



# **Girl Scouts of the Sierra Nevada Wild Horses and Burros Patch Project**

## **Girl's Guide**



## **America's Mustangs and Burros** *Legends in Endurance*



BUREAU OF LAND MANAGEMENT, NEVADA

**This book belongs to:**



**This project was jointly developed by:**

The Bureau of Land Management (BLM) in Nevada &  
The Girl Scouts of the Sierra Nevada

The project will be piloted in Nevada with the goal of making it available to  
Girl Scouts nationwide.

**The purpose of this project  
is to encourage girls to:**

- ☆ Learn how to give presentations to small and large groups.
- ☆ Increase science and math skills through exploration of nature.
- ☆ Increase research skills through internet use.

**Acknowledgements:**

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Sunnie Kaufmann, Girl Scouts of the Sierra Nevada  
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# **What's Inside**

|  |           |
|--|-----------|
| <b>Introduction .....</b>                                | <b>1</b>  |
| <b>Background Information .....</b>                      | <b>3</b>  |
| <b>Girl Scout Patch Requirements .....</b>               | <b>6</b>  |
| <b>Community Projects &amp; Hands-On Activities.....</b> | <b>9</b>  |
| <b>What is Habitat? .....</b>                            | <b>9</b>  |
| <b>A Problem of Numbers.....</b>                         | <b>14</b> |
| <b>Meet Wild Horse Annie .....</b>                       | <b>16</b> |
| <b>Legends in Endurance .....</b>                        | <b>19</b> |
| <b>The Adopt-A-Horse (or Burro) Program .....</b>        | <b>24</b> |
| <b>Just for Fun.....</b>                                 | <b>27</b> |
| <b>Glossary.....</b>                                     | <b>28</b> |
| <b>Resources .....</b>                                   | <b>30</b> |
| <b>Reading List .....</b>                                | <b>31</b> |
| <b>Student Notebook .....</b>                            | <b>32</b> |



## Introduction

America's mustangs and burros are the descendants of wild horses and burros brought to the New World by Spanish explorers and missionaries in the 16th century. Others come from stock which was released or escaped from miners, ranchers, homesteaders and others who settled the West. More than two million wild horses and burros are reported to have roamed the west by the late 1800s. By the early 1900s, competition between wild horses and burros and cattle, sheep, fences, farms, and ranches for the remaining open range intensified. Wild horse and burro populations plummeted as tens of thousands of animals were rounded up for use as draft animals, saddle stock, military mounts and food. Others were shot to reduce competition with domestic livestock for limited forage, water and space.

### The "Pencil War"

By the mid-20th century, domestic markets for pet and chicken feed and European markets for horse meat emerged, further reducing the number of wild horses and burros remaining in the West. Public concern escalated in response to the brutal methods used by

mustangers (horse catchers) to capture and transport wild horses for sale to slaughterhouses and rendering plants. Horrified by the mustangers' gruesome practices, Velma Johnston, a shy, middle-aged secretary from Reno, Nevada, spearheaded a "Pencil War" – a letter writing campaign that generated more letters to Congress than any single subject except the Vietnam War. Thousands of the letters were written by school children concerned for the horses' welfare.

### Congress passes "the Act"

As populations on western rangelands declined to fewer than 20,000 animals, the Congress of the United States deliberated over the animals' future and passed the Wild Free-Roaming Horses and Burros Act in 1971 (Act). The Act placed America's mustangs and burros under federal jurisdiction, and charged the Department of the Interior's Bureau of Land Management (BLM) and the Department of Agriculture's Forest Service (USFS) with preserving and protecting wild horses and burros on federal lands as "living symbols of the historic and pioneer spirit of the West."





Thanks to the passage of the Wild Horses and Burros Act, wild horses and burros have a lasting place in America's legacy. The biggest management challenge is to balance the number of wild horses and burros with the number the land can support without damage to the range. The Act requires land managers to maintain wild horse and burro numbers at levels that achieve a "thriving natural ecological balance." When populations of wild horses and burros (or livestock or wildlife) exceed the capacity of their habitat to support them, land health begins to deteriorate. Native vegetation is damaged, encouraging the growth of invasive weeds and reducing the amount of forage and water available for livestock, wildlife, recreational users, wild horses and burros and others. When this occurs, populations must be reduced to protect rangeland health.

Wildlife populations are kept in check through hunting and natural predators. Livestock use is controlled by federal managers through limits outlined in the grazing permits issued to ranchers. But wild horses and burros have few natural predators and are protected from hunting, illegal capture or harassment under federal law. Without these checks, wild horse and burro populations can increase an average of 15-20 percent or more each year.

When BLM determines that wild horse and burro populations exceed habitat capacity, the excess animals are removed from the range and prepared for adoption to private citizens through the BLM's Adopt-A-Horse (or Burro) Program. More than 211,000 wild horses and burros have found good homes with private citizens since the early 1970s. Finding good homes for America's wild horses and burros is sometimes challenging, but Girl Scouts can help by getting involved as advocates for the Adopt-A-Horse or Burro Program in their communities.

### **Did You Know?**

The term "mustang" originates from the Spanish *mesteño*. *Mesteño* is a stray or ownerless horse.





## Background Information

### Did You Know?

When you think about wild animals of the American West, you probably think of bears, mountain lions, elk and deer. But did you know that over 30,000 wild horses and burros also make their homes on public lands? These animals are descended from horses and burros that escaped from or were set free by explorers, settlers and ranchers.

Horses and burros live in a wild condition and roam free today – but their ancestors were once domesticated or tame. Wild horses and burros on public lands in the West were designated as “wild” in the Wild Free-Roaming Horses and Burros Act which was passed by the United States Congress in 1971. Today, wild horses and burros are managed by the BLM and the Forest Service as “living symbols of the historic and pioneer spirit of the West.”

### Nuisance or Legend?

The road to becoming a Living Legend has been a rocky one for America’s wild horses and burros. Some view wild horses and burros as a proud symbol of the fiercely independent pioneer spirit which triumphed in settling the West. Running wild and free they fill many of us with a sense of freedom, an image which carries us from the hectic pace of modern life to simpler times. But to others wild horses and burros are an introduced species with no place on the range. They view horses and burros as competition with native wildlife and domestic livestock.

It is this conflict BLM faces in managing wild horses and burros. Under the law, a thriving natural ecological balance among wild horse and burro populations, livestock, wildlife, and vegetation must be achieved. As first steps, the land’s ability to provide habitat (food, cover, water and space) over the long





term is evaluated and the amount of vegetation available for use as forage is determined. Then the available forage is allocated among livestock, wildlife and wild horses and burros. The number of horses and burros which can graze without causing damage to the range is called the **Appropriate Management Level** (AML).

Under the law, BLM is required to manage horses and burros only in those areas (Herd Areas) where they were found in 1971. Through land use planning, BLM evaluates each Herd Area to determine if it has ade-

quate food, water, cover and space to sustain healthy and diverse wild horse and burro populations over the long term. The areas which meet these criteria are then designated as **Herd Management Areas** (HMAs).

