DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 9
(South Slope)
March 2012

BOUNDARY DESCRIPTION

Wasatch, Summit, Daggett, Uintah, Duchesne counties - Boundary begins at the Junction of US-40 and SR-87 in Duchesne; north on SR-87 to SR-35; northwest on SR-35 to the Provo River; north along the Provo River to the North Fork Provo River; north along the North Fork Provo River to SR-150; north along SR-150 to the Summit/Duchesne county line (summit of the Uinta Mountains); east along the summit of the Uinta Mountains to US-191; north along US-191 to Cart Creek; north along Cart Creek to Flaming Gorge Reservoir; east along Flaming Gorge Reservoir to the Green River; east along the Green River to the Utah-Colorado state line; south along the Utah-Colorado state line to the White River; west along the White River to the Green River; north along the Green River to the Duchesne River; west along the Duchesne River to US-40 at Myton; west along US-40 to SR-87 in Duchesne.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Yearlong range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	0	0%	601817	53%	38165	5%
Bureau of Land Management	388251	41%	97496	9%	223035	31%
Utah State Institutional Trust Lands	67305	7%	12320	1%	45610	6%
Native American Trust Lands	133415	14%	35293	3%	206941	28%
Private	344309	36%	108198	9%	177247	24%
Department of Defense	0	0%	0	0%	0	0%
USFWS Refuge	8703	1%	0	0%	272	0%
National Parks	7435	1%	8009	1%	35185	5%
Utah State Parks	62	0%	0	0%	946	0%
Utah Division of Wildlife Resources	1201	0%	10603	1%	2197	0%
National recreation Areas	0	0%	1559	1%	2352	0%
USFS & BLM Wilderness Areas	0	0%	264713	23%	0	0%
TOTAL	950681	100%	1140008	100%	731950	100%

UNIT MANAGEMENT GOALS

- Expand and improve mule deer populations within the carrying capacity of available habitats and in consideration of other land uses.

- Provide a diversity of high-quality hunting and viewing opportunities for mule deer throughout the unit.

- Conserve and improve mule deer habitat throughout the unit with emphasis on crucial ranges.

POPULATION MANAGEMENT OBJECTIVES

- **Long Term Target Winter Herd Size** - population size of 26,000 wintering deer (modeled number distributed in the following subpopulations).

  - 9a Yellowstone subpopulation: 13,000
  - 9b,c&d Vernal/Bonanza and Diamond Mountain subpopulations: 13,000

  If forage production or range conditions are identified as a problem, antlerless deer permits will be used to address specific locations of concern.

- Herd Composition –

  The Yellowstone and Vernal/Bonanza subunits are General Season subunits and will be managed for a 3-year average postseason buck to doe ratio in accordance to the statewide plan

  The Diamond Mountain subunit will be managed as a Limited Entry hunting unit, with a 3 year average postseason buck to doe ratio objective ranging from 25 to 35 bucks per 100 does. When the buck ratio reaches the Premium Limited Entry hunting unit objectives, the unit will be recommended for inclusion in the Premium Limited Entry category. As of postseason 2011, the 3 year average on Diamond Mountain is 38.7 bucks per 100 does.

  Once this unit becomes premium limited entry management buck hunts can be implemented, based on the same criteria used on the other premium limited entry units.

POPULATION MANAGEMENT STRATEGIES

Monitoring

- Population Size - Winter population size will be estimated using a computer model that was developed to utilize harvest data, postseason and spring classifications and radio collar based survival estimates. Annual survival rates for adult does and doe fawns will be monitored by capturing and radio collaring 30 doe fawns each Dec. across the unit and following survival rates into adult hood.

- Buck Age Structure - Monitor age class structure of the buck population through the use of checking stations, postseason classification, tooth cementum annuli analysis, uniform harvest surveys and field bag checks.

- Harvest - The primary means of monitoring harvest will be through the statewide uniform harvest survey and the use of checking stations. Achieve the target population size by use of antlerless harvest using a variety of harvest methods and seasons. Recognize that buck harvest will be above or below what is expected due to climatic and productivity variables. Buck harvest strategies will be developed through the RAC and Wildlife Board process to achieve management objectives for buck: doe ratios

Limiting Factors (May prevent achieving management objectives)

- Crop Depredation - Minimize depredation as prescribed by state law and DWR policy.

- Habitat - Public land winter range availability, landowner acceptance and winter range forage conditions will determine herd size. Excessive habitat utilization will be addressed with hunting.

- Predation - Follow DWR predator management policy:
- - If the population estimate is less than 90% of objective and fawn to doe ratio drops below 70 for 2 of the last 3 years or if the fawn survival rate drops below 50% for one year, then a Predator Management Plan targeting coyotes will be implemented on that subunit.
- - If the population estimate is less than 90% of objective and the doe survival rate drops below 85% for 2 of the last 3 years or below 80% for one year, then a Predator Management Plan targeting cougar would be implemented on that subunit.

