FARMINGTON FIELD OFFICE

- DRAFT -

PRONGHORN ANTELOPE HABITAT MANAGEMENT PLAN

Prepared By:
United States Department of the Interior
Bureau of Land Management
Farmington, NM

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ABSTRACT

The Farmington Field Office area provides habitat for 3 small individual populations of antelope. Habitat deficiencies exist within each of these population's use areas; coupled with climatic fluctuations, predators, and encroaching human development these populations are struggling to survive. This plan identifies habitat improvement measures for 2 of the 3 populations with the most potential to expand and eventually become self-sufficient. The proposed Pronghorn Antelope Habitat Management Plan will focus on several key areas, included are:

1- **Water development.**
2- **Increase herbaceous forage production, in particular, forbs and cool season grasses.**
3- **Minimize new human perturbations associated with natural gas development.**
4- **Possibly implement short term predator control of coyotes.**
5- **Restrict (as identified in the Farmington RMP/FEIS) drilling and construction activity during the antelope fawning period of May 1 through July 15 each year.**

The antelope population (Twin Mounds) not targeted for focused improvement measures may still receive some habitat improvements as time and money allow. However, the Angel Peak and Ensenada Mesa areas will be the priority.

PLAN REVIEW/APPROVAL

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I. INTRODUCTION

Reasons for preparation: Historically, the sage/grass habitat types within the Farmington Field Office area have supported self-sustaining populations of Pronghorn antelope (*Antilocapra americana*). In the late 1950's and early 60s, Pronghorns were a common sight on public lands within a 30-40 mile radius of Farmington. Limited hunting was authorized by the New Mexico Department of Game and Fish up until 1974. However, around this time antelope numbers began to decline in the San Juan Basin. No one cause has been identified as responsible for the decline. In reality, the decline of the antelope population is probably due to several variables, included are:

1. Encroachment of people on the antelope's habitat, in particular, the Twin Mounds and Crouch Mesa areas. This encroachment resulted in poaching and the degradation of some key habitats.

2. Possible predation by coyotes.

3. Climatic fluctuations. Periodic drought has significant, negative impacts on antelope reproduction. In the absence of adequate spring moisture to grow abundant forbs and cool season grasses, the antelope's diet is often deficient in protein. This deficiency affects the quantity and quality of milk production by lactating does and in turn the survival of fawns.

4. Overall habitat quality may be lacking, e.g., forbs, water sources, roads, etc.

The Farmington Field Office area has three geographically separated Pronghorn antelope populations. Population estimates were determined by repeated field observations and, in some cases, helicopter surveys. By geographic reference (see Appendix A, maps 1, 2, 5), they are: Ensenada Mesa - approximately 60 animals; Angel Peak - approximately 17 animals; and the Twin Mounds population estimated to be about 9 to10 animals with occasional fluctuations to about 35 animals. These fluctuations are attributable to migration from the Ute Mountain Reservation. Recruitment into these populations has been erratic. These populations have held relatively steady for the past 2 to 3 years but experienced sharp declines prior to that. For example, in 1986-87 the Angel Peak population was at 35 animals, it is now less than half that number. The Ensenada Mesa population, was re-established through releases conducted in1989 and 1990 totaling 127 antelope. Intensive field observations from December 2001 through December 2002 found no more than 58 antelope at any one time on Ensenada Mesa. It would appear that without some sort of human intervention, none of these populations possess the capability to sustain itself over the long term. The habitat in the Twin Mounds area has been significantly altered due to its proximity to large human population centers, a coal fired electrical generating plant, an open pit coal mine, law enforcement training facility, and competition with domestic sheep for forage. Because of these factors, it is assumed that the Twin Mounds habitat possesses little potential to successfully support the existing antelope population to where it could be self-sustaining. Therefore, this plan will only address the future management of the Angel Peak and Ensenada Mesa herds.

II. ECOSYSTEM DESCRIPTION

Vegetation: The preferred vegetation type used by the antelope in the San Juan Basin is primarily Wyoming big sagebrush (*Artemisia tridentata wyomingensis*) with varying understory grasses and forbs. Typical herbaceous species include grasses such as: blue gram (*Bouteloua gracilus*), galleta (*Pleuraphis jamesii*), six-weeks fescue (*Vulpia octoflora*), cheatgrass (*Bromus tectorum* L.), squirreltail (*Elymus elymoides*), Indian ricegrass (*Achnatherum hymenoides*) and western wheatgrass (*Pascopyrum smithii*). Common forbs are

filaree (*Erodium cicutarium*), woolly plantain (*Patagonica spp*.), scarlet globemallow (*Sphaeralcea coccinea*), mustard species (*Cruciferae spp*.), Indian paintbrush (*Castilleja spp*.), and penstemon (*Penstemon spp.*). The Wyoming sage habitat type is typically interspersed with stringers or islands of pinyon pine (*Pinus edulis*) and Utah juniper (*Juniperus osteosperma*) situated on a rolling hills/mesa landscape.

A1. Angel Peak Habitat: There are approximately 51,093 acres of public lands (USDI, 2002) that are occupied or potentially suitable antelope habitat in the Angel Peak area (see Appendix A, Map 2). Approximately 21,440 acres or 42 percent of this area has been treated with the chemical herbicide tebuthiuron (see Appendix A, Map 3). The intent of this action was to increase the production of herbaceous plant species, primarily grasses. This treatment has been very successful in achieving this goal. Benefits in the form of increased forage for livestock and vegetative ground cover that enhances watershed health have resulted. Field studies conducted by Farmington Field Office personnel have found that antelope prefer these treatment areas during most of the year. Exceptions to this are during the fawning period and at times during the winter. A total of 80 observations were made between December 2000 through December 2001. A total of 391 antelope were observed, of these 372 or 95% were located in tebuthiuron treatments.

Vegetation cover studies were conducted during the summer of 2001. A summary of these data by antelope use area is presented in Table 1.

Table 1. Habitat attributes by type of antelope use in Angel Peak area.

	Percent Cover						
Type Use Area	Bare Ground	Litter	Grass	Forbs	Rock	Sage (Other shrubs)	Total Cover
Fawning activity observed	39	11	17	1	1	31 (T)	100%
Sage *	37	11	20	0	0	28 (4)	100%
Common** Yearlong	22	20	50	3	0	5 (T)	100%

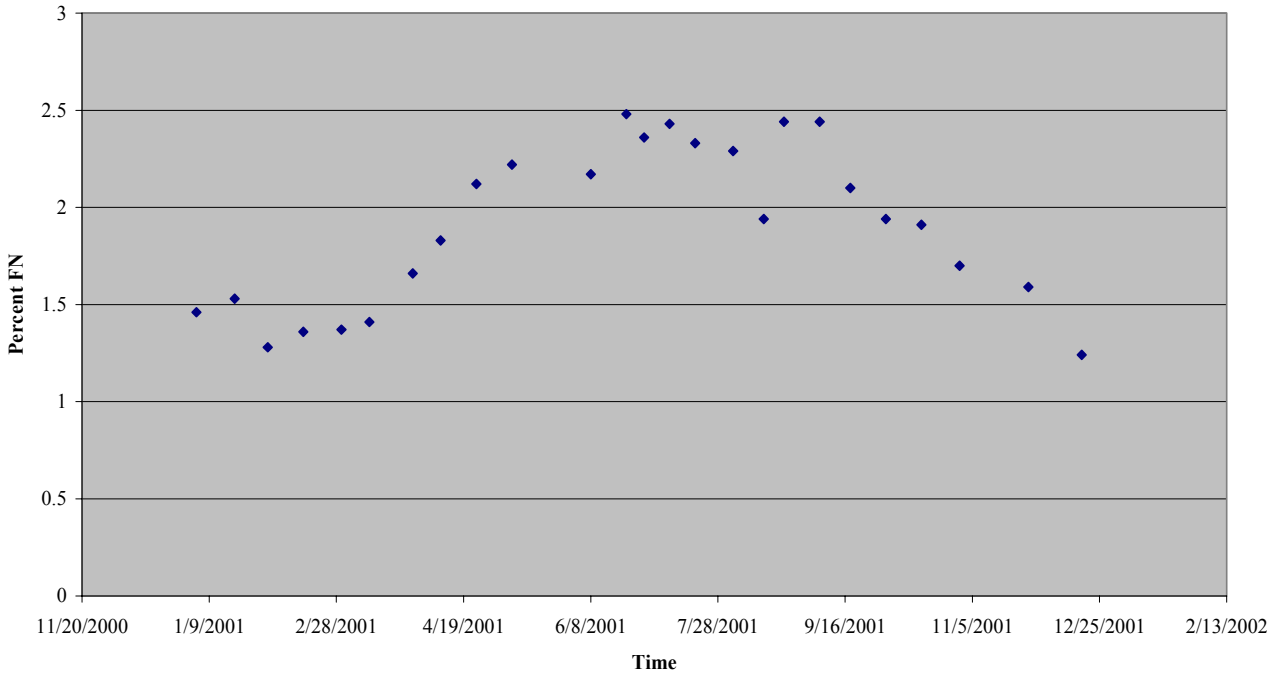
*Sage - representative of the untreated sagebrush habitat adjacent to the treatment areas. Antelope observations in these areas are relatively uncommon outside of the fawning period (May-June) or during the winter (Dec. - March) when snow accumulations are >3-4 inches. The data shown were collected at sites where fawning activity was not observed.

** Common Yearlong – These are primarily sagebrush areas that have been treated with the herbicide tebuthiuron.

Antelope droppings were collected on alternate weeks during the year-long study period referenced above. The intent of this effort was to determine the composition of the antelope's diet, the fecal nitrogen content, and the amount of diaminopimelic acid (DAPA) in the fecal matter. Collectively, these attributes provide insight into the overall nutritional quality of the antelope's diet. The composition identifies the preferred plant species, the fecal nitrogen (FN) is the protein remaining in the feces, and the DAPA is a component of the cell walls of rumen bacteria. FN and DAPA were found by Kie and Burton (1984) to be the most commonly used indices of diet quality.

Protein is considered to be the most important nutrient for animals (Nelson and Leege, 1982). It is essential to maintaining the antelope's basic metabolic function throughout the winter and in turn the initial health of newborn fawns. Neonate survival is also positively correlated with does whose diets are relatively high in crude protein (CP). Specific data concerning the protein needs of antelope is not abundant in the literature. However, using another ruminant such as mule deer (*Odocoileus hemionus*), Verme and Ullrey (1972) found that dietary crude protein levels of 16-17% were necessary for lactation. The prenatal diet is equally important. Verme (1962) found that pregnancy in deer increases the demand for protein and that a low quality diet in the last third of gestation contributed to greater stillborn fawns, but that the greatest loss of recruitment occurred within the first 48 hours following parturition. The total FN and CP values for the Angel Peak antelope population are depicted in Graphs 1 and 2 below. Crude protein values were calculated based upon the FN amounts (e.g., N content X 6.25), (Robbins, 1983). A review of the literature for information concerning the minimum amount of protein that antelope require revealed little useful data. However, for comparison, French and others (1955) suggested that dietary levels of protein for white-tailed deer (*Odocoileus virginianus*) should be 13-16 percent for growth and 6 to 7 percent for maintenance. Comparing these numbers to the Angel Peak data suggests that dietary protein content is sufficient for growth from mid April through mid September but then drops below the required level for most of the fall and winter. Most likely, this apparent dietary deficiency is not the primary cause of the poor recruitment and declining numbers of antelope in the Angel Peak area. However, if viewed from a cumulative perspective, it could have significance as one of several contributing factors. The fecal analysis data also revealed the composition of the antelopes' diet. As expected, the antelope were heavily dependent

Graph 1 - FN Content Angel Peak Antelope

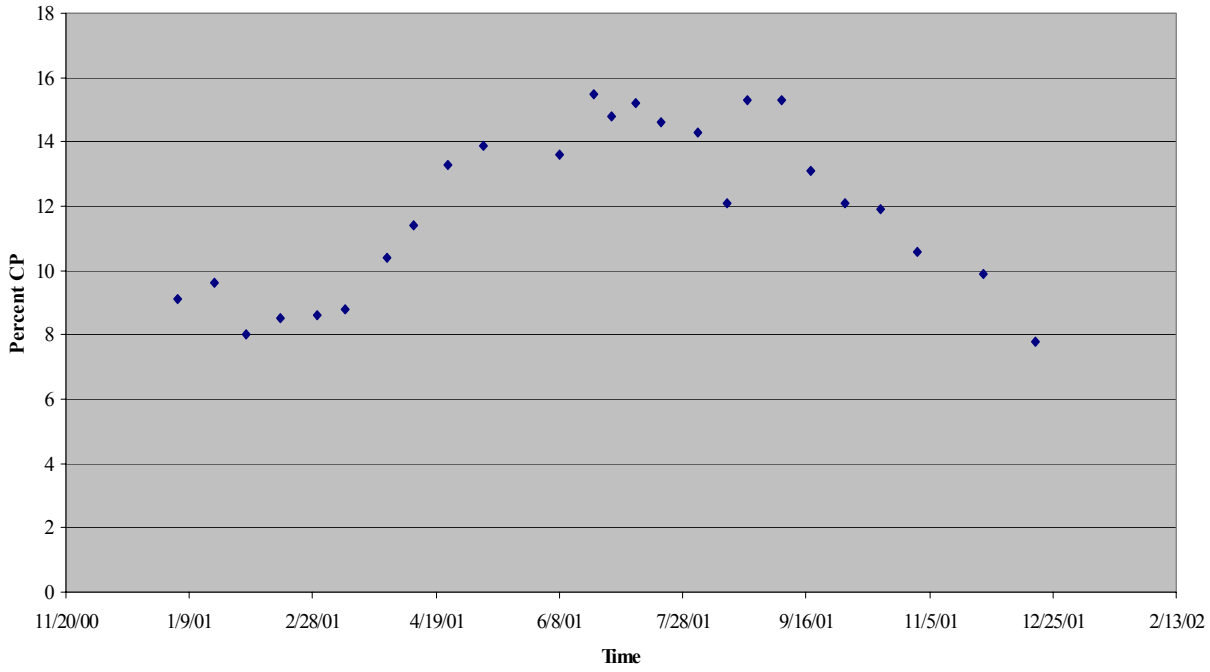


on Wyoming big sagebrush for much of their sustenance. During the period September 16 through April 19, Wyoming big sagebrush constituted 82.9 percent of the Angel Peak antelopes' diet. During the spring/summer (April 20 - September 15) use of Wyoming big sagebrush by the Angel Peak antelope declined to 50.3 percent. On a yearlong basis Wyoming big sagebrush comprised 66.4 percent of the Angel Peak antelopes' diet. These data indicate (as do numerous references in the literature; Yoakum (1980),

Stoddart et al. (1975), Burt and Grossenheider (1980) that Wyoming big sagebrush is a very important staple in the antelope's diet throughout the year.