The law also requires BLM to manage horses and burros as wildland species and not as livestock. The agency does not typically haul feed or water to the animals, but does intervene in cases of extreme drought, fire, or freezing weather. In managing the animals, BLM uses the minimum feasible level of management necessary to achieve healthy populations of horses and burros in balance with other uses and the land's capability.

### **A Balancing Act**

Left unchecked, wild horse and burro numbers can increase as much as 20 percent or more each year. Because horses and burros are an introduced species, they have few natural enemies. Unlike wildlife, they are protected from hunting, illegal capture and harassment under the law. In the absence of these controls, there is a danger their numbers will grow to the point where the land can't support them. BLM has chosen several different ways to keep the size of the herds under control. Sometimes the animals are gathered and moved to another area, either for a short time or for a longer time, to preparation or holding facilities. BLM has also set up the Adopt-A-Horse (or Burro) Program in which these animals are made available for qualified people to adopt.



Normally, the BLM gathers wild horses and burros from the range using helicopters. In several studies, researchers have found this method to be the most humane and least stressful for the animals.



## Adopt-A-Horse (or Burro) Program

Each year, BLM rounds up thousands of wild horses and burros in order to protect land health. These animals are transported to preparation facilities and prepared for adoption through the Adopt-A-Horse (or Burro) Program. At the preparation facility, each animal is vaccinated to prevent illness or disease and is given plenty of food and water. BLM also assigns each animal a unique number – or freeze mark. Between 1971 and 2006, more than 211,000 wild horses and burros have been adopted by private citizens.

To adopt a wild horse or burro, you must be 18 years old. Parents or guardians may adopt and allow a younger family member to care for the animal. You must also have the facilities necessary to care for the animal and no prior conviction for inhumane treatment of animals.

If you or your parents or guardians aren't able to adopt a wild horse or burro, you can still help. Consider becoming a BLM volunteer, or look for opportunities to educate others in your community about America's wild horses and burros and BLM's Adopt-A-Horse Program.

### To Find Out More:

Check out the Wild Horse and Burro Program on the web:

[www.wildhorseandburro.blm.gov](http://www.wildhorseandburro.blm.gov)

### Did You Know?

About half the nation's wild horses and burros live in Nevada.

## BLM Adoption Requirements



Must be 18 years old. Parents or guardians may adopt and allow a younger family member to care for the animal.



Have no prior conviction for inhumane treatment of animals or for violating the Wild Free-Roaming Horses and Burros Act.



Have adequate feed, water and facilities (at least 400 square feet for each animal) to provide humane care for the number of animals requested.



Provide a home for the animal in the United States until you receive Certificate of Title from the BLM.





## Girl Scout Patch Requirements

- Brownies** Do any four of the first nine requirements.
- Juniors** Do any six of the first nine requirements.
- Cadettes** Do any eight of the first thirteen requirements, one of which must be requirement numbers 9-13.
- Seniors** Do any 10 of the 20 requirements, two of which must be requirement numbers 13-20.

1. Nevada has more wild horses and burros on public lands than any other state. What other states have wild horses and burros? Which state ranks second to Nevada? To answer these questions, log on to [www.wildhorseandburro.blm.gov](http://www.wildhorseandburro.blm.gov).
2. Read the Background Information (pages 3-5). What are some of the ways wild horses and burros were introduced to America?
3. Find out more about how wild horses and burros were introduced to America. Look up some of the early explorers and trace their routes. Who was one of the earliest explorers to America (the United States)? Which states did he/she explore? Write a paragraph or short story and share it with your Girl Scout Troup or class at school. (Hint: try an internet search "early explorers to the Americas" to learn more.)



4. Wild horses and burros run wild and free in a harsh and often unforgiving environment. Read about their habitat (pages 9-12) and complete Exercise 1 (page 10) and Exercise 2 (page 13). Then answer the following questions:
  - ☆ What are the four basic habitat components every living thing needs to survive?
  - ☆ What do horses and burros eat?
  - ☆ Why is maintaining rangeland health so important?
5. Is the following true? Left unchecked, wild horse and burro numbers can nearly double in four years. Complete Exercise 3 (page 15) to determine if the statement is true or false.
6. Read "Meet Wild Horse Annie" (pages 16-18). What motivated a shy and quiet lady, who was terribly sensitive about her appearance, to galvanize a nation to protect America's mustangs and burros? Make a poster or draw a picture which captures the image of wild horses and/or burros roaming wild and free in the American West.
7. Read the Legends in Endurance section (pages 19-20). Why have wild horses and burros become a symbol to the American public as Legends in Endurance? Complete Exercises 4 and 5 (pages 22-23).
8. Complete Exercise 6, "Check What You Know" (page 24).
9. Call the BLM at 1-866-4MUSTANGS and ask for copies of "The Wild Bunch." Share the poster with your Girl Scout Troop or class at school.
10. Contact a BLM office to arrange a field trip to view a herd management area (see Appendix, page 31, for the addresses and telephone numbers of BLM offices in Nevada). Or call the National Wild Horse and Burro Adoption Center at Palomino Valley (775-475-2222), or the Susanville District's Litchfield Holding Facility (530-254-6575) to arrange a tour. Complete the Student Notebook during your field trip or facility tour (see Appendix pages 33-36).
11. Contact a local elementary school or library and ask if you can read a story about wild horses or burros to children in kindergarten through third grades or during your library's story time. (For story recommendations, see Appendix, page 32).





12. Read about BLM's Adopt-A-Horse (or Burro) Program (pages 24-25). Complete Exercise 7 (page 26). Then call the BLM at 1-866-4MUSTANGS or go to [www.wildhorseandburro.blm.gov](http://www.wildhorseandburro.blm.gov) for the wild horse adoption schedule.
13. Demonstrate how to read a freeze mark number to your Girl Scout Troop or classroom.
14. Attend a wild horse adoption event or a wild horse and burro show or expo.
15. Organize a debate with your class or Girl Scout Troop about the wild horse and burro program. Argue for or against the protection of wild horses and burros under federal law.
16. Research "least resistance" training methods. What is least resistance training? Why is it so effective in gentling and training wild horses?
17. Give a five to seven minute speech to the Rotary Club, Chamber of Commerce or other business organizations. Possible topics could include: the history and need to protect America's Living Legends; care and training of a wild horse; why horses and burros are known as Legends in Endurance; provide information about an upcoming adoption event; why it is important to achieve the proper number of wild horses and burros on the range; or share a personal story about gentling and training your adopted horse or burro.
18. Contact BLM to arrange an interview with a wild horse and burro specialist. Ask her/him how he/she got interested in the wild horse and burro program? Did he/she go to college? For how many years? What college degree did he/she obtain? What do they like best about their job? Least? Write a one-page paper summarizing their answers. Answer the question: Is a job with BLM managing wild horses and burros something you might like to do? If not, what are some other career opportunities provided by BLM that may be of interest to you? (Visit [www.blm.gov](http://www.blm.gov) and look under BLM jobs for opportunities.)
19. Contact a local elementary school and ask if you can organize/sponsor an art contest to positively promote the wild horse and burro program. Determine contest rules, and arrange judges and prize(s) to be awarded to the winning artist(s). One opportunity may be to work with your local BLM office to coordinate the contest and announce the contest winners during an adoption.
20. Together with your parents, adopt your very own wild horse or burro. Or offer to become a BLM volunteer and assist BLM with event promotion.





