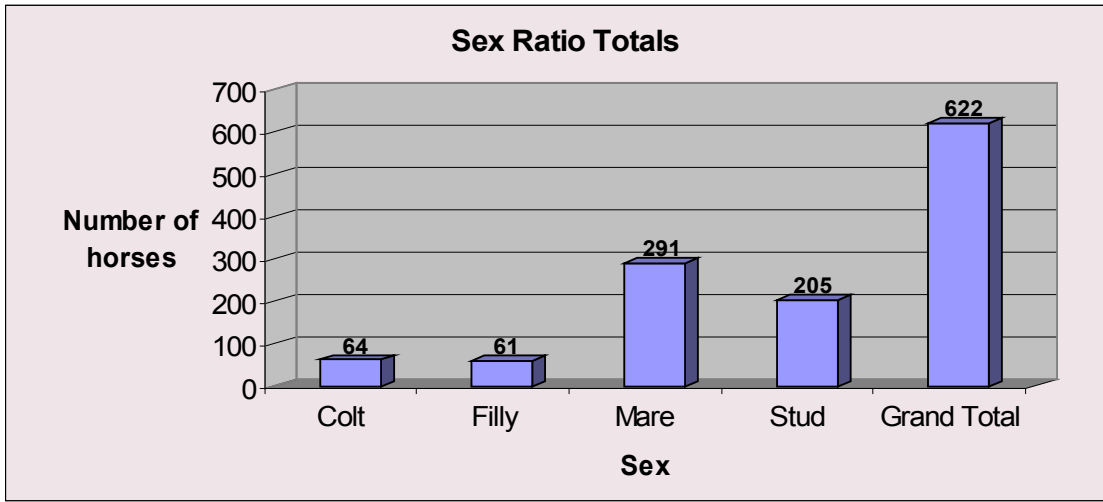
Of 621 captured, foals were similar in numbers of fillies and colts present. Mares in general exceeded studs in proportion through age 9, at which time studs assumed a larger portion of the age groups. Mares resumed a higher proportion of the age structure in the older ages.

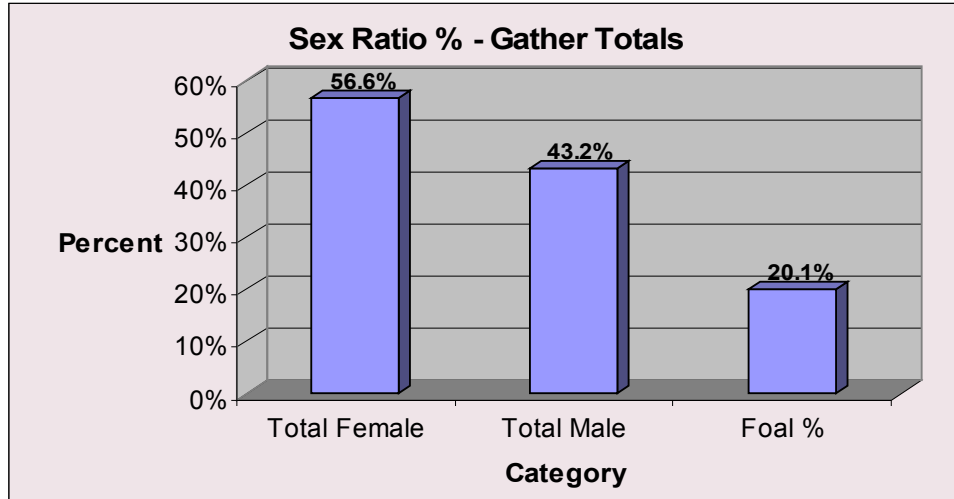
This chart displays the percent age structure within each category – male or female.



