## APPENDIX N. Additional Wildlife Information

### **N.1 HABITAT MANAGEMENT PLANS**

#### N.1.1 CISCO DESERT HABITAT MANAGEMENT PLAN

The Cisco Desert Habitat Management Plan, signed in September of 1978, was written particularly for pronghorn, and is primarily concerned with the development of water. An Agreement of Cooperation Between UDWR and BLM Moab was signed in August of 1979, agreeing that 1) BLM and UDWR would inspect and fill water developments, 2) BLM and UDWR would install locks and provide keys on water developments, 3) UDWR would provide BLM population trend data, distribution, and population estimates for the Cisco herd unit, 4) BLM would provide fecal analysis study results to UDWR. The UDWR and the BLM also agreed that a reasonable population goal after completion of phase one would be 350 to 400 pronghorn and after a two year evaluation the BLM and UDWR would jointly agree on reasonable numbers during phases two and three of the plan.

Under this HMP, 242,560 acres of land administered by the BLM were to be improved to provide habitat capable of supporting at least 350 to 400 pronghorn after the completion of phase one and up to 750 adult pronghorn year-round upon completion of projects. These numbers would be attained through habitat management and natural reproductive processes. Eleven specific management objectives were established and were to be implemented in three stages as follows:

Phase One focused on the eastern third of the HMP area:

- 1. Improve 70,000 acres of pronghorn habitat on the eastern third of the HMP area by developing reliable water sources to provide water for approximately 400 pronghorn.
- 2. On the eastern third of the HMP area modify or remove fences in areas that do not meet BLM specifications for fencing on pronghorn range.
- 3. Determine the similarity of diet of domestic livestock, pronghorn and mule deer utilizing the 242,560 acres of the HMP.
- 4. Establish six seeding study plots in greasewood and shad scale vegetation types within HMP area to determine the suitability of these types of browse and forb introduction.

Phase Two focused on the central third of the HMP area:

- 1. Improve 86,000 acres of pronghorn habitat on the central third of the HMP area by developing reliable water sources to provide water for approximately 200 pronghorn.
- 2. Increase the percent browse and forb species on 6,375 acres of grass vegetation from less the 5% to 30% browse and forb on the central third of the HMP area.

Phase Three focused on the western third of the HMP area:

- 1. Increase 86,000 acres of pronghorn habitat on the western third of the HMP area by developing reliable water sources to provide water for approximately 150 pronghorn.
- 2. Improve 86,000 acres of pronghorn habitat on the western third of the HMP area by modification of the Nash Wash Allotment fence to allow pronghorn un-restricted passage.

Other objectives:

- 1. Improve 1000 acres of pronghorn habitat in wash bottoms by changing the greasewood vegetation to a more palatable species type as indicated by study results obtained from objective four accomplishments.
- 2. Improve pronghorn habitat by excluding livestock grazing and oil and gas exploration activities from May 15<sup>th</sup> through June 20<sup>th</sup> or during extreme snow conditions.
- 3. Maintain or improve HMP area for pronghorn habitat by insuring the oil and gas, pipeline, fire and other vegetative rehab projects include at lease 30% browse and 30% forb species when re-seeding.

These objectives were to be met by constructing water developments, removing fencing along the Colorado-Utah state line, conducting range and vegetative studies, manipulating vegetation, constructing needed pronghorn fences to protect water developments, changing season of use and restricting oil and gas exploration on kidding grounds to reduce disturbance, using seed mixtures that enhance pronghorn forage on rehab areas and ensuring that all livestock concentration locations (feeding, salting, watering, sheep camps) are not within a half mile of pronghorn water developments.

### N.1.2 HATCH POINT HABITAT MANAGEMENT PLAN

The Hatch Point HMP, signed in September of 1976, was intended to benefit 309 pronghorn. A Memorandum of Understanding was signed in 1968 between the BLM and the Utah State Division of Fish and Game (now the UDWR) to transplant 150 pronghorn into this area and allow the population to increase by natural reproduction to whatever the optimum herd size is jointly determined by the BLM and UDWR. Under this HMP, 109,002 acres of land administered by the BLM are to be maintained in good condition and habitat is to be improved where needed. Six specific management objectives were established:

1. a. Maintain the present big sagebrush association at 31% of the total wildlife habitat.

b. Increase the forb cover within the big sagebrush association in the key areas from less then 1% to 5%.

- 2. Improve the habitat for pronghorn by eliminating barriers to their movements caused by fencing.
- 3. Improve pronghorn, sage-grouse and other big game and non-game species habitat by improving year-round water resources on Hatch Point.
- 4. Improve pronghorn habitat by eliminating livestock grazing on known kidding grounds from May 1<sup>st</sup> through June 30<sup>th</sup>.