## Community Projects and Hands-On Activities



### What is Habitat?

**T**hink about the home you live in. It provides shelter from the heat and sun in the summer and warmth during the cool winter months. When you are thirsty, you can get a drink of water from the kitchen faucet. When you are hungry, you may search the refrigerator for tasty snacks or Mom or Dad may make you something to eat. You may even have your own bedroom where you can listen to the music you like. Your home is your habitat. It provides you with food, shelter (cover), water and space.

Wild horses and burros are at home on western rangelands. Their habitat is provided by arid grasslands and semi-desert shrublands and woodlands. Trees, canyons, and rocks often provide shelter from the summer's heat or cold winter storms. Water is often in short supply and horses and burros may have to travel miles to get a nice cool drink at a spring or stream. Food is provided by a variety of grasses, forbs and shrubs. Wildlife and

domestic livestock are also dependent on the same forage, water and habitat. Even the wide open spaces have to be shared, as fences are constructed, roads are built, and towns and communities expand.

Now think about your bedroom. Isn't it wonderful when you have it all to yourself? Provided you follow Mom and Dad's rules, you can put your things where you want, and sit down to watch a video or listen to music when you choose. But what if you have to share your bedroom with your sisters? Can you and your sisters reach an agreement about where things should go, which movie to watch or what music to listen to? Without agreement, conflict and controversy can result.





### Habitat is limited

Because habitat is limited (finite), conflicts among wild horses and burros, wildlife and domestic livestock for the available forage often result. Under the law, a thriving natural ecological balance among wild horse and burro populations, livestock, wildlife, and vegetation must be achieved.

- 1 First, BLM must determine whether the rangeland is capable of providing adequate forage, water, cover and space to support healthy populations of wild horses and burros over the long-term.
- 2 Next, the amount of vegetation available for use as forage must be determined.
- 3 As a final step, the available forage is allocated among livestock, wildlife and wild horses and burros.

The number of horses and burros which can graze without causing damage to the range is called the **appropriate management level (AML)**.

### Did You Know?

The average horse will eat its weight in hay each month.



### Exercise 1

### How much will your horse eat?

Your horse weighs 1,000 pounds. How many tons of hay will your horse eat each year?

Hint: A ton is 2,000 pounds.



### Healthy Rangelands ~ A Buffet of Nutritious Grasses, Forbs and Shrubs

Healthy rangelands provide a variety of habitats for resident animals. Available grasses, forbs and shrubs offer wild horses and burros a nutritious buffet which can carry the animals through all but the most extreme drought or winter conditions.

Wild horses prefer grasses and forbs, but during the winter when grasses are covered with snow or ice, they may choose to browse on a variety of shrubs. During extreme winter conditions, they may even eat the sprigs and bark of trees. Each day, the average horse eats about 20-25 pounds of food and spends an average of 12 hours a day grazing.

Wild burros feed on various plants including grasses and shrubs. Burros enjoy forbs as well, particularly in the spring. They usually forage during the daytime, except during the hottest days of summer. The average burro eats 15 pounds of food each day and spends about the same amount of time foraging.

### Did You Know?

Most western rangelands produce only a few hundred pounds of vegetation per acre, compared to mid- and tall-grass prairies in the central and eastern United States which can produce several hundred pounds of vegetation.



Shrubs such as sagebrush, bitterbrush and fourwing salt brush are common.

### More About Healthy Rangelands

Each year homes are lost or damaged from flooding, earthquakes, or mud slides. Often these homes collapse because they aren't built on a solid foundation. Without a solid foundation, your home may shift, sag, or even be destroyed.

Healthy rangelands are the foundation for the habitat provided to domestic livestock, wildlife and wild horses and burros. Healthy rangelands provide a diverse mix of grasses, forbs and shrubs. In the Great Basin, healthy rangelands exhibit a mix of perennial grasses such as Great Basin wild rye, bluebunch wheatgrass, and Indian ricegrass. Forbs are less common, while shrubs--such as sagebrush, bitterbrush and fourwing salt brush--are common. Aspen and juniper or pinyon trees may also be common. In the Mojave Desert environment, healthy habitats are characterized by galleta grass, muhlenbergia, evening primrose, globe mallow, and yucca and Joshua trees.



Without proper management, the range may be damaged. Desirable native species may be replaced by invasive non-native species such as cheatgrass or Red brome, or noxious weeds such as knapweed or perennial pepperweed. These weedy species out-compete native species, further reducing vegetation diversity. Under these conditions, the range may become unable to produce forage and habitat for the many animals that live there.

In order to assure proper management, BLM allocates the forage provided by these habitats for use by domestic livestock, wildlife, and wild horses and burros. Limiting the use by grazing animals helps to ensure that vegetation is not overgrazed and reduces the risk of invasion by weedy species.

Take a closer look at how BLM allocates limited forage resources to assure rangeland health by completing Exercise 2 on the next page.

### Summary

Although Exercise 2 provides a simple example, making forage allocations is a highly complex task. In establishing the AML, BLM relies on an intensive "monitoring" program over several years involving studies of grazing utilization, trend in range condition, actual use, precipitation (climate) and other factors. AML is based on consideration of wildlife, permitted livestock, and wild horses and burros in the area, and is set with public involvement through an in-depth environmental analysis and decision process.







## Exercise 2

### Making Forage Allocations

**Step 1.** Using a plain sheet of paper, first draw a circle about 8" in diameter. Now draw a line, dividing the circle in half. Shade this portion of the circle with a color of your choice. This portion of the pie represents the amount of vegetation which is not allocated as forage for use by grazing animals. It protects the soil from erosion, maintains healthy plants, and provides habitat to resident animals.

**Step 2.** Next, divide the un-shaded portion of the circle into thirds ( $1/6$ ). Label one piece "domestic livestock." This represents the portion of the available forage allocated to livestock use.

**Step 3.** Label the remaining pieces as "wildlife" and "wild horses and burros." This represents the portion of forage available for these animals to eat.

#### Question:

What do you think happens when the number of wild horse and burro, livestock or wildlife grow beyond their portion of the allocated forage?



## A Problem of Numbers



**L**eft unchecked, wild horse and burro numbers can increase as much as 15-20 percent or more each year. Wildlife populations are kept in check through hunting and natural predators. Livestock use is controlled by federal managers through limits outlined in the grazing permits issued to ranchers. Because horses and burros are an introduced species, they have few natural enemies and are protected from hunting, illegal capture or harassment under federal law. In the absence of these controls, there is a danger that wild horse and burro numbers will grow to the point where the land can't support them.

