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Service

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# Devil's Garden Plateau Wild Horse Territory Management Plan



**Devil's Garden and Doublehead Ranger Districts,  
Modoc National Forest  
Modoc County, California**

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**DEVILS GARDEN PLATEAU WILD HORSE TERRITORY PLAN**

**MODOC NATIONAL FOREST**

**August, 2013**

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## **INTRODUCTION**

Management of wild horses in the Devil's Garden Plateau Wild Horse Territory (WHT) is governed by the Wild Free-Roaming Wild Horses and Burros Act of 1971 (Public Law 92-195), as amended, 36 Code of Federal Regulations (CFR) 222 Subpart D (Management of wild Free-Roaming Horses and Burros), Forest Service Manual 2200 (Range Management) and Chapter 2260 (Wild Free-Roaming Horses and Burros,) and the 1991 Modoc National Forest Land and Resource Management Plan (as amended).

The Devil's Garden Wild Horse Territory Management Plan serves to document the goals, objectives, management actions, and monitoring requirements as they relate to wild horses management in the Devil's Garden Plateau Wild Horse Territory.

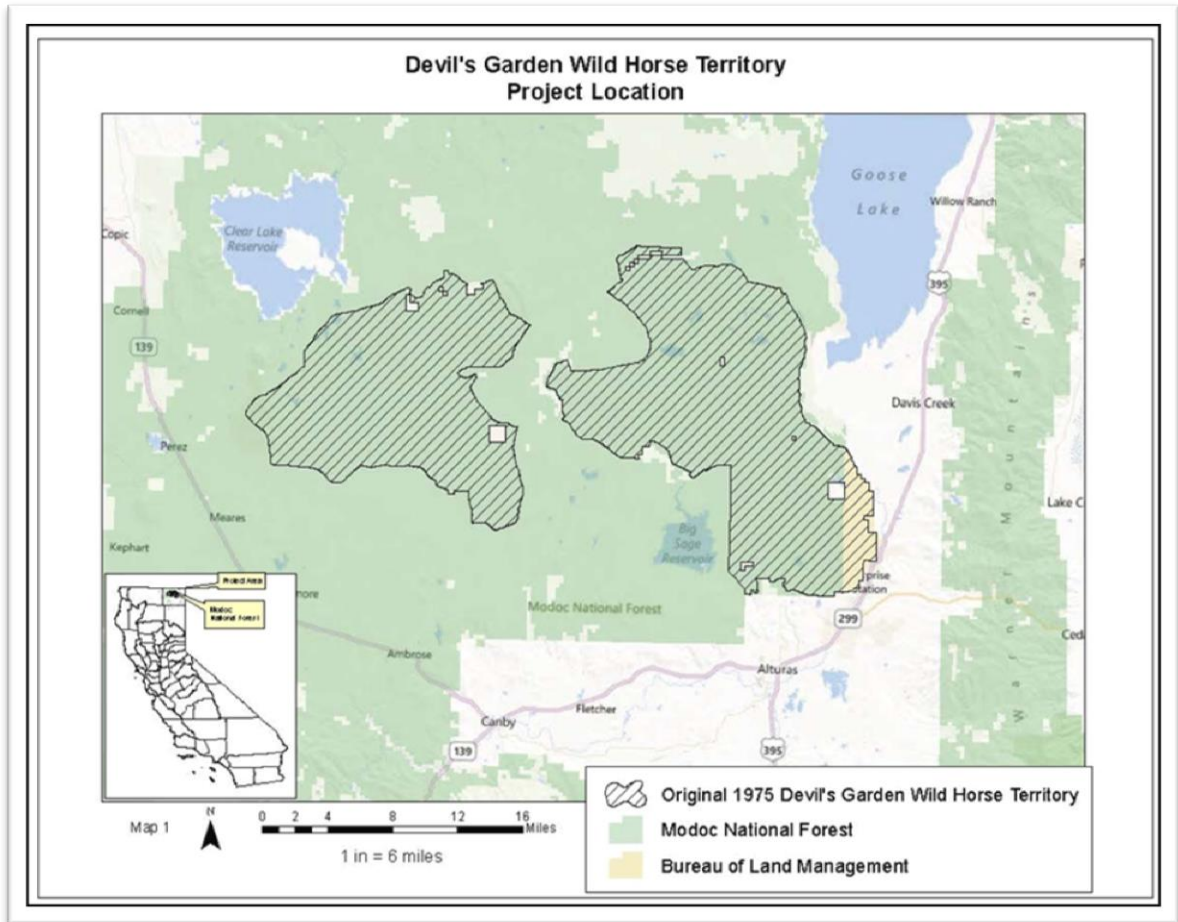
This plan will guide management of the Devil's Garden Plateau Wild Horse Territory for the next 15-20 years. The plan may be amended or revised as necessary to reflect changed conditions. Any such changes will be made after supplemental NEPA Analysis.

## **LOCATION**

The Devil's Garden Plateau WHT is located beginning approximately 7 miles north of the City of Alturas, CA. See Map 1- Location. The Territory is made up of approximately 232,520 acres of federal land, including 224,888 acres of National Forest System Lands administered by the Modoc National Forest. An additional 7,632 acres of public lands administered by the Bureau of Land Management's Alturas Field Office (BLM) is included in the territory. Approximately 800 acres of Tribal Lands, 640 acres of California State Lands and 500 acres of private lands fall within the territorial boundaries; however, these lands are excluded from the territory.

As shown on Map 1, the Territory is made up of East and West Home Ranges. The boundary is the same as that established in the initial Devil's Garden Wild Horse Management Plan, approved in 1975.

## MAP 1- Location



## HISTORY

Feral Horses originating from domestic stock have been in the Devils Garden area since shortly after the first settlement. As early as 1889, organized roundups captured and disposed of many of the poorest class of stray and unbranded horses. In the early to mid-1920's, nearly 1,200 unclaimed or unbranded horses were gathered from the Devil's Garden area and sold. By 1943, it is estimated 300 horses remained on the Devil's Garden Ranger District.

In 1946, another 287 horses were removed. In 1951, 70 head were removed, nearly eliminating the animals in entirety from the Devil's Garden Plateau.