- 5. Improve pronghorn, sage-grouse and other game and non-game species habitat by protecting and establishing riparian and succulent forage areas around exiting and proposed water sources.
- 6. Improve the pronghorn habitat by a change of class of livestock from sheep to cattle on the Hatch Point area. Change of class of livestock from cattle to sheep will be prohibited within this area.

These objectives will be attained through water developments, changes in season of use (November 1<sup>st</sup> through June 1<sup>st</sup>), number of livestock (27% reduction), change in livestock class from sheep to cattle, fencing, seeding and rest/rotation. For the rest/rotation to be implemented, three pastures were developed on the Hatch Point Allotment. One pasture was to be grazed from November 1<sup>st</sup> to March 1<sup>st</sup>, the second from March 1<sup>st</sup> to June 1<sup>st</sup> and the third was to receive a yearlong rest from grazing. Pronghorn kidding areas were to have livestock grazing removed by May 1<sup>st</sup> and if critical sage-grouse habitat was located, livestock grazing would be excluded within a one-mile radius from these areas from April 1<sup>st</sup> through June 15<sup>th</sup>. A total of 69 acres were to be seeded to attain a combination of succulent forbs, grasses and shrubs that would provide spring forage. Fencing was to be a management tool to eliminate livestock grazing from the following projects: a) 10 acres of drainage fenced at the Hatch Point Reservoir; b) 20 acres of drainage fenced at Hatch Point Section 4 Permit Reservoir; c) 3 acres fenced around each Hatch Point catchment.

## N.1.3 DOLORES TRIANGLE HABITAT MANAGEMENT PLAN

The Dolores Triangle HMP, signed in November of 1979, was intended for deer, elk, and bighorn sheep, but also has objectives for raptors, waterfowl, and native trout. Under this plan, 100,686 acres of land administered by the BLM are to be improved and maintained by providing food, cover, water and open space. Eight specific management objectives were established:

- 1. Improve and maintain 100,686 aces of public land to provide:
  - a. Winter habitat for 3,500 mule deer from November 1<sup>st</sup> through May 1<sup>st</sup>
  - b. Year-round habitat for approximately 350 resident mule deer
- 2. Maintain approximately 20,000 acres of public land within the Dolores Triangle Planning Unit to provide year-round habitat to support 150 desert bighorn sheep.
- 3. Improve approximately 25,000 acres of public land within the Dolores Triangle Planning Unit to provide winter habitat to support 250 head of Rocky Mountain Elk from November 1<sup>st</sup> through April 1<sup>st</sup>.
- 4. Improve approximately 300 acres of public land within the Dolores Triangle Planning Unit to provide shorebird and waterfowl nesting habitat.
- 5. Improve approximately 10 miles of aquatic and associated riparian habitat in Granite Creek Canyon to increase self-sustaining brook trout populations
- 6. Improve approximately 20 miles of aquatic and associated riparian habitat in Coates, Ryan and Renegade Creeks to support a self-sustaining warm-water fish population
- 7. Improve species diversity of wildlife habitats within planning area by cooperating with both UDWR and USFWS in attempts to re-establish wildlife populations within this area.

8. Enhance bald eagle wintering habitat and non-game habitat along river and stream corridors.

Deer and elk winter habitat were to be improved through chaining, herbicides, prescribe fires, vegetative seeding with mixes to improve browses and forage for wildlife, water developments and improvements. These winter ranges were to be protected from grazing by forage reallocation from and oil and gas disturbance. Bighorn sheep would be supported by improving habitat, reallocating forage, and reducing harassment. The bighorn sheep area would be closed to OHV use by a rock barrier. Bald eagle habitat was to be improved through the installation of fencing and enclosures to protect cottonwoods. Raptor surveys would determine location and density of nesting location so that these areas could be protected from surface disturbances. Quarter mile buffers would protect nest sites from February 15<sup>th</sup> through June 1<sup>st</sup> from oil and gas occupancy. Riparian habitat along Granite, Coates, Ryan, and Renegade Creeks would be improved by installing in-stream structures such as drop structures, log, earth and rock dams, deepening and channelization of stream channels, erosion control with rock and soil berms, and seeding. Riparian areas would be fenced to prevent livestock from entering these areas, helping to improve shorebird and waterfowl nesting habitat. Nest structures were to be installed.