### Different ways to control herd size

BLM has chosen several different ways to keep the size of the herds under control.



Sometimes the animals are gathered and moved, either for a short time or for longer, to "holding facilities."



Sometimes mares released back to the range following a gather are treated with a fertility control agent to slow population growth. Because fertility control treatment is experimental, its use is limited to certain herd management areas to allow for monitoring and continuing research.



BLM has also set up the Adopt-A-Horse (or Burro) Program in which animals removed from the range are made available for qualified people to adopt.





### Exercise 3

#### It's A Numbers Game

Let's take a look at how quickly the numbers of wild horses and burros in Nevada can grow.

Nevada 2005 Population Estimate = 14,715 animals.

Estimated Appropriate Management Level (AML) = 13,960 animals.

#### Questions:

1. Does the 2005 population estimate exceed the AML? If so, by how much?
2. According to most estimates, wild horse and burro populations can increase 20 percent or more per year. Given a beginning population of 15,000 animals in 2005 and a 20 percent annual population increase, what would Nevada's population of wild horses and burros be in 2010? Make a chart or graph to illustrate your findings.





## Meet Wild Horse Annie

By Susie Stokke, *BLM Nevada Wild Horse and Burro Program Lead*

I met Wild Horse Annie when I was 21, during a round-up of wild horses from the Shinn Peak area just south of Ravendale, California. I was a college student working over the summer for BLM California's Susanville District. Because I grew up on a ranch, I was lucky enough to be asked to help with the wild horse gather. Until that time, I had never seen a wild horse. But I will never forget the first wild horses I saw! They moved with grace and majesty, appearing to float across the rocky and rugged gray-green sagebrush flats.

In 1976, BLM was just beginning to manage wild horses and burros under the provisions of the 1971 Wild Free-Roaming Horses and Burros Act. At that time, the use of helicopters to assist in rounding up the an-

imals was prohibited, so BLM conducted wild horse gathers from horseback. A couple of the wranglers would start a group of horses, guiding them toward a temporary corral or trap. My job was to wait on my horse until the wild bunch got closer to the trap, then help the wranglers herd the horses into the trap. During the gather, Wild Horse Annie (Velma Johnston) and her associate, Dawn Lappin, closely monitored the operation to ensure the animals received humane treatment.

This experience aroused my curiosity about Velma Johnston. What would lead a shy rancher's wife, who suffered from the effects of polio and was very sensitive about her appearance, to galvanize a nation into passing legislation to protect wild horses and burros as "living symbols of the historic and pioneer spirit of the West?"



### Spurred to action

I discovered that in 1950, Velma Johnston saw a sight so horrific she was spurred to action – a truck carrying horses, many of them injured and dripping blood, being transported for slaughter as pet food. Mrs. Johnston discovered the gruesome practice was legal. Seen as competition with domestic livestock and wildlife for limited forage, many considered mustangs a nuisance. “Mustangers” were encouraged to round the animals up, often hunting them by plane or truck, shooting or poisoning them, or shipping them to slaughter.

Impassioned by what she had seen, Mrs. Johnston was successful in convincing the Storey County Nevada Commission to ban the hunting of horses from airplanes in 1952. But she didn't stop there. Next, she lobbied the Nevada Legislature to provide additional protection for Nevada's wild horses and burros. Labeled “Wild Horse Annie” by a heckler, Mrs. Johnston continued to wage her fight, interesting newspapers, magazines and television in the plight of wild horses. Together with America's school children, she waged a “Pencil War” – a letter writing campaign which paid off.

### Annie's dream becomes reality

In 1959, Congress passed the Wild Horse Annie Act (Public Law 86-234) which prohibited

the use of motorized vehicles to hunt wild horses and burros on all public lands. And in 1971, amid continuing public outcry, Annie's dream of providing protection and management for America's mustangs and burros became a reality when the Senate unanimously passed the Wild Free-Roaming Horses and Burros Act. This Act requires the BLM and the Forest Service to protect and manage wild horses and burros in a “thriving natural ecological balance” with the land's ability to produce forage and other multiple uses.

Mrs. Johnston's friend and associate Dawn Lappin (president, Wild Horse Organized Assistance) said that the mustangers wished they hadn't made so much fun of Mrs. Johnston and they wish they hadn't given her the name that spread like wildfire. They also wished that they had paid attention to business at the time, because they didn't think one woman could change Nevada around.

*Wild Horse Annie's story  
demonstrates that one person  
can make a difference.*

*Although she died in 1977, her  
legacy lives on—wild and free.*





### You Can Make A Difference Too!

- ★ Share what you've learned with others in your community.
- ★ Volunteer with BLM or another group devoted to America's mustangs and burros.
- ★ Together with your parents, adopt your very own wild horse or burro.



### Things to Know About Volunteering

- ★ Contact your local BLM Office or log onto [www.blm.gov/volunteer](http://www.blm.gov/volunteer) to identify specific opportunities.
- ★ The approval of your parents (or guardian) is required.
- ★ Volunteers under age 18 must be supervised by a leader, parent, or chaperone.
- ★ Volunteers under age 18 are not allowed to work directly with wild horses or burros.
- ★ Volunteers under age 16 may not work with power tools or operate equipment.



### Did You Know?

The BLM and the Forest Service manage about 15,500 wild horses and burros within 102 herd management areas and 25 territories on 17.5 million acres of public and National Forest land in Nevada.



## Legends in Endurance



**T**he American West can be a rugged and harsh place. Winter temperatures may reach well below zero degrees Fahrenheit while summertime temperatures can reach over 100 degrees Fahrenheit. The land is often arid with low precipitation, sparse vegetation, and limited water. Despite the rugged conditions, wild horses and burros have adapted to the rigors of this harsh environment. It is this ability to survive and adapt that fires the public's image of the wild horse and burro as Legends in Endurance – a living symbol of the American pioneer spirit.

### America's Mustangs Roam Wild and Free

Wild horses (or mustangs) are often compact, possessing stronger legs, higher bone density and harder hooves than domestic horses. Ranging in height from 13 to 16 hands, the average wild horse weighs 800-1,000 pounds, eats 20-25 pounds of food and needs 10 gallons of water per day during the summer months.

Wild horses have acute hearing and are able to rotate their ears about 180 degrees to capture sounds. Their eyes can move independently and are placed in a manner which allows them a 320 degree field of view, even while grazing with their heads down. They generally attain their full growth between the ages of four and seven years, but are considered mature animals at five years of age when they have attained their full complement of teeth. In the wild, horses generally live until they are 20 or more years old. Wild horses are most commonly colored bay, black, brown, and sorrel, but some herds are known for unusual colors such as duns, paints, grullas and roans.

