

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 10
(Book Cliffs)
March 2012

BOUNDARY DESCRIPTION

Grand and Uintah counties—Boundary begins at Exit 164 on I-70 near the town of Green River; east on I-70 to the Utah-Colorado state line; north on this state line to the White River; west along this river to the Green River; south along this river to Swasey's Boat Ramp and the Hastings Road; south on this road to SR-19; south and east on SR-19 to Exit 164 on 1-70 near the town of Green River. **EXCLUDES ALL NATIVE AMERICAN TRUST LAND WITHIN THE BOUNDARY.**

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Yearlong range		Summer Range		Winter Range	
	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service	0	0%	0	0%	0	0%
Bureau of Land Management	145453	62%	160399	34%	899786	66%
Utah State Institutional Trust Lands	33770	14%	127776	27%	119242	9%
Native American Trust Lands	51816	22%	161229	35%	253474	19%
Private	4216	2%	9608	2%	90387	7%
Department of Defense	0	0%	0	0%	0	0%
USFWS Refuge	0	0%	0	0%	0	0%
National Parks	0	0%	0	0%	0	0%
Utah State Parks	0	0%	0	0%	0	0%
Utah Division of Wildlife Resources	0	0%	6518	1%	1689	0%
TOTAL	235255	100%	465531	100%	1364578	100%

UNIT MANAGEMENT GOALS

Manage for a population of healthy animals capable of providing a broad range of recreational opportunities, including hunting and viewing. Balance deer herd impacts on human needs, such as private property rights, agricultural crops and local economies. Maintain the population at a level that is within the long-term capability of the available habitat.

POPULATION MANAGEMENT OBJECTIVES

€ Target Winter Herd Size - The wintering deer herd will be maintained within the vegetative carrying capacity. This will be achieved by establishing short term population objectives if the trend of the rangeland Desired Component Index (DCI) values indicate a need. (The DCI is a measurement of the condition of mule deer winter range and relates to the potential “carrying capacity” for the study site. If short term population objectives are warranted due to declining range condition, they will be established and adjusted as the DCI reflects the need or opportunity.)

The most recent DCI ratings occurred in 2010. Winter range study sites appear stable. The Book Cliffs unit is a summer range limited area. Summer study site DCI values do not reflect a problem. Therefore, no short term population parameters are warranted.

Achieve a target population size of 15,000 wintering deer (modeled number) distributed in the following subpopulations:

	Objective
Bitter Creek, Subunit 10A	10,000
South, Subunit 10B	5,000
Unit 10 Total	15,000

(Subunit boundary descriptions are provided in the Appendix)

€ Herd Composition and Harvest – The Book Cliffs will be managed as a Limited Entry buck deer hunting unit, with a 3 year average postseason buck to doe ratio objective ranging from 25 to 35 bucks per 100 does. If buck to doe ratios are significantly different on the northern and southern subunits, changes to season dates and hunt boundaries may be explored to address this large disparity. Management buck hunts may be considered when the statewide plan is revised.

POPULATION MANAGEMENT STRATEGIES

Monitoring

€ Population Size - Utilizing harvest data, postseason and spring classifications and mortality estimates, a computer model has been developed to estimate winter population sizes. Wintering populations may be computer modeled for each herd subunit when deemed advantageous or when animal numbers appear to be reaching the objective.

€ Buck Age Structure - Monitor age class structure of the buck subpopulations through the use of tooth sampling, checking stations, postseason classification, 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 - Take all steps necessary to minimize depredation as prescribed by state law and DWR policy.

€ Habitat – The vast expanse of the Book Cliffs herd unit is public land managed under a “multiple use”

directive. In recent years increased in energy development activities have and will continue to contribute to substantial habitat losses and increasing habitat fragmentation. Development of mineral resources through traditional well pads and associated drilling and production facilities may negatively impact deer habitat quality and quantity through loss, disturbance and fragmentation. The paving of the Seep Ridge Road may contribute to increased habitat fragmentation and deer vehicle collisions. In addition to existing mineral lease activities, future development of tar sands and/or oil shale extraction activities pose a significant additional threat to deer habitat. The Book Cliffs deer herd is summer range limited and exhibits slower herd recovery following significant population declines. Proliferation of non-system roads and increasing ATV and OHV use compromises deer security and escape possibilities. Domestic cattle grazing outside of recognized grazing plan utilization levels and seasons may negatively impact deer forage availability and condition. Excessive habitat utilization will be addressed when observed.

€ 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 - Cooperate with the Utah Department of Transportation and appropriate county road departments in construction of fences, crossing structures and warning signs etc. Especially in conjunction with the paving of the Seep Ridge Road. The DWR will also continue working collecting data as part of the Seep Ridge Road deer radio collar study examining the impacts of the paving of the Seep Ridge Road on mule deer.