A2. Habitat Suitability Criteria Rating - A comparison of the habitat suitability for antelope between the Tebuthiuron treated and un-treated Wyoming big sage areas in the Angel Peak area was done on the basis of a table provided in BLM Technical Note 347 - Habitat Management Guides for the American Pronghorn Antelope, page 28. This table provides a range of qualitative and quantitative attributes as they apply to water and vegetation. A comparison of the data collected in the field and the criteria provided in the table resulted in a score of 34 (low-fair) for the un-treated Wyoming big sage habitat and 58 (high-fair to low-good) for the Tebuthiuron treated area. The table provided a range of values from 5 to 105 with poor habitat being 5-25, fair habitat 35-55, and good habitat 65-105. The numerical score obtained in this rating process suggests that the Tebuthiuron treatment would be the most desirable habitat for antelope. In reality, however, the antelope will likely require a combination of both areas as the amount of sagebrush cover in

Graph 2 - CP Content Angel Peak Antelope



much of the treatment areas (5%) is significantly less than what was found in the areas preferred for fawning (31%).

A3. Water Availability - Within the Angel Peak area identified as potential antelope habitat there are 3 reliable water sources (see map 2). The majority of the waters in this area are dirt tanks, and due to their ephemeral nature, cannot be relied upon to consistently provide antelope water, especially during drought. Yoakum (1980) defined an individual antelope's daily water requirements as varying from .25 to 1.0 gallons year around. Ideally, waters should be distributed every 1- 4 miles (Yoakum, 1980). Reliable water sources such as wells provide coverage to approximately 42 percent of the potential antelope area when assessed on a 2 mile radius. If all of the dirt tanks in the Angel Peak antelope area are included, the available water coverage increases to 100 percent.

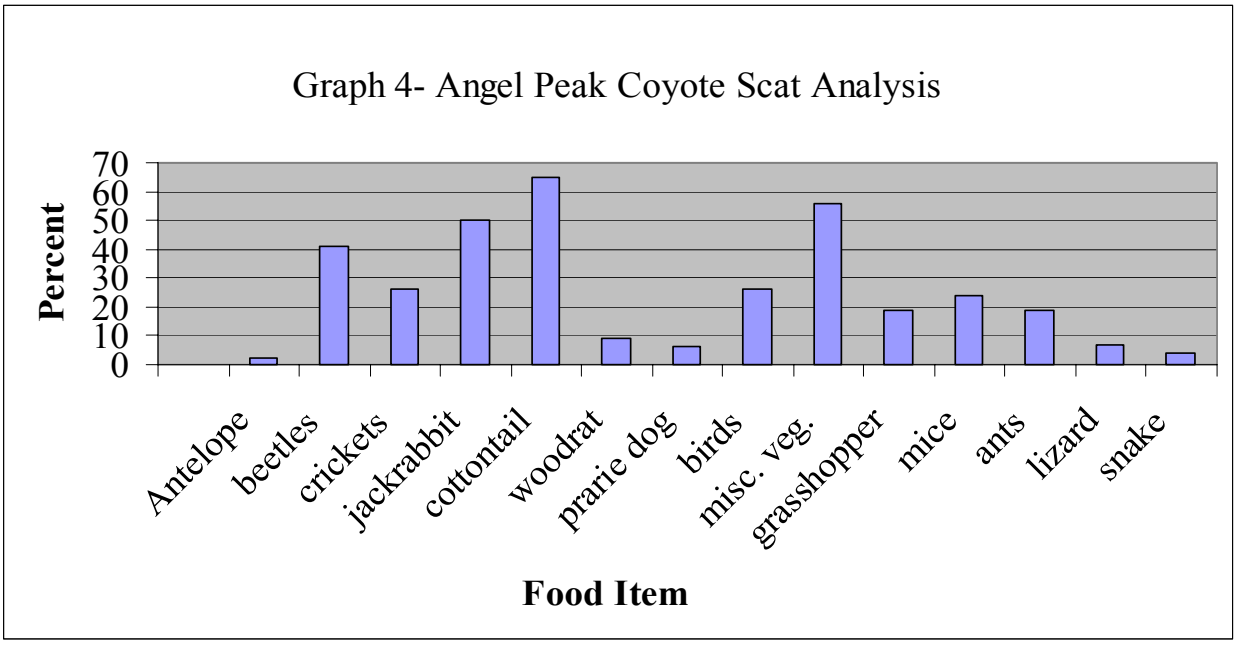
A4. Fences - There are approximately 8 miles of woven wire fence in the Angel Peak antelope area.

Antelope are generally incapable of negotiating woven wire fence. These fences were constructed many years ago when sheep were run in the area. In recent years, much of this wire, mostly in the key antelope use area has been modified to allow for antelope passage. Over time it is hoped that all of this wire can be removed and replaced with a combination of barbed and smooth wires, properly spaced for safe antelope passage.

A5. Roads/Gas Wells - There are 326 natural gas wells and 336 miles of secondary road that exist primarily to facilitate operation of the gas wells (see Appendix A, map 4). These wells and roads represent a significant disturbance and fragmentation of the antelope's habitat. On average there are 4.2 miles of road and 4.1 wells per square mile in the Angel Peak antelope area. The human disturbance caused by vehicles traveling these roads may displace antelope does during fawning if the volume of traffic becomes excessive or people try to approach the antelope.

A6. Livestock Grazing - The Angel Peak antelope habitat area encompasses portions of the following livestock grazing allotments: Angel Peak - 5072, 44 Allotment - 5074, Huerfano - 5077, Jacques Canyon Community - 5070, Huerfanito Peak - 5075, Blanco Navajo Community -5078, Dufer's Point – 5076 (see Appendix A, map 8). The class of livestock on all of these allotments, except one, is primarily cattle. Horses used to work livestock on the allotment are also sometimes authorized and sheep graze a small portion of the potential antelope use area allotment where allotment #5078 overlaps it. Less than 5 percent of the antelope area is occupied by sheep use. Yoakum (1980) reported that domestic sheep consume more forbs and browse than cattle but not as much as antelope and that competition between all classes of domestic livestock and antelope should not be significant if all classes of forage were adequately represented. Livestock use may occur year around on some allotments in this area. The dietary overlap between antelope and cattle is not significant (Wagner, 1978). The animal unit month (AUM) equivalents reported in the literature for antelope to cattle ranges from 5:1 to 105:1 (O'Gara and Yoakum, 1992). Obviously, this range of values suggests there is not a consensus among scientists on this issue. In general, however, it is assumed that antelope, which feed primarily on shrubs and forbs, offer little competition to cattle which are primarily grass eating animals. Interspecific competition for space may occur at other critical times. McNay and O'Gara (1982) reported displacement of parturient does by livestock. Better water distribution or timing of cattle use in pastures with key fawning areas may be solutions to this concern if it were to occur.

A7. Predators - The impact of coyote predation on the Angel Peak antelope were assessed in 1995. Coyote scat was collected weekly by BLM personnel from April 25, 1995 through August 2, 1995. An analysis of the 54 scat samples revealed that coyotes prey primarily on small mammals (blacktail jackrabbits and desert cottontails –*Sylvilagus auduboni*), insects (mostly beetles- *Order: Coleoptera*, ants *Family: Formicidae*, and grasshoppers – *Order: Orthoptera*), and vegetation (juniper berries and grass). Antelope were detected in only 1 of 54 samples. These data (see Graph 4) tend to suggest that coyote predation is not a significant factor in the lack of recruitment in the Angel Peak antelope population. However, the removal of coyotes from the Ensenada Mesa antelope area appeared to have precipitated a significant increase in fawn survival during the spring of 2003.



The graph above should be interpreted as the percent of the individual coyote scat samples that contained a particular food item. For instance, the remains of blacktail jackrabbits (*Lepus californicus*) were found in 50 percent of all the coyote scat collected in the Angel Peak antelope area. Beetles were found in 41 percent, wood rats (*Neotoma spp.)* in 9 percent of the scat analyzed, and so on.

ENSENADA MESA HABITAT

B1. Ensenada Mesa Habitat - There are approximately 51,280 acres of public lands (USDI, 2002) that are occupied or are potentially suitable antelope habitat in the Ensenada Mesa area (see Appendix A, map 5). The landscape is typified by low hills and broad valleys. Wyoming big sagebrush with a perennial grass under-story of galleta, blue grama, western wheatgrass, squirreltail and Indian ricegrass dominates the herbaceous plant community. Forbs, while present in varying degrees, are not conspicuous on the landscape and are a relatively minor component of the plant community. Pockets and stringers of pinyon pine and Utah juniper are interspersed throughout the area. Large tracts of land where the sagebrush has been treated with the herbicide tebuthiuron are pervasive (see Appendix A, map 5). The total acreage treated is 12,851 acres or 25% of the area.

B2. Habitat Suitability Criteria rating – The criteria for defining antelope habitat suitability is described under A2 above. Using the vegetative data collected in the Ensenada Mesa antelope use area the habitat suitability rating for the tebuthiuron treated areas was 59 and for the untreated sage areas 48. These numbers indicate that the Ensenada Mesa area rates out as fair antelope habitat. Habitat attributes that could be altered to improve the rating would be the addition of reliable water sources and the seeding of forbs. It should also be recognized that applying tebuthiuron to all of the sagebrush in this area would not make the habitat more suitable as the antelope require a combination of the treated sage areas for spring/summer use and the untreated areas for fawning and some winter use. A combination of treated and untreated areas with a high degree of interspersion would be the most desirable.

B3. Water Availability – There are 6 reliable sources of water in the Ensenada Mesa antelope use area (see Appendix A, Map 6). The reliability of these water sources varies considerably from never being dry to

seldom having water. Map 6 provides a graphic depiction of the water's reliability to provide wildlife water.

B4. Fences - A stretch of about 1 mile of woven wire northwest of Lowry Camp was replaced with barbed and smooth wire about 10 years ago. There are also a number of 4 strand barbed wire fences on Ensenada Mesa. Past observations have found that antelope are able to negotiate these fences with no visible problems. However, there is a stretch of about 1 mile of fence that divides the Middle pasture and South Seeding pasture on the Ice Canyon Grazing Allotment #5114 that is comprised of 7 strands of barbed wire. A fence of this type largely precludes the passage of antelope. Antelope mortality associated with the fences has not been observed.

B5. Roads/Gas Wells - Much of this area is currently managed as critical big game winter habitat and is subject to a seasonal restriction on drilling of new gas wells and any significant construction activity. As of June 2003 there were approximately 1,139 gas wells and 264 miles of roads located in the Ensenada Mesa antelope use area. These numbers equate to 14.2 wells and 3.3 miles of roads per square mile (see Appendix A, map 7).