### Fuzzy Long Ears

Wild burros can live in especially harsh habitats, as long as they are within eight to 10 miles of a water source. Originally from Africa, they are hardy, sure-footed animals who can locate food in almost barren terrain. Burros weigh about 400-600 pounds,



have a short mane and can grow to about 42 inches in height. They eat about 15 pounds of food and need only about half the water a wild horse requires on a daily basis. They also tolerate a water loss of as much as 30 percent of their body weight and can replenish it after only five minutes of drinking. (By contrast, a human who lost even 10 percent of his or her body weight would require immediate medical attention and a full day of intermittent drinking for replenishment). Most young burros survive to maturity, and may live to more than 30 years of age in the wild. Burros may be black, brown or gray in color, but may also be spotted.

### **For more information on Nevada's herd management areas:**

Check out the following web site:

**[www.nv.blm.gov](http://www.nv.blm.gov)**

Then click on "What We Do" and "Nevada Wild Horse and Burro Program."

### **The first horse**

The first horse appeared in North America 55 million years ago. The dog-sized, multi-toed early horse is called Eohippus or "Dawn Horse."

The horse family (Equidae) continued to evolve in North America, reaching the height of its diversity and its maximum numbers about 10 million years ago. Many of these species migrated to Asia across the Bering land bridge.

About 8,000-10,000 years ago, at the end of the last major Ice Age, horses died out in the Americas, along with mammals such as the woolly mammoth and the sabertooth cat.

### **It's all in the family**

Wild horses live in family groups. A band of wild horses is made up of mares, foals and yearlings. Each family group is guarded by a stallion who is the father of the group's foals. Young male horses, or bachelors, are forced out of the family group when they are about two years old. They join other young male horses to form a bachelor band. Sometimes, bachelors leave the group, find their own mates, and form their own band.

A herd is formed by all the bands living in a particular area. A herd rarely comes together unless food or water is very scarce. Most often, you will see individual bands of horses in the wild.

### **Did You Know?**

Unlike wild horses, wild burros don't live in family groups. They may occur as single animals, all male, all female or mixed groups or groups of jennies and foals. Female burros are called jennies while male burros are called jacks.



**Wild or Estray?**

Some of Nevada's horses and burros are not managed under the provisions of the 1971 Wild Free-Roaming Horses and Burros Act.

Horses in the Virginia City area are estrays. They live on state lands and are managed by the Nevada Department of Agriculture.

Horses and burros on the Sheldon National Wildlife Refuge are managed by the United States Fish and Wildlife Service. The National Park Service at Lake Mead manages horses and burros.

**Exercise 4****How tall?**

Your horse is 14.0 hands in height. How tall is she?

**Did You Know?**

Some of Nevada's horses and burros are not managed under the provisions of the 1971 Wild Free-Roaming Horses and Burros Act.

**What is a measurement called a hand?**

A hand is 4 inches.







### America's Mustangs or Burros

Test Your Knowledge

Circle the correct animal for each item below.

- |                   |   |
|-------------------|---|
| Mustang or Burro? | I average 13-16 hands.  |
| Mustang or Burro? | I may live more than 30 years in the wild.  |
| Mustang or Burro? | I am most often bay, brown, black and sorrel, but may be roan, dun, paint, grulla or other unusual color. |
| Mustang or Burro? | I have acute hearing and a wide field of view.  |
| Mustang or Burro? | I weigh 400-600 pounds, on average.   |
| Mustang or Burro? | I mature at about five years of age.  |
| Mustang or Burro? | I am hardy and surefooted and can find food in almost barren terrain.                                     |
| Mustang or Burro? | I generally live about 20 years in the wild.  |
| Mustang or Burro? | I eat about 15 pounds of food each day.   |
| Mustang or Burro? | I can replenish my body weight after drinking for five minutes.   |
| Mustang or Burro? | I am less than four feet tall, on average.  |
| Mustang or Burro? | I drink about 10 gallons of water every day during the summer.  |





## Exercise 6

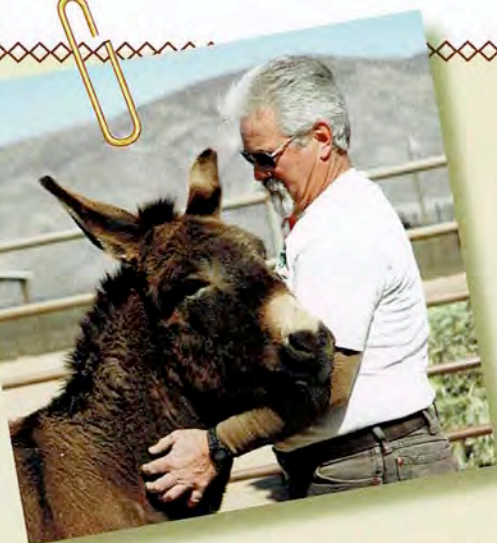
### Check What You Know

Use the words listed at right to complete the sentences correctly. You'll use each word only once.

|                                    |                   |
|------------------------------------|-------------------|
| cover                              | water             |
| domestic                           | health            |
| food                               | proper management |
| protection                         | BLM               |
| living symbols                     | public            |
| AML (Appropriate Management Level) | monitoring        |
|                                    | habitat           |

1. Animals need \_\_\_\_\_ for shelter and protection.
2. Wild horses and burros are \_\_\_\_\_.
3. \_\_\_\_\_ stands for the Bureau of Land Management.
4. The lands owned and managed by the federal government are \_\_\_\_\_ lands.
5. Tame animals that are kept by man are \_\_\_\_\_ animals.
6. The place where animals live is their \_\_\_\_\_.
7. The number of wild horses and burros which can graze without damage to the range is the \_\_\_\_\_.
8. BLM is responsible for the \_\_\_\_\_ of wild horses and burros on public lands.
9. Rangeland \_\_\_\_\_ is the foundation for the habitat provided to domestic livestock, wildlife and wild horses and burros.
10. Without \_\_\_\_\_, the range may be damaged.
11. Animals need \_\_\_\_\_ and \_\_\_\_\_ to survive.
12. BLM uses \_\_\_\_\_ data to establish AML.





## **The Adopt a Horse (or Burro) Program**

**E**ach year, BLM gathers thousands of wild horses and burros in order to protect land health. The excess animals are transported to holding facilities and prepared for adoption through the Adopt-A-Horse (or Burro) Program. At the holding facility, each animal is vaccinated to prevent illness or disease and is given lots of food and water. BLM also assigns each animal a unique number – or freeze mark. Between 1971 and 2006, more than 211,000 wild horses and burros have been adopted by private citizens.

### **Training before Adoption**

BLM conducts dozens of adoption events throughout the United States each year. To increase the number of wild horses adopted, BLM is partnering with some state correctional centers to operate wild horse training programs. The training program at the

Warm Springs Correctional Center in Carson City, Nevada, is an example of the working partnership between BLM and the Nevada Departments of Agriculture and Corrections. Each year, the facility trains about 45 animals which are made available to the public at three adoption events. Each animal receives up to 120 days of intensive training. When a wild horse graduates from the program, it can be ridden under saddle, will stop, back, turn left and right, and load into a stock trailer. But, each graduate is still considered a kindergarten – each horse will need daily riding and handling to reinforce its first lessons. Wyoming, Colorado, Kansas and Oklahoma also have wild horse training programs.

