APPENDIX A

SITE SPECIFIC GATHER PLANS FOR FY 2005 FOR THE ADOBE TOWN HMA AND THE AREA DESIGNATED AS I80 SOUTH WITHIN THE RAWLINS FIELD OFFICE AND FOR THE SALT WELLS CREEK HMA AND AN ADJACENT AREA OUTSIDE THE HMA IN THE ROCK SPRINGS FIELD OFFICE.

SITE SPECIFIC GATHER PLAN FOR FY 2005 FOR THE ADOBE TOWN HMA AND THE AREA DESIGNATED AS I80 SOUTH WITHIN THE RAWLINS FIELD OFFICE.

BACKGROUND

This plan was developed pursuant to the practices and procedures detailed in the Rawlins Field Office Wild Horse Management Handbook (Handbook) and the Wyoming Supplemental Program Guidance for Wild Horse Management which includes Instruction Memoranda and Information Bulletins that are issued from time to time. The Handbook and guidance are included in this plan by reference. They describe the operating practices and mitigating measures that constitute, among other things, Wyoming BLM's Standard Operating Procedures for removing stray and excess wild horses from the public lands and contiguous areas of private land. This site-specific gather plan describes how a specific Population Management Action (PMA) will be conducted. Specifically, this plan will guide the capture, confinement, care, and evaluation of approximately 1100 horses from the Adobe Town Herd Management Area (HMA) and nearby areas adjacent to the HMA collectively referred to as I80 South and subsequent return to the range within the HMA of approximately 600 specifically identified individual adult horses and their dependant young of the year after July 15th of the calendar year 2005 and for a necessary, reasonable and prudent period of time beyond that to complete the objectives of the plan. As part of this action, approximately 700 excess and stray horses will be identified for removal, transportation, and associated handling. The current, total population of this combined area is estimated to be approximately 1200 horses inside the HMA and 100 outside. Of this total, it is projected to capture approximately 1000 total (800 adults and 200 colts) horses inside the HMA and 100 (80 adults and 20 colts) outside the HMA. Then approximately 600 total (475 adults and 125 colts) would be removed from within the HMA and 100 (80 adults and 20 colts) from the areas outside and adjacent to the HMA. The ultimate objective of this action is to achieve the Lower Limit of the AML of approximately 600 adults + unweaned colts for the Adobe Town HMA and to limit the distribution of horses in the area to within the HMA. Further, it is the objective of this action to insure that the horses remaining comprise a healthy herd, with an age/sex distribution that will insure a thriving natural ecological balance (TNEB) in the Adobe Town HMA.

By the time this removal action is conducted, special management objectives may have been identified as a result of the ongoing effort to identify the nature and extent of the Spanish Colonial gene pool in the area that appears to include all of the Adobe Town HMA and the eastern ½ to 2/3rds of the Salt Wells HMA . It is anticipated that these would take the form of modifications to the selective removal criteria established for this herd and possibly some modification of fertility control practices that might be employed.

A limited, specific segment of the adult female population may be identified for treatment with the best available PZP immunocontraceptive vaccine prior to their release back to the range.

PURPOSE

<u>Removal of Animals, Background</u>

Wild, free roaming horses are removed from the public and private lands for two distinctly different purposes. When horses inside of HMAs exceed the population levels established for them, excess horses (the number of horses present above that established level) may be removed. When horses stray from within the HMAs to nearby areas of public or private land, the strayed horses must be removed if it is not practical to return them to the HMA from which they have strayed.

The purpose of this removal action is to continue to implement decisions to achieve the Appropriate Management Levels (AMLs) that have been established for the HMAs (remove excess horses) within the jurisdiction of the RFO, to limit the distribution of horses to within these HMAs by removing horses from outside the HMA boundary, and to evaluate the effect of the AML on the resources and other uses of the HMA. These decisions were based upon the analysis completed in Wyoming BLM Environmental Assessments (EA) WY-037-EA1-

039, "Wild Horse Gathering Outside Wild Horse Management Areas" and WY-037-EA4-122, "Management Changes in the Wild Horse HMAs." The EA titled, Management Changes in the Wild Horse HMAs, evaluated management recommended by the Wild Horse Herd Management Area Evaluation. These two documents were completed in 1994 after an intensive monitoring effort in the HMAs. Rangeland conditions have not changed significantly since 1994.

Establishment of AMLs occurred with this public process. Subsequent, minor adjustment of HMA boundaries has occurred as well. The effect of maintaining AMLs on the horses, their habitat, and the other users of the public land was analyzed in EA# WY030-EA0-037 (January, 2000). This gather plan and a range of alternative management strategies will be the subject of a specific environmental analysis that will be conducted prior to the implementation of the action described herein.

Removal of Excess Animals

The Adobe Town HMA was designated in 1994 from the Adobe Town HMA and a portion of the Flat Top HMA. Throughout this process, the AML for the HMA was monitored and evaluated. The result of this progression is that the AML for the Adobe Town HMA is 700 horses. The population (summer 2005 pre gather) is estimated to be as many as 1300 horses. This includes approximately 100 horses outside of the HMA in the area known as I80 South. This is approximately **5**75 more than the lower limit of 600 established for the population objective (AML) for the area and thus, an excess exists. An inventory will be conducted in July or August of 2005 to confirm this estimate, to identify the then current distribution of the population, and to determine the precise number to be removed, utilizing the guidelines identified in the first paragraph of this plan. Gathering of excess and stray wild horses is in conformance with Public Law 92-195 (Wild and Free-Roaming Horse and Burro Act of 1971) as amended by Public Law 94-579 (Federal Land Policy and Management Act), and Public Law 95-514 (Public Rangelands Improvement Act). Public law 92-195, as amended, requires the protection, management, and control of wild free-roaming horses and burros on public lands.

As provided in 43 CFR 4700.0-6, BLM's policy for management of wild horses is to:

a) ...be managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat;
b)...be considered comparably with other resource values; and
c)...by maintaining free-roaming behavior.

The planned action is also in compliance with the following section of the CFR:

> by the authorized officer that an excess of wild horses or burros exists, the authorized officer shall 43 CFR 4720.1 - Upon examination of current information and a determination remove the excess animals immediately.

In order to determine the number of horses that are excess and thus subject to removal, factors other than just the AML must be considered. It is accepted practice, when establishing the AML for a particular population of horses to identify a range within which that population will be allowed to fluctuate. The limits of that range are referred as the upper and lower limits for that AML. Removal actions are indicated when the population approaches the upper limit and designed to insure that the population will not go below the lower limit established for it. This enables removal actions to be scheduled less frequently than would be indicated to maintain populations at a constant level on an annual basis. These upper and lower limits are subject to change as such things as operational considerations require and as additional data about the herd become available.

Table 1 shows the AML, the Lower Limit, the Upper Limit, the current population estimate, and the projected excess for the all of the horse populations that could be potentially affected by the gather. The excess is

based on a number of projections. The exact excess cannot be determined until the winter 04-05 (mortality) and spring 05 (natality) have actually occurred. The estimate employs historical average values for these forces. These areas are included in the table as all of these horses (along with the Sand Wash HMA which is under the jurisdiction of the Craig, Colorado Field Office to the south) comprise one metapopulation with enough exchange of competent breeding adults to comprise a common pool of genetic material. The metapopulation is an important consideration in evaluating the lower limit and its potential effect on the genetic viability of the population. EA# WY-030-EA0-037 contains a complete discussion of metapopulations on pages 17 and 18.

TABLE 1

AREA	AML	@Lower Limit	@Upper Limit	7/05 est. Population	Est. Excess
Adobe Town HMA	700	600	800	1200	600
Salt Wells HMA	365	251	450		
I80 South #	0	0	0	100*	100
TOTALS	1065	861	1250	1300	700

* These horses are outside of any HMA and therefore are stray as defined by the Act
# Not an HMA
@ These are calculated values which are periodically reviewed and may require adjustment from time to time to reflect more current information such as reproductive rates, age-specific survival, selective removal or fertility control policies, etc. The intended net effect of these numbers is to identify the range within which the population must be managed to result in the average population level, when sampled over time to equal the AML.

