DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 1
(Box Elder)
April 2012

BOUNDARY DESCRIPTION

Box Elder, Tooele, Salt Lake, Davis and Weber counties - Boundary begins at the Utah-Idaho state line and Interstate 15; then west along this state line to the Utah-Nevada state line, south along this state line to Interstate 80, east on I-80 to I-15, north on I-15 to the Utah-Idaho state line.

Subunit 1 A: Consists of the western half of Box Elder county.
Subunit 1 B: Consists of the eastern half of Box Elder county (Kelton - east).
Subunit 1 C: Consists of Tooele, Salt Lake and Weber counties north of I-80 and west of I-15.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Yearlong range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	0	0	47174	6	25491	4
Bureau of Land Management, Dept Def.	35185	22	57466	8	243074	37
Private	115756	73	638378	84	341858	53
National Park	0	0	2263	<1	0	0
State Institutional Trust Lands, Sovereign	2387	2	17752	2	40309	6
Utah Division of Wildlife Resources	4796	3	0	0	0	0
DWR Salt Lake Office **TOTAL**	158124	100	763033	100	650734	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 to support.

POPULATION MANAGEMENT OBJECTIVES

< Target Winter Herd Size – The short term objective for 2013 is to achieve 20,000 wintering deer (13,000 for subunits 1A,1C and 7,000 for subunit B). Historically, the Unit 1 objective has been 24,000 animals. This population target has not been reached since deer management plans have been in place. Therefore, the Division recommends a short term reduction in management objectives to levels that are viewed as obtainable by regional biologists.

Subunit 1 A West Box Elder – The past objective has been 16,000 deer. This number has not been reached since 1988, when a 12 year wet cycle culminated. Over the last 14 years, this area

reached a peak population of around 11,000 deer in the year 2000; the population averaged less than 7,000 animals during that period. Based on this population performance, DWR recommends a minimum of 20% reduction to 13,000 animals.

Subunit 1 B- East Box Elder - This area reached and exceeded the 8,000 deer objective in 1999. A severe winter range fire on the Promontory peninsula occurred in 2001 and has reduced carrying capacity by approximately 1,000 animals. Consequently, the short-term objective is reduced to 7,000 deer.

We will recommend revisions of the short term objective if review of habitat conditions or the next range trend monitoring period indicate that changes are needed.

	Unit 1	**Subunit 1A**	**Subunit 1B**
1994-2005 Objective	24,000	16,000	8,000
2006-2011 Objective	20,000	13,000	7,000
20012-2013 Objective	20,000	13,000	7,000
Change	0	0	0

< Herd Composition - Maintain a region-wide three year average postseason buck to doe ratio in accordance to the statewide plan.

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 size.

< Buck Age Structure - Monitor age class structure of the buck population through the use of 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. Achieve the target population size by use of antlerless harvest using a variety of harvest methods and seasons. The winter population of 20,000 should result in an expected annual buck harvest of 2,200 when normal conditions occur, but 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 (Items which may prevent achieving population objectives)

< Crop Depredation - Take all steps necessary to minimize depredation as prescribed by state law and DWR policy.

< Habitat - Two-thirds of the Promontory peninsula critical winter range on subunit 1B burned in 2001. This loss will correspond to a 1,000 deer reduction in subunit 1B's short term objective. Subunit 1A has very little summer range and the DWR's range trend site's indicate that it is in good condition.

< Predation - Refer to DWR predator management policy.

- Assess need for control by species, geographic area and season of year.

- Seek assistance from ADC when deer populations are depressed and where there is a reasonable chance of gaining some relief through a predator control effort. Predator control efforts will be focused just before and during the spring fawning period.

- Recommend cougar harvest to benefit deer while maintaining the cougar as a valued resource in its own right.

< Highway Mortality - Cooperate with the Utah Dept. Of Transportation in construction of highway fences, passage structures and warning signs etc..

< Illegal Harvest - Should illegal kill become an identified and significant source of mortality attempt to develop specific preventive measures within the context of an “Action Plan” developed in cooperation with the Law Enforcement Section.

HABITAT MANAGEMENT OBJECTIVES

< Maintain and/or enhance forage production through direct range improvements throughout summer range on sub-unit 1A and on winter range portions of the southern Promontory peninsula on sub-unit 1B to achieve population management objectives.