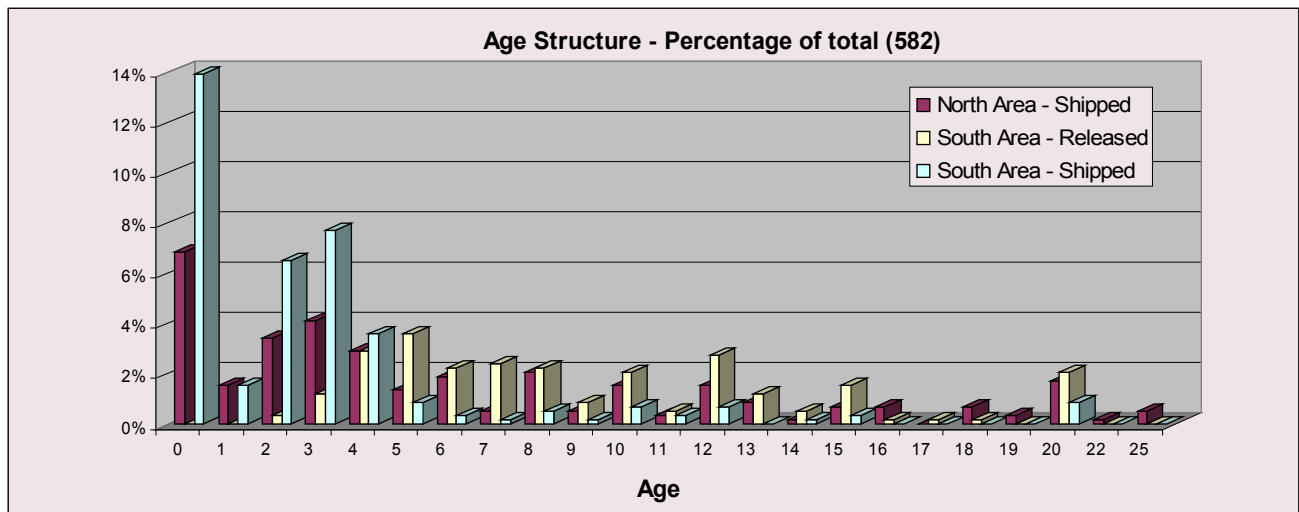
Of 355 female and 266 males captured, this chart compares the age structure of females to the age structure of males. The female age structure shows higher proportions of the female population within the 1-8 year olds and again at 20-20+. A large portion of the male population is also within the 3-5 year old range and represents a larger proportion through age 15.

The following charts show the overall total composition of the 622 wild horses captured.