Removal of Strayed Animals

The Bureau of Land Management is responsible for the welfare of wild horses, their habitat (HMAs), and adjacent areas of public and private land that are effected by the presence of wild, free roaming horses.

EA WY-037-EA1-039, completed in 1991, specifically addressed the geographic areas in the Rawlins Field Office that are adjacent to HMAs and which contained horses that had become established in them through emigration from the HMAs during periods of high populations. These areas are typically more than 50% private land and not suited for designation as HMAs. I80 South is one of those areas. In addition, EA WY-037-EA0-037 completed in 2000 addressed alternative management strategies for wild horses within the Rawlins Field Office jurisdiction. The net effect of all of these individual analyses is to affirm that it is necessary to control population levels within established levels and areas as prescribed by law.

Maintenance of these population levels and distributions is an important first step in maintaining the healthy habitats that wild horses and other users of the public lands require. The action described in this plan will meet those requirements.

Horses that occupy the I80 South area, for the most part, have strayed from the Adobe Town HMA and will continue to do so as long as the Adobe Town population remains above the AML set for it. Horses are prone to become habituated to particular areas for sometimes unknown reasons and once they have established a home outside the HMA, they may expend considerable effort to stay in or return to those places even when relocated. J Frank Dobie, in his classic work, *The Mustangs,* uses the Spanish word querencia to describe this behavior. At its simplest level, the word means homesickness but is used throughout the Spanish speaking world to refer to the inexplicable attractions

that particular places hold for animals and even people at certain points in their life journeys. This characteristic may make relocation of stray horses impractical and require their removal, even if other, unoccupied range were available.

RELATIONSHIP TO THE LAND USE PLAN

The planned action conforms with the land use plan terms and conditions as required by 43 CFR 1610.5-3. This action is subject to the Great Divide Resource Management Plan (RMP), approved November 8, 1990. Actions proposed in this plan are consistent with the Wild Horse Management Objective on page 41 of the RMP which states . . . to protect, maintain, and *control* a viable healthy herd of wild horses . . . (Emphasis added).

It can also be noted that the current RMP update which is underway at this time, proposes no changes to the Adobe Town HMA boundary or AML.

The action would also be in conformance with the Great Divide Herd Management Area Evaluation and the associated EA (WY-037-EA4-122). Recommendations from this evaluation were the basis for increasing AMLs from previous levels and adjusting HMA boundaries. Rangeland conditions have not changed significantly since 1994.

The proposed action is consistent with all other federal, state, and local plans. The proposed action is in conformance with Appendix III of the RMP - *Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management*. No additional permits or authorizing actions are required.

The Adobe Town HMA is bordered by the Salt Wells HMA for a considerable portion of its western and northern boundaries. Much of this boundary is topographic in nature and is not impassable to horses or other animals. Horses in both HMAs are part of the same metapopulation. Horses may move from one HMA to the other at any time of the year in response to a variety of pressures including but not limited to ongoing gathering activities, differing seasons of use for livestock, locally variable supplies of water or forage, energy exploration or development, or competition for water or forage or space.

TABLE 2 OTHER AUTHORIZED USES OF THE AREA					
Grazing Allotment	Active Preference(cattle AUMs)	Active Preference(sheep AUMs)	Mineral Production	Wildlife Species	Other Uses
INSIDE HMA					
ADOBE TOWN		1802	Increasing	Pronghorn, Mule Deer,SageGrouse	Hunting, dispersed recreation
CONTINENTAL	2830		"	", elk	"
COW CREEK	1759	870	'	", elk	"
CROOKED WASH	87		"	"	"
ESPITALIER	2775		"	"	"
GRINDSTONE SPRINGS		413	"	"	"
LITTLE POWDER MOUNTAIN	253	1730	"	", elk	"
HIAWATHA TRIDISTRICT		5865	"	"	"
POWDER MOUNTAIN	668	187	"	", elk	"
RED CREEK			"	", elk	"
ROTTEN SPRINGS	767	661	"	"	"
SAND CREEK	592	2247	"	", elk	"
WILLOW CREEK		5362	"	"	"
ROCK SPRINGS			"	"	"
OUTSIDE HMA					
South LaClede	237	3294	"	"	"
Mexican Flats	1695		"	"	"
Mexican Graves	394	1234	"	"	"
South Barrel	583	195	"	"	"
Big Robber	1620		"	"	"
Powder Rim	3867	2686	"	"	"
Cottonwood Hill	1022		"	", elk	"
Cherokee Trail	1000	218	"	"	"
North LaClede		939	"	"	"
Poison Buttes	696		"	", elk	"
44 Ranch	59		"	"	"
South Flat Top	1592		"	", elk	"
Big Robber Spreaders	114		"	"	"
Little Robber	250		"	"	"
V Spreaders	70		"	"	"
Tipton	4752		"	"	"
South Red Desert	700 (56 horse)		"	"	"
North Barrel	2930		"	"	"
Oppenheimer			"	, elk	domestic horse

NEPA RECORD
The entire National Environmental Policy Act (NEPA) record for this action comprises more that just EA# WY-030-EA05-158, prepared for the action described in this plan. It consists of at least the following and can include other actions which are less directly related to Wild Horse management activities.

YEAR	NEPA DOCUMENT	SUBJECT
1983	Divide Grazing EIS	Domestic Livestock grazing vis-à-vis other uses of the public vegetation resource
1990	Great Divide RMP/EIS	Interrelationship of all public land uses
1991	EA WY037-EA1-039	Removal of strayed horses from areas outside of HMAs
1994	EA WY037-EA4-122	Adjustment of HMA boundaries and establishment of AMLs based on monitoring data collected since 1989
1999	EA WY030-EA9-156	Removal of strayed horses from areas outside of the Adobe Town HMA
1999	EA WY030-EA0-037	Maintaining Viable Populations of Wild Horses in Herd Management Areas of the Rawlins Field Office
1999	EA WY030-EA0-038	Wild Horse Gathering in I80N
2000	EA WY030-EA0-181	Wild Horse gathering in other areas.
2001	EA WY030-EA0-214	Wild Horse gathering in other` Areas
2002	EA WY030-EA2-007	Maintaining Viable Populations Of Wild Horses On Healthy Rangelands In The Adobe Town HMA

SUBSEQUENT ACTIVITIES

In 2008 and about every third year thereafter, approximately 500 horses would need to be removed from the Adobe Town HMA in order to maintain the population within the range associated with the AML. This would cause the long term average population to be approximately 700 head of adult horses.

GATHER INITIATION/COMPLETION/ADJUSTMENT

For the purposes of planning and analysis, the dates for initiation and completion of this gather are assumed to be July 15 and November 30, 2005. In practice, the actual dates may be different. Due to the needs of mountain plover, greater sage-grouse, nesting raptors, pregnant mares and very young colts, this action will not begin prior to July 15. Any one or more of the following may delay the start of the gather and/or the completion: Budgetary constraints, availability of personnel and/or equipment, facility capacities, local or regional weather conditions, adoption success, or animal health concerns. Initiation would not be before July 15, 2005 and completion could be any reasonable time thereafter. This could even include the periods before April 1 or after July 15, 2006. Since this gather will be closely coordinated with the planned gather in the Salt Wells HMA, the two actions may appear to be one.

ALTERNATE GATHER DATES

The opportunity to conduct this gather at another time other than the scheduled time is limited by a number of considerations. The most significant

limitation is imposed due to logistical considerations and coordination amongst the various BLM jurisdictions in Wyoming and other states. Prior to the selection of the dates in this plan, all of the anticipated needs for wild horse management personnel, equipment, or facilities in Wyoming were evaluated. Other proposed gathers, facility capacities, and availability of key personnel and other resources were all considered and tentatively allocated. In order to conduct this gather at an alternate time, the other actions scheduled at the proposed alternate time would have to be evaluated to determine the extent to which adjustments were feasible. Most often a single event could not be merely rescheduled but rather two events would have to trade places on the schedule. Since this and the associated Salt Wells gather will take a large part of an entire field season to complete, rescheduling would involve the whole state and two entire fiscal years' work. In addition, delaying Adobe Town would allow for additional population increase and additional risks for resource damage. The availability of additional contract capabilities for gathering would not provide significant flexibility as facility capacity and adoption demand would remain unchanged. In this particular case, this event was determined to be the most suited to this particular time slot. The number of horses to be removed, access, and prevailing weather conditions were all considered in making the determination. In addition, it proves necessary from time to time, to make internal adjustments to schedules in order to adjust to such things as weather or animal conditions encountered on site at the time. Continuation of this action in order to complete it during the periods described on page one of this plan would not constitute rescheduling.