- Highway Mortality - Highway mortality is a significant factor in reduced population growth in deer. Work should continue in cooperation with UDOT, Uintah and Duchesne Counties, Universities, local conservation groups, and landowners to minimize highway mortality by identifying locations of high deer-vehicle collisions and erecting sufficient wildlife crossing structures in those locations. Evaluate the effectiveness of the crossing structures over time and implement new technologies to improve future wildlife crossing structures.

- Disease - The impact of disease on deer herds is difficult to assess. Monitoring should be continued for diseases that have been found in the state. Those diseases include: bluetongue, epizootic hemorrhagic disease (EHD), pneumonia, enterotoxemia and Chronic Wasting Disease (CWD). CWD has been documented on the Vernal and Diamond Mountain subunits. Between 2003 and 2008 six samples tested positive for CWD. Since 2008 there have been no positive samples for CWD on this unit or in the vicinity. Since 2002 when CWD monitoring was initiated samples from 6 deer have tested positive for CWD out of 4,130 samples tested from across the North Slope and the South Slope and an additional 1610 elk samples that have all tested negative.

- Illegal Harvest - Support law enforcement efforts to educate the public concerning poaching and reduce illegal taking of deer.

HABITAT MANAGEMENT OBJECTIVES

- Maintain mule deer habitat throughout the unit by protecting and enhancing existing crucial habitats and mitigating for losses due to natural and human impacts.

- Improve the quality and quantity of vegetation for mule deer on crucial range.

- Provide improved habitat security and escapement opportunities for deer.

HABITAT MANAGEMENT STRATEGIES

- Continue to monitor permanent Big Game Range Trend Studies of crucial mule deer range across the unit.

- Continue annual seasonal range rides and range assessments to evaluate forage condition and utilization.

- Work with land management agencies, conservation organizations, private landowners, and local leaders through the regional Watershed Restoration Initiative working groups to identify and prioritize mule deer habitats that are in need of enhancement or restoration.

- Initiate broad scale vegetative treatment projects to improve mule deer habitat with emphasis on drought or fire damaged sagebrush winter ranges, ranges that are being taken over by invasive annual grass species, and ranges being diminished by encroachment of conifers into sagebrush or aspen habitats.

- Properly manage elk populations to minimize competition with mule deer on crucial ranges.

- Work with state and federal land management agencies to properly manage livestock to enhance crucial mule deer ranges

- Minimize impacts and mitigate for losses of crucial habitat due to human impacts and energy development.

- Work with county, state, and federal agencies to limit the negative effects of roads by reclaiming unused roads, properly planning new roads, and installing fencing and highway passage structures where roads disrupt normal mule deer migration patterns.

- Utilize antlerless deer harvest to improve or protect forage conditions if and when vegetative declines are attributed to deer overutilization or are expected due to severe weather conditions.

PERMANENT RANGE TREND SUMMARIES

The following table summarizes the condition of deer winter range on Unit 9, as indicated by DWR permanent Big Game Range Trend studies:

Year	Mountain Brush Sites (n=5)		Mountain Big Sagebrush Sites (n=9)		Wyoming Big Sagebrush Sites (n=6)	
	score	ranking	score	Ranking	score	ranking
1995	77	Good	63	Fair	42	Fair
2000	84	Good	68	Good	32	Fair
2005	83	Good	64	Fair-Good	25	Poor-Fair
2010	90	Good-Excellent	65	Fair-Good	29	Fair

Based upon the last range trend studies conducted in 2010 the overall condition of the South Slope deer unit is currently considered to be improving slightly. However, the most critical winter range areas are the Wyoming Big Sagebrush areas which are currently only in Fair condition. These are the areas with the lowest potential and are reflective of the sagebrush die-off that occurred in 2003. These low potential sites are located on the most critical winter range where deer are pushed on hard winters. Serious range condition problems exist in some of this zone, particularly on the South Slope, Vernal subunit (9b). Those areas where the range condition is currently in the Poor or Very Poor condition need to be addressed and utilization minimized until

range condition can be improved.

Unit 9bcd, South Slope, Vernal, Diamond Mountain and Bonanza Subunits

A total of 12 study sites were read on these subunits in 2010. Range trend varies depending upon the sites ecological potential. The Mid to High potential sites are mostly in Good condition. The Low potential sites range from Fair to Very Poor. The low potential sites are the most critical deer winter range.

Six of the study sites are located at sites with a low ecological potential. Of those 2 are in Very Poor Condition, 1 is in Poor condition, 2 are in Fair Condition and 1 is in Good-Excellent condition. Several of these sites have suffered from fire or from the drought caused sagebrush die-off in 2003. They are recovering very slowly or not at all.