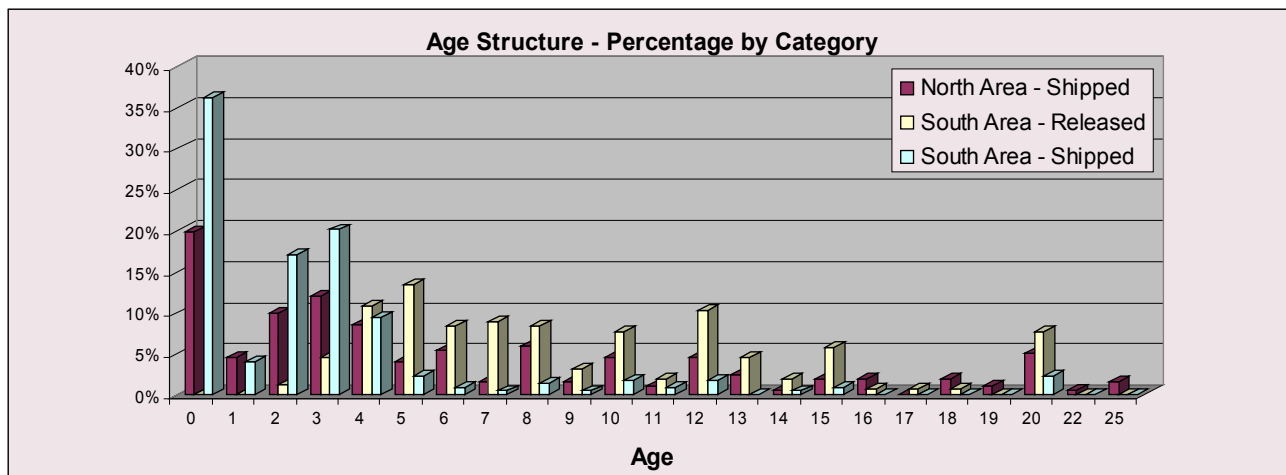




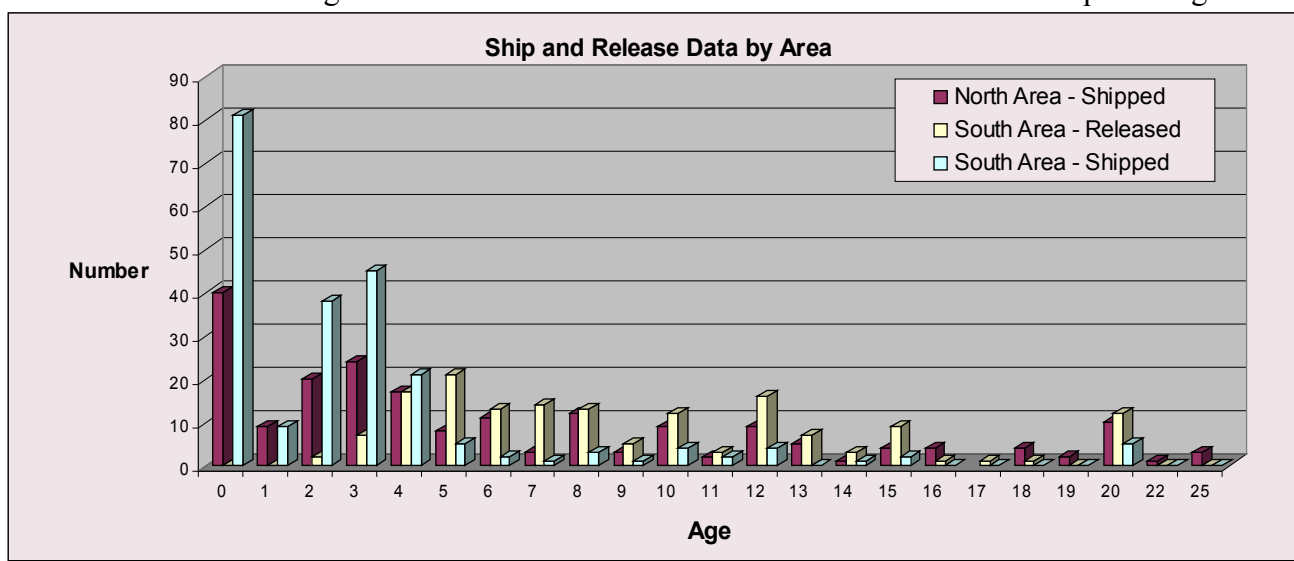
All of the horses captured from Trap 1 and 2 were shipped due to the proximity within the HMA to the areas burned by the Raven Fire. The emphasis for Traps 3, 4, and 5 was to ship animals 3 and under, and to release most animals that were 4 and older. This was accomplished for the most part.