< Work with private and federal agencies to maintain and protect critical and existing summer and winter range from future losses.

< Provide improved habitat security and escapement opportunities for deer.

< Condition of deer winter range (extensive, non-limiting) on subunit 1A, as indicated by DWR range trend surveys.

Year	Mean DCI score for Unit	Classification	Unit-specific DCI score range: Poor	Unit-specific DCI score range: Fair	Unit-specific DCI score range: Good
1996	58	Good	22-36	37-53	54-72
2001	55	Good			

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HABITAT MANAGEMENT STRATEGIES

< Continue to monitor the permanent range trend studies located on subunit 1 A. Increase the emphasis on summer range transect sites.

CURRENT POPULATION STATUS

Year	Buck Harvest	Post-Season F/100 D	Post-Season Buck/100 D	% 3 point or better	Post-Season Population	% of Objective
2010	1,115	64	21	17,100	20,000	86%
2011	1,101	70	20	15,000	20,000	75%

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.

Draft 04/9/2012

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 2
(Cache)
April 2006

BOUNDARY DESCRIPTION

Cache, Rich, Weber, and Box Elder counties - Boundary begins at the Utah-Idaho state line and I-15; south on I-15 to US-91; northeast on US-91 to SR-101; east on SR-101 to Hardware Ranch and USFS Road 054 (Ant Flat); south on USFS 054 to SR-39; east on SR-39 to SR-16; southeast on SR-16 to the Utah-Wyoming state line; north along this state line to the Utah-Idaho state line; west along this state line to I-15.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Yearlong range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	0	0%	273346	55%	52358	16%
Bureau of Land Management	845	<1%	46126	9%	94909	29%
Utah State Institutional Trust Lands	245	<1%	25001	5%	28933	9%
Native American Trust Lands	0	0%	0	0%	0	0%
Private	104662	99%	146362	30%	133488	41%
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%	17	<1%
Utah Division of Wildlife Resources	81	<1%	4552	1%	11823	4%
TOTAL	105833	100%	495387	100%	321528	100%

UNIT MANAGEMENT GOALS

The primary goal is to maintain the proper balance between the number of animals in the deer herd and the forage available on the limited winter range, thereby sustaining physiologically healthy deer. Also, to provide public hunting and non-consumptive opportunities, promote additional harvest opportunities for landowners, recommend measures for highway safety, and consider private property values.

POPULATION MANAGEMENT OBJECTIVES

- Target Winter Herd Size - Maintain a target population size of 25,000 wintering deer. This population objective remains for both the short-term (5-year life of this plan) and long term, barring significant changes in range conditions.

< Herd Composition –. General Hunt portion of Cache Unit: Maintain a 3-year average postseason buck to doe ratio in accordance with the statewide plan. Crawford Mountain subunit, managed under Limited Entry hunting: Maintain a 3-year average post-season buck: doe ratio of 25-35:100.

< We will recommend revisions of the short-term objective if review of habitat conditions or the next range trend monitoring period indicates that changes are needed.

	Unit 2
1994-2005 Objective:	25,000
2006-2013 Objective:	25,000
Change	0

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 size. Over winter mortality estimates will be determined using observations of mortality, and change-in-ratios from classification data.

< Buck Age Structure - Estimates of the age class structure of the buck population will be determined primarily (directly) through the use of hunter harvested bucks at checking stations and field bag checks, and secondarily (indirectly) using post-season classification observations.

< Harvest - The primary technique used to estimate harvest over the unit is the statewide uniform harvest telephone/mail surveys. Data collected at checking stations will also be used to compare with the uniform survey. Buck harvest strategies will be developed through the RAC and Wildlife Board process to achieve management objectives for buck:doe ratios. Antlerless harvest will be achieved, as needed using a variety of methods and seasons to maintain a wintering population within range carrying capacity and address depredation conflicts.

Limiting Factors (May prevent achieving management objectives)

< Crop Depredation - Take all steps necessary to minimize depredation as prescribed by state law and DWR policy. Some geographic populations may be maintained below range carrying capacity due to conflicts with crop production and private landscapes.