### **For more information**

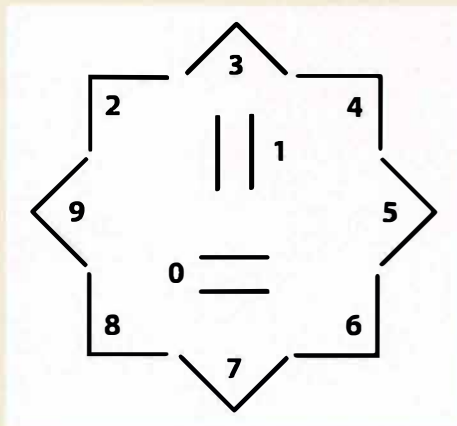
Check out:

**[www.wildhorseandburro.blm.gov](http://www.wildhorseandburro.blm.gov)**



## Key to Freeze Mark Symbols

The BLM uses freeze marking to identify captured wild horses and burros. Freeze marking is a permanent, unalterable and painless way to identify each horse as an individual. It is applied on the left side of the neck. It utilizes the International Alpha Angle System which uses a series of angles and alpha-symbols that cannot be altered. The mark contains the Registering Organization (U.S. Government), year of birth, and registration number.



The technique is simple and completely painless to the animal. The left side of the neck is shaved and washed with alcohol, and the mark is applied with an iron that is chilled in liquid nitrogen. The hair at the site of the mark will grow back white and show the identification number. The following illustration shows how to read a freeze mark.

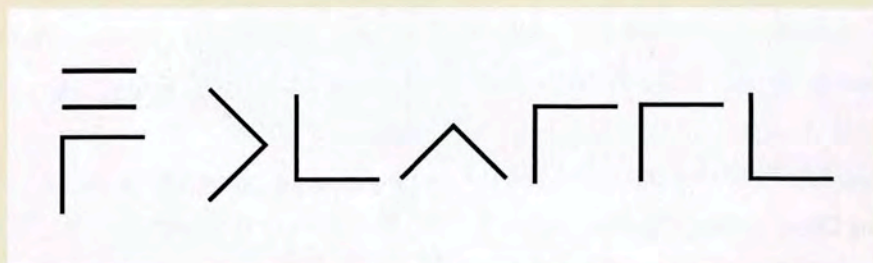
### The freeze mark indicates what state the horse was gathered from:

|                |               |
|----------------|---------------|
| Arizona        | 80001-160000  |
| California     | 160001-240000 |
| Colorado       | 240001-320000 |
| Idaho          | 320001-400000 |
| Montana        | 400001-480000 |
| Nevada         | 480001-640000 |
| New Mexico     | 640001-720000 |
| Oregon         | 0 - 80000     |
| Utah           | 720001-800000 |
| Wyoming        | 800001-880000 |
| Eastern States | 880001-880100 |

Registering Organization  
Year of Birth (top to bottom)  
Registration Number





**Exercise 7****Reading a Freeze Mark****Questions:**

1. What is the freeze mark number for this horse?
2. From which state was it gathered?





## Just For Fun

Conduct Your Own Wild Horse Gather

Throw a Loop Around the Following Words:

MUSTANG

ANNIE

COVER

WEED

LAND HEALTH

FOOD

FERAL

STURDY

FORB

TREE

SPACE

ARID

BURRO

PENCIL WAR

WILDLIFE

FREEZE MARK

HABITAT

WATER

VEGETATION

ADOPT

GRASS

LIVING SYMBOL

LIVESTOCK

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | F | R | Y | M | B | U | R | R | O | K | O | F | P | L | V |
| E | O | Z | X | U | D | G | H | M | O | P | S | E | T | A | E |
| N | O | S | D | S | F | Q | G | M | F | V | C | R | L | N | G |
| C | D | Q | E | T | D | S | I | N | O | B | C | A | X | D | E |
| I | D | I | R | A | J | T | G | L | O | U | Y | L | T | H | T |
| L | Z | V | M | N | O | U | W | L | D | E | R | S | K | E | A |
| W | E | E | D | G | O | R | D | X | Z | L | O | R | P | A | T |
| A | T | I | M | S | T | D | Y | A | I | J | I | K | O | L | I |
| R | E | T | A | W | M | Y | N | V | O | P | Q | F | R | T | O |
| G | R | A | S | S | C | H | E | C | O | V | E | R | E | H | N |
| L | I | V | I | N | G | S | Y | M | B | O | L | P | S | O | M |
| C | T | R | E | E | T | A | T | I | B | A | H | B | P | V | S |
| F | O | R | B | O | G | F | R | E | E | Z | E | M | A | R | K |
| A | C | D | C | E | A | N | N | I | E | F | G | H | C | I | C |
| L | M | K | A | D | O | P | T | N | O | P | R | S | E | T | U |



## Glossary

### Animal

Any living being that is not a plant; able to move voluntarily.

### Animal Unit Month

An animal unit month (AUM) is the amount of forage needed to feed a cow, or its equivalent, for one month. The equivalent of a cow for forage purposes is one horse or five sheep.

### Appropriate Management Level

The number of wild horses and burros the land can support without damage to the range.

### Characteristic

A trait or feature that separates one person or thing from another.

### Competition

The struggle by different living things for the same food, water, cover, and space needed for existence.

### Cover

Shelter for protection; hiding place for game animals, e.g. woods, brush.

### Domestic

Tame animals; kept and used by man.

### Ecology

The study of the interrelationships between organisms and their environment.

### Environment

All the surrounding conditions, circumstances and influences that affect the development of a living being.

### Feral

Animals whose ancestors were once domesticated or tame but live in a wild free-roaming condition today.

### Foal

The offspring of a stallion and mare; may be male or female; less than one year old.

### Forb

A herbaceous plant, other than grass.

### Grass

An herbaceous plant, with jointed stems, slender sheathing leaves, and flowers borne in spikelets of bracts.

### Grazing

Animals feeding on growing grasses or pastureland.

### Habitat

The place where a plant or animal species naturally lives and grows.

### Herd Area

Area where wild horses and burros were found when the Wild and Free-Roaming Horses and Burros Act passed in 1971.

### Herd Management Area

Herd areas with adequate food, water, cover and space to manage for healthy and viable wild horse and burro populations over the long term. HMAs are designated in BLM land use plans.

### Heritage

Something handed down from one's ancestors or from the past.

### Humane

Kind, merciful, tenderness, compassion and sympathy toward animals and man.

### Livestock

Animals kept for home (domestic) use or for sale or profit.

### Management

The art or manner of handling, controlling, or directing.

### Mare

A female horse old enough to mate.

### Multiple Use

Used for more than one purpose. Public lands provide multiple uses, such as, timber, livestock grazing, wildlife habitat, wild horse and burro habitat, mining, and recreation.



**Natural Resources**

Materials supplied by nature, e.g. minerals, water, vegetation.

**Population**

The number of people or other organisms living in a given area.