NUMBER OF ANIMALS TO BE CAPTURED/REMOVED

TOTAL INSIDE THE HMA
At the present time, it can be projected with a high degree of confidence what the population will look like at gather time and given the criteria to be applied, what it will look like after the gather is completed. (Appendix 1) By comparing those two, it can be projected that the removal is likely to consist of a total of approximately 575 +/- horses. The segment of the population less than six years of age will be approximately 50% female. Approximately 125 will be females between the ages of 3 and 4 and be very likely to have colts at their sides. Approximately 135 would be 10 years of age or older and approximately 10 of those would be mares with nursing foals at their side. It should be noted that these older mares may well be pregnant again when captured so that if they are sent to long term care, another colt crop will have to be anticipated and provided for.

OUTSIDE THE HMA
It is likely that approximately 100 horses may occupy the I 80 South area at the time of the removal. As this is not an HMA, all are subject to removal. This population has grown from approximately 32 (all male) head in 1999 primarily by the mechanism of immigration from the Adobe Town HMA. At that time, (summer of 1999) 670 head were removed from this area. Trap sites at Windmill Draw, Blue Gap Draw, South Flat Top, and Cedar Breaks have previously been successfully used in this area. The final determination of trap sites to be used will be based on the numbers, distribution, and apparent demographics identified in the inventory which will be conducted in June, 2005.

In conducting this gather, the objective will be to remove a predetermined mix of age and sex classes of horses so that the resulting population within the HMA will be as socially stable as possible. All horses outside the HMA will be removed, which will dictate a different approach at those trap sites outside the HMA. This will require current observations on the distribution of the horses to be collected during the month of June, 2005.

TRAP SITES AND MANAGEMENT
In order to accomplish this action, approximately four large holding/processing facilities (probable locations would be East Haystack Wash, Lower Sand Creek, Middle Sand Creek, and Cow Creek) would be employed and as many as 10-15 individual trap sites may be utilized.

The exact number and location will be selected in consultation with the contractor after consideration of the inventory that will be conducted in June or July of 2005. The following list is tentative and identifies a potential trap site, the sub population(s)it would serve, and any special considerations anticipated with that site.

TABLE 3

TRAP SITE	SUB POPULATION(S)	NOTES
Cedar Breaks	Cedar Breaks Sand Creek	Herding from I80S
Kinney Rim	Espitalier Spring Greasewood Flats Corson Springs	Coordinated with Salt Wells Herding from south
Cow Creek HQ	Espitalier Spring Greasewood Flats	Herding from WSA
Manuel Gap	Greasewood Flats Corson Springs	Coordinated with Salt Wells
Rotten Springs	Sand Creek Cedar Breaks	
Crooked Wash	Espitalier Spring	
West Sand Creek	Willow Creek Sand Creek	
East Sand Creek	Sand Creek Cedar Breaks Continental Hangout	Herding from Continental and Hangout
Horseshoe Bend	Willow Creek Sand Creek	Herding from WSA
Windmill Draw	Willow Creek	
Shell Creek	Espitalier Springs, Corson Springs, Greasewood	
Willow Creek	Willow Creek, Sand Creek	

The net effect will be that approximately 1000 horses will be captured inside the HMA in order to remove approximately 475 head of adult horses and leave a viable herd of ~600 horses + unweaned colts inside the HMA and none outside of the HMA.

One objective of the removal will be to maintain the traditional, long term distribution pattern. Table 4 reflects the numbers of horses that, if left in each grazing allotment, would equal the 10 yr average distribution of populations ranging from 417 to 909 and averaging 666 for the period of 1983 to 1993 during the growing season (column A)

HELICOPTER HERDING/FENCE MODIFICATIONS

Due to the size and remoteness of the Adobe Town HMA and the adjacent I80 South area, it may prove desirable to employ some helicopter herding and fence modification in conjunction with the gather operation. These techniques will be employed where suitable trap sites cannot be located close enough to all

concentrations of horses identified in the inventory. In order to avoid driving horses too far in a single run and the need to build any additional access roads, the helicopter may be employed to herd some bands closer to the trap site(s) in order to break up the distances the horses will have to travel at one time.

In other words, horses in the Willow Creek Rim area who would be +/- 12-15 miles from the Horseshoe Bend trap site over rough terrain might be herded 7-10 miles northwesterly one afternoon and then left to rest overnight where they could be picked up the next morning and brought the last few miles to the trap. This helicopter herding would be conducted at a leisurely pace determined by the weakest members of the band. Rather than chasing the horses toward the trap, the helicopter pilot will just keep a little pressure on them to make the horses think that they are escaping an unwelcome source of pressure in their home territory and slipping off to quieter places. At least one wrangler with a saddle horse will be available for each herding operation. The wrangler(s) will maintain radio contact with the helicopter pilot and be available to provide necessary support such as rescuing foals that separate from the moving bands.

Around the periphery of the HMA and in the adjacent I80 South area, there are several fenced pastures. If these pastures are found to contain horses in the June, 2005 inventory that need to be removed, it may prove to be more efficient to employ the helicopter to herd horses out of these relatively small areas into the adjacent areas prior to capturing them, rather than building additional traps within these areas for limited use. When the bands to be relocated contain colts that are not yet fence wise, generally, sections of fence of about 100 feet are removed and small wings constructed to aid in funneling the bands through these spots. When the bands do not contain young colts, existing gates and trails can often be successfully employed for the necessary relocation.

When horses are herded toward traps in unfenced areas, they will be captured the day immediately following the herding. When they are herded out of fenced pastures, they may be captured the next day or allowed time to settle themselves in the new surroundings. Herding will usually be conducted in the early part of the day to avoid heat stress to the horses and undesirable or unsafe flight operations conditions for the helicopter.

ADOBE TOWN HMA DISTRIBUTION TARGETS TABLE 4					
Grazing Allotment	Column A Historic @ Growing Season Distribution	Column B Target Post Gather Distribution (approx.)	Column C # 2005 Estimated Population	Column D Estimated Total Removal Need #	NOTES
ADOBE TOWN	31	35	100	65	
CONTINENTAL	36	35	30	0	
CORSON SPRINGS	26	**	**	**	Now in Salt Wells HMA
COW CREEK	68	65	190	105	Most below SC rim
CROOKED WASH	16	5	5	0	
ESPITALIER	52	40	40	0	
GRINDSTONE SPRINGS	16	15	50	30	
LITTLE POWDER MOUNTAIN	21	20	20	0	
MANEOTIS CROOKED WASH	5	5	5	0	
POWDER MOUNTAIN	5	5	10	0	
RED CREEK	36	35	50	10	
ROTTEN SPRINGS	31	30	50	20	
SAND CREEK	31	30	100	70	
WILLOW CREEK	83	80	250	170	
ROCK SPRINGS	150	200	300	35	
TOTAL	607*	600*	1200	500	

@ converted to a portion of the Lower Limit of the AML(number) which represents that allotment's share of the total area's contribution to the population during the period 1983-94
* + unweaned colts
# To be revised to reflect completion of inventory in 6/05 NOTE: Most of the numbers portrayed in this plan are approximations based on the assumed population level and makeup. The inventory along with the detailed examination of the horses captured will provide the opportunity to fine tune these numbers. The post gather target will not change but the population levels and removal needs may change. Those changes are estimated to be less than +/- 10%.