< Habitat - Winter range is the major limiting factor on the Cache. Not only is winter range less than 30 % of the total range, but much of the winter range is in poor condition due to past fires, competition from introduced weedy species, and the lack of spring livestock grazing, as described by "Clements and Young. 1997. A viewpoint: Rangeland health and mule deer habitat. J. Range Manage. 50:129-

138." Excessive habitat utilization will be addressed by antlerless harvests.

< Predation – It is clear that predators do eat deer. It is difficult to predict how predation in effecting current deer populations however. Because the population density on the Cache unit is so far below objective, a predator management plan has been drafted and cougars are being aggressively harvested on the unit. Wildlife Services has agreed to implement coyote control on the unit as well.

< Highway Mortality - The cooperation of the Utah Department Of Transportation to prevent vehicle collisions in terms of highway fences, underpasses, and earthen ramps in Wellsville Canyon, and warning signs as needed throughout the unit is greatly appreciated. A significant number of highway mortalities may tend to reduce deer populations in the following areas: Wellsville Canyon, Highway 91 between Smithfield and Richmond, and Logan Canyon. Reduced speed limits in these areas should be considered by the Department Of Transportation.

< Illegal Harvest, Crippling Loss, Disease and Parasites, White-tailed Deer - Although poaching losses appear insignificant on the Cache, due primarily to a highly visible law enforcement effort, crippling losses are a concern, especially under buck-only hunting. Hunter survey studies (Austin, D.D. 1992. Great Basin Naturalist 52:364-372) suggests as many as 18 deer may be left in the field per 100 hunters. Disease is very difficult to evaluate, but high mortality in the spring is often associated with disease. The meningeal or brain worm parasite is probably the most potentially dangerous organism to mule deer. This parasite is carried without ill effects by white-tailed deer and can be transferred to mule deer, elk or moose. The arrival of white-tailed deer in Utah (McClure M.F. et al. 1997. Range expansion of white-tailed deer (Odocoileus virginianus) into urban and agricultural areas of Utah. Great Basin Nat. 57:278-280) must be viewed cautiously because, "Mule deer show signs of dwindling wherever they meet whitetails, even in the mule deer's stronghold in Wyoming," (Valerius Geist. 1990. Mule deer country. North Word Press. Minocqua, WI). The animal disease diagnostic facility associated with Utah State University acts as the laboratory to identify disease problems. Chronic Wasting disease is of further concern though it has not yet been detected on the unit. Surveillance will be implemented by testing hunter harvested animals as well as targeted surveillance of symptomatic animals.

HABITAT MANAGEMENT OBJECTIVES

< Maintain, protect, and improve forage production on winter ranges, especially big game winter ranges owned by the Division of Wildlife. Annual projects of reseeding, seedling planting, and livestock grazing in spring will continue. The following wildlife management areas are available for big game on the Cache: Hardware Ranch 14,000 ac., Millville 3,477 ac., Richmond 2,066 ac., Woodruff 1,643 ac., Cold Water (new) 1,000 ac., Swan Creek 660 ac., USU (proposed but owned by DWR since 1937) 197 ac., First Dam 74 ac., and Orme 40 ac.

< Work with counties, cities, private landowners and federal agencies to maintain and protect critical and existing winter range from future losses.

< Encourage conservation easements in all ownership sectors, and additional acquisitions for DWR. Determine through research on defined plots, species, either seed or seedling, which may be used successfully in reestablishing browse on steep and/or rocky slopes not conducive to mechanical treatments.

Condition of deer winter range on Unit 2, as indicated by DWR range trend surveys.

Year	Mean DCI score for Unit	Classification	Unit-specific DCI score range: Poor	Unit-specific DCI score range: Fair	Unit-specific DCI score range: Good
1996	47	Fair	27 - 41	42 – 58	59 - 74
2001	49	Fair			

HABITAT MANAGEMENT STRATEGIES

Data will be collected about every five years on the 40-plus permanent trend transects on the Cache. These data will be evaluated as related to deer management by the biologist.

Revegetation of poor condition rangeland and winter ranges damaged by wildfire will be accomplished as time and materials are available.