The other six study sites are located at sites with a mid to high range ecological potential. Eighty percent of these are considered to be in fair to good condition, while the other site remains in Very Poor condition. Deer primarily use these sites during transition to critical winter range and during light winters with below normal snow depths. These areas did not experience browse die-offs during the drought.

Unit 9a, South Slope, Yellowstone Subunit

Eight range trend sites were assessed in 2010 across the Yellowstone subunit. Four of those are mid potential sites and 4 are high potential sites. Most of the studies on this subunit are located in the mountain brush and mountain sagebrush habitat type and sample deer winter range. Some sites sample higher elevation winter range, which is likely used in the spring and summer as well. Currently, there are no low elevation monitoring sites on this subunit to represent the most critical winter range.

Three of the four Mid Potential trend sites (7,000'-7,900') are rated in Good or Excellent condition, while the other site is rated in Poor condition due primarily to being burned by the Neola North fire. The other three are up slightly from 2005.
All four of the High Potential sites (7,000'-8160') are rated in Good or Excellent condition. The condition of these mid elevation sites all appear to be improving.
There is a real need for additional monitoring sites at lower elevation wintering areas which become crucial in hard winters. For example: the Clay Basin area near Bluebell (6300') suffered high sagebrush mortality due to the drought 2003. That area historically wintered large numbers of deer but will take decades to recover. Additional monitoring is needed in those types of areas.

Duration of Plan

This unit management plan was approved by the Wildlife Board on _____ and will be in effect for five years from that date, or until amended.

APPENDIX

Unit 9a South Slope, Yellowstone Subunit

Wasatch, Summit, Duchesne, Uintah counties -- Boundary begins at SR-87 and US-40 in Duchesne; north on SR-87 to SR-35; northwest on SR-35 to the Provo River; north along this river to North Fork Provo River; north along this river to SR-150; east and north on SR-150 to the Summit-Duchesne county line (summit of the Uinta Mountains) at Hayden Pass; east along the summit of the Uinta Mountains to the Dry Fork-Whiterocks drainage divide; south atop this divide to USFS Trail #025; southwest on this trail to Whiterocks Lake and the East Fork of the Whiterocks River; south along this river to the Whiterocks River; south along this river to the Uinta River; south along this river to the Duchesne River; west along this river to US-40 at Myton; west on US-40 to SR-87 in Duchesne.

Unit 9b South Slope, Vernal Subunit

Uintah, Daggett counties -- Boundary begins at the Dry Fork-White Rocks drainage divide and the Daggett-Uintah county line (summit of the Uinta mountains); east along the summit of the Uinta mountains to US-191; north along US-191 to Cart Creek; north along Cart Creek to Flaming Gorge Reservoir; east along Flaming Gorge Reservoir to the Green River; east along the Green River to Gorge Creek; south along Gorge Creek to the summit and the head of Davenport Draw; south along the Forest Service-Private Land boundary on the west side of Davenport Draw and continuing south along this Forest Service boundary to the BLM boundary on the Diamond Mountain rim; east and south along the Diamond Mountain rim to the Diamond Mountain road; south and west along this road to the Brush Creek road; south along this road to the Island Park/Rainbow Park road; east along this road to the Dinosaur National Monument boundary; north and east along this boundary to the Utah-Colorado state line; south along this state line to the Green River; south along this river to the Duchesne River; west along this river to the Uinta River; north along this river to Whiterocks river; north along this river to the East Fork of the Whiterocks River; north along this river to Whiterocks Lake and USFS Trail #025; northeast on this trail to the Dry Fork-Whiterocks drainage divide; north atop this divide to the Daggett-Uintah county line (summit of the Uinta Mountains).

Unit 9c South Slope, Diamond Mountain Subunit

Uintah, Daggett counties -- Boundary begins at the Green River and the Utah-Colorado state line; then west along this river to Gorge Creek; then south along Gorge Creek to the summit and the head of Davenport Draw; south along the Forest Service-Private Land boundary on the west side of Davenport Draw and continuing south along this Forest Service boundary to the BLM Boundary on the Diamond Mountain Rim; east and south along the Diamond Mountain rim to the Diamond Mountain road; south and west along this road to the Brush Creek road; south along this road to the Island Park / Rainbow Park road; east along this road to the Dinosaur National Monument Boundary; north and east along this boundary to the Utah -Colorado state line; north along this state line to the Green River.

Unit 9d South Slope, Bonanza Subunit

Uintah county -- Boundary begins at the Colorado-Utah state line and the White River; west along this river to the Green River; north along this river to the Colorado-Utah state line; south along this state line to the White River.