SELECTIVE REMOVAL

It has been the policy of the BLM since 1992 not to remove horses from the public lands for which no adoption demand exists. Horses captured for which no

adoption demand exists have historically been returned to the HMA where they were captured. Selective removal has come to be understood by some as only this practice. But, in truth, the term selective removal is properly used to identify a group of practices which employ anything rather than random occurrence as a criteria in identifying which horses from a particular population will be gathered and which of the horses gathered will be removed or returned to the range. At the same time, a viable population must remain on the range. In this action, the number of colts is often portrayed. It should be noted that colts, themselves, are neither targeted for removal nor retention in this action. Most of the colts will still be too young to thrive independently and so they will be kept with their mothers. If a mare is selected for removal and she has a colt, that colt will be removed with her, if a mare selected for retention has a colt, that colt will be retained with her. Any decisions about early weaning of colts will be made by personnel at the Rock Springs facility after the horses arrive and have settled in.

Immediately following the July 2005 inventory, the selective removal criteria to be employed in this gather will be finalized. The criteria will list specifically how many horses of what age and sex to remove in order to leave the prescribed numbers on the range (the Post Gather Target) Those criteria will follow the pattern portrayed here. If the inventory were to be exactly the same as the projections, the most appropriate selective removal criteria for this gather would be to remove 40 pair with the mare 2-4 years old, 50 pair with the mare 5-9 years old, 110 yearlings, 75 two year olds, 100 males three to nine years old and 100 horses 10 years of age and older. Approximately 10 of these would be mares with colts. This would leave most the colts of mares 10 and older, a significant number of yearlings and quite a few 2 year olds to grow through the herd, refresh the gene pool, and preserve adequate presence of young to insure social order. In order to accomplish this, approximately 1000 horses would have to be captured and handled inside the HMA, probably at 3 or 4 locations: Cow Creek Headquarters (likely to prove undesirable due to concentrations), Lower Sand Creek (between McPherson Spring and Sand Creek), Middle Sand Creek (north Rotten Springs Allotment), and Willow Reservoir/East Haystack. An aerial inventory within one month prior to the start date would be most useful in order to “fine tune” the details. Should the actual population prove to be much different than the projection, these criteria would be revisited to insure that the objective population would still be attainable. In addition, horses exhibiting noticeable Spanish Colonial characteristics will be favored for returning to the range while horses exhibiting characteristics considered to be antithetical to that type will be favored for removal. Some older horses will be returned to the range. They could be accompanied by a few colts if, for instance, an aged mare with one eye or a non-life-threatening injury who had a colt not yet old enough to be weaned, were designated for return. In general color will not be used as a selection criteria; however, individuals representing the truly rare characteristics (Appaloosa, primitive markings, and albino) may be left on the range if that is determined to be feasible at the time. A number of special placement options will be available to BLM managers once horses have been removed from the range. These include halter training and saddle training programs.

In 2008 or 2009, it is anticipated that a PMA will be conducted which will remove approximately 500 horses in order to maintain the population within the range established for it. For that PMA, it is likely that the Selective Removal policy will again be modified to reflect the then current adoption demand and facility capacities. Prior to initiation of these subsequent activities, a detailed plan will be prepared which will identify important objectives for the maintenance of the long term health of the herd. It will also be possible, if indicated, to adjust the sex ratio and, indirectly, the reproductive rate by removing unequal numbers of males and females. Appendix 1 consists of a number of probable age/sex distributions for the Adobe Town HMA both pre and post gather. All of these were developed using the 670 horses captured in 1999 and the 800+ actual horses captured the summer of 2003 as representative samples of the population. Then the baseline was established by applying those samples plus the horses turned back out into the

population and extrapolating those results to the current inventory levels.

DATE(S) OF PMA AND ANY DATE RESTRICTIONS OR ALTERNATIVE DATES

This action is scheduled to start on or about August 15, 2005 and end on or about November 30, 2005. It will not be conducted during the period April 1-July 15 and adverse weather conditions usually constrain activities prior to April 1. The scheduled period contains eighteen full weeks. This is more than adequate as it is likely that the contractor/BLM combination of resources contemplated for this action can complete it in four weeks or less.

TRAPS

Trap site selection is a process which begins with the identification of areas and conditions for the location of traps and often ends just a few days before the actual PMA with the final selection of the exact location and its final configuration.

a. General

General location/exclusion criteria are identified by the field office staff in the preliminary planning for the specific PMA. Such things as access to the trap site by the transport vehicles, raptor nesting, seasonal wildlife restrictions, other permitted activities result in general areas in which specific traps may be located or must not be located and steps required to finalize trap site selection (e.g. cultural, landowner permission). Location of fences that may restrict horse movement and typical distribution of animals at the proposed time are also noted.

b. Specific

Specific trap site selection will be made by the gather contractor in consultation and approval by the BLM COR, and the trap will be located on the site that will function best and produce a minimum of impacts. Required specific clearances (i.e. cultural, T&E) will then be obtained if indicated. Personnel working at the trap sites will inspect the area within the wings and the approach to the wings to insure that dangerous obstacles or obstructions are identified and alleviated. For trap construction, refer to the statewide plan/standards. Arrangements for fence modifications, gate openings, closings, herding of livestock, water availability, etc. will be finalized at this point.

The weather conditions and current location of the horses will be the final determining factor in the number and location of traps utilized. Initially, it is estimated that 10-15 trap sites will be utilized. Other sites may be selected if conditions warrant.

c. Trap Construction, Management

Trap construction is a complex science/art. Years of practice, observation, and experience have yielded the materials and methods presently employed. The corrals, themselves are constructed of heavy duty portable steel panels. The wings are jute fabric on steel posts. The wings and the corrals are usually reinforced with plastic snow fence where they join the trap. The loading chute is portable and moved from trap to trap. Trap construction is described in detail in the Wyoming Supplemental Program Guidance. This operation may employ, as do most, multiple trap sites. At least two and sometimes as many as four traps may be in place and in alternate use at the same time. Daily operations may move around amongst those sites based on distribution of horses, localized weather and site conditions, other uses and events. Rather than "using up" one site before moving to another, this helps minimize stress on the horses and other animals. Traps will typically be constructed and removed within a few weeks of their use and will rarely remain in place for

more than a few weeks. Most often, traps are disassembled the last time they are used so that the materials can be used at other sites.

CAPTURE METHOD

A contractor, selected from the nationally maintained and approved list, will be engaged under the national gather contract. A helicopter drive-trapping using portable corral trap and wings under the control of the contractor will be utilized in conjunction with wranglers on foot and on horseback. Prada or Judas horses will also be employed to help guide the wild horses into the trap. A few horses may be roped in employing this combination of practices. Roping will not be the primary method of capture but will only be employed by experienced personnel in appropriate circumstances. Its most common usage is in the reuniting of separated mothers and young colts.

Feed or water trapping will not be employed because of the widespread availability of forage and water sources in the gather area and nearby. The presence of wildlife and livestock in the area also precludes the use of feed or water trapping for this action.

TRANSPORTATION

Captured animals designated for removal will be transported to the BLM facility in Rock Springs or Canon City, CO via the Standard Road, Sand Creek Road, Bitter Creek Road, Wamsutter Road, Eureka Headquarters Road, Wyoming 789, and Interstate Highway 80. Equipment and handling will be in accordance with the instructions contained in the Handbook and the specific provisions of the contract.

PRACTICES PLANNED TO MINIMIZE STRESS TO CAPTURED ANIMALS

Standard operating procedures will be employed which include the following practices:

GATHERING

The horses will be allowed to set the pace until they are within ~1/4 mile of the trap. If bands must be brought long distances, they will be allowed time to rest along the way if they indicate a need. Horses may be brought to the trap in stages which may include separate days (see section on herding) if difficult terrain or obstacles warrant. Horses that run more than five miles at once will do so of their own choosing.