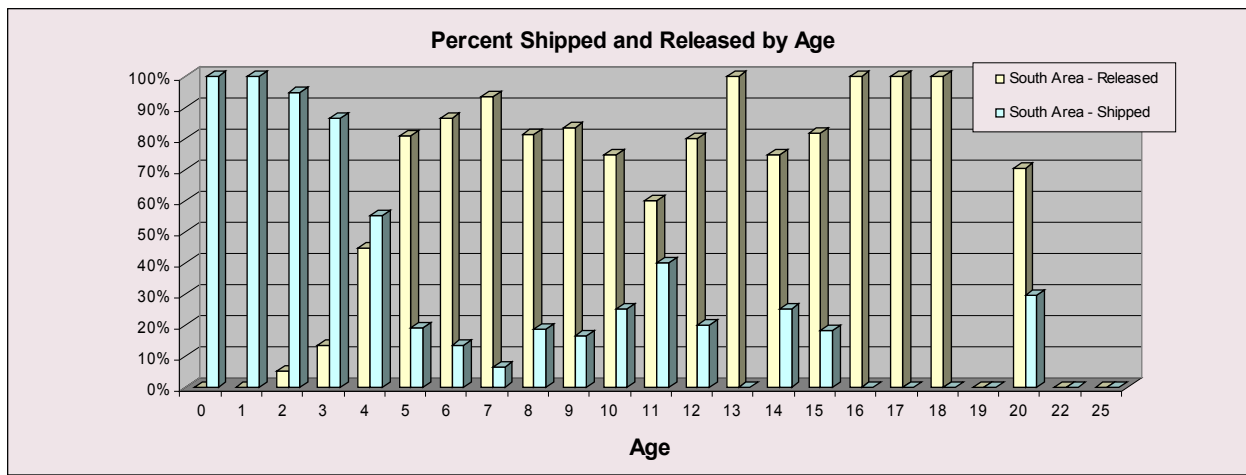
This chart displays the % by age of the disposition of all 582 wild horses. For example, of 582 wild horses, 14% were weanlings that were shipped from the southern areas.



This chart shows the % by age and disposition within each disposition category. North area shipped consists of 201 horses. Of those horses, 20% were foals that were shipped. The south area released consists of 157 animals. Of those for example, no foals or yearlings were released, and 1.3% consisted of 2 year olds released, 13.4% 5 year olds and so on. The South Area Shipped consists of 224 animals. Of those shipped from trapsites in the southern areas, 36.2% were foals. The following chart shows the same data for actual numbers rather than percentages.

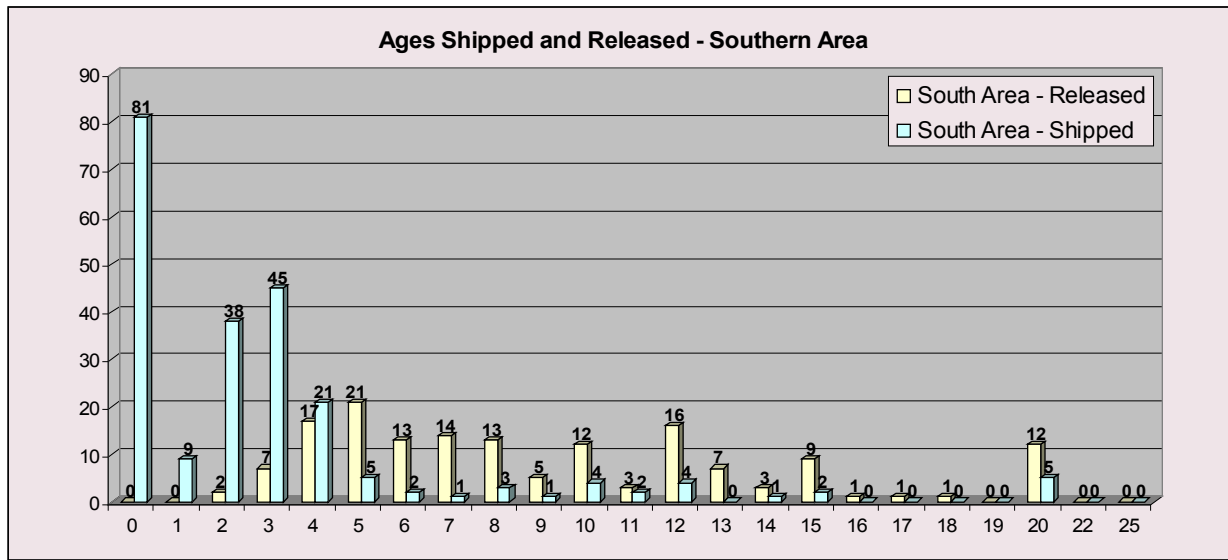


The next two charts depict the proportions of various aged horses shipped and released from the northern area and the southern area.