In 1971, the Wild Free-Roaming Horses and Burros Act was signed into law. This Act, as amended, provides for the protection, management and control of wild free-roaming horses and burros on public lands. The Secretaries of Interior for the Bureau of Land Management and Agriculture for the Forest Service are charged with their management. The Act defines wild

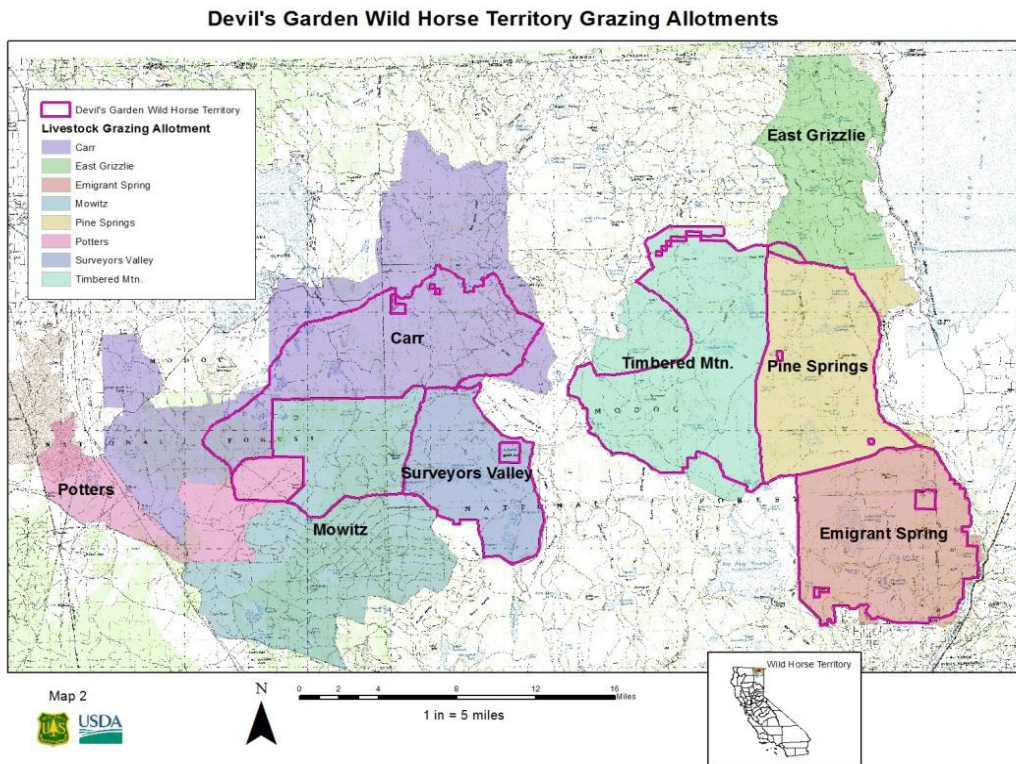
free-roaming horses and burros as “all unbranded horses and burros on public lands of the United States”. The Act directs the Secretaries to protect and manage these horses and burros as integral components of the public lands.

In 1975, the first Devil’s Garden Plateau Wild Horse Management Plan was approved. This plan called for the management of 300 wild horses. The plan was updated in 1980 and 1982. Each plan and the associated Memorandums of Understanding serve to document the cooperation and working relationship between the Modoc National Forest (MDF) and the BLM. Generally, the BLM has been responsible for the operational work of gathering, holding and disposition of captured animals. The MDF has been responsible for planning, environmental analysis, monitoring and financing, and supplying the equipment and manpower necessary to assist in these efforts.

In 1991, the Modoc National Forest Land and Resource Management Plan (Forest Plan) was approved. This document established an Appropriate Management Level (AML) as a population range of 275-335 wild horses, and allocated 4,400 AUMs of forage for their use.

The WHT encompasses portions of eight allotments used for domestic livestock grazing (See Map 2).

### Map 2- Livestock Grazing Allotments





Since Forest Plan approval in 1991, wild horses have been gathered periodically in an attempt to manage population size within the Appropriate Management Level, and in balance with available forage and water, and other uses occurring within the area.

In April, 2013, an updated Memorandum of Understanding (MOU) between the BLM and Modoc National Forest was approved. This MOU clearly defines the roles and responsibilities of each agency in relation to the management of wild Horses on the Devil's Garden Plateau WHT. This document designates the Modoc National Forest as the lead agency for administration of the wild horse program in the territory, including BLM public lands therein. For the purposes of the MOU, administration includes the determination, validation and adjustment of appropriate management levels and development of the Devil's Garden Plateau Wild Horse Territory Management Plan (TMP). The BLM's responsibility is to provide MDF with population, resource and inventory data as it is collected from the public lands, to assist MDF in carrying out their role as lead agency.

From an aerial census conducted in February of 2013, it was found that current population of wild horses (Feb., 2013) was 1,260 adult animals. Of these, 256 (20%) were found outside the designated WHT boundary.

## **DESIRED FUTURE CONDITION**

### **Habitat**

Habitat for wild horses is composed of four essential components- Vegetation, water, cover and space. The objectives for each habitat component are discussed below.

#### *Vegetation/Forage*

Vegetative Objectives are as follows:

1. Manage rangeland within the Territory in order to improve overall ecological conditions to satisfactory by 2025. Monitoring: Range condition and trend every 5 years.
2. For upland range sites, limit utilization of key forage species to 50% by wild horses and livestock on range sites in satisfactory condition. Limit utilization on ranges in unsatisfactory condition to 30%. Monitoring: Landscape appearance method of utilization. Utilization on key areas to be conducted each spring before livestock turnout, and each fall after livestock are removed.
3. Manage riparian areas (springs, seeps, meadow areas) to satisfactory ecological conditions by 2020. Monitoring: Riparian Functional Assessment every 5 years.
4. Limit use on riparian areas so stubble heights and bank alteration Forest Plan standards are met. (6" stubble heights, <20% bank alteration). Monitoring: Protocols for stubble height measurement, stream bank alteration at end of livestock use period.

## Water

Objectives are as follows:

1. Maintain existing water improvement projects (annually, or as needed)
2. Develop new water sources (reservoirs) in areas of WHT that do not have adequate year-long water sources (i.e. Timbered Mountain, Mowitz).

Monitoring: Range improvement inspection (annually)

## Cover

1. Insure that adequate tree cover remains in the major use areas to provide wild horses with shelter during periods of extreme inclement weather.

Monitoring: All proposed vegetation projects will be reviewed by District wild horse specialist to insure adequate cover for wild horses is considered.

## Living Space

1. Maintain current living space to facilitate free-roaming behavior. No additional pasture fences will be constructed within the Territory boundary. Gates will continue to be left open as livestock are removed from allotments in the fall and will remain open throughout the winter season to facilitate the movement of animals between seasonal ranges. Where animal concentrations are found along existing fence lines fences will be lined with snow fence and gates will be widened or added to facilitate movement between areas.

Monitoring: Range inspections to determine concentration of animals.

## Population

### Demographics

In January, 2013 the *Evaluation of Monitoring Data for the Purpose of Determining an Appropriate Management Level* for the Devil's Garden Wild Horse Territory was completed by the Modoc National Forest. The evaluation was conducted using all available data including climatic, upland and riparian habitat conditions, utilization, and stream bank alteration.

From the evaluation of data, it was determined that the upper limit of AML the territory could support on a year-long basis is 402 head of adult wild horses or 5,789 AUMs<sup>1</sup>. From the upper AML limit, it was determined a lower limit of 206 wild horses should be established to provide the population range necessary so AML maintenance gathers would be necessary only every 4-5 years.