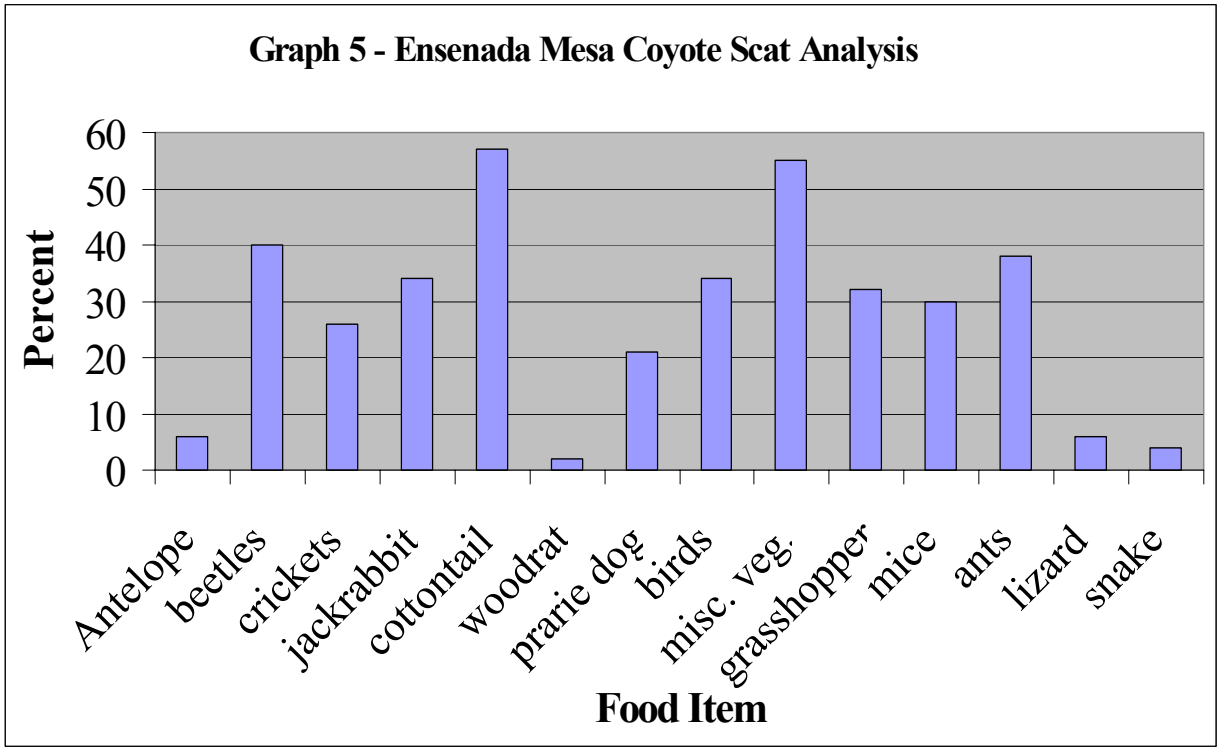
B6. Livestock Grazing – All or portions of several livestock grazing allotments are located with in the boundaries of the antelope use area. These allotments include: Ice Canyon - #5114, Canyon Largo - #5106, Ensenada Mesa #5115, Carter Mesa #5117, and a small portion of Dufers Point #5076. Note: the part of Dufers Point in the Ensenada antelope area is not within the area routinely used by the antelope. (See Appendix A, map 9). Cattle are the authorized class of livestock with grazing use occurring on a yearlong basis. (See discussion under A6 for information concerning competition and dietary overlap between antelope and cattle.)

B7. Predators - The results of the coyote diet study during the spring/summer of 1995 in the Ensenada Mesa antelope area are depicted in Graph 5. A total of 53 coyote scat were collected between April 24 and August 2. Antelope remains were found in slightly over 5 percent of the coyote scat analyzed. Small mammals and insects dominated the coyote's diet. These data would tend to suggest that coyote predation is not likely to be a significant factor in antelope reproduction. (See discussion under VI.b. below).

III. RELEVANT CONSTRAINTS

A. Regulatory Guidance: The preparation of this HMP is consistent with the guidance contained in the Federal Land Policy and Management Act (FLPMA) of 1976. Management emphasis for the Ensenada Mesa area is also called for in the Farmington Resource Management Plan (FRMP) as part of the management prescriptions for the specially designated areas by the same name. The Ensenada Mesa antelope area was proposed as a specially designated area (SDA) under the Preferred Alternative (D) in the recently completed FRMP while the Angel Peak antelope area was proposed under the Conservation Alternative (C). Under the FRMP/EIS the Preferred Alternative was selected thereby leaving the Angel Peak area without designation as a special area. However, in accordance with the provisions of the FLPMA of 1976 the Angel Peak antelope use area is being included in this document but with less management stipulations. Essentially what this means is that timing stipulations on drilling and construction during the fawning period will be coordinated but is voluntary.

B. Environmental/Human Factors: There are the usual decimating factors affecting the pronghorn antelope in the Angel Peak and Ensenada Mesa areas. These include: illegal hunting, predation, disease, and climatic fluctuations resulting in drought and harsh winters, which may impact natality. These factors may be



exacerbated by other competing land uses such as natural gas production which has severely fragmented the habitat with a spider web of roads and wells. In addition, habitat deficiencies such as inadequate water distribution and a lack of forbs may also be contributing to the antelope's low recruitment and gradual decline in numbers.

C. Funding Availability: Funding to implement the Antelope HMP will come from several possible sources. These include:

1. Sikes Act – these funds are generated by collecting a $5.00 user fee from each person purchasing a hunting, fishing, or trapping license that intends to pursue these activities on public lands in New Mexico. The Farmington BLM Field Office generally receives an annual allocation of about $55,000. Monies directed towards the improvement of antelope habitat would be consistent with the recently approved 3 year Sikes Act Habitat Stamp Program (HSP) plan that identifies antelope as a target species to increase their numbers by improving their habitat.

2. Off-site mitigation – funds are currently being collected from companies that voluntarily contribute to an account administered by the BLM to restore/improve habitat impacted by the development of oil and gas resources. The majority of these funds is directed towards range improvement projects. However, the wildlife program is eligible to share these funds. In 2003 the FFO wildlife program received $5,000 from this account. It is anticipated that funding of a similar magnitude may be available for several years to come.

3. Bureau funds – some money may be available for studies and habitat improvements such as prescribed burns from the BLM's wildlife and fuels programs. It is anticipated that about $5,000 per year will be available during the period anticipated for the implementation of this plan.

D. Land Status: The proposed antelope use areas are comprised mostly of public lands administered by the Farmington BLM. A summary of the land ownership is as follows:

Table 2 – Acreage Ownership Summary of Antelope Use Areas

Area	Acres/ BLM	Private	State	Indian Allotted	Total Acres
Ensenada Mesa	43,179	2,181	3,520	0	51,280
Angel Peak	42,612	1,201	5,920	1,360	51,093
Total	85,791	3,381	9,440	1,360	102,373

IV. MANAGEMENT OBJECTIVES: The primary objective of this plan is to restore the Ensenada and Angel Peak antelope populations to a point where they are self-sustaining and can accommodate some hunting pressure. The desired population to support this objective is 150 antelope in each use area. It is anticipated that the best means to achieve this goal will be through a variety of habitat improvement measures and management actions intended to minimize the number and size of human caused perturbations within the antelope's identified use areas.

V. PLANNED ACTIONS: There are a number of habitat improvements planned (see maps 10 & 11) for the antelope use areas. A summary of these actions is as follows:

Table 3 - Planned Habitat Improvements – Timetable for Construction

Improvement Type	Amount	Location	Implementation Date	Estimated Cost	Use Area
Water well	1	T27N, R7W, Sec. 35	2004	$14,000	Ensenada Mesa
Trick Tank	1	T26N, R6W, Sec. 22	2004	$7,500	Ensenada Mesa
Trick Tank	1	T26N, R10W, Sec. 10	2004	$7,500	Angel Peak
Trick Tank	1	T26N, R6W, Sec. 18 SWSE	2005	$7,500	Ensenada Mesa
RX Burn*	500 acres	T26N, R7W, Sec. 24	2004	$5,000	Ensenada Mesa
RX Burn*	1,900 acres	T27N, R6W, various sections	2005	$8,000	Ensenada Mesa
Earthen Ponds (new/rebuild/apply bentonite)	5	Various locations	2005	$7,500	Ensenada Mesa
Earthen Ponds (new/rebuild/apply bentonite)	5	Various locations	2006	$7,500	Angel Peak
Remove/Replace Woven Wire	3 miles	T26N, R6W, various	2004	$10,000	Angel Peak

		sections			
Water Pipeline/Drinker	1 mile	T27N, R7W, Sec. 27	2005	$4,000	Ensenada Mesa
RX Burn*	300 acres	T26N, R10W, Sec. 12	2005	$4,000	Angel Peak
Regulatory Signs OHV Restrictions	5	Various entry points	2004	$2,000	Ensenada Mesa
Limited Coyote Trapping	2 months	Various locations	Possibly 05 or 06.	$2,000	Ensenada Mesa & Angel Peak
			Totals:	$86,500.00	

- Proposed RX burns will maintain a predominant grass/forb component in sagebrush areas treated in the past with the herbicide tebuthiuron (Graslan), see Map 11.

Funding for the planned habitat improvements will come primarily from the Sikes Act Habitat Stamp Program or contributions made by the natural gas industry to the BLM's the off-site mitigation account. Up to 30% of these funds can be used for improvements in special management areas.

An environmental assessment will be prepared for each new habitat improvement project. These documents will be made available for public review and comment.

VI. MANAGEMENT ACTIONS: A number of management actions designed to improve antelope recruitment have been identified. They are as follows:

A. During the fawning period (May 1 – July 15) the antelope are widely dispersed and express a very strong site fidelity to particular areas of un-treated Wyoming sagebrush. As a means to reduce the displacement and stress to antelope during the fawning period a seasonal restriction on drilling and new construction will be imposed from May 1 through July 15. Activities prohibited during this period include the drilling of new wells, building new roads, digging trench, laying pipeline cross country, or any type of significant construction activity that would significantly increase traffic levels. Other activities that would have to be deferred during this period would be prescribed fire or the mechanical or chemical treatment of vegetation. Application of the seasonal drilling restriction in the Angel Peak area would be coordinated with the affected company on a voluntary basis.

B. Although the results of the coyote fecal analysis project didn't suggest that the coyote was a major factor in antelope fawn mortality some limited predator control may be undertaken. The basis for this action stems from the probable results of a private trapper that removed 27 coyotes from Ensenada Mesa during the winter of 2003. Monitoring of the antelope fawning success during the spring of 2003 revealed the highest fawn survival ever observed since the release of antelope in this area. Ground observations conducted on October 14, 2003 on Ensenada Mesa found a total of 63 antelope. The various antelope group's cumulative composition was as follows: 10 mature bucks, 26 does, and 27 fawns. Prior to this, the most fawns ever observed at this time of the year were 7 in 1991 (Hooley, 1991. These findings are consistent with research conducted by Menzel (1992) in Nebraska. In this study, the fawn:doe ratio following two consecutive years of aerial gunning for coyotes, increased from 21-39:100 to 70:100. Any future coyote trapping efforts in the FFO area will be closely monitored to assess its effect on antelope recruitment. It is hoped that this action will allow the antelope population to increase to a point where the breeding population produces an annual fawn crop that exceeds the losses to predators and other decimating sources. Once this population level is

reached coyote control measures will be suspended. Coyotes will be the only predator targeted.

C. The seed mix for re-vegetating well locations and pipeline rights of ways will be modified to include more forbs and cool season grasses. In addition, weed-free straw mulch will be required in future seeding efforts as a means to increase soil moisture retention and improve the chances for a successful seeding effort. The intent of this action is to increase the amount and kinds of high protein and early season feed available to antelope. Plant species recommended for inclusion in the mix will include:

Plant Species	**Lbs. per acre (PLS)**
Scarlet globemallow	0.5
Aster spp.	0.5
Blue flax	0.5
Small burnet	2.0
Western wheatgrass	3.0
Indian rice grass	2.0

D. In accordance with the FRMP motorized vehicle travel will be limited to maintained and/or designated roads and trails. This management action is intended to minimize the stress and disturbance to wildlife, in particular, antelope during the fawning period.

VII. EVALUATION AND MONITORING: Progress made towards implementing the Ensenada Mesa Antelope HMP will be monitored and recorded on BLM Form 6780-2 (see Appendix A.). The actual monitoring and evaluation of individual plan objectives will be facilitated through the following field studies:

A. Helicopter surveys of antelope numbers and distribution will be conducted in the winter each year. In addition, ground surveys will be conducted each spring to assess the fawning success and distribution of does. Areas used for fawning will be identified and recorded using a GPS unit. These data will be entered into the FFO GIS.

B. Vegetative cover studies will be conducted as part of the monitoring process to determine if the planned prescribed burns and altered seed mixes for well locations and pipeline rights of ways are adding forbs to the available forage.

C. Fecal analysis studies will be conducted in 4 to 5 years (or after some of the planned vegetation treatments are completed) to determine if the treatments are successful in raising the level of crude protein available to the antelope.

D. Scent post surveys will be conducted each year in August or September to monitor the level of predator activity in the antelope use area.

VIII. COORDINATION WITH OTHER BLM PROGRAMS, AGENCIES, ETC.: It is recognized that the success or failure of this plan will hinge largely on the cooperation of the various entities that utilize the antelope use areas. These user groups span a broad spectrum from the production of natural gas and livestock to the collection of firewood and the hunting of big game and waterfowl. Other non-consumptive uses such as watershed management, preservation of cultural resources, threatened and endangered species, and the overall maintenance of the ecosystem are also important factors to consider in the management of this area.

Listed below is a summary of the interests represented in the HMP area and a discussion of their effects upon one another.

A. BLM Programs

1. Livestock Grazing - There a total of 11 grazing allotments that are encompassed either partially or entirely by the combined Angel Peak and Ensenada Mesa antelope use areas. The authorized class of livestock on all of these allotments is cattle. The literature does not indicate that there would be any significant dietary overlap between antelope and cattle. Conversely, it is likely that cattle will benefit from the actions planned in this document, e.g., more waters will be created and herbaceous forage production will be increased. There will be no adjustments to livestock grazing authorizations as a result of achieving the goals identified in this plan.

2. Natural gas Production – The production of natural gas within the antelope use areas is important to the economy of San Juan county and the nation's energy supply. There are approximately 1,571 gas wells and 600 miles of roads within the two antelope use areas. Implementation of the proposed HMP provides a tool for applying the management prescriptions called for under Alternative D of the recently approved Farmington Resource Management Plan.