€ Illegal Harvest - Support law enforcement efforts to educate the public concerning poaching and reduce illegal taking of deer. In cooperation with the Law Enforcement Section develop specific preventive measures within the context of an Action Plan to prevent illegal harvest.

HABITAT MANAGEMENT OBJECTIVES

€ Maintain and/or enhance forage production through direct range improvements to support and maintain herd population management objectives.

€ Work with private landowners and, federal, state, local and tribal governments to maintain and protect critical and existing ranges from future losses and degradation.

€ Provide improved habitat security and escapement opportunities for deer.

€ Mitigate impacts from energy development activities.

€ Minimize deer vehicle collisions along soon to be paved Seep Ridge Road corridor.

HABITAT MANAGEMENT STRATEGIES

€ Continue to monitor permanent range trend studies located throughout the unit.

€ Conduct cooperative seasonal range rides and surveys to evaluate forage condition and utilization. Determining opportunities for habitat improvements will be an integral part of these surveys.

- £ Work cooperatively to utilize grazing, prescribed burning and other recognized vegetative manipulation techniques to enhance deer forage quantity and quality.
- £ Utilize antlerless deer harvest to improve or protect forage conditions when vegetative declines are attributed to deer over utilization.
- £ Cooperate with and provide input to land management planning efforts dealing with actions affecting habitat security, quality and quantity.
- £ Work with land management agencies and energy companies to minimize and mitigate impacts of energy development activities. Oil and Gas specific habitat biologists will lead this effort.
- £ Continue to monitor deer survival in relation to the paving of the Seep Ridge Road and work to minimize deer vehicle collisions through fencing, crossing structures, signage etc.

PERMANENT RANGE TREND SUMMARIES

In 2010 mule deer habitat range trend Desirable Conditions Indices were calculated for 22 permanent range trend sites on the North Book Cliffs and 7 permanent range trend study sites on the South Book Cliffs. On the North Book Cliffs 5 “High Potential” summer range sites were evaluated, 8 “Mid Potential” spring/fall transition range sites were evaluated, and 9 “low potential” winter range sites were evaluated. On the South Book Cliffs 7 “low potential” winter range sites were evaluated. These range trend studies show a general trend of stability over the last 10 years with the exception of browse availability on the South Book Cliffs which has declined. In addition, the forb component has generally declined in all these study sites as it has across much of Utah. Weather patterns are the driving force behind much of the trend in range conditions, but continued efforts to reduce pinion juniper monocultures, diversify plant communities, develop/protect limited water resources, increase vigor of browse communities and promote sustainable livestock grazing practices are critical.

Mountain Brush Sites (High)

North Book Cliffs (n=5)

Year	Score	Ranking
95/98	89.1	Good-Excellent
00/02	85.4	Good
05	79.8	Good
10	81.2	Good

Mountain Big Sagebrush Sites (Mid)

North Book Cliffs (n=8)

Year	Score	Ranking
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95/97/98	62.1	Fair
00	54.7	Fair
05	54.0	Fair
10	54.6	Fair

Wyoming Big Sagebrush Sites (Low)

North Book Cliffs (n=9)

Year	Score	Ranking
95/97	42.4	Fair
99/00	52.4	Good
05	29.9	Fair
10	49.4	Good

Wyoming Big Sagebrush Sites (Low)

South Book Cliffs (n=7)

Year	Score	Ranking
95	21.8	Poor
00	33.5	Fair
05	12.9	Poor
10	26.7	Poor-Fair

Unit 10 Book Cliffs, South Book Cliffs Subunit

Grand County - Boundary begins at the Utah-Colorado state line and the summit and drainage divide of the Book Cliffs; west along this summit and drainage divide to Diamond Ridge; southwest along Diamond Ridge and the Book Cliffs summit (north-south drainage divide) to the Uintah and Ouray Indian Reservation boundary (Hells Hole/head of Segó Canyon); west along this boundary to the Green River; south along the Green River to Swasey boat ramp and Hastings Road; south along Hastings Road to SR-19; south and east along SR-19 to exit 164 of I-70; east along I-70 to the Utah-Colorado state line; north along this state line to the summit and drainage divide of the Book Cliffs.

Unit 10 Book Cliffs, North Book Cliffs Subunit

Uintah and Grand Counties - Boundary begins at the Utah-Colorado state line and the White River; south along this state line to the summit and drainage divide of the Book Cliffs; west along this summit and drainage divide to the Uintah and Ouray Indian Reservation boundary (Hells Hole/head of Segó Canyon); west along this boundary to the Green River; north along the Green River to the White River; east along this river to the Utah-Colorado state line.

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.