**Public Lands**

Land administered by the Bureau of Land Management (BLM) for the public.

**Rangeland**

Land suitable for grazing; common in the western United States.

**Rangeland Health**

Rangelands which exhibit a diversity of vegetation consistent with the land's productive capability. The mix of native grasses, forbs, shrubs and trees as compared to non-native or weed species is a measure of rangeland health.

**Sagebrush**

Grayish green shrubs common to the dry plains and mountains in the western United States. State plant of Nevada.

**Shrub**

A low, usually several-stemmed woody plant.  
**Species** A class of individuals having some common characteristics or qualities that distinguish them from other individuals.

**Stallion**

A male horse that is old enough to mate.

**Symbol**

An expression of invisible or intangible value or means.

**Survival**

The act of surviving, continuance of life; living or lasting longer than others.

**Tree**

A woody plant with an elongated main stem and usually few or no branches on its lower part.

**Vegetation**

Plant life; growing plants.

**Wildlife**

Living things that are not human or domesticated.

**Yearling**

A foal between one and two years old.



## Resources

### BLM National Wild Horse and Burro Program

[www.wildhorseandburro.blm.gov](http://www.wildhorseandburro.blm.gov)

Toll Free Telephone Number:

1-866-4MUSTANGS

Environmental Education website:

[www.blm.gov/education](http://www.blm.gov/education)

Volunteer website:

[www.blm.gov/volunteer](http://www.blm.gov/volunteer)

### BLM Nevada Wild Horse and Burro Program

[www.nv.blm.gov](http://www.nv.blm.gov). Click on "What We Do", then "Nevada Wild Horses and Burros".

### Warm Springs Correctional Center

Wild Horse Training Program

Nevada Prison Dairy

POB 7000

Carson City, Nevada 89701

### Nevada Department of Agriculture

Mike Holmes, Virginia Range Estray Manager

350 Capitol Hill Avenue

Reno, Nevada 89502

(775) 721-3470

### Nevada Commission for the Preservation of Wild Horses

Catherine Barcomb

885 E. Lake Blvd.

Carson City, NV 89704

(775) 849-3625

### Nevada Department of Wildlife

1100 Valley Road

Reno, Nevada 89512-2817

(775) 688-1500

### Humboldt-Toiyabe National Forest

Toni Strauss

1200 Franklin Way

Sparks, Nevada 89431

(775) 355-5387

### U. S. Fish and Wildlife Service

Sheldon-Hart National Wildlife Refuge

PO Box 111

Lakeview, Oregon 97650

(541) 947-3310

### National Park Service

Lake Mead National Recreation Area

PO Box 1000

Cottonwood Cove, Nevada 89046

(702) 297-1464

### Mustang Heritage Foundation

Janet Greenlee

Fleishman-Hillard

515 Congress Ave., Suite 2500

Austin, TX 78701

[greenlej@fleishman.com](mailto:greenlej@fleishman.com)

(512) 495-7165



## Reading List

### Books

*American's Last Wild Horses* by Hope Ryden

*The American Mustang Guide Book: History, behavior, and state-by-state direction on where to best view American's wild horses* by Lisa Dines

*Brightly of the Grand Canyon* by Marguerite Henry

*A Field Full of Horses/Hansard* by Peter

*The Girl Who Loved Wild Horses* by Paul Goble

*Honest Horses, Wild Horses in the Great Basin* by Paula Morin

*Horse Stories: an annotated bibliography of books for all ages* by Terri A. Wear

*Learning to Ride Horses and Ponies* by Jackie Budd

*Let's Ride* by Linda Tellington-Jones

*The Little Wild Horse* by Rita Gray

*Misty of Chincoteague* by Marguerite Henry

*Wild Horses I Have Known* by Hope Ryden

### Series

*Amazing Animal Adventures, Wild Horse Country* by Katacha Diaz

*Heartland* by Lauren Brooke

*High Hurdle* by Lauraine Snelling

*Horseshoe Trilogies* by Lucy Daniels

*Phantom Stallion* by Terri Farley

*Pony Pals* by Jeanne Betancourt

*Saddleclub* by Bonnie Bryant

*Spirit* by Kathleen Duey

*Thoroughbred* by Joanna Campbell

*The Wonder Series, Wild Horsesy* by Carol Ann Moorhead



**Herd Management Area (HMA) Field Trip**

**Section I. Lasso These Wild Horse and Burro Facts...understand how wild horses and burros have come to represent the essential spirit of the American West.**

**Instructions:**

- ☆ Did you know that native people share their custom and culture by telling stories to their children who, in turn, share the stories with their own children? During this portion of the field trip, you will divide into tribal communities and tell the story of America's mustangs and burros.
- ☆ Begin by forming tribal communities of 5-7 girls.
- ☆ Each tribal community should decide how they want to read the story (example: elect a tribal leader to read (tell) the story to the group, have each tribal member (girl) read a paragraph, etc).
- ☆ Once you have read the story, complete the exercise titled "Lasso These Wild Horse and Burro Facts".
- ☆ Once each small group has completed the exercise, the Leader will bring the small groups together to share what they learned.



### Legends in Endurance... America's Mustangs and Burros

**D**id you know that horses were found in America millions of years ago? Early horse was about the size of a dog and had multiple toes. But horses disappeared from America at the end of the last Ice Age or about 10,000 years ago.

In the 16th century, Spanish explorers re-introduced horses to the Americas. Later, other horses and burros were turned loose or escaped from the cavalry, farms, ranches and miners. At the end of the 19th century, an estimated 2 million wild horses and burros roamed the west.

By the mid 20th century, mustangs and burros were viewed as pests because they competed with domestic livestock and native wildlife for forage and water. "Mustangers" were hired to rid the range of wild horses and burros. They used trucks and airplanes to catch the animals. Many horses or burros were shot or poisoned or sold for pet food. Some were even used as rodeo stock.

One day, Velma Johnston, a rancher's wife, found some injured horses loaded on a truck, dripping blood. She learned there were no laws to protect mustangs or burros from the mustangers (horse catchers). From then on, Mrs. Johnston waged a fight to bring America's mustangs and burros under federal protection. Her battle earned her the title Wild Horse Annie and led Congress to pass the Wild Free-Roaming Horses and Burros Act in 1971. This Act requires the Bureau of Land Management (BLM) and the Forest Service to protect and manage wild horses and burros on public lands in the west as living symbols of the pioneer spirit.

Mustangs and burros have become Legends in Endurance. Their home is the rugged and harsh American west — which provides the food, water, cover and space (habitat) they need to live.

The average mustangs weighs 800–1,000 pounds, is 13–16 hands tall, eats 20–25 pounds of food and drinks 10 gallons of water daily. Originally from Africa, burros weigh about 400–600 pounds, are less than four feet tall, and can live in almost barren terrain. Burros eat about 15 pounds of food and drink about 5 gallons of water each day.