3. Recreation – The primary form of recreation in the antelope use areas is hunting for upland game birds such as mourning doves (*Zenaida macoura*) and Gambel's quail (*Callipepla gambellii*) and big game such as mule deer and elk (*Cervus elaphus*). Individuals may also sightsee in the area but this activity is limited mostly to cultural site visits. The implementation of this plan may afford these people more opportunity for viewing wildlife and possibly in the future additional hunting opportunity. Motorized vehicle travel off of established roads will not be possible, which may reduce recreational opportunity to some people. The Angel Peak Recreation facilities will be refurbished in 2004, this could potentially draw more people into the HMP area.

4. Watershed – Maintaining a healthy watershed is critical to sustaining the soil and vegetation which in turn provide habitat for a variety of wildlife species. Implementation of this plan will assist in this effort by increasing or maintaining the vegetative cover which will reduce soil erosion and the percolation of water into the soil.

5. Threatened, Endangered, and Sensitive Species – There are no known threatened or endangered species within the antelope use areas.

6. Cultural Resources – The FFO area is rich in cultural resources (See ACECs listed below). Implementation of this plan should not impact any of these resources. All habitat improvement projects required as part of this plan will be subject to the appropriate cultural surveys and analyses as mandated by the National Environmental Policy Act of 1970.

7. Invasive/Exotic species – In recent years a variety of invasive/exotic plant species have appeared in the FFO area. Many of these species are a result of construction activities. The implementation of this plan will carefully consider the impacts of any surface disturbing activities and the potential for these activities to provide a niche for an invasive or exotic species.

8. Migratory Birds of Conservation Concern – There are a number of migratory birds that utilize the sagebrush/grass habitat that is key to the antelope survival. Habitat improvements such as prescribed

burns or seedings will be carefully planned and executed so as to avoid impacts to avian species utilizing the sage/grass habitat.

9. Areas of Critical Environmental Concern (ACEC) – There are 7 ACECs within the boundaries of the proposed Pronghorn Antelope HMP. All of the actions proposed under the HMP will be consistent with the overall management objectives of the effected ACECs. The ACECs that could potentially be affected are as follows:

Antelope Use Area	**ACEC Name**	**Program**
Ensenada	Crow Canyon	Cultural
	Kiva	Cultural
	Albert Mesa	Cultural
	Tapacito & Split rock	Cultural
	Gobernador & Cereza	Paleontology
Angel Peak	Huerafano Mesa	Cultural
	Chacoan Roads	Cultural

B. Consultation/Coordination: The following individuals or organizations have/will be provided an opportunity to review this plan and provide comment.

Farmington Field Office Personnel

Individual	**Title**	**Discipline**
Eddy Williams	Senior Range Management Specialist	Range
Pete Lefebvre	Rangeland Management Specialist	Range
John Kendall	Threatened & Endangered Species Biologist	T&E
Dale Wirth	Soil Conservationist	Watershed
Rich Simmons	Outdoor Recreation Planner	Recreation
Ray Sanchez	Environmental Protection/Realty Lead	Oil & Gas
Cathleen Lowe	Fuels Management Specialist	Fuels Mgmt.
Robert Moore	Renewable Resources Team Leader	Management
Joel Farrell	Assistant F.O. Manager/Renewable Res.	Management
Dave Mankiewicz	Assistant F.O. Manager/Mineral Res.	Management
Jim Copeland	Lead Archaeologist	Cultural
Jim Ramakka	Planning & Environmental Coordinator	Planning

New Mexico Department of Game & Fish

Bruce Mazuranich	Northwest Area Sergeant
Steve Anderson	NW Area Habitat Specialist

New Mexico State lands Office

Richard Gallegos	Lands Specialist

BLM Grazing Operators
Ensenada Mesa Antelope Area

Allotment Operator	**Grazing Allotment**
Betty Cox	#5114 – Ice Canyon

Leo Pacheco	#5106 – Canyon Largo
Wilma Kaime	#5113 – Ensenada Mesa
Jerry Napie	#5076 – Dufers Point
Terry Cornell	#5117 – Carter Mesa

Angel Peak Antelope Area

Allotment Operator	**Grazing Allotment**
Jerry Napie	#5076 – Dufers Point Operator
Lorenzo Bates	#5072 – Angel Peak Operator
Bruce Sterling	#5076 – Huerfano Mesa
Lydia C. Valdez	#5075 – Huerfanito
Fred Armenta	#5070 – Jacquez Canyon Community
Mary Sullivan	#5070 – Jacquez Canyon Community
Don Higgins	#5070 – Jacquez Canyon Community
Navajo Nation c/o Raymond Kee	#5078 – Blanco Navajo Community

Oil & Gas Operators
Burlington resources
Conoco-Phillips
Pure energy
Calkins Oil

IX. WILDLIFE ECONOMICS: Calculating the monetary benefits from implementing this plan is a difficult task. At present, there is no hunting of the existing antelope population in GMU 2. Any future hunting opportunities would likely be very limited. Determining the economic benefits derived from hunting and its impacts to the local economy versus the costs of implementing this plan would require considerable extrapolation of the current situation. Opportunities for viewing wildlife may be improved. This could potentially result in some economic benefit to the area. Due to a lack of any baseline data concerning wildlife viewing, no attempt was made to quantify the economic benefits of this activity. Having stated this, an estimated projection of the future values associated with this plan is provided below:

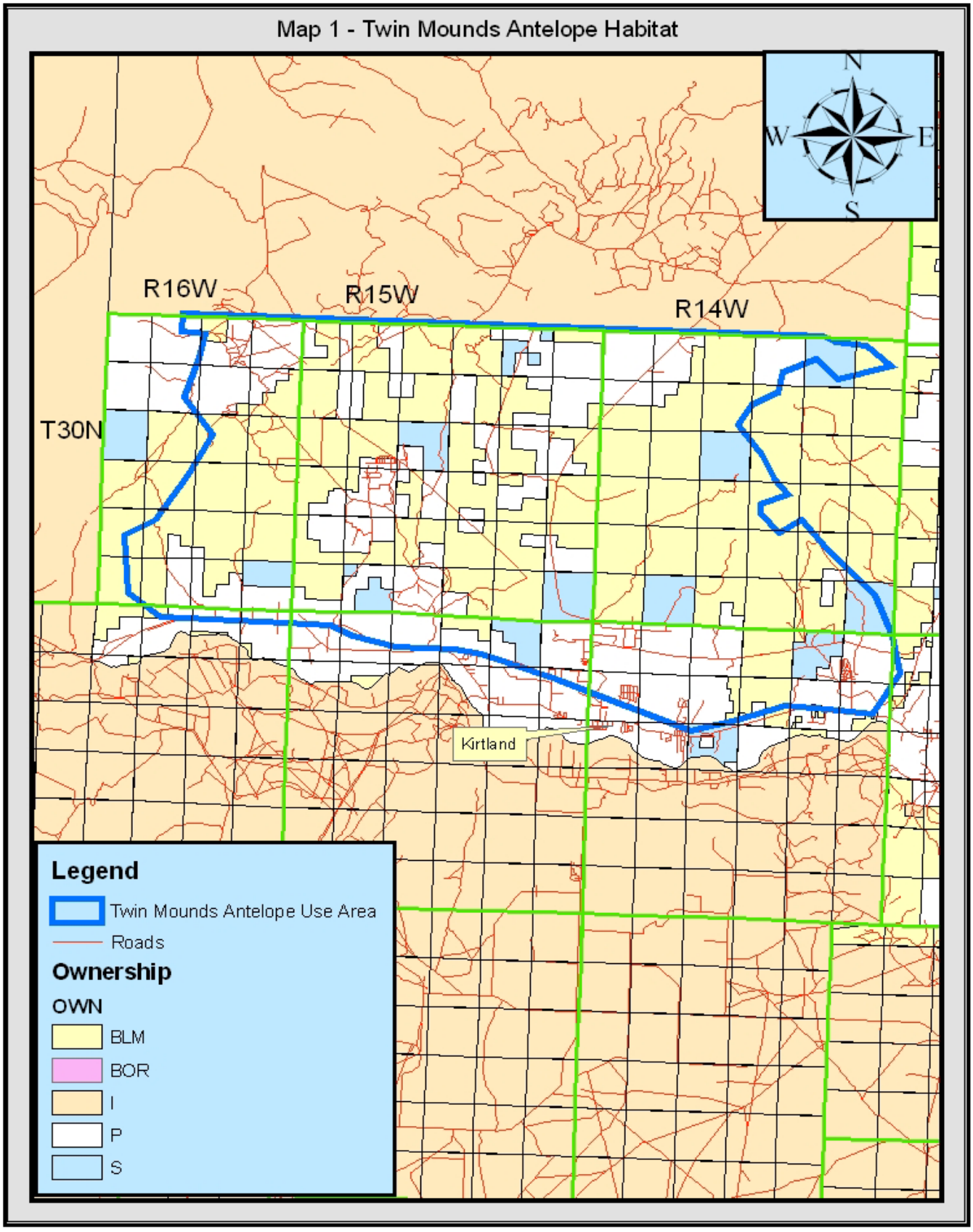
Species	Current Hunter Days	Estimated $ Value	Estimated Hunter Days (Year 2010)	*Estimated Value
Antelope	0	0	20	$1,000

*Based upon economic data collected in 1991 and adjusted for inflation, i.e., value of 1 hunter = $50.

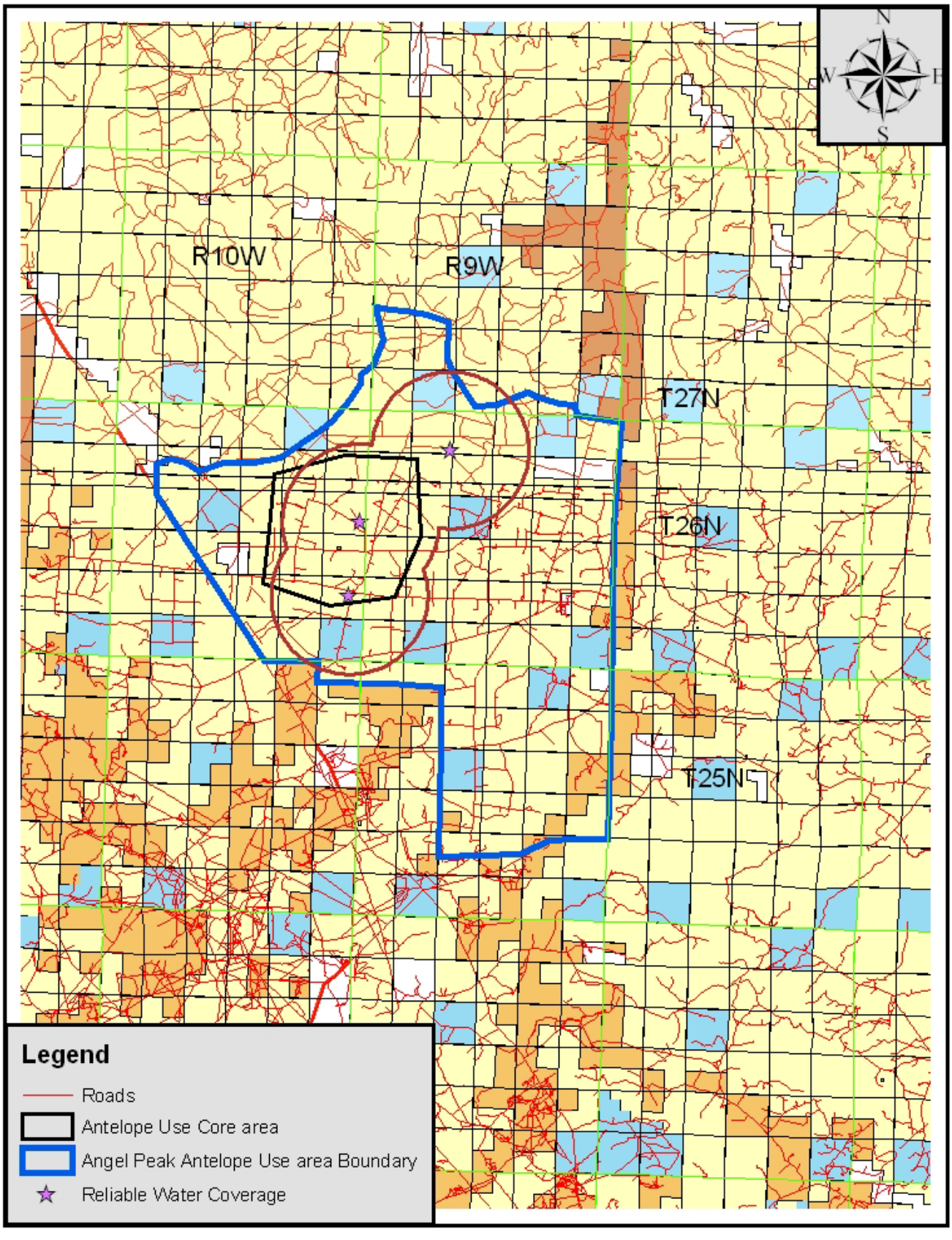
X. PUBLIC AFFAIRS:
A. Public Input – Affected interests such as the New Mexico Department of Game & Fish, natural gas producers and grazing operators will be provided a draft of the HMP/Environmental Assessment for their review and comment. A notice will also be place in the Farmington Daily Times informing the general public that a draft of the HMP/EA is available for their review and comment. Following a 30 day review/comment period the plan will be finalized and a Record of Decision issued, that implements the plan.