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<sup>1</sup> As per Forest Service Policy, one adult horse for a month is 1.2 AUMs. 1 horse for 12 months is equal to 14.4 AUMS.

Objectives are as follow:

1. Wild horses shall initially be managed at the populations shown in Table 1, below.

**Table 1: Appropriate Management Level**

Allotment	Acres Within the WHT	AML Lower Limit (Number Horses)	AML Upper Limit (Number Horses)
<b>West Portion</b>			
Carr	44,180	32	78
Surveyors Valley	25,754	23	55
Mowitz	22,516	30	30*
Potters	4,812	20	20*
<b>Total for the West Portion</b>	<b>97,262</b>	<b>105</b>	<b>183</b>
<b>East Portion</b>			
Pine Springs	40,278	29	72
Emigrant Springs (includes affected BLM land)	43,793	24	61
Timbered Mountain	50,475	48	86
East Grizzlie	712	0	0
<b>Total for the East Portion</b>	<b>135,258</b>	<b>101</b>	<b>219</b>
<b>Total for the WHT</b>	<b>232,520</b>	<b>206</b>	<b>402</b>

\*These AMLs are taken from the 1991 Forest Plan.

Monitoring: Aerial census using approved science-based protocols to be conducted at least every 3 years.

2. Manage for an overall age distribution as is normally found in a herd over time by managing the turnout/ removal of animals. Animals turned out will generally be in the 6-10+ age group, which is under-represented. The objective for age distribution will be as follows:

- 10-25% Young Age Class (Ages 0-5)
- 50-80% Middle Age Class (Ages 6-15)
- 10-25% Old Age Class (Age 16+)

Monitoring: During gathers/census record ages of animals to measure progress in meeting age structure objectives.

3. Wild Horses will be managed to achieve a 50:50 ratio between males and females by returning more males than females.

Monitoring: During gather operations, record sexes of animals to measure progress in meeting sex distribution objective.

## *Phenotype*

Maintain the phenotype of animals that currently occur within the WHT. Generally, animals in the East Home Range are heavier boned, draft type animals with feathered legs. In the West Home Range, animals generally resemble the lighter saddle horse type breeds. Subsequent to gathers, animals that are turned back out into the WHT will possess the general characteristics found in each Home Range. Color will not be a consideration when turning out animals. Turnouts will generally be animals 6 to 10+years old, for which little adoption demand exists.

Monitoring: Maintain photographic records of animals during gathers and field work.

## *Distribution*

Facilitate a more even distribution of wild horses over the WHT. This will be accomplished through new water development, fence modification (i.e. widened gates), and turnout of animals.

Monitoring: Approximate numbers of animals and locations will be recorded during site inspections. Annual utilization monitoring will be used to determine if distribution has improved.

## *Genetic Diversity*

Maintain an Observed Heterozygosity ( $H_o$ ) of at least 0.66, as determined through the analysis of hair samples.

Monitoring: During the initial removal(s) to achieve AML, hair samples will be collected from a portion of those animals gathered for to provide a baseline for genetic diversity. Sampling will be conducted at least every other gather thereafter (e.g., every 8-10 years) to reassess genetic diversity.

## *Body Condition*

Manage population so a Henneke Condition score of at least 3 is maintained on a year-long basis.

Monitoring: Observe and document body condition during field inspections during the different seasons of the year.

## **EXISTING CONDITIONS**

### **Habitat**

The territory has been evaluated for habitat suitability. Table 2 summarizes the suitability of each area within the territory for long term maintenance of wild horses.

**Table 2: Current Habitat Suitability**

Area	Habitat Component			
	Forage	Water	Cover	Space
<b>West Portion</b>				
Carr	S*	S	S	S
Surveyors	S	S	S	S
Mowitz	S	U	S	S
Potters	S	S	S	U
<b>East Portion</b>				
Pine Springs	S	S	S	S
Emigrant Spring	S	S	S	S
Timbered Mountain	S	S/U	S	S
East Grizzlie	S	S	S	U

\*S (Suitable), U (Unsuitable)

The territory has been determined to be suitable for year-long use for wild horses except as follows:

- The Mowitz portion of the Territory does not have adequate late season water to sustain a population of wild horses.
- The Potters Allotment portion of the Territory contains only 4,812 acres and may not have adequate space for a year-long producing population of wild horses.
- The Cowhead Pasture of the Timbered Mountain Allotment does not have adequate late season water to maintain a year-long population of wild horses.
- The East Grizzlie portion of the Territory contains only 712 acres and therefore does not have an adequate space habitat component to maintain a breeding population of wild horses.

### *Vegetation/Forage*

The condition of upland range sites vary throughout the Territory. In the Pine Springs and Emigrant Spring area, to the east, there are large areas that appear to be in unsatisfactory ecological conditions, with large areas of invasive annuals including cheatgrass and medusahead. Upland habitats over the WHT include many range sites where key species are rare or missing. Upland sites have large areas that receive utilization in excess of Forest Plan standards. Riparian habitats appear to be in unsatisfactory condition and receive use in excess of Forest Plan standards.

### *Water*

There is adequate year-long water over the majority of the WHT to maintain populations of wild horses. Exceptions to this include the Mowitz portion of the WHT and the Cowhead Pasture of the Timbered Mountain Allotment.

## Cover

Although the terrain in the WHT is relatively flat, there are numerous draws where animals can take shelter during inclement weather. The majority of the Territory has western Juniper cover at varying densities that also provides shelter.

## Living Space

From the large degree of emigration occurring outside the Territory at the current time, it appears there is not adequate living space for the current population of animals. Of the 1,260 wild horses surveyed in February, 2013, approximately 20% were found to be outside the Territory.

## Population

### Demographics

An AML range of 275-335 wild horses (4,400 AUMs) was established in the 1991 Modoc National Forest Land and Resource Management Plan. This AML range was determined based on the population that occurred on the territory at the time of plan approval.

Based on gather information, the Devil's Garden herd is made up of animals in the younger age class. Approximately 70% of the animals are in the 0-5 age classes, with very few middle aged and older animals (See Table 3).

From data collected during past gathering operations, it appears the current population is weighted towards females (57%) while males make up about 43% of the total population (Table 3). This is especially apparent in those animals that are in age classes 2-8.

**Table 3: Current Sex and Age Distribution**

AGE	NO. FEMALES	NO. MALES	TOTAL NO. OF ANIMALS	PERCENTAGE OF ANIMALS IN EACH AGE GROUP
0	130	120	250	25%
1	93	79	172	17%
2	90	63	153	15%
3	58	25	83	8%
4	38	24	62	6%
5	42	17	59	6%
6-8	68	33	101	10%
9-12	32	49	81	8%
12+	22	29	51	5%
Totals / Percentage	573 (57%)	439 (43%)	1,012	100%

## *Phenotype*

Generally, the animals on the east side of the Territory tend to display draft type characteristics. Many individuals are heavily boned, with feathering occurring on the legs. In the western portion of the Territory, animals more resemble lighter saddle horse types of animals. In the past, animals that were turned out subsequent to gathers were selected based on age only with little regard to phenotype.