## Lasso These Wild Horse and Burro Facts

Label each picture with a number from the list below:

1. Wild Horse Annie
2. Home = Habitat
3. Ice Age
4. Competition for Food and Water
5. 16<sup>th</sup> Century Spanish Explorers
6. Early or Dawn Horse
7. "Mustangers"
8. Burros
9. Mustangs





## **HMA Field Trip**

**Section II. Home on the Range Fact-Finding Adventure... understand the need to balance habitat needs for wild horses and burros with other uses of the environment.**

### **Instructions:**

- ☆ Divide into groups of 5–7 girls.
- ☆ Select someone to document your group's findings.
- ☆ Also select a spokesperson(s) to report back to the other groups at the conclusion of your Adventure.

### **Home on the Range Fact-Finding Adventure**

#### **I. You are a wild horse and this is your home. Discuss the following topics with the other horses in your band.**

1. What is the weather like during the summer? How about winter?
2. What do you use for shelter during hot or extremely cold weather?
3. Where do you find water to drink? Do you have to travel a long way?

#### **II. As a wild burro, you like to eat about 15 pounds of food and spend about 12 hours per day foraging.**

1. Explore this range site. Find at least three plants that you like to eat (you may cut off the tops but please leave the roots).
2. Are the plants you found annuals or perennials? (Annual plants grow from seed each year and usually have a single stem, while perennial plants grow from the plant's roots each year. Perennial grasses generally grow in a bunch...ie. have multiple stems).



3. Annual grasses are an introduced species (not native), often have a short growing season, and are less productive (provide less forage value) than native perennial bunchgrasses. Is this range site dominated by annual grasses or perennials?
4. Based on your observations, is this a healthy range site? (Healthy range sites provide a diverse mix of native grasses, forbs and shrubs and are the foundation for the habitat provided to domestic livestock, wildlife and wild horses and burros. Without proper management, the range may be damaged).

**III. As a wild horse or burro, you need to share your home. You also need to share the food, water, cover and space your home provides.**

1. Explore this range site. What evidence do you see of others who share your home?
2. Does your home provide limited or unlimited food, water, cover and space? Why?
3. The Bureau of Land Management (BLM) is responsible for allocating the available forage and water to all users. Making forage allocations is a complex task, involving intensive monitoring of range condition, grazing use, climate and other factors over several years. Let's take a closer look at how BLM allocates the available forage and water.
  - ☆ Draw a large circle on the ground. The circle represents the amount of vegetation BLM has determined is available for use as forage.
  - ☆ Now divide the circle in half. This portion (1/2) represents the amount of forage which is reserved to maintain plant health and promote healthy rangelands. Plants which are healthy store carbohydrates (food) in their root systems. Because of this food reserve, healthy plants can produce new growth (forage) in all but the most extreme drought conditions.



☆ Next, divide the remaining half of the circle into four equal pieces and label each piece as follows:

- › Recreation/Aesthetics = R
- › Domestic Livestock = L
- › Wildlife = W
- › Wild Horses and Burros = H

The number of wild horses and burros the land can support without damage to the range is the appropriate management level (AML).

**4. What is the AML of wild horses which the range can support in the following example?**

- › BLM has allocated 6,000 animal unit months (AUMs) of forage for use by wild horses in this herd management area (HMA).
- › One horse grazing for one month is equal to 1 AUM. (An AUM is the amount of forage needed to feed a cow or its equivalent for one month).
- › Horses depend on the forage provided year-round (for 12 months).

**i. How many AUMs are needed to support 1 horse for a year?**

1 horse x 1 AUM/month x 12 months = XX AUMs/Horse/Year.

XX = \_\_\_\_\_

**ii. How many horses can be supported with 5,000 AUMs of allocated forage?**

6,000 AUM's/ XX AUMs/Horse/Year (from item i above) =  
XXXX Number of Horses.

XXXX = \_\_\_\_\_ Number of Horses.



**IV. Conclude your Home on the Range Fact-Finding Adventure by discussing at least one of the following topics:**

1. What do you think Americans find appealing about the image of wild horses and burros roaming free in the West? (Group A)
2. Did Congress do the right thing by providing horses and burros with federal protection? If not, why not? (Group B)
3. Do you admire Wild Horse Annie and her efforts to protect and manage America's mustangs and burros? If not, why not? (Group C)

**You have concluded the Home on the Range Fact-Finding Adventure.**

**Return to Home Base.**

**Be prepared to share your group's findings with the other groups.**



## HMA Field Trip

**Section III. Wild Horse and Burro Round-Up...understand what wild horses and burros need to survive in the wild.**

### Instructions:

- ☆ Count off in fours. "Ones" report to one area; all "twos", "threes" and "fours" go to another area.
- ☆ "Ones" become WH&B. As a WH&B, choose which habitat component you are looking for at the beginning of each round (you may not change what you are looking for until the next round).
- ☆ "Twos", "threes" and "fours" become habitat components. Choose which you will be – food, water, or shelter (you may not change which habitat component you are until the next round).
- ☆ WH&B depict the habitat they are looking for as follows (habitat components use the same signs):
  - Food — place both hands over your stomach.
  - Water — place both hands over your mouth.
  - Shelter — place both hands over your head.
- WH&B and Habitat line up opposite each other with backs turned. At the count of three, turn to face each other, holding your sign clearly.
- When a WH&B sees the habitat they need, they run to it.
- When a WH&B finds the habitat component it needs, take the habitat back to the WH&B side of the line.
- When a WH&B doesn't find the habitat it needs, it will die.



**WILD HORSE AND BURRO (WH&B) ROUND-UP**

1. What do animals need to survive?
2. What are some of the “limiting activities” that affect survival?
3. Are WH&B population’s static (stable), or do they fluctuate over time?
4. What would happen if BLM didn’t conduct periodic gathers to remove excess WH&B?

**HMA FIELD TRIP – WRAP UP**

- ★ Check What You Know. Complete Exercise 6 (page 23) in the Girl’s Guide.



## National Adoption Center Facility Tour

**Section IV. Understand what adopting a wild horse or burro involves and the between these animals.**

1. At this facility, animals are prepared for \_\_\_\_\_ through BLM's Adopt A Horse Program.
2. What are some of the activities which take place when an animal is brought into the facility for preparation?
3. You can tell how old a horse is by checking his \_\_\_\_\_.
4. To adopt a wild horse, you must be \_\_\_\_\_ years old.
5. Name three other things you will also need in order to adopt a horse:
6. Your horse will eat its weight in hay every month. If your horse weighs 1,000 pounds, how many tons of hay will your horse eat each year? (Hint: a ton is 2,000 pounds).
7. If your horse is 14.0 hands in height, how tall is she? (Hint: A hand is 4 inches).
8. What are some of the differences between mustangs and burros? Complete Exercise 5 in the book (page 22).



**Notes:**



**Girl Scouts of the Sierra Nevada  
Wild Horses and Burros Patch Project**

**Girl's Guide**

**America's Mustangs and Burros**

*Legends in Endurance*

**BUREAU OF LAND MANAGEMENT  
GIRL SCOUTS OF THE SIERRA NEVADA**