B. Once the HMP/EA is approved copies will be mailed to those participating in the planning process or requesting a copy of the plan.

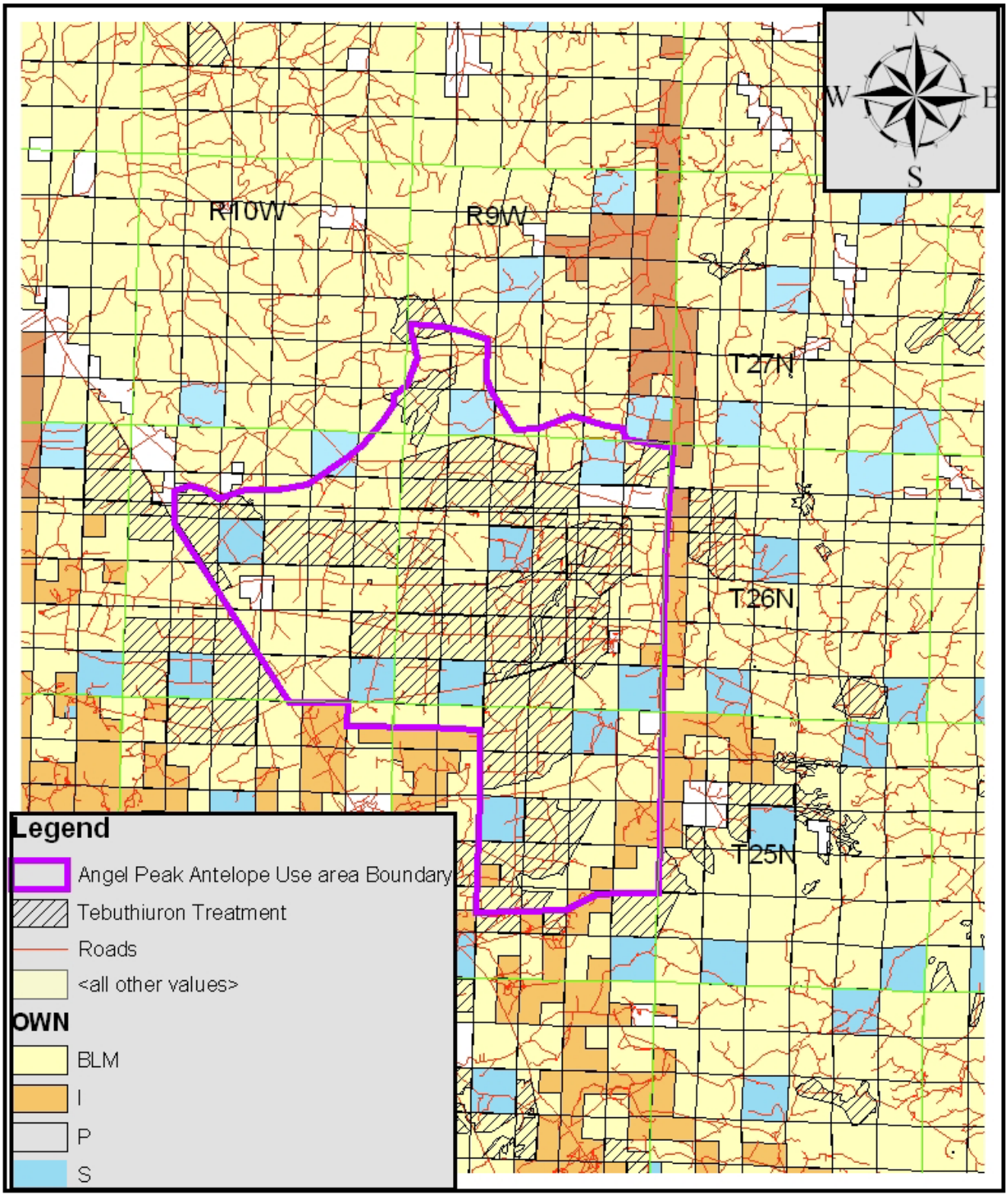
Appendix A – Maps 1 through 11.


Map 1 - Twin Mounds Antelope Habitat
N
W
E
S
R16W
R15W
R14W
T30N
Kirtland
Legend
Twin Mounds Antelope Use Area
Roads
Ownership
OWN
BLM
BOR
I
P
S

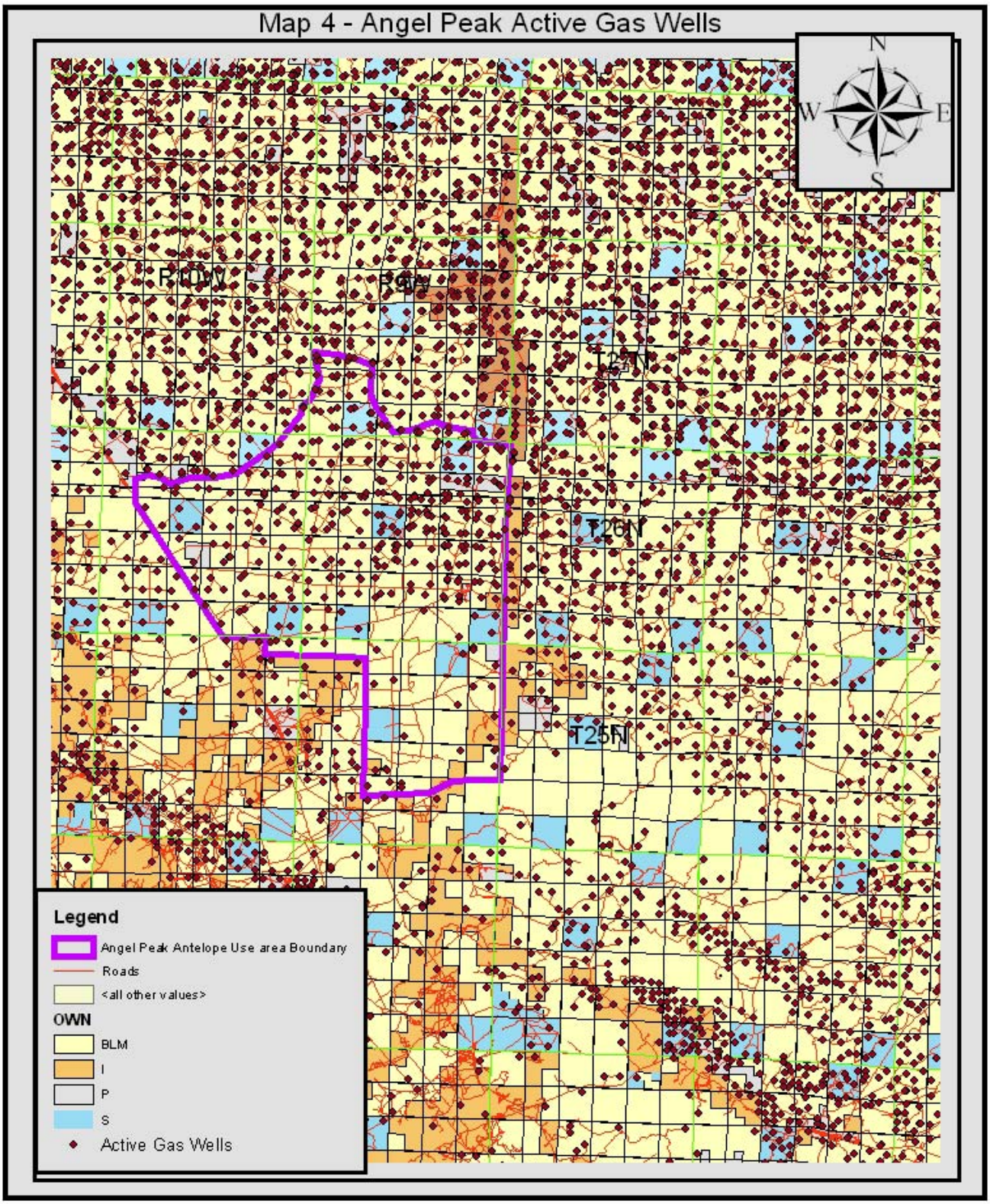
Map 2 - Angel Peak Antelope Use Area/Reliable Waters



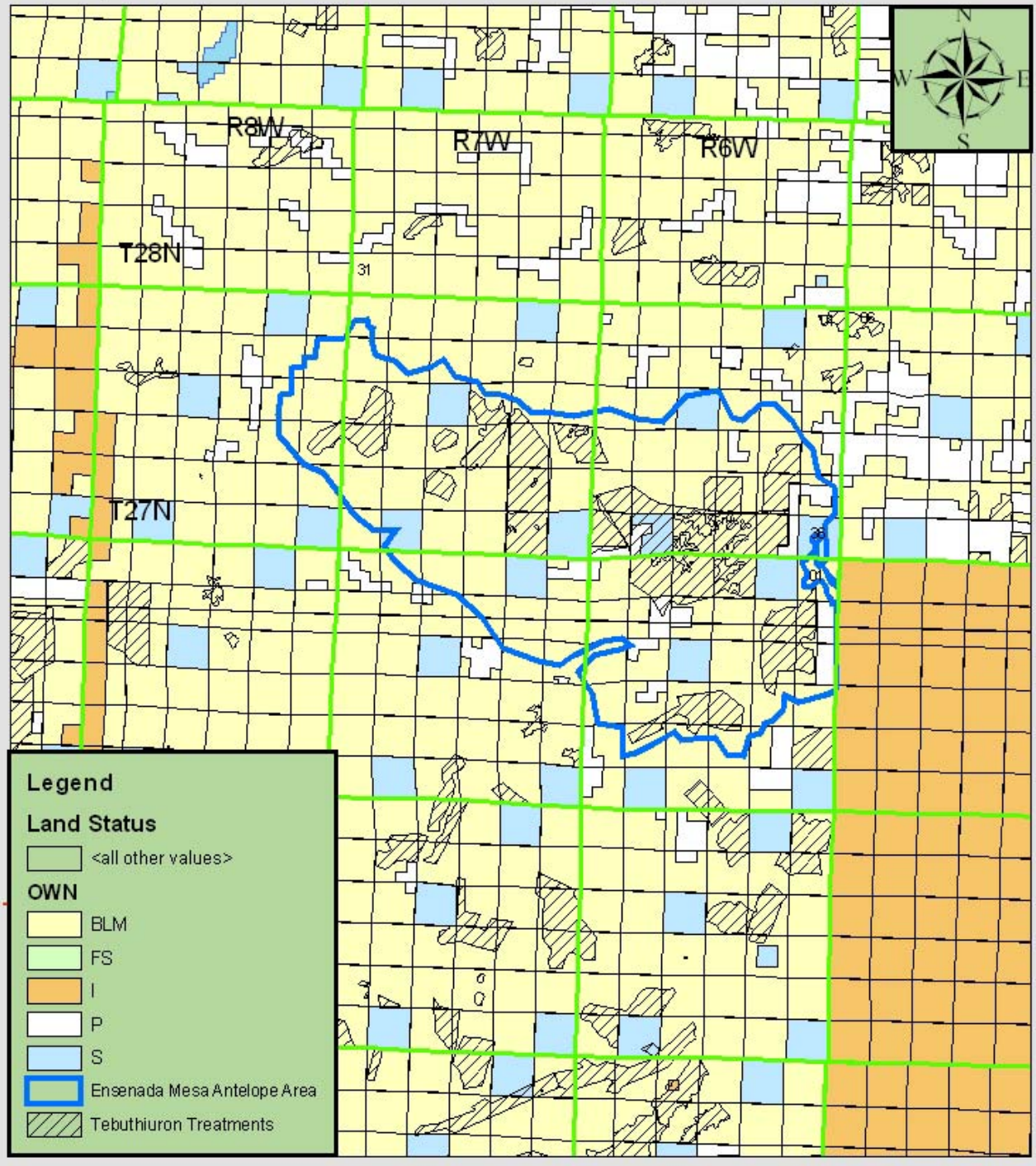
Map 3 - Angel Peak Tebuthiuron Treatments