## *Distribution*

In several areas within the Territory, animals are very poorly distributed. An example is on the Timbered Mountain Allotment, where the west side of the Black Rock Pasture contains heavy concentrations of animals, while the other pastures show very little use. Poor distribution appears to be a result of lack of available water, with some areas receiving the bulk of use and others no use.

## *Genetic Diversity*

There have been no studies conducted to determine the genetic health of animals in the area. There is not, however, any indication that genetic diversity is a concern.

## **POPULATION CONTROL**

### Primary Methods of Population Control

Population control shall be conducted utilizing a combination of gathering, fertility control, and adjusting the sex ratio of the herd to about 50/50 males/females that normally occurs in a herd over time. Each method and the instances in which it will be employed are described below.

### **Helicopter Gathering**

Helicopter assisted gather operations will initially be the primary method of gathering. This method will be employed to achieve Appropriate Management Levels and as necessary to maintain the population within AML. Helicopter gathering will also be used to gather animals that have established home ranges outside the designated territory boundary.

Helicopter gathering is conducted by utilizing a helicopter to herd animals into a trap constructed of portable pipe panels. A set of wings is constructed from jute, a burlap type material, strung on metal t-posts. The wings are constructed to form a “funnel” and facilitate the movement of animals into the trap.

One or more individuals on horseback may be on hand to drive the animals into the trap once they are within the wings. Additionally, “decoy” horses may be used to more efficiently capture the animals.

All helicopter gathering operations will be under the direct supervision of a duly authorized officer, and in accordance with the Standard Operation Procedures (SOPs) developed for helicopter gathering (Appendix A).

### **Bait/Water Trapping**

Bait/Water Trapping will be used as a secondary method to reduce the populations of wild horses to achieve or maintain AML. All Bait/Water trapping operations will be conducted in accordance with the SOPs for this type of operation (Appendix A).

This method will be employed in conjunction with helicopter assisted gathering. Traps constructed of portable pipe panels are constructed near animal concentrations and animals lured into the traps through the use of feed or water. Various types of trigger assemblies exist to close the gate on animals that enter the trap, including the use of ropes strung across the trap just above ground level. The animals unintentionally trigger the trap when their legs come into contact with the rope.

This bait/water trapping method is best suited for those cases where animal concentrations and good access exist. It is also useful in those areas where dense tree cover makes helicopter gathering unfeasible. At the current time, there are only a few known sites where the combination of heavy animal concentration and good access occurs. Therefore, this method of trapping has limited capability for capturing larger numbers of animals. Maintenance and reconstruction of roads (Lauer Reservoir Road) into areas with animal concentrations could increase the feasibility of expanding this method of gathering in the future.

### **Fertility Control**

Fertility control will be used to slow the rate of population growth over the territory. It is anticipated that AML will be achieved in 2016. As soon as AML is achieved, fertility control will be initiated. As each maintenance gather (every 4-5 year intervals) is conducted, the Forest Service will attempt to gather at least 40% of the total herd. This will allow the treatment and release of mares back into the population to help slow population growth. Of those animals to be released, 100% of all females 1 year and older will be treated with fertility control. The 1-year or 22-month formulation of Porcine Zona Pellucida (PZP) will be used. As it is expected that most gathers will occur during the summer or fall period, the effectiveness of the fertility treatments will be less than optimum.

All fertility treatments will be conducted in accordance with the Standard Operating Procedures for Wild Horse Population-Level Fertility Control Treatments (Appendix B). BLM in NE California currently has two individuals certified to administer fertility control.

### **Sex Ratio Adjustment**

Based on previous gather data, the current sex ratio within the herd is 43% male and 57% female as shown on Table 3, above. The herd will be managed to attain a more normal 50:50 sex ratio. This would be done by managing the animals that are turned out after gather



operations, i.e. releasing more males than females. By reducing the proportional amount of mares in the WHT, a reduction in population growth rate will be expected.

## **IMPROVEMENT PROJECTS**

Improvement projects will consist of the following:

- Water Development - In areas within the Territory where water appears to be a limiting factor for yearlong use by wild horses, the possibility of developing season-long water sources will be considered. Priority will be in the Cow Head Pasture of the Timbered Mountain Allotment and the Mowitz area. New water developments will be initiated within 3 years of approval for this plan.
- Fence Modification - During the first 2 years of implementation of this plan, pasture and allotment boundary fences will be inspected for animal concentrations/sign. Where feasible, gates will be widened or constructed to allow improved distribution of animals throughout the Territory and facilitate seasonal movements. Snow fencing will be placed on fencing where signs of horse concentrations are obvious.

## **MONITORING**

### **Habitat**

#### *Trend*

Condition and Trend studies, at key areas and using Forest Service and BLM protocols, will be measured on a 5 year cycle, beginning in 2016.

#### *Climate*

Climatic data will be recorded for each month using data from the NOAA website. This data will be supplemented with information from RAWs sites, scattered across the Forest.

#### *Water*

During WHT/Allotment inspections, water availability will be monitored and documented throughout the year, especially in late summer when water can become a limiting factor.

#### *Utilization (Pre/Post livestock)*

Utilization will be measured at key areas on an annual basis at the end of the livestock use period, using the Landscape Appearance method of utilization. Additionally, utilization mapping will occur on preferred winter ranges (i.e. Pine Springs, Emigrant, Carr) in late fall (end of livestock use period) and early spring (prior to livestock turnout).

## Animal

Population Inventory Aerial inventory will occur at intervals not to exceed every 3 years. Aerial inventory will be conducted utilizing statistically valid and science based protocols.

### *Distribution/Seasonal Use Areas*

Distribution of animals will be documented throughout the year. This will be done during regular allotment inspections and census activities.

### *Body Condition*

Body condition of animals will be documented during the course of allotment inspections and census activities.

### *Reproduction/Foaling Period*

During regular WHT/Allotment inspections, the number of young per adults in each band will be documented. A photographic record will be maintained of individual bands.

### *Mortality*

Observed mortality will be documented during the course of regular WHT/Allotment inspections.

## MONITORING PLAN

Monitoring Item	How	Who	When	Actions to Take (Adaptive Management)
<b>Population Management Monitoring</b>				
Manage wild horse populations within the established AML range (206-402 adults) to protect the range from deterioration associated with overpopulation.	Census populations through aerial flights following established protocols. Direct count method or other approved protocol pending census research results and recommendations.	Devil's Garden R.D. Range Specialist	Census Devil's Garden WHT a minimum of every three years i.e. 2013, 2016, 2019.	Schedule gathers to remove excess wild horses when the total population exceeds the AML, or when animals are found to be permanently residing outside the DGWHT core area (i.e. more than seasonal drift), or when animal health/condition is at risk.