CAPTURE AND HANDLING AT THE TRAP SITE

Handling at the trap site is carefully monitored to insure that aggression and injury are kept to a minimum. The decision on when and how to sort, confine, and load is determined by the behavior of the captured animals. Individuals or bands may be separated, if necessary. The long years of experience in trap construction have resulted in the use of materials such as jute, plastic snow fence, and panels of particular height and spacing; and methods including pen, gate, alley and chute design and use which minimize the horses' and wranglers' exposure to injury. When members of the public view the gather operation, they are required to occupy specific areas and conduct themselves so as to avoid additional stress to captured horses and to protect the success of the operation.

HOLDING/HANDLING

Each of the major holding/handling facilities will be constructed and operated by the contractor. These major facilities will accommodate 250-300 head of horses and will be of sufficient size to confine all the animals for 3-5 days to complete all the necessary tasks. Feed and water and indicated dust control will be provided daily. Typically, a trap is associated with each facility and then other traps are utilized in conjunction with it. As horses

are brought to the facility either by direct trapping or transport from other trap sites, males, females, and nursing colts are separated. In this action, the males and females will also be sorted by age groups.

The probable separation appears to be four and younger, five to ten and eleven and over. Once separated, the horses will be inventoried in order to determine a proportionate share of the total removal target to be allocated to that portion of the population. Given the removal criteria and the time of year, it will be necessary to pair mares and colts to be removed prior to their actual removal. As soon as an individual is positively designated for removal, it can be transported to Rock Springs by the gather contractor or BLM personnel.

Further sorting and handling may be required. For instance, if 125 six to nine year old mares are to be administered an immunocontraceptive in the entire project area, they will need to be sorted for this age class and counted to keep track of the number of doses administered. If blood samples for genetic testing or for animal health purposes are required, this may impose additional handling requirements. All handling will be coordinated and completed to reduce the stress on the animals as well as the number of time handled. All horses to be released from the individual facility will be held until they can be released together, at one time.

The type of records kept will insure that a very accurate picture of the age/sex distribution of the horses returned to the range is obtained.

MARKING/BRANDING

All horses held at each location will be marked with a distinctive mark on the head, neck, or back region so that the helicopter pilot and others can recognize horses that have been previously captured. Any mares administered immunocontraceptives will be freeze branded or otherwise marked in accordance with the policy in effect at the time, typically, a hip/butt brand that is visible from the air would be applied so that the mare could be observed for a few years following the treatment to monitor its effectiveness over time.

TRANSPORTATION

Horses designated for removal will be transported to the BLM corral facility in Rock Springs or Canon City, CO to complete their preparation. As much as possible, these animals will be transported to these facilities on a daily basis to reduce stress on the animals and to minimize crowding at the temporary corrals. Additional transportation may be required at the conclusion of the use of each facility. The transport vehicles are continuously inspected for safety and adequacy and provide for separation in groups of twelve or less. When warranted, colts may be separated and transported separately.

FERTILITY CONTROL

Fertility control policies are being formulated at this time. If fertility control is employed in this action, it will be subject to the following conditions:
1. The most effective PZP vaccine available at the time will be employed.
2. Only mares selected to be returned to the range will receive the vaccine
3. Mares receiving the vaccine will be freeze marked in a distinctive way in order to be able to be identified for long term monitoring.
4. The vaccine will be administered by qualified, trained personnel to mares confined in a chute. **Appendix 2** contains detailed information pertaining to the protocols that would be employed if fertility control were employed in this action. The example is from a fertility control project that was implemented in the McCullough Peaks HMA.

VETERINARIAN

The US Department of Agriculture/Animal and Plant Health Inspection Services (USDA/APHIS) will be consulted pursuant to the Memorandum of Understanding (MOU) between the agencies. This will result in the following:

Plan Consultation

USDA/APHIS has reviewed BLM practices in general and will continue to do so. This plan is reflective of that process. Additional specific recommendations as to specific practices may be generated at any time during the year and incorporated into existing practices.

On Site Consultation

For this particular action, USDA/APHIS will provide on-site consultation and oversight of animal health. Normally, the USDA/APHIS representative will be present for the entire operation and be available to make recommendations on individual treatment/euthanasia questions.

On Site Services

The USDA/APHIS vet who completes the initial on site visit will determine the need for and availability of on site services in addition to his/her presence.

On Call Services

On call services are available through the Rock Springs Wild Horse Facility Manager's existing contractual arrangements with local practitioners.

EUTHANASIA OF SICK, LAME, OR INJURED ANIMALS

Sick, lame, or injured animals will be euthanized at the trap site by trained, authorized personnel only, in accordance with the pertinent regulations. Remains will be disposed of at the site in accordance with established procedures.

ORGANIZATION

The team consists of the:
The Rawlins Field Office Liaison who will provide for COR service
The contractor, the helicopter pilot and the contractor’s employees.
The USDA/APHIS representative

CONSULTATION AND COORDINATION

a. Government Agencies.
The US Fish and Wildlife Service has been regularly consulted in accordance with section 7 of the Endangered Species Act, as amended and will be consulted in accordance with procedures outlined in the Handbook.

b. Public Input.
The availability of this plan for 30 day review and comment will be published on the Wyoming BLM webpage and identified affected interests will also be contacted through the mail.

C. Wyoming Game and Fish Department.
The WGFD is regularly consulted for its input concerning wildlife populations and needs.

D. Other RFO Program Specialists.
This plan and the accompanying environmental analysis was developed utilizing an Interdisciplinary Team approach. The team consists of a number of specialists who review the overall objectives against their individual program needs and provide appropriate inputs.

PUBLIC VIEWING OF THE OPERATION

Commercial photographing or videotaping for other than personal use may be approved by the authorized officer provided that timely and appropriate application is made pursuant to 43 CFR 2920. The contractor will be contacted prior to any public viewing being arranged or approved by the BLM.

Media representatives may make arrangements to observe and/or record events by contacting Mary Wilson at 307-328-4329.

Interested members of the public may request to view gather operations by contacting the contractor, directly. If the requests can be accommodated without compromising the safety or integrity of the operation, viewing can be allowed. Captured animals may be viewed at the facility in Rock Springs, Wyoming which is generally open to the public during regular business hours.

Once begun, gather operations are subject to daily adjustment and modification and the opportunity for viewing is difficult to predict and manage. Trap sites are selected with a number of purposes in mind. Whether or not the site presents viewing or photographic opportunities is not one of those primary considerations.

BRANDED AND CLAIMED ANIMALS

Any branded horses captured will be transported to the Rock Springs facility where they will be processed in accordance with state laws regarding estray livestock as provided for by the Act.

Approval/Signature.

I have reviewed the capture plan for the Adobe Town HMA and the I 80 South area for FY 2005. I find it to be complete.

_____DATE_____
RAWLINS FIELD MANAGER

APPENDIX 1

LIKELY POPULATION DEMOGRAPHICS

In order to develop the tables presented here and the large number of other permutations included in the files, a number of tools was utilized. Excel spreadsheets were used to provide some analysis and to portray the results in useful, comparative forms. The population model developed for the BLM by Dr Stephen Jenkins was used to develop a series of Excel spreadsheets which are used to predict the most likely responses of the population to a single variable (in this case, winter survival by age class) They can also be utilized in predicting the probable response of a population to short term fertility control with declining rates of immunity. The Excel spreadsheets are not stochastic as is Dr Jenkins' model. They produce only simple, arithmetic projections and tend to overestimate growth rates somewhat as they do not mimic the random occurrence of the catastrophic extremes that make up the averages employed in the calculations. In order to overcome this limitation, a projection assuming all good years (high survival) can be compared to one assuming all Bad years (low survival) and a range examined. An examination of the age/sex distribution for I80 South (1999) and for the animals removed in the summer of 2003 reveals that several age classes are noticeably under represented when compared to the expected numbers for them. This suggests that in actual experience, catastrophic events such as harsh winters play a major role in the actual population growth of the Adobe Town herd. All of these produce approximations of future conditions after accepting some assumptions such as birth rates, survival rates, etc. WHBIS is a useful source of information when it is thoughtfully employed. Worthy of particular note is that specific survival rates for the Adobe Town population have not been determined although they have been inferred from observations and age group analysis to be highly variable ranging from almost 100% to almost 0%. Considering all of these factors, it is accepted practice to project population growth at either a continued high rate or low rate and compare the two. Both of these rates are based on actual observations of the population dynamics. The least predictable factor is how many "good" or "bad" years will occur within a given period of time so these projections can determine the absolute maximums and minimums that could be encountered. In any case, these projections are useful for observing and predicting such things as trends and averages. They are also useful in determining if and how to adjust Upper and/or Lower Limits to affect the desired average population level, over time. Dr Jenkins model is also employed to compare the relative sensitivities of various inputs to change, over time and to verify results seen in the other analysis. Throughout, one will note numerous totals that don't "add up" or cross check exactly due to a number of formulae employed for rounding, averaging, etc.