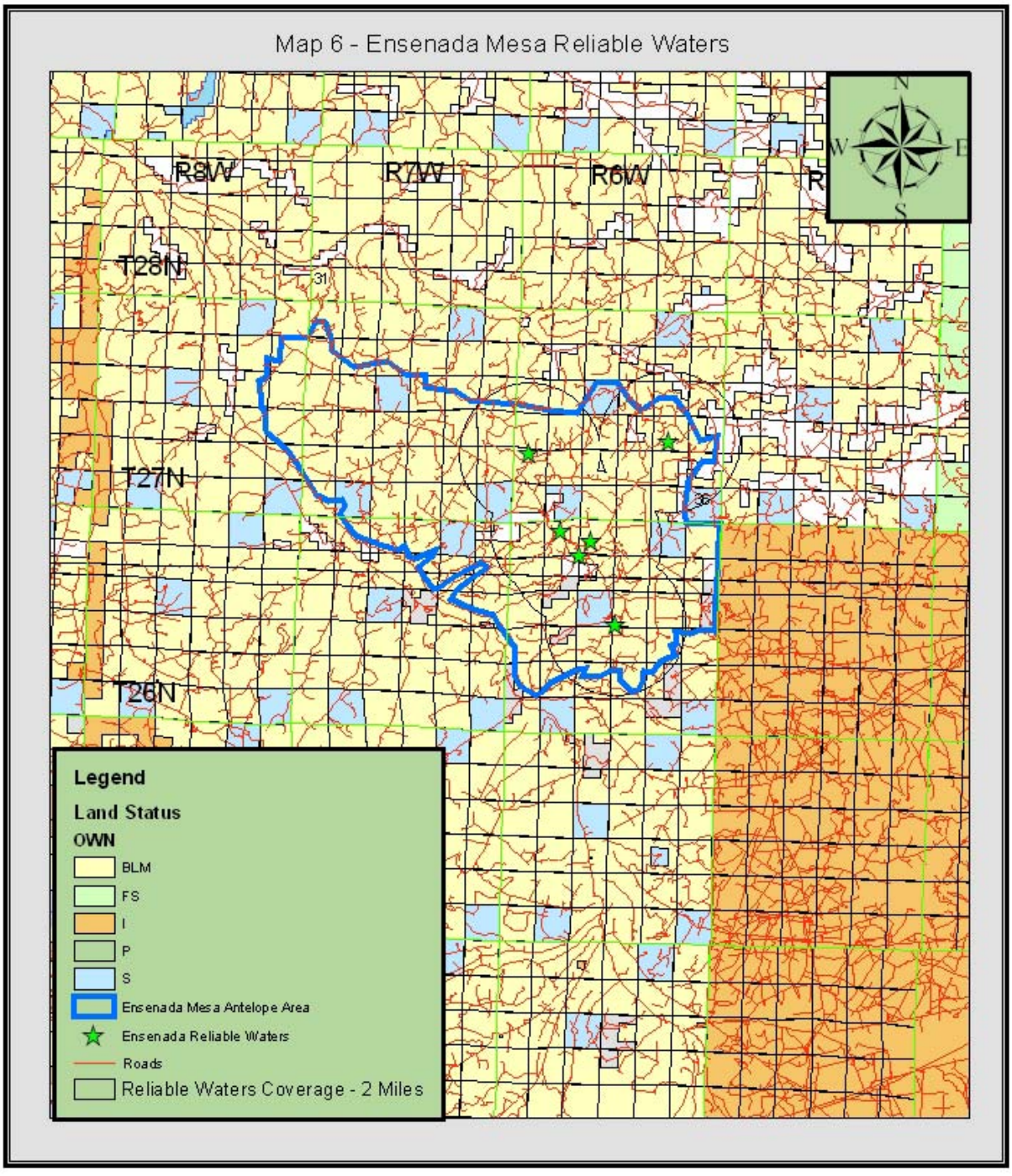
Map 4 - Angel Peak Active Gas Wells

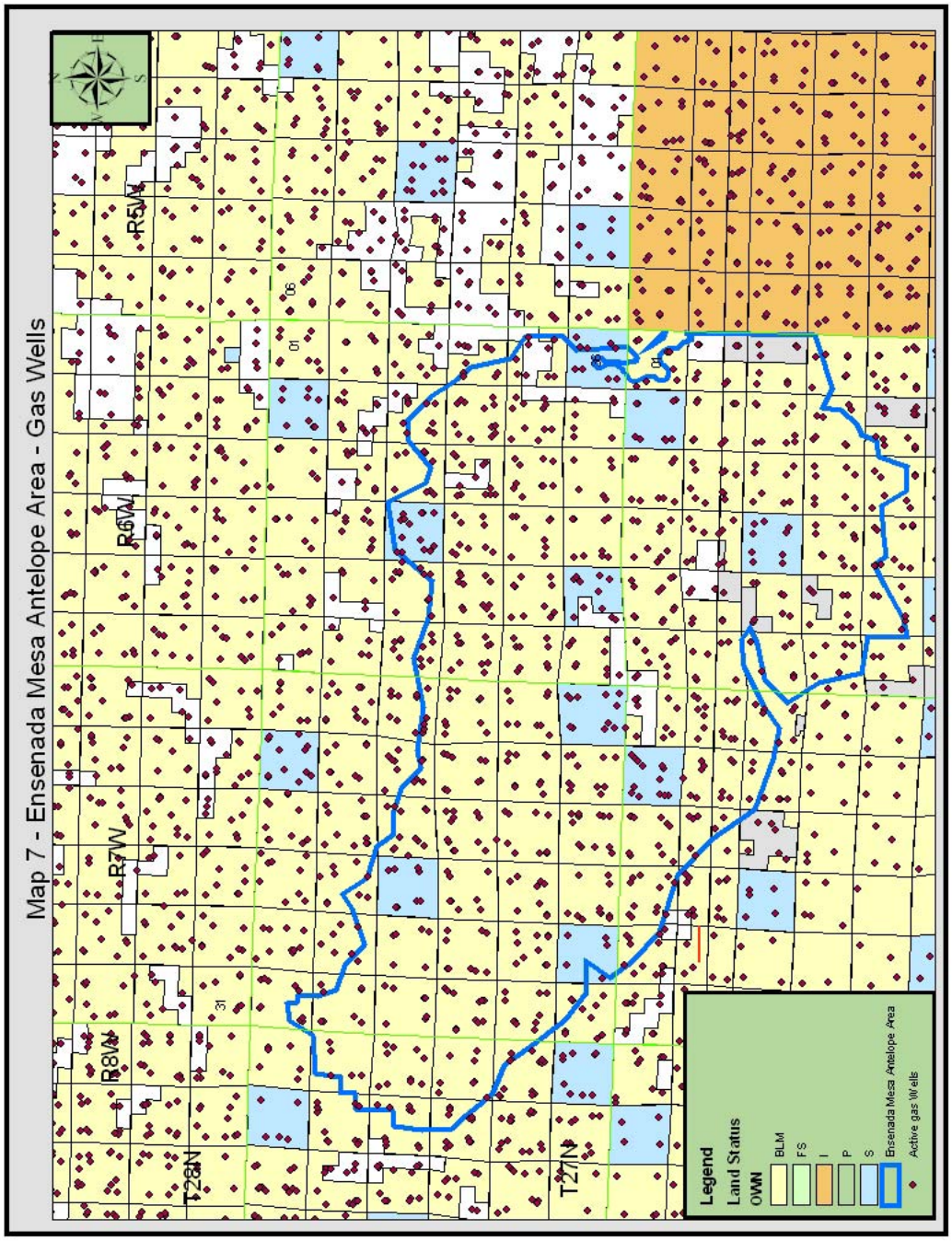


Map 5 - Ensenada Mesa Antelope Area - Tebuthiuron Treatments

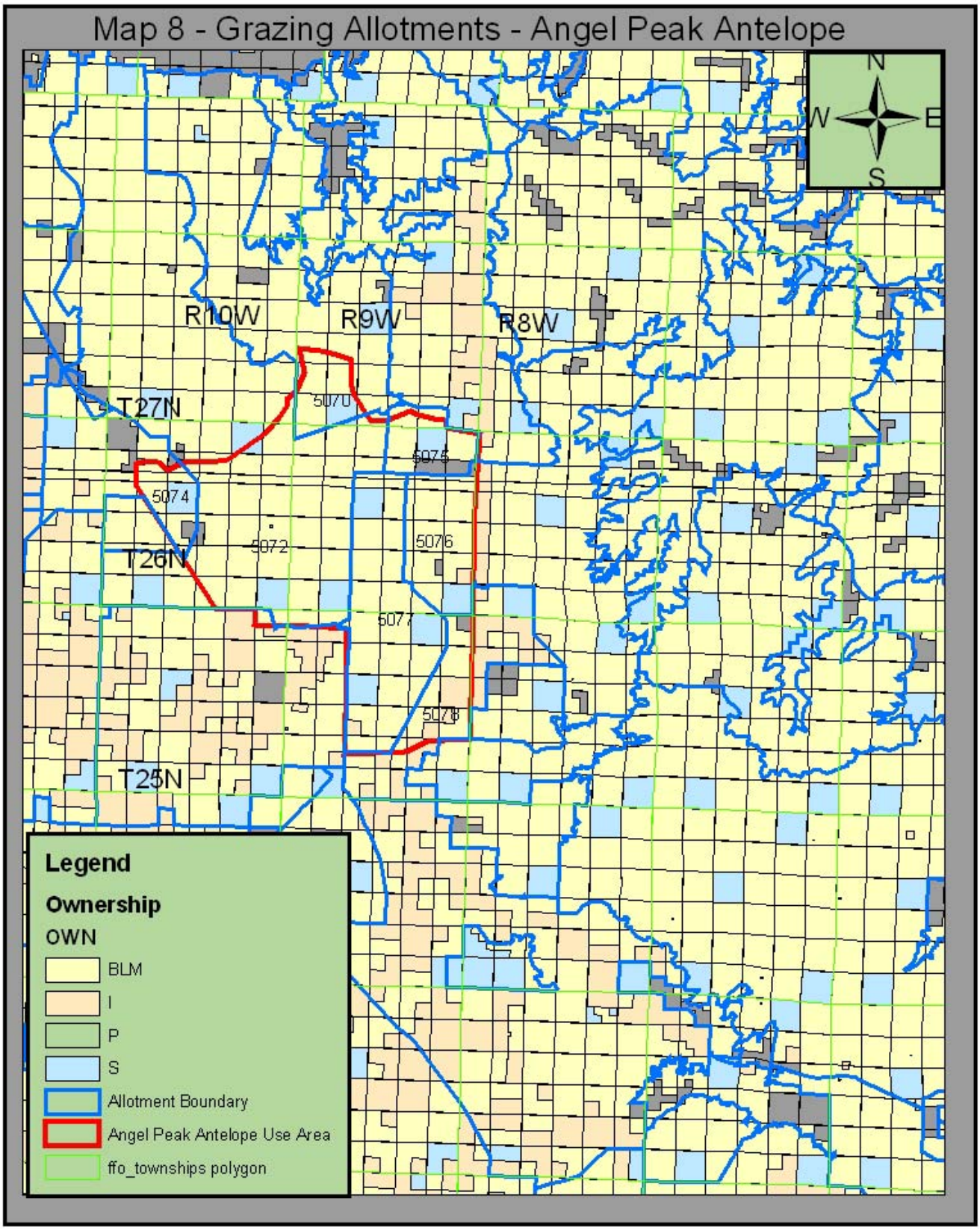


Map 6 - Ensenada Mesa Reliable Waters



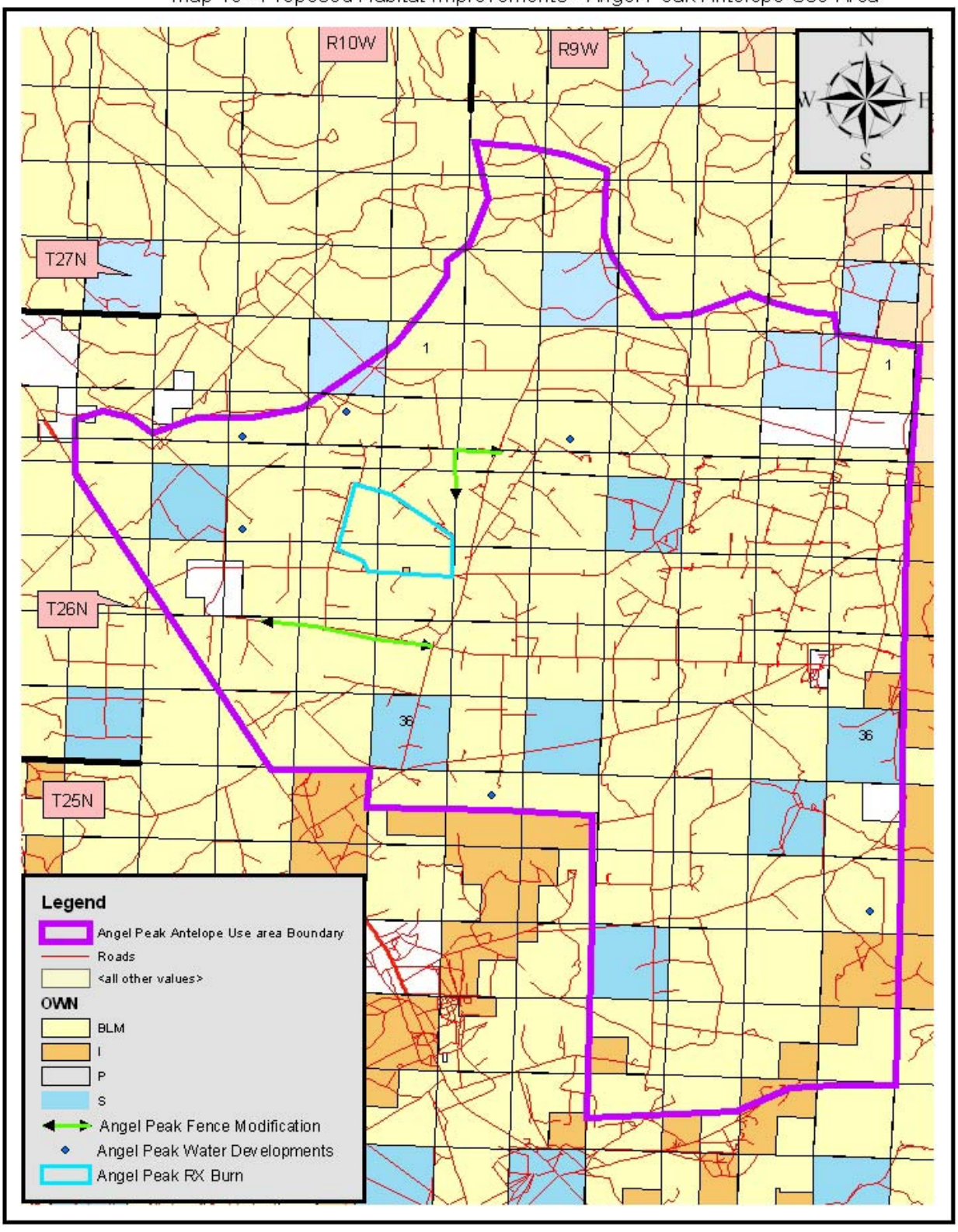

Map 7 - Ensenada Mesa Antelope Area - Gas Wells
R5W
R6W
R7W
R8W
T28N
T27N
Legend
Land Status
OWN
BLM
FS
I
P
S
Ensenada Mesa Antelope Area
Active gas Wells