Monitoring Item	How	Who	When	Actions to Take (Adaptive Management)
Assure all age classes are represented post gather.	Record ages of animals released post-gather.	Devil's Garden R.D. Range Specialist	Every gather.	Adjust age class distribution during each gather to result in an even age distribution.
Maintain genetic diversity (avoid inbreeding depression).	Hair samples would be collected during at every other regularly scheduled gather, (8-10 years), to determine whether USFS's management is maintaining acceptable genetic diversity (avoiding inbreeding depression).	Devil's Garden R.D. Range Specialist	Every other regularly scheduled gather.	If genetic sampling indicates there is greater than 10% loss in genetic diversity, introduce two mares from opposite home range areas every other gather (about 10 years) Released animals will be phenotypically similar to those occurring in the home range.
Manage wild horses to achieve an average Henneke body condition class score of 3+.	Visually observe wild horse body condition (Henneke condition class method).  Record average body condition during periodic gather operations.	Devil's Garden R.D. Range Specialist	Annually, as part of regular field monitoring.  Every gather.	If body condition falls below condition class 3 during extended periods (greater than 6 months) re-evaluate AML to determine if an adjustment is needed.
Apply fertility control to all mares (1 year and older) released back to the range following future gathers.	Conduct post-fertility control monitoring in accordance with established procedures.	Devil's Garden R.D. Range Specialist	Year 2-4 following each gather.	If population growth rate is not reduced by at least 5% through fertility control alone, consider other methods to reduce growth rate (i.e. sex ratio skewing to favor males), pending supplemental environmental analysis.
<b>Habitat Management Monitoring</b>				
Assess rangeland conditions by 2016.  Limit utilization by all	Locate key monitoring areas within the WHT. Range conditions on FS lands to be assessed according to FS	Devil's Garden R.D. & BLM	2016	Establish additional site-specific resource management objectives for key

Monitoring Item	How	Who	When	Actions to Take (Adaptive Management)
herbivores to 50% of the current year's production for key grasses and 45% for key shrubs .	<p>protocols.</p> <p>For BLM lands, assess rangeland health using procedures outlined in Technical Reference 1734-6.</p> <p>Establish baseline trend studies using the frequency sampling procedures as outline in the Nevada Rangeland Monitoring Handbook.</p> <p>Measure utilization at key areas/use pattern mapping annually.</p>	Range Specialist and R.D. & BLM Interdisciplinary teams		<p>areas, as needed.</p> <p>Based on the above, re-adjust AML or identify additional management actions to address/resolved identified rangeland health issues, as needed/appropriate.</p>
Improve riparian condition at of the various spring areas within the WHT that are being impacted by heavy to severe use.	<p>Re-evaluate riparian functionality every five years using the Proper Functioning Condition (PFC) method on springs within the WHT.</p> <p>Assess stubble heights and bank alteration.</p>	Inter-disciplin. teams	<p>Every five years, starting the first year AML is achieved (est. 2016).</p> <p>Annually.</p>	Consider adding additional water storage or riparian pastures to protect riparian habitat, if riparian habitats do not show significant improvement after achieving and maintaining AML for a two year period.
<p>Decrease over- winter utilization by wild horses to moderate use when AML is achieved.</p> <p>Ensure there is adequate available water to maintain wild horses on a year –long basis</p>	<p>Measure utilization at key areas/use pattern mapping.</p> <p>Monitor water sources to assure adequate water availability during the year.</p>	Devil's Garden R.D./ BLM Range Specialist	<p>Annually, in late fall when livestock are removed and again in spring prior to livestock turnout.</p> <p>Continuously through the summer months.</p>	<p>Adjust AML, as needed, pending evaluation of monitoring results (after 2020).</p> <p>Adjust AML, early livestock removal.</p>
Monitor/assess annual maintenance needs.	Site visits at water sources.	Devil's Garden R.D./ BLM Range	As needed, throughout the year.	<p>Schedule and complete any necessary maintenance work.</p> <p>Document</p>

Monitoring Item	How	Who	When	Actions to Take (Adaptive Management)
		Specialist		maintenance activities.

## TRACKING LOG/PROJECT IMPLEMENTATION SCHEDULE

Description	Who	Where	When	Completed	Remarks
<b>Population Management Actions</b>					
<p>Schedule removals to attain AML by 2016.</p> <p>Schedule maintenance gathers to remove excess wild horses when the total wild horse population exceeds the AML for the WHT (about every 4-5 years, as needed).</p>	USFS	Devil's Garden Plateau WHT	<p>Annual gathers until AML is achieved, then every 4-5 years thereafter.</p> <p>Summer-Fall</p>		
Assure all age classes are represented post-gather.	USFS	Devil's Garden Plateau WHT	<p>About every 4-5 years, during AML maintenance gathers 2020, 2024 etc.</p> <p>Summer-Fall</p>		
Prioritize removal of horses with deformities from the herd.	USFS	Devil's Garden Plateau WHT	<p>During initial gathers to AML and about every 4-5 years, thereafter, 2020, 2024 etc.</p> <p>Summer-Fall</p>		
Prioritize conformation (similar phenotypes) over color when releasing animals back to the range.	USFS	Devil's Garden Plateau WHT	<p>During initial gathers to AML and about every 4-5 years,</p>		

Description	Who	Where	When	Completed	Remarks
			thereafter, 2020, 2024 etc.  Summer- Fall		
Collect hair and/or blood samples to determine whether the USFS's management is maintaining acceptable genetic diversity (avoiding inbreeding depression).	USFS	Temporary holding facility and/or short term holding facility.	Initial gathers to AML, then every 8-10 years thereafter.		
Selectively release animals post-gather slightly in favor of males until the ratio is 50:50 males/females.	USFS	Temporary holding facility.	Each gather after AML is achieved.		
After attaining AML, apply fertility control to mares released back to the range every regularly scheduled gather, and monitor results in years 2-4 following treatment.	USFS	Temporary holding facility.	Each gather after achieving AML, 2016, 2020, etc.		

Habitat Management Actions					
Description	Who	Where	When	Completed	Remarks
Construct new water developments to improve distribution of wild horses over the WHT.	USFS	Cow Head Pasture, Mowitz, etc.	Determine need and feasibility by 2015, construct by 2018, or as funding allows.		
Maintain existing water developments.	Grazing Permittees/ USFS	Territory-wide	Annually/ as needed		

## TERRITORY PLANNING MONITORING AND EVALUATION

Proven mitigation and monitoring are incorporated through standard operating procedures (SOPs) that have been developed over time. These SOPs represent the "best methods" for reducing impacts associated with gathering, handling, transportation, herd data collection, and application and monitoring of fertility control. The DGPWHT will be monitored annually as outlined in the Monitoring Plan. Management may be adjusted when monitoring data and other information indicates a need. In addition to monitoring, long-term evaluations will be completed at roughly ten-year intervals, or as needed, based on the results of annual evaluations. Monitoring objectives are outlined in the Monitoring Plan. Monitoring is designed to answer two primary questions:

***"Did we do what we said we were going to do?"***  
***"Was what we did effective in meeting/moving toward our objectives?"***

The objective for the long-term evaluation is to determine:

***"Are our objective(s) still current...or do they need to be modified?"***  
***"Is our management on track...or do we need to make some changes?"***

Significant changes needed as a result of annual or long-term evaluations may require appropriate NEPA analysis and documentation prior to implementation.