Discussion and Analysis

The wild, free roaming horses of the Adobe Town HMA are first, wild animals. While they are not a separate species from domestic horses, they are not domestic. Much can be drawn from the knowledge and observation of their domestic counterparts but the other wild animals that occupy their habitat can also tell us much. So, management prescriptions for wild horses must be blended from these two bases and, as such, may look a bit strange from either one of those perspectives. Much use can be and is made of the very exact results of population modeling, forecasting, projection, comparison, etc but in the final analysis, these should be regarded as only guidelines to be employed and adjusted as the on the ground experience indicates. With all of this, we are able to project and compare the most likely outcomes of various management strategies on the horses (and other animals) yet unborn in this large, complex area.

The volume of data available is comfortingly large and growing. From this, we can see two things clearly. The first is that habitat conditions and the dependant population fluctuations are highly variable, and second, that even at its 'worst', Adobe Town is good horse habitat. Along with that or in that

setting, wild horse management faces three fundamental challenges: 1) How many horses can this habitat support without sacrificing any other uses (ers)? 2) How should that number be maintained? And, 3) What is the effect of those actions (and by implication, lack of action) on the habitat? The first question was answered in 1994 and the conclusion reached was that an average population of 700 adults was that number. The third question is regularly addressed by monitoring activities and is outside the scope of this analysis. The second question is the focus of this analysis.

The rationale developed in 1994 that lead to the conclusion that 700 was the appropriate AML (and average population, over time) remains sound, though untested. Additional information collected on the Adobe Town population and changing practices and policies requires periodic re-examination of all the related practices that are employed to affect that average population level. This analysis is confined to the redefinition of the population range associated with the AML. The Upper Limit does not need to be re examined, as gathers would be scheduled every third year under current policy, regardless of the projected population level. However, the Lower Limit is more critical to management decisions implemented at removal time. It is used to fine tune the selective removal criteria that will be employed and to identify the post gather target population which is central to the orderly accomplishment of all the various objectives for the population management action.

The following spreadsheets present the basis for the determination of the number and kinds of horses to be removed or left on the range to insure that a thriving ecological balance is maintained.

They portray:
1: The age/sex distribution of one sample population in the area
2: The most likely population and age/sex distribution that will be encountered
3: The Target Age/Sex distribution to be achieved by the proposed removal
4: A sample of the projection of the Age/Sex distributions and total populations that could be expected to result from the proposed removal

ONE DATA SOURCE FOR DEMOGRAPHIC ANALYSIS

AGE/SEX DISTRIBUTION			**OF I80S IN 1999**		
AGE	NUMBER FEMALES	NUMBER MALES	NUMBER OF ANIMALS	PER CENT FOR AGE	CUMULATIVE PER CENT
0	80	84	164	24.5%	24.5%
1	42	54	96	14.3%	38.8%
2	44	56	100	14.9%	53.7%
3	27	14	41	6.1%	59.9%
4	29	15	44	6.6%	66.4%
5	5	7	12	1.8%	68.2%
6	21	6	27	4.0%	72.2%
7	15	13	28	4.2%	76.4%
8	15	16	31	4.6%	81.0%
9	3	15	18	2.7%	83.7%
10	10	11	21	3.1%	86.9%
11	4	20	24	3.6%	90.4%
12	14	12	26	3.9%	94.3%
13	3	6	9	1.3%	95.7%
14	3	4	7	1.0%	96.7%
15	6	4	10	1.5%	98.2%
16	1	2	3	0.4%	98.7%
17		1	1	0.1%	98.8%
18		2	2	0.3%	99.1%
19			0	0.0%	99.1%
20	1	5	6	0.9%	100.0%
21			0	0.0%	100.0%
22			0	0.0%	100.0%
23			0	0.0%	100.0%
24			0	0.0%	100.0%
25			0	0.0%	100.0%
26			0	0.0%	100.0%
27			0	0.0%	100.0%
28			0	0.0%	100.0%
29			0	0.0%	100.0%
30			0	0.0%	100.0%
TOTALS	323	347	670		
HMA	I80S			**1999**	
SR @ BIRTH					
(% FEMALE)	48.8%		NOTES		
AV AGE	4.4		Actual population from a gather in I80 South		
% FEMALE	48.2%				
% <6	68.2%				
% 6-9	15.5%				
% 10 +	16.3%				

THIS REPRESENTS WHAT THE TOTAL POPULATION IS PROJECTED TO LOOK LIKE IMMEDIATELY PRIOR TO THE GATHER

AGE/SEX DISTRIBUTION					
	NUMBER	NUMBER	NUMBER	PER CENT	CUMULATIVE
AGE	FEMALES	MALES	OF ANIMALS	FOR AGE	PER CENT
0	122	117	239	20.1%	20.1%
1	95	92	187	15.7%	35.8%
2	66	64	130	10.9%	46.7%
3	26	37	63	5.3%	52.0%
4	78	55	133	11.2%	63.2%
5	45	31	76	6.4%	69.6%
6	36	18	54	4.5%	74.1%
7	14	19	33	2.8%	76.9%
8	26	19	45	3.8%	80.7%
9	25	17	42	3.5%	84.2%
10	15	16	31	2.6%	86.8%
11	11	18	29	2.4%	89.2%
12			0	0.0%	89.2%
13			0	0.0%	89.2%
14			0	0.0%	89.2%
15			0	0.0%	89.2%
16	20	61	81	6.8%	96.1%
17			0	0.0%	96.1%
18			0	0.0%	96.1%
19	18	29	47	3.9%	100.0%
20			0	0.0%	100.0%
21			0	0.0%	100.0%
22			0	0.0%	100.0%
23			0	0.0%	100.0%
24			0	0.0%	100.0%
25			0	0.0%	100.0%
26			0	0.0%	100.0%
27			0	0.0%	100.0%
28			0	0.0%	100.0%
29			0	0.0%	100.0%
30			0	0.0%	100.0%
TOTALS	597	593	1190		

HMA	ADOBE TOWN	**YEAR**	
SR @ BIRTH			
(% FEM	51%	# FEM 3-14	276
AV AGE	5.0	#>0	951
% FEMA	50%	% FEM 3-14	23%
% <6	70%	NOTES	
% 6-9	15%		
% 10 +	16%	Likely 2005 pre-gather population	

Need better Title for this table so people know what it is quickly.