This is perhaps the most useful chart to compare the age structure of released horses to the age structure of shipped horses captured from the southern area. This chart shows that nearly 100% of all horses 0-3 years old were shipped. A few 2-3 year old horses were released. Then from age 6 through age 20, 60%-100% of all horses were released. A much smaller percentage of 5-20 year old horses were shipped.

The following chart shows the actual numbers of horses shipped and released by age for the southern area. Only 30 wild horses five years old and older were shipped. All others were released back to the range.



The age structure of the gathered animals was very close to the pre-gather estimate with a few exceptions. The following table displays the pre-gather estimate with the actual captured. The figures include all horses captured minus the horses that were un-aged. The percentages of animals captured by age is based on 613 animals.

Sex Ratios Age	Pre-Gather Estimate			Percentage			Actual Ages				Actual Percentages		
	Male	Female	Total	Male	Female	Total	Age	Male	Female	Total	Male	Female	Total
0	50	54	104	7%	8%	15%	0	64	61	125	10%	10%	20%
1	18	21	39	3%	3%	6%	1	7	12	19	1%	2%	3%
2	30	50	80	4%	7%	12%	2	15	45	60	2%	7%	10%
3	29	44	73	4%	7%	11%	3	37	42	79	6%	7%	13%
4	29	33	62	4%	5%	9%	4	22	34	56	4%	5%	9%
5	22	28	50	3%	4%	7%	5	14	24	38	2%	4%	6%
6	12	21	33	2%	3%	5%	6	8	20	28	1%	3%	5%
7	18	15	33	3%	2%	5%	7	7	11	18	1%	2%	3%
8	12	17	29	2%	3%	4%	8	12	19	31	2%	3%	5%
9	16	13	29	2%	2%	4%	9	3	6	9	0%	1%	1%
10-14	40	32	72	6%	5%	11%	10-14	46	35	81	8%	6%	13%
15-19	26	20	46	4%	3%	7%	15-19	21	10	31	3%	2%	5%
20+	13	8	21	2%	1%	3%	20+	11	27	38	2%	4%	6%
Totals	315	356	671	47%	53%	100%	Totals	267	346	613	43%	57%	100%

Overall, slightly higher percentage females were captured than the estimate. Additionally, slightly higher percentages of 20+ year old horses and foals were captured. When broken into larger more general groupings, the figures are very similar and well within reason. Overall, the minor differences between ages and males and females cancels out for the overall total.

Age Groupings	Actual Percentage			Estimated Percentage			% Difference from estimated		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
0	10%	10%	20%	7%	8%	15%	3%	2%	5%
1-2	4%	9%	13%	7%	11%	18%	-4%	-1%	-5%
3-5	12%	16%	28%	12%	16%	28%	0%	1%	1%
6-9	5%	9%	14%	9%	10%	18%	-4%	-1%	-4%
10-14	8%	6%	13%	6%	5%	11%	2%	1%	2%
15-19	3%	2%	5%	4%	3%	7%	0%	-1%	-2%
20+	2%	4%	6%	2%	1%	3%	0%	3%	3%
Totals	43%	57%	100%	47%	53%	100%	-3.4%	3.4%	0%

## Lactation Status

During the gather, lactation status for 222 mares was recorded as wet or dry. Notes of potential pregnancy or questions marks were noted on the corral sheets if lactation status was questioned.