PERMANENT RANGE TREND DATA SUMMARIES

Unit 2 Cache

Twenty-nine permanently marked study sites were established in 1984 on the Cache unit. During the 1990 survey season, 5 new sites were added, and in 1996, 6 additional sites were added for a total of 40. Data are available in: Davis et al. 1996, Volume 1. Utah big game range trend studies. Ut. Div. Wildl. Res. Publ. No. 98-9. Since 1996 additional sites have been added, especially on State Wildlife Management Areas, but these data are unpublished. Data analyzed from the 29 available sites between 1984 and 1996 indicated a downward trend in shrub density. Specifically, big sagebrush decreased from about 3,300 to 2,700 plants/acre, antelope bitterbrush decreased from about 600 to 550 plants/acre, and rabbitbrush decreased from about 1900 to 1600 plants/acre. Decrease in shrub density is believed to have mostly occurred between 1984 and 1990 during periods of high deer population and unfavorable climatic conditions. Between 1990 and 1996, the number of sites per browse trend category were: down = 6, slightly down = 2, stable = 21, slightly up = 7, up = 4. These data suggest a mostly stable browse trend over the unit, 1990-1996. Between 1996 and 2001, the browse trend is considered to be stable or slightly up, due to favorable winter climatic conditions and decreased deer populations. Beginning in 1996, the 100 foot individual transect lines used for vegetal measurement, and not just the 500 foot location line, were permanently marked to increase the accuracy of data collection.

CURRENT POPULATION STATUS

Year	Buck Harvest	Post-Season F/100 D	Post-Season Buck/100 D	Post-Season Population	Objective	% of Objective
2010	1,056	81	23	16,500	25,000	66%
2011	950	72	12	16,000	25,000	64%

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.

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 3
(Ogden)
April 2012

BOUNDARY DESCRIPTION

Weber, Box Elder, Cache, and Morgan counties - Boundary begins at Hyrum and SR-101; east on SR-101 to the Ant Flat Road (at Hardware Ranch); south on this road to SR-39; west on SR-39 to SR-167 (Trappers Loop Road); south on SR-167 to I-84; west on I-84 to I-15; north on I-15 to Exit 364 and U.S.-91: northeast on US-91 to SR-101; east on SR-101 to Hyrum.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Yearlong range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	0	--	19859	10%	12011	9%
Bureau of Land Management	0	--	0	0%	76	<1%
Utah State Institutional Trust Lands	0	--	8216	5%	0	0%
Native American Trust Lands	0	--	0	0%	0	0%
Private	0	--	139478	70%	112589	80%
Department of Defense	0	--	0	0%	5	<1%
USFWS Refuge	0	--	0	0%	0	0%
National Parks	0	--	0	0%	0	0%
Utah State Parks	0	--	0	0%	20	<1%
Utah Division of Wildlife Resources	0	--	30516	15%	15206	11%
TOTAL	0	--	198069	100%	139,907	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 to support.

POPULATION MANAGEMENT OBJECTIVES

< Target Winter Herd Size - Achieve a modeled target population size of 11,000 wintering deer. This is a reduction of both long-term and short-term objectives from the objective established in 2003, due to permanent loss of winter range within the unit.

< Herd Composition – Maintain a minimum 3-year average postseason buck to doe ratio in accordance with the statewide plan.

Unit 3

1994-2005 Objective:	15,000	
2003 Objective:	12,000	
2006-2013 Objective:	11,000	
Change since 2003:	-1,000	(due to permanent loss of winter range)

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 size.

< Buck Age Structure - Monitor age class structure of the buck population through the use of 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. Achieve the target population size by use of antlerless harvest using a variety of harvest methods and seasons. 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 - Winter and summer forage conditions, public land range availability, winter habitat development, and landowner acceptance will determine herd size. Excessive habitat utilization will be addressed.

< Predation - Refer to DWR predator management policy.

- Assess need for control by species, geographic area and season of year.

- Seek assistance from Wildlife Services when deer populations are depressed and where there is a reasonable chance of gaining some relief through a predator control effort. Concentrate Wildlife Services control efforts during and immediately prior to the fawning period.

- As necessary, recommend cougar harvest to benefit deer while maintaining the cougar as a valued resource in its own right.