AGE/SEX DISTRIBUTION			Adobe Town 2005 Post Gather Target		
	NUMBER	NUMBER	NUMBER	PER CENT	CUMULATIVE
AGE	FEMALES	MALES	OF ANIMALS	FOR AGE	PER CENT
0	67	61	128	17.6%	17.6%
1	50	45	95	13.1%	30.7%
2	38	33	71	9.8%	40.4%
3	33	30	63	8.7%	49.1%
4	28	29	57	7.8%	56.9%
5	25	26	51	7.0%	64.0%
6	20	25	45	6.2%	70.2%
7	18	22	40	5.5%	75.7%
8	16	20	36	5.0%	80.6%
9	13	20	33	4.5%	85.1%
10	10	20	30	4.1%	89.3%
11	9	14	23	3.2%	92.4%
12	8	12	20	2.8%	95.2%
13	6	9	15	2.1%	97.2%
14	4	7	11	1.5%	98.8%
15	3	6	9	1.2%	100.0%
16			0	0.0%	100.0%
17			0	0.0%	100.0%
18			0	0.0%	100.0%
19			0	0.0%	100.0%
20			0	0.0%	100.0%
21			0	0.0%	100.0%
22			0	0.0%	100.0%
23			0	0.0%	100.0%
24			0	0.0%	100.0%
25			0	0.0%	100.0%
26			0	0.0%	100.0%
27			0	0.0%	100.0%
28			0	0.0%	100.0%
29			0	0.0%	100.0%
30			0	0.0%	100.0%
TOTALS	348	379	727		
HMA			**YEAR**		
SR @ BIRTH					
(% FEMALE)	52%	# FEM 3-14	190		
AV AGE	4.7	#>0	599		
% FEMALE	48%	% FEM 3-14	26%		
% <6	64%	NOTES			
% 6-9	21%				
% 10 +	15%	Post Gather Target for A T HMA for 2005			

POST GATHER TARGET AGE/SEX DISTRIBUTION AND COMPARATIVE POPULATION PROJECTIONS

AGE	NUMBER FEMALES	NUMBER MALES	NUMBER ANIMALS	% FOR AGE	CUM %	EST Y + 1	W/ IC	EST Y + 2	W/ IC	EST Y+3	W/ IC
0	67	61	128	17.6%	17.6%	164	164	179	106	196	120
1	50	45	95	13.1%	30.7%	96	96	123	123	134	79
2	38	33	71	9.8%	40.4%	81	81	82	82	104	104
3	33	30	63	8.7%	49.1%	68	68	78	78	78	78
4	28	29	57	7.8%	56.9%	60	60	65	65	74	74
5	25	26	51	7.0%	64.0%	55	55	58	58	63	63
6	20	25	45	6.2%	70.2%	49	49	53	53	56	56
7	18	22	40	5.5%	75.7%	43	43	47	47	50	50
8	16	20	36	5.0%	80.6%	36	36	39	39	42	42
9	13	20	33	4.5%	85.1%	32	32	32	32	35	35
10	10	20	30	4.1%	89.3%	30	30	29	29	29	29
11	9	14	23	3.2%	92.4%	25	25	24	24	24	24
12	8	12	20	2.8%	95.2%	19	19	20	20	20	20
13	6	9	15	2.1%	97.2%	16	16	15	15	17	17
14	4	7	11	1.5%	98.8%	12	12	13	13	13	13
15	3	6	9	1.2%	100.0%	9	9	10	10	11	11
16			0	0.0%	100.0%	5	5	5	5	6	6
17			0	0.0%	100.0%	0	0	3	3	3	3
18			0	0.0%	100.0%	0	0	0	0	2	2
19			0	0.0%	100.0%	0	0	0	0	0	0
20			0	0.0%	100.0%	0	0	0	0	0	0
21			0	0.0%	100.0%	0	0	0	0	0	0
22			0	0.0%	100.0%	0	0	0	0	0	0
23			0	0.0%	100.0%	0	0	0	0	0	0
24			0	0.0%	100.0%	0	0	0	0	0	0
25			0	0.0%	100.0%	0	0	0	0	0	0
26			0	0.0%	100.0%	0	0	0	0	0	0
27			0	0.0%	100.0%	0	0	0	0	0	0
28			0	0.0%	100.0%	0	0	0	0	0	0
29			0	0.0%	100.0%	0	0	0	0	0	0
30			0	0.0%	100.0%	0	0	0	0	0	0
TOTALS	348	379	727			800	800	876	803	957	827
				GROWTH RATES		10%	10%	9%	0%	9%	3%
HMA/YR				Adult Populations		637	637	697	697	762	707

					AVERAGE SURVIVAL RATES						
SR @ BIRTH					AGE						
% FEM	52%	# 3-14	190		CLASS		Average W/ out FC			699	
					0	0.750					
AV AGE	4.7	#>0	599		1	0.850	Average W/ FC			680	
					2	0.960					
% FEM	48%	% 3-14	26%		3	0.960					
					4	0.960					
% <6	64%	NOTES			5	0.960					
					6	0.960					
% 6-9	21%	Assumes treatment of 1/2 released mares and above average survival rates			7	0.900					
					8	0.900					
% 10 +	15%				9	0.900					
FOALING rate w/out IC. Enter .000	26%	25.70%	Y+1 FR w/ IC (.000)		10 -14	0.820					
		15.20%	Y+2 FR w/ IC (.000)		15 -19	0.580					
		17.00%	Y+3 FR w/ IC (.000)		20+	0.580					

INSTRUCTIONS FOR USE: WHBIS is best source for developing a present Distribution. A recent gather can be used and adjusted as needed. The distribution used here should be the **POST GATHER TARGET (what do you want left)**. This plus removals should equal the present distribution. FR can be either calculated from % foals above or supplemented by Field observations. Foaling Rates with fertility control (FR w/ IC) are calculated based on the ({[100-expected efecacy] X %mares treated}X FR for herd) +(% mares not treated X FR for herd).

APPENDIX 2 FERTILITY CONTROL

The fertility control vaccine, PZP (Porcine Zona Pellucida) is available to BLM under a research protocol only and administered under a use permit (INAD) held by the Humane Society of the US (HSUS).

BLM applications of fertility control are divided into Individual-based and Population-based trials. These trials are designed to evaluate the 1 and 2 year vaccines. Individual-based trials involve intensive field monitoring efforts both pre and post treatment of mares.

The following describes the practices employed in the McCullough Peaks HMA and would be the guide for development of specific methods for the Adobe Town HMA if fertility control were employed.

SUMMARY OF FERTILITY CONTROL METHODOLOGY
Specific to McCullough Peaks HMA

1. PROPOSED FERTILITY CONTROL AGENT:

At this time, all published research indicates that the Immunocontraceptive Porcine Zona Pellucida (PZP) vaccine meets BLM requirements for an ideal contraceptive agent including criteria for safety and efficacy. When injected, PZP vaccine acts as an antigen and causes the mare's immune system to produce antibodies. These antibodies then bind to eggs in the mare's ovaries and effectively block sperm binding and fertilization. The vaccine is relatively inexpensive ($20 per dose), can be remotely administered in the field, and requires a single annual booster dose to confer infertility for one breeding season. Research has shown that contracepted mares clearly show improvements in body condition and may actually live longer. From a mare physiological standpoint, PZP contraception appears to be completely reversible, does not appear to cause out-of-season births, and has no ill effects on ovarian function if contraception is not repeated for more than 5 consecutive years on a given mare.

If mares are already pregnant, research has shown that PZP vaccine will not affect normal development of the fetus, hormone health of the mare or behavioral responses to stallions. Recent behavioral studies with the Assateague Island and Shackleford Banks wild horses have shown that contracepted and uncontracepted mares had virtually identical activity budgets, associated in a similar manner with the harem stallion and showed no increase in harem exchange behavior or change in their social status during the study. All mares affected by the proposed action would continue to be monitored for body condition and aspects of social behavior. The latter would be compared to existing baseline data and control studies.

2. VACCINE QUALITY and REMOTE-DELIVERY PROTOCOL:

All PZP vaccine used on mares within the McCullough Peaks HMA would be provided by the Science and Conservation Lab (SCC), Zoo Montana and subjected to quality control testing. All documented aspects of PZP vaccine provision, mare selection, vaccine remote-delivery, dart recovery, record keeping, veterinary emergencies, and media relations would be strictly adhered to by all participants in the proposed action. This protocol shall serve as the Standard Operating Procedures (SOPs) for the proposed management action. Implementation of the SOPs would take into consideration all safety concerns, individual animal health and condition, seasonal distribution of the horses, as well as local weather and environmental considerations.