291 total mares were captured, of which 6 were unaged. Lactation status was not recorded for 63 mares of which most were young. All of this information was modified to reflect the likely status of the unrecorded animals or those questioned. That information is presented below:

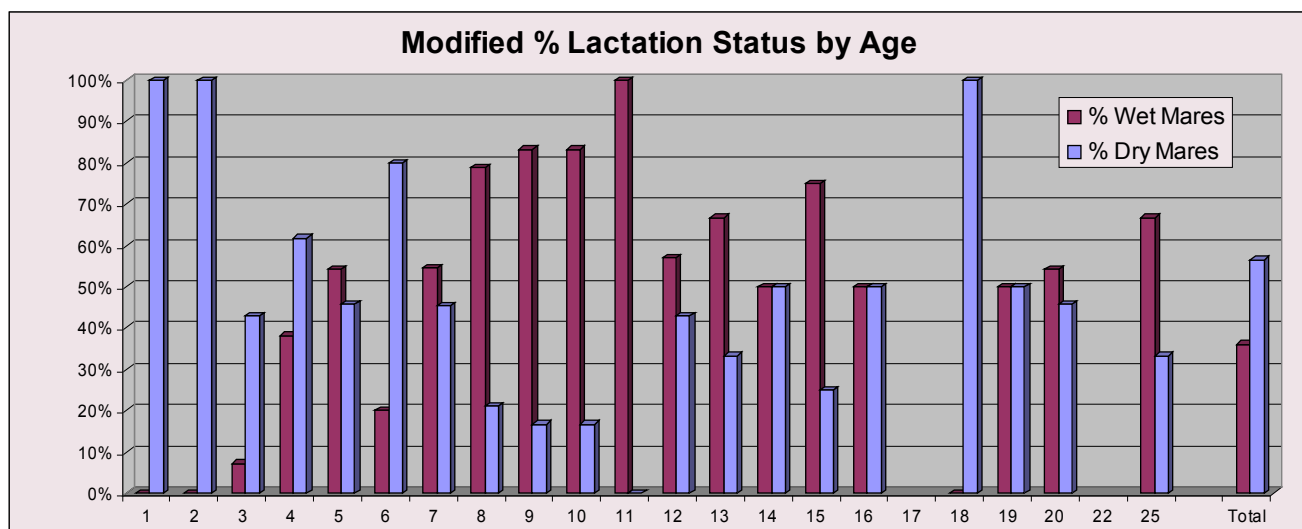
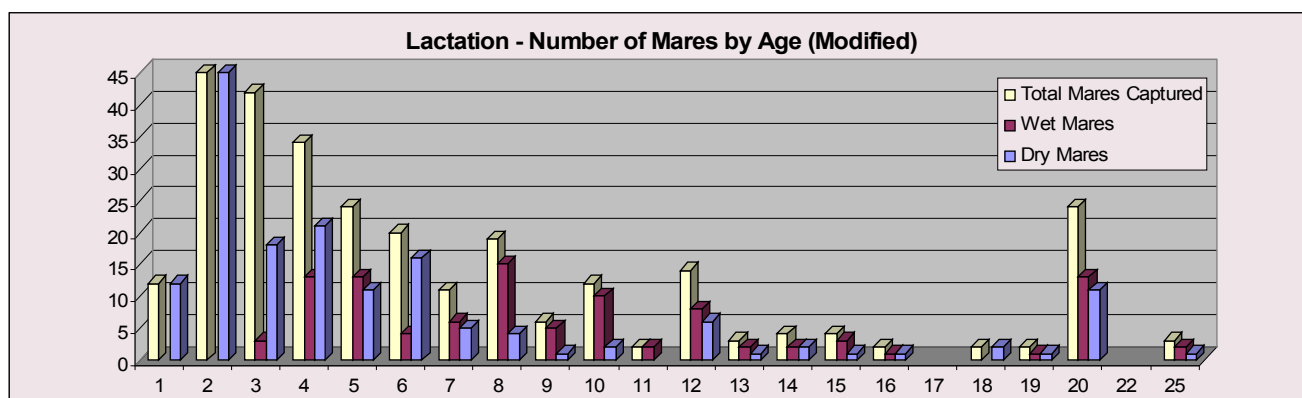
Modified Lactation status					
Age	Dry	Wet	Total Captured	% Wet	% Dry
1	12	0	12	0.0%	100.0%
2	45	0	45	0.0%	100.0%
3	39	3	42	7.1%	92.9%
4	21	13	34	38.2%	61.8%
5	11	13	24	54.2%	45.8%
6	16	4	20	20.0%	80.0%
7	5	6	11	54.5%	45.5%
8	4	15	19	78.9%	21.1%
9	1	5	6	83.3%	16.7%
10	2	10	12	83.3%	16.7%
11		2	2	100.0%	0.0%
12	6	8	14	57.1%	42.9%
13	1	2	3	66.7%	33.3%
14	2	2	4	50.0%	50.0%
15	1	3	4	75.0%	25.0%
16	1	1	2	50.0%	50.0%
18	2		2	0.0%	100.0%
19	1	1	2	50.0%	50.0%
20	11	13	24	54.2%	45.8%
22					
25	1	2	3	66.7%	33.3%
Total	161	103	285	36.1%	63.9%
Assume all unaccounted for are dry, and all noted as pregnant or questioned are wet.					