### N.1.4 POTASH-CONFLUENCE HABITAT MANAGEMENT PLAN

The Potash-Confluence HMP, signed in June of 1986, was developed from direction established in the Grand RMP. This HMP provides management guidance primarily for desert bighorn sheep, but also includes guidance for chukar partridge, bald eagles, and peregrine falcon. Under this HMP, 278,000 acres of land administered by the BLM are to be maintained in good condition and habitat is to be improved where needed. Eight specific management objectives were established:

- 1. Improve 42,500 acres of critical bighorn sheep habitat by preventing major human disturbance during lambing and breeding seasons.
- 2. Provide additional water sources at a minimum spacing of 1 water development in each 2 square mile area on lambing grounds.
- 3. Adopt fence standards to adequately restrict livestock while providing for free movement of bighorn sheep.
- 4. Maintain water developments used by bighorn sheep, chukar partridge and other wildlife by providing funding where needed and ensuring that wildlife escape ramps are placed in all water troughs.
- 5. Assist in the development of livestock manipulation techniques on Horsethief Point, Spring Canyon Bottom, and Ten-Mile Point allotments to improve or maintain bighorn sheep habitat.
- 6. Change season of use on the Potash allotment to reduce competition on lambing and breeding grounds.
- 7. Maintain 64,000 areas of cliff habitat to support 4 breeding pairs of peregrine falcon along the Colorado and Green Rivers to achieve as annual production of 10 peregrines by 1990.
- 8. Protect and maintain 5,000 acres of riparian habitat to provide wintering habitat for bald eagles and support a diversity of game and non-game species.

Human disturbance in critical habitat would be lessened by using protective stipulations for oil and gas leasing, disallowing oil and gas exploration and occupancy, including seismic exploration, controlling filming activities and solid mineral extraction during lambing and rutting seasons. Water developments were to be installed to alleviate conflicts created by human occupancy (recreational and industrial) and to reduce competition between livestock and bighorn for forage, water and space. Most bighorn water developments were installed in areas inaccessible to both people and cattle. This spatial separation lessens the potential for bighorn and people and cattle interaction. The risk of bighorn contacting diseases, which could be carried by the cattle, is also lessened.

## N.2 WILDLIFE LAND-USE PLAN AMENDMENTS TO THE 1985 GRAND RMP

## N.2.1 BIGHORN SHEEP AMENDMENT TO THE GRAND RMP

An RMP amendment (EA #UT-068-89-036) was completed in 1989 involving the improvement of desert bighorn and Rocky Mountain bighorn habitat. The amendment provided for installation of new water facilities and modified the Grand RMP from supporting current estimated bighorn sheep population of 259 and managing bighorn sheep habitat to support prior stable numbers of 1440 desert bighorn sheep. Population goals would be reached by big games releases, reestablishment, and through change of livestock class. Furthermore, the amendment prevents changes in livestock from cattle to domestic sheep to prevent forage competition and disease transmittal to bighorns. Current allotments grazing domestic sheep were not required to change to cattle. Allotments that were effected by this plan amendment include: Ten Mile Point, Big Flat-Ten Mile, Spring Canyon Bottom, Horsethief Point, Arth's Pasture, Potash, Kane Springs, Rattlesnake, Showerbath Springs, Tusher Wash, Lone Cone, Coal Canyon, Floy Canyon, Horse Canyon, Thompson Canyon, Crescent Canyon, Floy Creek, Little Hole, Lost Canyon-Sugar Bench, Agate, Steamboat Mesa, South Beaver Mesa, Dakota Rock, Dolores Point, Taylor (Fisher Valley), Professor Valley, Ida Gulch, Hotel Mesa, Taylor (Highlands) North River and Hatch Point.

This change will allow desert bighorn sheep populations to also attain their prior stable population level providing that favorable habitat and environmental conditions prevail.

# N.2.2 LIVESTOCK GRAZING USE ADJUSTMENTS AMENDMENT TO THE GRAND RMP (1995)

An RMP amendment (EA #UT-068-94-047) was implemented in 1995 which benefited wildlife across much of Moab FO area. The amendment allowed for the removal of cattle from the Bogart, Diamond, Cottonwood, North Sand Flats, South Sand Flats, and Between the Creeks allotments. This action resulted in a retirement of 5,066 BLM AUMs that are now reserved for wildlife, riparian vegetation, watershed and recreational values.

The amendment included the reallocation of cattle grazing privileges in the Cisco, Main Canyon-Middle Canyon, and Arth's pasture allotments to enhance, protect and improve wildlife habitat, riparian vegetation, watershed, and recreation values. These reductions totaled 3,206 AUMs. Main and Middle Canyon were combined and a rest/rotation system implemented, allowing pastures to be rested every third or forth year. AUMs remaining for cattle on the Arth's Pasture allotment were to be actively managed using fencing and herding to benefit desert bighorn sheep, by reducing spatial competition, social intolerance, disease transmittal, and competition for forage and water. These reductions in AUMs are summarized in Table 1:

Allotment	Permitted BLM AUMs	Reallocation of BLM AUMs	Remaining BLM AUMs	Permitted Season of Use
Cisco	4,149	2,330 (56%)	1,819	10/25-6/20
Main Canyon-Middle Canyon	951	451 (47%)	500	6/01-10/30
Arth's Pasture	808	425 (53%)	353	11/6-5/17
Bogart	206	206 (100%)	0	
North Sand Flats	797	797 (100%)	0	
South Sand Flats	597	597 (100%)	0	
Between the Creeks	260	260 (100%)	0	
TOTAL	7,768	5,066	2,672	

 Table 1: Reductions in Grazing from the 1995 Amendment to the Grand RMP

All livestock AUMs in the Horse Pasture-Nash Wash area of the Cisco allotment were reallocated for use by deer and pronghorn. The domestic sheep grazing that was permitted was redistributed throughout the remaining portion of the Cisco Allotment. Approximately 3 miles of fence was constructed on the unfenced portion to exclude livestock from the Horse Pasture area. The Horse Pasture area is an area where large numbers of deer concentrate during the winter months and is considered to be a crucial deer winter area and competition for forage and space had existed for decades. Wintering deer would no longer have to compete with cattle and domestic sheep for sagebrush and the early spring season grasses. It was hoped that there would be an increase in the deer population resulting from increased reproductive success rates (fawn: doe ratio) through increased forage availability. Any disturbance which had been caused by the presence of sheep dogs, sheep camps and the domestic sheep herd, which may have interfered with deer movement and their use of pinyon-juniper trees for thermal and escape cover, would no longer occur.

Of the 2,330 reallocated AUMs in the Cisco allotment, 500 are specifically for pronghorn habitat enhancement. The additional 500 AUMs of forage specifically allocated for pronghorn should allow the herd to increase by approximately 400 animals. Approximately 300-400 pronghorn could occupy the Cisco Allotment yearlong, except during the winter months when pronghorn gather into large herds. Possibly 600-800 pronghorn could occupy a portion of the Cisco Allotment for a two to three month period.

This RMP Amendments allows for additional flexibility to modify the grazing season of use for individual allotments within the entire Resources Area.

This RMP Amendments allows for the relinquishment of grazing permits and reallocation of forage previously reserved for livestock to non-livestock purposes such as wildlife habitat,

riparian vegetation, watershed and recreational values. This would result in partial or complete removal of livestock from specific grazing allotments

### N.2.3 LIVESTOCK GRAZING USE ADJUSTMENTS AMENDMENT TO THE GRAND RMP ON DIAMOND-COTTONWOOD ALLOTMENTS (1996)

An RMP amendment (EA #UT-068-94-047) was implemented in 1996 which benefited wildlife in the Diamond and Cottonwood Allotments. The amendment allowed for the removal of cattle from the Diamond and Cottonwood allotments, resulting in the retirement of 1,491 BLM AUMs. These AUMs are now reserved for wildlife, riparian vegetation, watershed and recreational values. These reductions in AUMs are summarized in Table 2:

 Table 2: Grazing Adjustments in the Diamond and Cottonwood Allotments

Allotment	Permitted BLM AUMs	Reallocation of BLM AUMs	Remaining BLM AUMs
Diamond	590	590 (100%)	0
Cottonwood	901	901 (100%)	0
TOTAL	1491	1491	0

## N.3 BIRD HABITAT CONSERVATION AREAS (BHCA)

### N.3.1 CISCO DESERT BIRD HABITAT CONSERVATION AREA

199,484 Acres: Low desert Shrub

Species of Concern: Golden Eagle, Ferruginous Hawk, Burrowing Owl, Long-billed curlew

### N.3.2 COLORADO & DOLORES RIVERS BIRD HABITAT CONSERVATION AREA

43,393 Acres: Lowland Riparian

**Species of Concern:** North American Waterfowl, Virginia & Lucy's Warbler, Yellow-breasted Chat, Blue Grosbeak, Yellow-billed Cuckoo, Bald Eagle, Peregrine, Mexican Spotted Owl

### N.3.3 GREEN RIVER BIRD HABITAT CONSERVATION AREA

30,110 Acres: Lowland Riparian

**Species of Concern:** North American Waterfowl, Virginia & Lucy's Warbler, Yellow-breasted Chat, Blue Grosbeak, Yellow-billed Cuckoo, Bald Eagle, Peregrine, Mexican Spotted Owl

## N.3.4 COTTONWOOD & WILLOW CREEKS BIRD HABITAT CONSERVATION AREA

38,487 Acres: Lowland Riparian

**Species of Concern:** Cordilleran & Olive-sided Flycatchers, Mexican Spotted Owl, Virginia & Lucy's Warbler, Broad-tailed Hummingbird, Goshawk, Fox Sparrow, Red-napped Sapsucker, Western Bluebird