II. PARTICIPANTS

Project Manager:	Patricia L. Hatle, Wild Horse and Burro Specialist, CYFO, BLM
Horse Identification:	Field-trained and experienced Susan Hahn, Seasonal Employee, USGS, BRD Adam Inbody, Seasonal Volunteer, USGS, BRD Phyllis Preator, Seasonal Employee, USGS, BRD
Vaccine Preparation:	Robin Lyda, The Science and Conservation Center, Zoo Montana, 2100 South Shiloh Road, Billings, MT 59106
Designated Vaccine Handlers	Jay F. Kirkpatrick, Kim Frank and Robin Lyda, The Science and Conservation Center, Zoo Montana, Billings, Mt. Dr. John Turner Medical College of Toledo, Ohio Ron Hall, NPO, BLM
Research Oversight:	Linda Coates-Markle, BiFO, BLM Francis Singer, USGS, BRD Jason Ransom, USGS, BRD Dr. Al Kane, APHIS
Contract Veterinarian:	Lyle Bischoff, DVM, Powell Veterinary Service 522 S. Division, Powell, WY 82435

3. PERMISSION and CRITERIA for VACCINE USE:

The Humane Society of the United States (HSUS) has made the PZP vaccine available to the BLM under the Investigational New Animal Drug exemption (INAD #8857) filed with the federal Food and Drug Administration (FDA). As a condition of using the PZP vaccine, the HSUS expects the BLM to follow the Draft Criteria for Immunocontraceptive Use in Wild Horse Herds recommended by the Wild Horse and Burro National Advisory Board in August 1999.

4. AUTHORITY for PROPOSED ACTION:

The Wild Free-Roaming Horse and Burro Act of 1971 (Public Law 92-195) as amended, Section 3(b) (1), states that the Secretaries of the Interior and Agriculture shall "determine appropriate management levels of wild free-roaming horses and burros on areas of public lands; and determine whether appropriate management levels should be achieved by the removal or destruction of excess animals, or other options (such as sterilization or natural controls on population levels)." The authority may also be found at Title 43 of the Code of Federal Regulations (CFR-4700, Protection, Management and Control of Wild and Free-Roaming Horses and Burros).

With implementation of the proposed action, selected wild horse mares would be contracepted under a humane approach for a one-year period in accord with 43 CFR 4700.0-6 which identifies that [...wild horses]" shall be managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat.", and with Public Law (PL) 92-195 Sec 3 (b) (2) which identifies the need to maintain appropriate management levels of wild horses within their herd management area (HMA).

The BLM has developed a long-term research strategy for the Wild Horse and Burro Program. A final draft of the Strategic Research Plan was reviewed and supported by the National Wild Horse and Burro Advisory Board in August 2002, and the BLM Director's Science Advisory Board in January 2003. Within this

strategy, continuing research on fertility control is identified as a high priority and directions are provided in the National Wild Horse Fertility Control Field Trial Plan (FCFTP) (Singer and Coates-Markle, 2002). The implementation of additional fertility control field trials, under this research protocol, began in the summer 2002.

The proposed action would adhere to all guidance and research protocol set by the oversight documents. The intent of this research is to answer those remaining questions and concerns about fertility control using PZP that are best answered on free-ranging populations in the wild. The plan details protocols for injections, experimental design, and research methods that will be employed to evaluate effects of PZP on free-ranging animals. The research focuses on the effects of immunocontraceptive treatment on seasonality of foaling, any possible compensatory reproduction of mares post-treatment, duration of estrus cycles, population growth rates, and harem behavior. The behavior and fertility of the treated mares will be studied both during the treatment phase, and for a minimum of two years post-treatment to assure that a return to normal fertility occurs.

5. PROCEDURES

A. Vaccine preparation and shipment: Vaccine would be prepared under the supervision of Robin Lyda, Science and Conservation Center (SCC), Billings, MT and transported to the field site in Wyoming on dry ice, under Food and Drug Administration authority (Investigational New Animal Drug exemption No.8857 (G0002 & 0003). FDA form "Notice of Drug Shipment" would be completed for each shipment of the PZP vaccine and filed in the offices of the Science and Conservation Center at Zoo Montana, Billings, MT.

B. Selection of subject animal: Animals to be treated will be identified by BLM and USGS-BRD field personnel. Approximately 40 released mares will be treated within the herd. The number and identity of animals would be selected on the basis of age and social structure as per the Environmental Assessment (EA) Alternative 1: Proposed Action. All animals selected for treatment would be female and at least one year old.

C. Delivery of contraceptive vaccine:

Target mares released back to the HMA would be treated with an immuno-contraceptive vaccine, porcine zona pellucidae (PZP), administered by trained BLM personnel. The inoculation of mares would consist of a liquid dose of PZP vaccine and a time released portion of the drug in the form of pellets. The approach incorporates the PZP into a non-toxic, biodegradable material which can be formed into small pellets. The pellets are injected with the liquid and are designed to release PZP at several points in time much the way time-release cold pills work.

Delivery of the vaccine would be by means of jab stick syringe or dart with a 12 gauge needle or 1.5" barbless needle respectfully, 0.5 cc of the PZP vaccine would be emulsified with 0.5 cc of adjuvant (a compound that stimulates antibody production) and loaded into the delivery system. The pellets would be placed in the barrel of the syringe or dart needle and would be injected with the liquid. Upon impact the liquid in the chamber would be propelled into the muscle along with the pellets. This formulation would be delivered as an intramuscular injection by a jab stick syringe, while mares are restrained in the working chute. This delivery method has been used previously to deliver immuno-contraceptive vaccine with acceptable results. Administration of this two-year vaccine to mares in late summer (before November) would be expected to be 94% effective the first year, 82% the second year, and 68% the third year.

D. Monitoring:

The intent of the monitoring would be to assess vaccine effects on mare estrus,

foaling, body condition, behavior, fitness and survival. The use of the immunocontraceptive would adhere to well-developed research protocol, and is responsible to restrictions and requirements placed on continuing research efforts with the PZP vaccine as set by the Humane Society of the United States (HSUS), the Food and Drug Administration (FDA), Animal and Plant Health Inspection Service (APHIS) and the National Wild Horse and Burro Advisory Board.

The field trials will provide either three or four years of contraception to treated mares. Following three or four years of contraception, treated mares will be allowed to return to normal reproductive function. Their reproductive rates, behavior, and harem social structure will be observed for a minimum of two years post-treatment, to assure that normal fertility is resumed. The treated mares will be individually marked and/or be individually recognizable without error. The treated mares must be left on the range for the duration of the research, and are not likely to be treated again.

In May 2003, United States Geological Survey – Biological Research Division (USGS-BRD) biological technicians under the supervision of BRD research biologists began the field trial studies to assess effects on mare estrus, foaling, body condition, behavior, fitness and survival. Individual behavior, reproduction, survival, and any health abnormalities will be closely monitored in the individually recognized horses.

Mares in 7 or 8 harems were selected for intensive studies during the summer of 2003. Pretreatment data on harem dynamics, population dynamics, and behavior was collected in 2003 and will have been gathered for two consecutive years prior to contraception. Treated mares will be compared to untreated mares (controls) in the same harems. Multivariate models will include age of mare, year, weather, density-dependent relations, and compensatory responses. If possible, harems with no treated mares will also be observed.

As of August 1, 2004 USGS-BRD field technicians have identified and entered into WHIMS a total of 498 individuals as part of the field trial study. In conformance with the Fertility Control Field Trial Plan for Individual-Based Study Herds, individuals would be initially recognized from natural markings using a computerized photo ID system call WHIMS (Wild Horse Information Management System, USGS_BRD, Ron Osborne, Final report to BLM 1999). Records and any photos will be maintained at the field office and a copy of the completed PZP treatment form will be sent to the National Program Office (NPO), Reno NV and the WH&B Research Coordinator and BRD-USGS.

A tracking system will be maintained by NPO detailing the quantity of PZP issued, the quantity used, the disposition of any unused PZP, and the number of treated mares by HMA, FO and State along with the freeze-mark applied by HMA. In the vast majority of cases, the released mares will never be gathered sooner than the mandatory three- year holding period. In those rare instances when, due to unforeseen circumstances, a treated mare(s) are removed from an HMA they will be maintain either in a BLM facility or a contracted Long Term Holding Facility until the expiration of the three- year holding period. In the event that it is necessary to remove treated mares, their removal and disposition will be coordinated through NPO. After expiration of the three-year holding period, the animal may be placed in the adoption system.