Map 8 - Grazing Allotments - Angel Peak Antelope

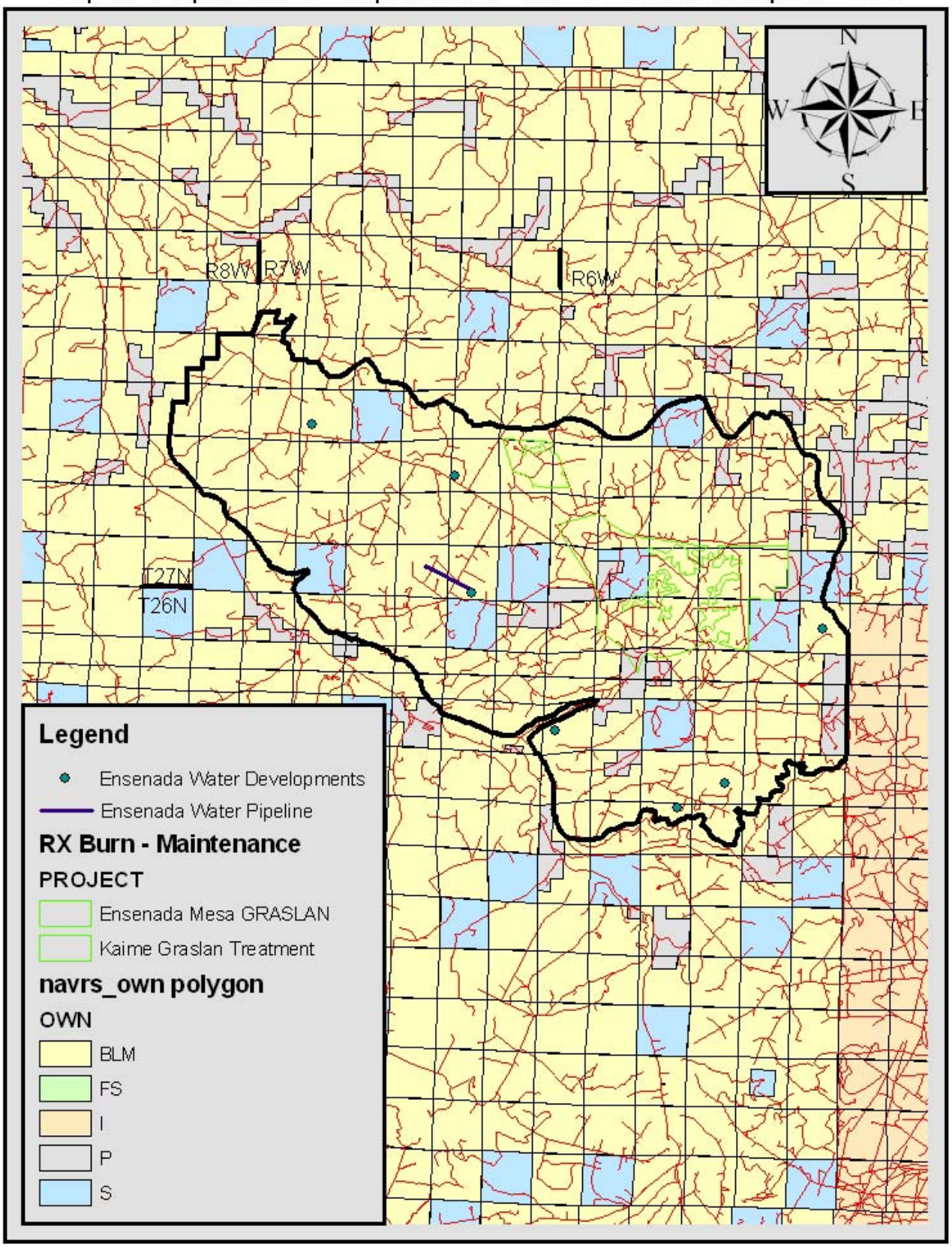



Map 9 - Ensenada Mesa Grazing Allotments
N
W
E
S
R8W
R7W
R6W
T28N
T27N
T26N
31
01
06
36
01
5076
5106
5113
5114
5117
Legend
Land Status
OWN
BLM
FS
I
P
S
Grazing Allotment Boundary
Ensenada Mesa Antelope Area
Township Boundary

Map 10 - Proposed Habitat Improvements - Angel Peak Antelope Use Area



Map 11 - Proposed Habitat Improvements - Ensenada Mesa Antelope use Area



Appendix B

Form 6780-2
(July 1981)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HABITAT MANAGEMENT PLAN PROGRES REPORT

OBJECTIVES	DATE COMPLETED	PLANNED ACTIONS	Date Completed	Evaluation/Monitoring	DATE COMPLETED
Restore the Angel Peak and Ensenada Mesa antelope populations to a self-sustaining state (150 animals each herd).		1- Flat Lake water well 2- Ensenada Trick Tank 3- Angel Peak Trick tank 4- Ensenada II Trick tank 5- Ensenada RX Burn (500) 6- Ensenada RX Burn (1,900) 7- Ensenada ponds (5) 8- Angel Peak Ponds (5) 9- Angel Peak Modify Fence (3 mi) 10- Ensenada Modify Fence (1) 11- Ensenada,		1- Helicopter surveys 2- Vegetative cover surveys 3- Fecal analysis 4- Scent post surveys	

		Water PL 12- Angel Peak RX Burn (300 ac) 13- Limited coyote trapping 14- Implement new seed mix for well/PL ROW 15- Regulatory signing			

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ENVIRONMENTAL ASSESSMENT OF THE PRONGHORN ANTELOPE HABITAT MANAGEMENT PLAN

Bureau of Land Management
United States Department of the Interior

Prepared by:
Farmington Field Office
1235 La Plata Highway, Suite A
Farmington, NM 87401

EA# NM070-04-461
April - 2004

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Item Page

INTRODUCTION:

Need for the Proposed Action: The Pronghorn Antelope Habitat Management Plan (HMP) is intended to provide a framework for the enhancement of the habitat within the Ensenada Mesa Wildlife SDA and the Angel Peak antelope use area. These areas currently support small populations of resident pronghorn whose numbers have consistently declined over the past 10-15 years. A number of suspected causes for this decline have been identified with the primary focus being on predation, poaching, climatic fluctuations, and habitat deficiencies. The Pronghorn Antelope HMP analyzes these causes, provides management recommendations, lists needed habitat improvements, funding sources, and a timetable for implementation.

Conformance with the Land Use Plan: The proposed Pronghorn Antelope HMP is consistent with the guidance found in the Farmington Resource Management Plan (approved Dec. 2003; page 2-25) which states:"Habitat management plans (HMP) or activity plans will be developed for wildlife management areas, especially the six Wildlife SDAs without plans, described in Appendix C."

Relationship to Statutes, Regulations, or other plans: The Pronghorn Antelope Habitat Management Plan also meets the guidance contained in the Federal land Policy and management Act of 1976. In general, this legislation directed the Bureau of Land Management (BLM) to improve management of the wildlife habitat to meet wildlife needs in the face of increasing demands for basic energy supplies, building materials and food products.

PROPOSED ACTION AND ALTERNATIVES

Proposed Action: The Proposed Action is to adopt the implementation of the Pronghorn Antelope Habitat Management Plan. The primary objective of this plan is to restore the Ensenada Mesa and Angel Peak antelope populations to self-sustaining levels, which is estimated to be 150 animals in each population. It is estimated that attaining these population levels will require establishing new sources of water, conducting vegetation treatments to increase desirable forage species, possibly engaging in short-term predator control with the focus on coyotes, and implementing restrictions on drilling and construction during the period of May 1 through July 15.

No Action Alternative: Under this alternative there would be less emphasis placed upon the enhancement of the Pronghorn antelope habitat. Competition for funds could be less successful due to the perceived lack of commitment or importance in attaining the goals stated in the HMP called for under the Proposed Action. Should this occur, the primary objective of the proposed HMP may not be achieved.

AFFECTED ENVIRONMENT – CURRENT SITUATION

General Setting: The Pronghorn Antelope Habitat Management Plan area is located in Northwest New Mexico and lies generally north and east of State Highway 550, south of State Highway 64, and west of the Jicarilla Apache Reservation boundary. The total area encompassed by the plan is 102,373 acres (see maps in Appendix A of the attached HMP). Approximately 84% of these lands are public lands administered by Farmington BLM Field Office.

The area within the proposed HMP area is characterized by gently rolling hills to a mesa like terrain. Vegetation throughout the area is predominately Wyoming big sagebrush and understory perennial grasses such as blue grama and galleta. Interspersions of pinyon pine and one-seed juniper are common, primarily in

the Ensenada Mesa area. Significant portions of the sites dominated by the Wyoming big sage have been treated with the herbicide tebuthiuron resulting in a predominately grassland habitat.

Natural Gas Production: There is extensive natural gas development in the HMP area. In the Ensenada Mesa area there are approximately 1,139 gas wells and 264 miles of roads which equates to 14.2 wells and 3.3 miles of road per square mile. Natural gas production in the Angel Peak area is less intensive than on Ensenada Mesa. There are a total of 326 gas wells and 336 miles of roads resulting in 4.1 wells and 4.2 miles of road per square mile. The Farmington RMP estimates there will be approximately 10,000 additional gas wells drilled in the Farmington Field Office area over the next 20 years. It is likely that a small percentage of these projected wells will be drilled in the antelope HMP area.

Domestic Livestock use: Livestock grazing is another major activity within the HMP area. There are 10 grazing allotments located either partially or entirely within the area. Cattle are the primary class of livestock authorized with grazing use occurring in various portions of the HMP area throughout the year. All livestock use, whether seasonal or yearlong, is conducted under a deferred rotation grazing system.

Recreation: Dispersed recreation use in the proposed HMP area consists mainly of big game hunting with lesser opportunities for hunting mourning dove, and scaled (*Callipepla squamata*) and Gambel's quail. The antelope HMP area is located within Big Game Management Unit 2-B. At present, the entire unit is closed to antelope hunting. Hunting for mule deer and elk is authorized under a limited entry system. The New Mexico Department of Game & Fish is responsible for determining the timing and length of seasons and the number of licenses issued.

Other uses of the HMP area include the cutting of firewood and the collection of antlers shed by deer and elk (*Cervus elaphus*) wintering in the area.

Non-Game Wildlife Use: There are a variety of non-game wildlife species that are endemic to the proposed HMP area. Included are numerous species of small mammals, reptiles, amphibians, and birds that are commonly associated with the pinyon/juniper and Wyoming sage/grass habitat types. Some of the more commonly observed small mammal species include the black-tailed jackrabbit and Gunnison's prairie dog (*Cynomys gunnisoni*) while typical reptiles are collared lizard (*Crotaphytus collaris*), bullsnake (*Pituophis melanoleucus sayi)* and western prairie rattlesnake (*Crotalus viridis*). In the relatively xeric conditions associated with the antelope HMP area the most predominant invertebrates are insects within the Orders Hymenoptera (ants, bees, wasps), Diptera (flies), Coleoptera (beetles), Orthoptera (grasshoppers and crickets), Lepidoptera (butterflies and moths, most notably the cutworm moths) and Homoptera (with the largest biomass contributor being cicadas). Surface water within the proposed HMP area is often ephemeral in nature, therefore, observations of amphibians have been incidental and limited. Avian species occurring in the HMP area are typical of those commonly found in the Wyoming sage/perennial grass and pinyon/juniper habitat types. Common raptors include the red-tailed (*Buteo jamaicensis*), sharp-shinned (*Accipiter striatus*), and Cooper's hawk (*Accipiter cooperii*). Golden eagles (*Aquila chrysaetos*) are also sometimes observed in the area.

Threatened and Endangered Species: There are no known threatened or endangered plant or animal species within the proposed HMP area nor is there any designated critical habitat for a threatened or endangered species. However, the area does provide potential habitat for a number of species that have been designated as species of concern or sensitive species the U.S. Fish & Wildlife Service (USFWS) or the BLM, e.g., the loggerhead shrike and the San Juan tiger beetle (*Cicindela lengi jordai*) and possibly some bat species. Bureau policy requires that no actions be taken that may cause a sensitive species to become listed as

Threatened or Endangered. In addition, the State of New Mexico has also designated certain species such as the gray vireo (*Vireo vic*inior), a resident species, and Baird's sparrow (*Ammodramus bairdii*), a migrant, as threatened.