## Appendix A: Standard Operating Procedures for Wild Horse Gatherers

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Gathers are conducted by utilizing USFS and/ or BLM personnel or contractors. The following procedures for gathering and handling wild horses apply whether a contractor or BLM personnel conduct a gather.

For helicopter gathers conducted by BLM personnel, gather operations will be conducted in conformance with the *Wild Horse Aviation Management Handbook* (January 2009).

Prior to any gathering operation, the lead agency for the gather will provide for a pre-capture evaluation of existing conditions in the gather area(s). The evaluation will include animal conditions, prevailing temperatures, drought conditions, soil conditions, road conditions, and a topographic map with wilderness boundaries, the location of fences, other physical barriers, and acceptable trap locations in relation to animal distribution. The evaluation will determine whether the proposed activities will necessitate the presence of a veterinarian during operations. If it is determined that a large number of animals may need to be euthanized or capture operations could be facilitated by a veterinarian, these services would be arranged before the capture would proceed. The contractor will be apprised of all conditions and will be given instructions regarding the capture and handling of animals to ensure their health and welfare is protected.

Trap sites and temporary holding sites will be located to reduce the likelihood of injury and stress to the animals, and to minimize potential damage to the natural resources of the area. These sites would be located on or near existing roads whenever possible. The primary capture methods used in the performance of gather operations include:

1. Helicopter Drive Trapping. This capture method involves utilizing a helicopter to herd wild horses into a temporary trap.
2. Helicopter Assisted Roping. This capture method involves utilizing a helicopter to herd wild horses to ropers.
3. Bait or Water Trapping. This capture method involves utilizing bait (e.g., water or feed) to lure wild horses into a temporary trap.

The following procedures and stipulations will be followed to ensure the welfare, safety and humane treatment of wild horses in accordance with the provisions of 43 CFR 4700.

### A. Capture Methods used in the Performance of Gather Contract Operations

1. The primary concern of the contractor is the safe and humane handling of all animals captured. All capture attempts shall incorporate the following:
  - a. All trap and holding facilities locations must be approved by the Contracting Officer's Representative (COR) and/or the Project Inspector (PI) prior to construction. The Contractor may also be required to change or move trap locations as determined by the COR/PI. All traps and holding facilities not located on public land must have prior written approval of the landowner.
2. The rate of movement and distance the animals travel shall not exceed limitations set by the COR/PI who will consider terrain, physical barriers, weather, condition of the animals and other factors. Under normal circumstances this travel should not exceed 10 miles and may be much



less dependent on existing conditions (i.e. ground conditions, animal health, extreme temperatures (high and low)).

3. All traps, wings, and holding facilities shall be constructed, maintained and operated to handle the animals in a safe and humane manner and be in accordance with the following:
  - a. Traps and holding facilities shall be constructed of portable panels, the top of which shall not be less than 72 inches high for horses, and the bottom rail of which shall not be more than 12 inches from ground level. All traps and holding facilities shall be oval or round in design.
  - b. All loading chute sides shall be a minimum of 6 feet high and shall be fully covered, plywood, metal without holes larger than 2"x4".
  - c. All runways shall be a minimum of 30 feet long and a minimum of 6 feet high for horses, and shall be covered with plywood, burlap, plastic snow fence or like material a minimum of 1 foot to 6 feet for horses. The location of the government furnished portable fly chute to restrain, age, or provide additional care for the animals shall be placed in the runway in a manner as instructed by or in concurrence with the COR/PI.
  - d. All crowding pens including the gates leading to the runways shall be covered with a material which prevents the animals from seeing out (plywood, burlap, plastic snow fence, etc.) and shall be covered a minimum of 2 feet to 6 feet for horses
  - e. All pens and runways used for the movement and handling of animals shall be connected with hinged self-locking or sliding gates.
4. No modification of existing fences will be made without authorization from the COR/PI. The Contractor shall be responsible for restoration of any fence modification which he has made.
5. When dust conditions occur within or adjacent to the trap or holding facility, the Contractor shall be required to wet down the ground with water.
6. Alternate pens, within the holding facility shall be furnished by the Contractor to separate mares or jennies with small foals, sick and injured animals, strays or other animals the COR determines need to be housed in a separate pen from the other animals. Animals shall be sorted as to age, number, size, temperament, sex, and condition when in the holding facility so as to minimize, to the extent possible, injury due to fighting and trampling. Under normal conditions, the government will require that animals be restrained for the purpose of determining an animal's age, sex, or other necessary procedures. In these instances, a portable restraining chute may be necessary and will be provided by the government. Alternate pens shall be furnished by the Contractor to hold animals if the specific gathering requires that animals be released back into the capture area(s). In areas requiring one or more satellite traps, and where a centralized holding facility is utilized, the contractor may be required to provide additional holding pens to segregate animals transported from remote locations so they may be returned to their traditional ranges. Either segregation or temporary marking and later segregation will be at the discretion of the COR.
7. The Contractor shall provide animals held in the traps and/or holding facilities with a continuous supply of fresh clean water at a minimum rate of 10 gallons per animal per day. Animals held for 10 hours or more in the traps or holding facilities shall be provided good quality hay at the rate of not less than two pounds of hay per 100 pounds of estimated body weight per day. The contractor will supply certified weed free hay if required by State, County, and Federal regulation.
8. An animal that is held at a temporary holding facility through the night is defined as a horse feed day. An animal that is held for only a portion of a day and is shipped or released does not constitute a feed day.

9. It is the responsibility of the Contractor to provide security to prevent loss, injury or death of captured animals until delivery to final destination.
10. The Contractor shall restrain sick or injured animals if treatment is necessary. The COR/PI will determine if animals must be euthanized and provide for the destruction of such animals. The Contractor may be required to humanely euthanize animals in the field and to dispose of the carcasses as directed by the COR/PI.
11. Animals shall be transported to their final destination from temporary holding facilities as quickly as possible after capture unless prior approval is granted by the COR for unusual circumstances. Animals to be released back into the HMA or territory following gather operations may be held up to 21 days or as directed by the COR. Animals shall not be held in traps and/or temporary holding facilities on days when there is no work being conducted except as specified by the COR. The Contractor shall schedule shipments of animals to arrive at final destination between 7:00 a.m. and 4:00 p.m. No shipments shall be scheduled to arrive at final destination on Sunday and Federal holidays, unless prior approval has been obtained by the COR. Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours in any 24 hour period. Animals that are to be released back into the capture area may need to be transported back to the original trap site. This determination will be at the discretion of the COR/PI or Field Office horse specialist.