This data shows the percentage of presumed wet or dry mares per age. For example, 66.7% of all captured 13 year old horses (3 total) were noted as being wet or having a foal. Conversely, all 100% of the 45 two year olds captured are presumed dry because they were either noted as so, or if not noted, presumed dry because the notation was omitted for these young mares.

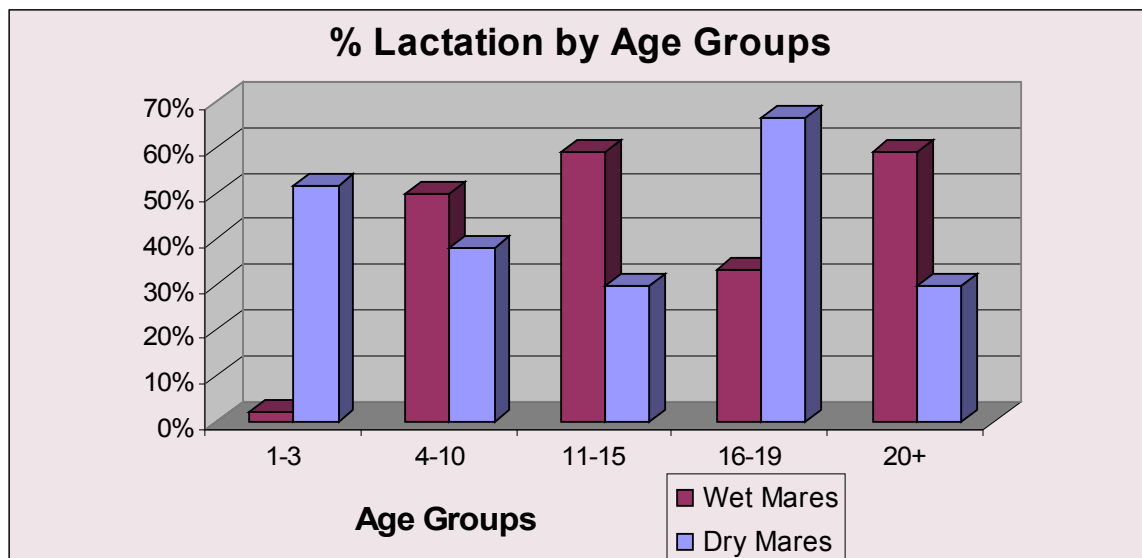
Lactation status was also calculated by some of the same age groupings utilized for other analysis. These tables do not use the modified data and are based on the direct count of the documented status, compared to the 285 wild mares that were aged.

Age Grouping	% of total mares (285)		% of each age group		
	wet	dry	Total	wet	dry
1-3	0.7%	17.5%	99	2.0%	51.5%
4-10	21.6%	16.5%	126	50.0%	38.1%
11-15	5.5%	2.7%	27	59.3%	29.6%
16-19	0.7%	1.4%	6	33.3%	66.7%
20+	5.5%	2.7%	27	59.3%	29.6%
Totals/Averages	34.0%	40.9%	285	34.7%	42.5%

The first table shows that of 285 mares, 21.6% of the total were documented as being wet. Because this table does not include the missing data, the percentages do not add up to 100. The second table shows the percentage for each age group. Of the 27 mares captured that were between 11-15 years of age, 59.3% were recorded as being wet. Again, these percentages do not add up to 100 because of the missing notations (roughly 23-25%). The following charts display the results.