Migratory Birds of Conservation Concern: Executive Order 13186 dated January 17, 2001 calls for increased efforts to more fully implement the Migratory Bird treaty Act of 1918. In keeping with this mandate, the Farmington BLM has consulted the Partners In Flight Bird Conservation Plan for the State of New Mexico and the U.S. Fish & Wildlife Service's list of Birds of Conservation Concern. A review of these documents, specifically, as they pertain to the Colorado Plateau physiographic area, indicates there are 7 "priority" avian species (with a known range of distribution in the FFO area) that utilize the Pinyon-Juniper woodland habitat type and 7 "priority" species that utilize the sagebrush/grass within the Great Basin Desert Shrub habitat type and may be impacted by various types of perturbations.

SPECIES	HABITAT TYPE
Loggerhead shrike	Sage/grass
Sage thrasher	Sage/grass
Sage Sparrow	Sage/grass
Black-throated sparrow	Sage/grass
Ash-throated Flycatcher	Sage/grass
Burrowing Owl	Sage/grass
Bendire's Thrasher	Sage/grass
Gray vireo	Pinyon/juniper
Gray flycatcher	Pinyon/juniper
Juniper titmouse	Pinyon/juniper
Pinyon jay	Pinyon/juniper
Cassin's kingbird	Pinyon/juniper
Black-throated gray warbler	Pinyon/juniper
Ash-throated flycatcher	Pinyon/juniper

Soils/Watershed: The predominate soil types in the HMP area are sandy loam to sandy clay loams. These soils are mesic, well drained to excessively drained, and generally formed in eolian and alluvial material derived from sandstone and shale. Slopes, where these soils are found, varies from 0 to 40 percent with the key portions of the antelope use areas having slopes generally less than 10 percent.

Areas of Critical Environmental Concern (ACEC): There are portions of 7 different ACECs (6 cultural, 1 paleontology) that lie within the boundaries of the proposed HMP area. The ACECs are as follows:

Antelope Use Area **ACEC Name** **Program**

Ensenada	Crow Canyon	Cultural
	Kiva	Cultural
	Albert Mesa	Cultural
	Tapacito & Split rock	Cultural
	Gobernador & Cereza	Paleontology
Angel Peak	Huerafano Mesa	Cultural
	Chacoan Roads	Cultural

EFFECTS OF THE PROPOSED ACTION

Natural Gas Production – Implementation of the Proposed Action will not pose any significant inconvenience to the natural gas industry above what is already stipulated as part of the Farmington Resource Management Plan. Under the RMP seasonal restrictions on drilling and construction during the fawning period of May 1 through July 15 are applied in the Ensenada Mesa Wildlife SDA. These restrictions do not apply in the Angel Peak area but cooperation in avoiding key antelope use areas is encouraged. Some additional cost may accrue to industry in applying more forb species in the reclamation mix on well locations and pipeline rights of ways. In addition, industry will be encouraged to avoid drilling in key fawning or antelope use areas. This may result in additional cost to horizontal or directional drill. Overall, the implementation of the Antelope HMP should not prevent industry from developing and producing the natural gas reserves in the antelope use areas.

Domestic Livestock Use – Implementation of the Proposed Action should benefit livestock in that additional water sources and herbaceous forage will be created. The dietary overlap between cattle and antelope is relatively insignificant; therefore, competition for forage should not be an issue. Conversely, there will be portions of the HMP area that will require the maintenance of a mature Wyoming big sagebrush plant community for the purpose of antelope fawning. While other resource concerns such as maintaining ecological diversity may preclude the conversion of these sage areas to grasslands, there may be the perception that the maintenance of these sage areas is due solely to the need for antelope fawning habitat.

Recreation – Because of the potential increase in forage and water in the HMP area, it is likely that increases in large ungulates such as mule deer and elk, upland game bird species such as mourning dove, and non-game avian species will occur. This should provide additional recreational opportunities for hunting and bird watching in the HMP area. Other forms of subsistence recreation such as firewood gathering and antler collection should not be negatively affected by the implementation of the Proposed Action.

Non-Game Wildlife – It is expected that the implementation of the Proposed Action will result in an increase of herbaceous cover and available water. In turn, this should result in increased production of small mammals and arthropods, and a variety of avian species that may benefit from this increased prey base. Overall, it is expected that the faunal diversity of the HMP area, especially as it pertains to invertebrates and songbirds, may increase.

Other non-game species such as the coyote could realize short term reductions in their numbers if predator control is implemented. Trapping would be timed so as to neutralize the targeted animals prior to their giving birth so that pups will not be affected. The potential consequences of reducing coyote numbers will likely include an increase in the number of individual prey available. Obviously, it is assumed that pronghorn will be among these prey species. Other likely species include desert cottontail, various species of mice, voles, and wood rats, and numerous insect species. The increased biomass at this trophic level should bode well for

other consumer species such as avian predators, e.g., red-tailed hawk and great horned owl.

Threatened and Endangered Species, USFWS Species of Concern, BLM Sensitive Species – Implementation of the Proposed Action poses no potential negative impacts to any known threatened or endangered species. At the present time, there are no known T&E species or designated habitats within the Antelope HMP area. However, the HMP area does contain potential habitat for a number of species of concern and sensitive species. Surveys will be conducted prior to implementing any habitat improvement projects to ensure that no special status species or their habitat will be adversely affected.

Migratory Birds of Conservation Concern - Overall, it is anticipated that the effects of implementing the Pronghorn Antelope HMP will be low. The most probable impact to avian species will be due to the application of prescribed fire. However, it is policy in the Farmington BLM Field Office to restrict the use of prescribed fire during the period of May 1 through July 15 as a means to minimize the loss of nesting birds' young. Other actions called for in the HMP such as water development should have a positive effect upon most avian species. A list of the high priority species is provided above. The effects of individual projects will be analyzed in environmental assessments that will be prepared for each project as it is implemented.

Soils/Watershed: In the absence of adequate vegetative cover and on steep slopes, soils of these types can be moderately to highly erosive. It is not anticipated that any of the proposed projects or the cumulative effects of an increase in antelope numbers will have any negative effects on the soils within the HMP area. The soil health and stability in the HMP area should remain stable with the adoption of the new HMP.

Areas of Critical Environmental Concern: There should be no negative effects to the ACECs either partially or totally located within the boundaries of the proposed HMP area as a result of implementing the HMP. With the exception of prescribed fire, the proposed habitat improvements have little potential to impact cultural or paleontological sites. This assumption is based upon the fact that an environmental assessment will be prepared for each project. Field surveys will be conducted prior to any projects being implemented to ensure that no resources within ACECs (or any other portion of the HMP area) are negatively impacted. In all cases the proposed projects will be consistent with the management prescriptions identified in Table 2-5, Management Prescriptions for Specially Designated Areas in the FFO of the Farmington Proposed Resource Management Plan and Final Environmental Impact Statement; Volume I: Chapters 1-5, pages 2-40 through 2-213.

EFFECTS OF THE NO ACTION ALTERNATIVE

Natural Gas Production – Impacts to natural gas producers would not vary much between the Proposed and No Action Alternatives. Under the No Action Alternative there would be less emphasis on minimizing new surface disturbance in key antelope use areas and on adding herbaceous plant species to the reclamation seed mix for the HMP area that would be more conducive to antelope use, especially in the spring. This emphasis would cause industry some inconvenience and additional cost but would likely be less under the No Action Alternative.

Domestic Livestock Use – There would be less commitment to increase herbaceous production and water sources which would eliminate the potential for increased weight gains for livestock.

Recreation – Wildlife in general, as well as the antelope, would not fare as well in the absence of increased water and herbaceous forage. This could result in decreased opportunity for hunting and wildlife observation.

Threatened and Endangered Species, USFWS Species of Concern, BLM Sensitive Species – There would be no negative impacts to any special status species due to the protection afforded them and their habitat by the Endangered Species Act and the BLM's policy for sensitive species management.

Non-Game Wildlife – Due to the decreased emphasis on the production of water and herbaceous vegetation the potential for certain wildlife species to increase their numbers may not be realized. This would be particularly true for those species whose prey consisted of arthropods and small mammals, or whose brood rearing habitat required more extensive herbaceous ground cover. Under the No Action Alternative, many wildlife species that would realize significant increases in their numbers under the Proposed Action, would not receive this benefit if the water sources listed under the Proposed Action were not constructed. Over the long term, a missed opportunity to provide additional water sources and forage would likely prove detrimental non-game wildlife especially during drought years. The additional resources that would accrue as a consequence of the Proposed Action would provide a buffer against drought conditions and could possibly prevent sharp declines in non-game wildlife species during periods of climatic fluctuations.

Migratory Birds of Conservation Concern – Under the No Action Alternative all avian species would still be afforded some degree of protection due to the provisions of the Migratory Bird Treaty Act of 1918 and Executive Order 13186. However, many bird species could be negatively impacted over the long term due to the lost opportunity to increase the number of water sources. Those bird species that would benefit from increased herbaceous production may not realize this under the No Action Alternative.

Soils/Watershed – The current soil/watershed conditions in the proposed HMP area are mostly stable. A continuation of existing management policy (No Action Alternative) would likely maintain this condition.

Areas of Critical Environmental Concern (ACEC) – There should be no negative impacts to the ACECs within the proposed HMP area under the No Action Alternative. Management guidance contained in the Farmington Resource Management Plan precludes any actions that may negatively affect these resources.

CONSULTATION AND COORDINATION

Non-Bureau entities being provided a copy of this (DRAFT) document are as follows:

STATE AGENCIES

Bruce Mazuranich	District Supervisor	New Mexico Dept. of Game & Fish
Steve Anderson	Northwest Area Habitat Specialist	New Mexico Dept. of Game & Fish
Richard Gallegos	Lands Specialist	New Mexico State Lands Office

OIL & GAS OPERATORS
Burlington Resources
ConocoPhillips
Pure Energy
Calkins Oil

BLM Grazing Operators – Ensenada Mesa Antelope Area

Allotment Operator	Grazing Allotment
Betty Cox	#5114 – Ice Canyon
Leo Pacheco	#5106 – Canyon Largo
Wilma Kaime	#5113 – Ensenada Mesa

Terry Cornell	#5117 – Carter Mesa

Angel Peak Antelope Area Allotment Operator	Grazing Allotment
Jerry Napie	#5076 – Dufer's Point
Lorenzo Bates	#5072 – Angel Peak (President HCA)
Bruce Sterling	#5076 – Huerfano
Lydia C. Valdez	#5075 – Huerfanito
Fred Armenta	#5070 – Jacquez Canyon Community
Mary Sullivan	#5070 – Jacquez Canyon Community
Don Higgins	#5070 – Jacquez Canyon Community
Navajo Nation c/o Raymond Kee	#5078 – Blanco Navajo Community

In addition to the entities listed above, this document will be posted to the Farmington Field Office's external web page at: http://nm.blm.gov/ffo_home.html

PROGRAM CONSULTATION & COORDINATION / EA CHECKLIST

Project: Pronghorn Antelope Habitat Management Plan
Applicant: Bureau of Land Management – Farmington Field Office

The Proposed Action has been developed in accordance with applicable land use plans, statutes, and regulations (See Introduction of the EA for specifics).

The following resource components, as well as the standard program requirements, have been considered in this environmental document. Resource staff, and/or specialists have signed and dated each section as review and/or preparation of these sections has been completed.

Will Be Impacted		Can Be Mitigated		Program Element	Specialist Signature/Date
Yes	No	Yes	No		
___	___	___	___	T&E	_____
___	___	___	___	Riparian	_____
___	___	___	___	Range	_____
___	___	___	___	ACECs/SMAs	_____
___	___	___	___	Soil/Air/Water	_____
___	___	___	___	Cultural resources	_____
___	___	___	___	Wildlife	_____
___	___	___	___	Realty	_____
___	___	___	___	Minerals	_____
___	___	___	___	Recreation	_____
___	___	___	___	Forestry	_____
___	___	___	___	Neotropic Migratory Birds	_____

FINDING OF NO SIGNIFICANT IMPACT/DECISION RECORD

EA No: NM070-04-457
Project Name: Pronghorn Antelope Habitat Management Plan
Applicant: Bureau of Land Management
Address: 1235 La Plata highway, Suite A
Farmington, NM 87401

Decision/Rationale: I have reviewed this environmental assessment including the explanation and resolution of any potentially significant environmental impacts. I have determined that the proposed action with the mitigation measures described below will not have any significant impacts on the human environment and that an EIS is not required. I have determined that the proposed project is in conformance with the approved land use plan. It is my decision to implement the project with the mitigation measures identified below.

Mitigation: Implementation of the Pronghorn Antelope Habitat Management Plan may result in an inconvenience to oil and gas operators in not being able to drill or conduct construction activities year around and OHV users in not being able to drive off of established roads. Complete mitigation of these inconveniences may not ever be entirely achieved to the satisfaction of the effected parties. However, it is expected that with proper planning, industry can accomplish their annual drilling/construction program in the 9 and ½ months not within the seasonal closure period and individuals desiring to use motorized vehicles off of established roads are encouraged to pursue these activities on public lands elsewhere within the Farmington Field Office area that are open to this type of recreation. In addition, individual environmental analyses will be prepared for each project identified in the plan. Mitigation measures as needed will be developed for each project.

Prepared by:_____ Date:_____
Lead Wildlife Biologist

Reviewed by:_____ Date:_____
Renewable Resources Team Leader

Approved by:_____ Date:_____
Assistant Field Manager for L&RR