## **B. Capture Methods That May Be Used in the Performance of a Gather**

1. Capture attempts may be accomplished by utilizing bait (feed, water, mineral licks) to lure animals into a temporary trap. If this capture method is selected, the following applies:
  - a. Finger gates shall not be constructed of materials such as "T" posts, sharpened willows, etc., that may be injurious to animals.
  - b. All trigger and/or trip gate devices must be approved by the COR/PI prior to capture of animals.
  - c. Traps shall be checked a minimum of once every 10 hours.
2. Capture attempts may be accomplished by utilizing a helicopter to drive animals into a temporary trap. If the contractor selects this method the following applies:
  - a. A minimum of two saddle-horses shall be immediately available at the trap site to accomplish roping if necessary. Roping shall be done as determined by the COR/PI. Under no circumstances shall animals be tied down for more than one half hour.
  - b. The contractor shall assure that foals shall not be left behind, and orphaned.
3. Capture attempts may be accomplished by utilizing a helicopter to drive animals to ropers. If the contractor, with the approval of the COR/PI, selects this method the following applies:
  - a. Under no circumstances shall animals be tied down for more than one hour.
  - b. The contractor shall assure that foals shall not be left behind, or orphaned.
  - c. The rate of movement and distance the animals travel shall not exceed limitations set by the COR/PI who will consider terrain, physical barriers, weather, condition of the animals and other factors.

## C. Use of Motorized Equipment

1. All motorized equipment employed in the transportation of captured animals shall be in compliance with appropriate State and Federal laws and regulations applicable to the humane transportation of animals. The Contractor shall provide the COR/PI, if requested, with a current safety inspection (less than one year old) for all motorized equipment and tractor-trailers used to transport animals to final destination.
2. All motorized equipment, tractor-trailers, and stock trailers shall be in good repair, of adequate rated capacity, and operated so as to ensure that captured animals are transported without undue risk or injury.
3. Only tractor-trailers or stock trailers with a covered top shall be allowed for transporting animals from trap site(s) to temporary holding facilities, and from temporary holding facilities to final destination(s). Sides or stock racks of all trailers used for transporting animals shall be a minimum height of 6 feet 6 inches from the floor. Single deck tractor-trailers 40 feet or longer shall have at least two (2) partition gates providing at least three (3) compartments within the trailer to separate animals. Tractor-trailers less than 40 feet shall have at least one partition gate providing at least two (2) compartments within the trailer to separate the animals. Compartments in all tractor-trailers shall be of equal size plus or minus 10 percent. Each partition shall be a minimum of 6 feet high and shall have a minimum 5 foot wide swinging gate. The use of double deck tractor-trailers is unacceptable and shall not be allowed.
  - a. All tractor-trailers used to transport animals to final destination(s) shall be equipped with at least one (1) door at the rear end of the trailer which is capable of sliding either horizontally or vertically. The rear door(s) of tractor-trailers and stock trailers must be capable of opening the full width of the trailer. Panels facing the inside of all trailers must be free of sharp edges or holes that could cause injury to the animals. The material facing the inside of all trailers must be strong enough so that the animals cannot push their hooves through the side. Final approval of tractor-trailers and stock trailers used to transport animals shall be held by the COR/PI.
  - b. Floors of tractor-trailers, stock trailers and loading chutes shall be covered and maintained with wood shavings to prevent the animals from slipping as much as possible during transport.
  - c. Animals to be loaded and transported in any trailer shall be as directed by the COR/PI and may include limitations on numbers according to age, size, sex, temperament and animal condition. The following minimum square feet per animal shall be allowed in all trailers:
    - 11 square feet per adult horse (1.4 linear foot in an 8 foot wide trailer);
    - 6 square feet per horse foal (.75 linear foot in an 8 foot wide trailer);
    - The COR/PI shall consider the condition and size of the animals, weather conditions, distance to be transported, or other factors when planning for the movement of captured animals. The COR/PI shall provide for any marking and/or inspection services required for the captured animals.
7. If the COR/PI determines that dust conditions are such that the animals could be endangered during transportation, the Contractor will be instructed to adjust speed.

## D. Safety and Communications

1. The Contractor shall have the means to communicate with the COR/PI and all contractor personnel engaged in the capture of wild horses utilizing a VHF/FM Transceiver or VHF/FM

portable Two-Way radio. If communications are ineffective the government will take steps necessary to protect the welfare of the animals.

2.
  - a. The proper operation, service and maintenance of all contractor furnished property is the responsibility of the Contractor. The BLM reserves the right to remove from service any contractor personnel or contractor furnished equipment which, in the opinion of the contracting officer or COR/PI violate contract rules, are unsafe or otherwise unsatisfactory. In this event, the Contractor will be notified in writing to furnish replacement personnel or equipment within 48 hours of notification. All such replacements must be approved in advance of operation by the Contracting Officer or his/her representative.
  - b. The Contractor shall obtain the necessary FCC licenses for the radio system
  - c. All accidents occurring during the performance of any task order shall be immediately reported to the COR/PI.
3. Should the contractor choose to utilize a helicopter the following will apply:
  - a. The Contractor must operate in compliance with Federal Aviation Regulations, Part 91. Pilots provided by the Contractor shall comply with the Contractor's Federal Aviation Certificates, applicable regulations of the State in which the gather is located.
  - b. Fueling operations shall not take place within 1,000 feet of animals.

## **E. Site Clearances**

No personnel working at gather sites may excavate, remove, damage, or otherwise alter or deface or attempt to excavate, remove, damage or otherwise alter or deface any archaeological resource located on public lands or Indian lands. Prior to setting up a trap or temporary holding facility, the relevant land management agency will conduct all necessary clearances (archaeological, T&E, etc.). All proposed site(s) must be inspected by a government archaeologist. Once archaeological clearance has been obtained, the trap or temporary holding facility may be set up. Said clearance shall be arranged for by the COR, PI, or other agency employees. Gather sites and temporary holding facilities would not be constructed on wetlands or riparian zones.

## **F. Animal Characteristics and Behavior**

Releases of wild horses would be near available water. If the area is new to them, a short-term adjustment period may be required while the wild horses become familiar with the new area.

## **G. Public Participation**

Opportunities for public viewing (i.e. media, interested public) of gather operations will be made available to the extent possible; however, the primary considerations will be to protect the health, safety and welfare of the animals being gathered and the personnel involved. The public must adhere to guidance from the on-site agency representative. It is BLM policy that the public will not be allowed to come into direct contact with wild horses being held in BLM facilities. Only authorized agency personnel or contractors may enter the corrals or directly handle the animals. The general public may not enter the corrals or directly handle the animals at any time or for any reason during agency operations.