This chart illustrates that most if not all of the mares under 4 years of age were presumed to be dry. Mares of all ages beyond 4 years of age produced foals, with the largest proportion of wet mares occurring from ages 8-15. Mares continued to exhibit signs of having foals well into their 20's.



This chart shows that all but the youngest age group is represented by mares that are producing foals.

### **Color Analysis**

The typical colors of the New Pass/Ravenswood HMA include primarily solid colors such as brown, bay black and sorrel. This has been noted within the last two gathers conducted in 1995 and 1999. Since 2005, colorful horses such as pintos and palominos have been identified within the southeast portion of the HMA. Reports from the permittee in spring 2007 indicate the influx of lightly colored horses such as palomino and grey horses. The data collected for horses captured at each trapseite shows marked differences of the coloration of horses from trap 3 (southeast portion) and trap 5 (Carson City Field Office/New Pass Range). The overall totals of colors documented has been compiled, as well as abbreviated tables with colors grouped.

Color -- totals and percentage				
Color	Ship		Release	
albino	1	0%		
bay	169	40%	44	28%
black	45	11%	18	11%
brown	31	7%	22	14%
buckskin	15	4%	4	3%
buckskin dun	3	1%	2	1%
chestnut	3	1%		
dun red	4	1%	1	1%
grey	12	3%	9	6%
grey/white	2	0%	1	1%
grulla	1	0%	1	1%
paint/bay	3	1%	5	3%
paint/black	3	0%	4	3%
paint/sorrel	3	1%	9	6%
paint/blue roan			2	1%
paint/red roan			1	1%
paint/grey			2	1%
palomino	6	1%	5	3%
roan	1	0%		
roan blue	5	1%	3	2%
roan red	8	2%	2	1%
roan strawberry	2	0%		
sorrel	108	25%	23	15%
Grand Total	425	100%	158	100%

Color of animals by general category							
Color	1999 gather	Ship	%	Release	%	Total	%
albino		1	0%	0	0	1	0%
bay	32%	169	40%	44	28%	213	37%
black	19%	46	11%	18	11%	63	11%
brown	16%	31	7%	22	14%	53	9%
buckskin	3%	18	4%	6	4%	24	4%
chestnut	1%	3	1%	0	0	3	1%
dun red	1%	4	1%	1	1%	5	1%
grey/white	1%	14	3%	10	6%	24	4%
grulla		1	0%	1	1%	2	0%
paint	1%	9	2%	23	15%	32	5%
palomino		6	1%	5	3%	11	2%
roan	7%	16	4%	5	3%	21	4%
sorrel	18%	108	25%	23	15%	138	22%
Grand Total	945	425	100%	158	100%	583	100%

Percent Color by Trapsite (General)							
Color	1	2	3	4	5	Total	Release
albino	0%	0%	1%	0%	0%	0%	0%
bay	40%	41%	31%	44%	22%	36%	28%
black	11%	10%	3%	11%	27%	11%	11%
brown	5%	14%	5%	16%	4%	9%	14%
buckskin	6%	0%	6%	3%	0%	4%	4%
chestnut	1%	0%	0%	0%	1%	0%	0%
dun red	2%	0%	0%	1%	0%	1%	1%
grey/white	1%		11%	2%	1%	4%	6%
grulla	1%	0%	0%	1%	0%	0%	1%
paint	1%	2%	8%	2%	22%	6%	15%
palomino	0%	0%	6%	1%	0%	2%	3%
roan	6%	0%	8%	2%	0%	4.0%	3%
sorrel	27%	33%	20%	17%	23%	22%	15.0%
Grand Total	102%	100%	99%	100%	100%	100%	101%