## **H. Responsibility and Lines of Communication**

The Contracting Officer's Representatives (CORs) and the project inspectors (PIs) have the direct responsibility to ensure the Contractor's compliance with the contract stipulations. The local agency administrators will take an active role to ensure the appropriate lines of communication are established between the field operations, higher level agency offices and receiving facilities. All employees involved in the gathering operations will keep the best interests of the animals at the forefront at all times.

All publicity, formal public contact and inquiries will be handled through the local agency administrators and public affairs office. These individuals will be the primary contact and will coordinate with the COR/PI on any inquiries. The COR will coordinate with the contractor and the receiving facility to ensure

animals are being transported from the capture site in a safe and humane manner and are arriving in good condition.

The contract specifications will require humane treatment and care of the animals during removal operations. These specifications will be designed to minimize the risk of injury and death during and after capture of the animals. The specifications will be vigorously enforced.

Should the Contractor show negligence and/or not perform according to contract stipulations, he/she will be issued written instructions, stop work orders, or defaulted.

## Appendix B: Standard Operating Procedures for Wild Horse Population-Level Fertility Control Treatments

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### One-Year Liquid Vaccine

The following implementation and monitoring requirements are part of the Proposed Action:

1. PZP vaccine would be administered through darting by trained USFS or BLM personnel or collaborating research partners only. For any darting operation, the designated personnel must have successfully completed a nationally recognized wildlife darting course and who have documented and successful experience darting wildlife under field conditions.
2. Mares that have never been treated would receive 0.5 cc of PZP vaccine emulsified with 0.5 cc of Freund's Modified Adjuvant (FMA) and loaded into darts at the time a decision has been made to dart a specific mare. Mares identified for re-treatment receive 0.5 cc of the PZP vaccine emulsified with 0.5 cc of Freund's Incomplete Adjuvant (FIA).
3. The liquid dose of PZP vaccine is administered using 1.0 cc Pneu-Darts with 1.5" barbless needles fired from either Dan Inject® or Pneu-Dart® capture gun.
4. Only designated darters would mix the vaccine/adjuvant and prepare the emulsion. Vaccine-adjuvant emulsion would be loaded into darts at the darting site and delivered by means of a capture gun.
5. Delivery of the vaccine would be by intramuscular injection into the left or right hip/gluteal muscles while the mare is standing still.
6. Safety for both humans and the horse is the foremost consideration in deciding to dart a mare. The Dan Inject® gun would not be used at ranges in excess of 30 m while the Pneu-Dart® capture gun would not be used over 50 m, and no attempt would be taken when other persons are within a 30-m radius of the target animal.
7. No attempts would be taken in high wind or when the horse is standing at an angle where the dart could miss the hip/gluteal region and hit the rib cage. The ideal is when the dart would strike the skin of the horse at a perfect 90° angle.
8. If a loaded dart is not used within two hours of the time of loading, the contents would be transferred to a new dart before attempting another horse. If the dart is not used before the end of the day, it would be stored under refrigeration and the contents transferred to another dart the next day. Refrigerated darts would not be used in the field.
9. No more than two people should be present at the time of a darting. The second person is responsible for locating fired darts. The second person should also be responsible for identifying the horse and keeping onlookers at a safe distance.
10. To the extent possible, all darting would be carried out in a discrete manner. However, if darting is to be done within view of non-participants or members of the public, an explanation of the nature of the project would be carried out either immediately before or after the darting.
11. Attempts will be made to recover all darts. To the extent possible, all darts which are discharged and drop from the horse at the darting site would be recovered before another darting occurs. In exceptional situations, the site of a lost dart may be noted and marked, and recovery efforts made at a later time. All discharged darts would be examined after recovery in order to determine if the charge fired and the plunger fully expelled the vaccine.

12. All mares targeted for treatment will be clearly identifiable through photographs to enable researchers and HMA managers to positively identify the animals during the research project and at the time of removal during subsequent gathers.
13. Personnel conducting darting operations should be equipped with a two-way radio or cell phone to provide a communications link with the Project Veterinarian for advice and/or assistance. In the event of a veterinary emergency, darting personnel would immediately contact the Project Veterinarian, providing all available information concerning the nature and location of the incident.
14. In the event that a dart strikes a bone or imbeds in soft tissue and does not dislodge, the darter would follow the affected horse until the dart falls out or the horse can no longer be found. The darter would be responsible for daily observation of the horse until the situation is resolved.

## **22-Month Time-Release Pelleted Vaccine**

The following implementation and monitoring requirements are part of the Proposed Action and Alternatives 3 and 4:

1. PZP vaccine would be administered only by trained USFS or BLM personnel or collaborating research partners.
2. The fertility control drug is administered with two separate injections: (1) a liquid dose of PZP is administered using an 18-gauge needle primarily by hand injection; (2) the pellets are preloaded into a 14-gauge needle. These are delivered using a modified syringe and jab-stick to inject the pellets into the gluteal muscles of the mares being returned to the range. The pellets are designed to release PZP over time similar to a time-release cold capsule.
3. Delivery of the vaccine would be by intramuscular injection into the gluteal muscles while the mare is restrained in a working chute. The primer would consist of 0.5 cc of liquid PZP emulsified with 0.5 cc of Freund's Modified Adjuvant (FMA). The pellets would be loaded into the jabstick for the second injection. With each injection, the liquid or pellets would be injected into the left hind quarters of the mare, above the imaginary line that connects the point of the hip (hook bone) and the point of the buttocks (pin bone).
4. In the future, the vaccine may be administered remotely using an approved long range darting protocol and delivery system if or when that technology is developed.
5. All treated mares will be freeze-marked on the hip or neck by WHT managers to positively identify the animals during the research project and at the time of removal during subsequent gathers.

## **Monitoring and Tracking of Treatments**

1. At a minimum, estimation of population growth rates using helicopter or fixed-wing surveys will be conducted before any subsequent gather. During these surveys it is not necessary to identify which foals were born to which mares; only an estimate of population growth is needed (i.e. # of foals to # of adults).
2. Population growth rates of herds selected for intensive monitoring will be estimated every year post-treatment using helicopter or fixed-wing surveys. During these surveys it is not necessary to identify which foals were born to which mares, only an estimate of population growth is needed (i.e. # of foals to # of adults). If, during routine WHT field monitoring (on-the-ground), data describing mare to foal ratios can be collected, these data should also be shared with the BLM NPO for possible analysis by the USGS.
3. A PZP Application Data sheet will be used by field applicators to record all pertinent data relating to identification of the mare (including photographs if mares are not freeze-marked) and date of

treatment. Each applicator will submit a PZP Application Report and accompanying narrative and data sheets will be forwarded to the NPO (Reno, Nevada). A copy of the form and data sheets and any photos taken will be maintained at the local agency office.

4. A tracking system will be maintained by NPO detailing the quantity of PZP issued, the quantity used, disposition of any unused PZP, the number of treated mares in the WHT, district office, and State along with the freeze-mark(s) applied by the WHT and date.