< Highway Mortality - Cooperate with the Utah Dept. Of Transportation in construction of highway fences, passage structures and warning signs.

< Illegal Harvest - Should illegal kill become an identified and significant source of mortality attempt to develop specific preventive measures within the context of an Action Plan developed in cooperation with the Law Enforcement Section.

HABITAT MANAGEMENT OBJECTIVES

< Maintain and/or enhance forage production through direct range improvements throughout the unit on winter range to achieve population management objectives.

< Work with private and federal agencies to maintain and protect critical and existing winter range from future losses.

< Provide improved habitat security and escapement opportunities for deer.

< Condition of deer winter range on Unit 3, as indicated by DWR range trend surveys.

Year	Mean DCI score for Unit	Classification	Unit-specific DCI score range: Poor	Unit-specific DCI score range: Fair	Unit-specific DCI score range: Good
1996	51	Poor to Fair	35 – 49	50 – 64	65 – 79
2001	54	Fair			

HABITAT MANAGEMENT STRATEGIES

< Continue to monitor the permanent range trend studies located throughout the winter range.

< 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 if and when vegetative declines are attributed to deer over utilization.

< Cooperate with and provide input to land management planning efforts dealing with management decisions affecting habitat security, quality and quantity.

PERMANENT RANGE TREND SUMMARIES

Unit 3, Ogden

There are a total of 13 range trend sites in this unit. Of these, 1 was dropped from the 1996 range trend inventory due to poor site placement. The remaining 12 sites are all located on big game winter range. Deer populations throughout the unit have increased since the 1992-93 die-off; however, fawn losses are common throughout the unit even during mild winters. Range conditions are generally described as having a low browse component with a downward trend in forb density. Because of fire, weedy species have replaced desirable plants throughout much of the unit. In addition, winter range development has severely impacted the number of deer that can winter on the unit. In March, 2000 the Ogden deer management plan objective was lowered to 12,000 to reflect winter range loss. To summarize, the unit can be divided into 3 distinct wintering areas. While all sites show different utilization and vegetal structure, the trends are reasonably similar throughout the unit.

Ogden, Box Elder County portion

- Eight established sites between Perry and Mantua Reservoir
- Trend is down on grasses and forbs, stable for browse.
- There is a predominance of undesirable species (cheat grass, dyer's woad) present on all sites

Ogden, Ogden Valley portion

- Three established sites east of Huntsville
- Fire and development have dramatically affected the number of deer this portion of the unit can winter
- The browse component varied from eliminated to slightly up, however, preferred browse species were down. On all sites, forb densities were down with an increase in undesirable grasses.

Ogden, Cache County portion

- There is one established site near Hardware Ranch
- Grasses and forbs are exhibiting a downward trend, while the browse component is stable.

CURRENT POPULATION STATUS

Year	Buck Harvest	Post-Season F/100 D	Post-Season Buck/100 D	Post-Season Population	Objective	% of Objective
2010	507	87	12	9,150	11,000	83%
2011	407	67	20	7,000	11,000	64%

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.

Draft 04/09/2012

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit #4
(Morgan-South Rich)
April 2012

BOUNDARY DESCRIPTION

Morgan, Rich, Summit and Weber counties - Boundary begins at the junction of I-80 and I-84 near Echo, Utah; east on I-80 to the Utah-Wyoming state line; north along this state line to SR-16; north on SR-16 to SR-39 near Woodruff; west along SR-39 to SR-167 (Trappers Loop road); south on SR-167 to SR-30 at Mountain Green; west on SR-30 to I-84; east on I-84 to I-80.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

2006	Yearlong range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service	0	0%	35429	9%	3217	2%
Bureau of Land Management	8142	19%	4695	1%	15803	9%
Utah State Institutional Trust Lands	701	2%	5876	2%	4967	3%
Native American Trust Lands	0	0%	0	0%	0	0%
Private	34386	79%	322364	86%	133812	80%
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	37	0%	6084	2%	11322	6%
TOTAL	43266	100%	374448	100%	169121	100%

UNIT MANAGEMENT GOALS

To manage the deer population at levels consistent with available habitat but below carrying capacity, and to maintain a high buck:doe ratio. Actively work and cooperate with private landowners in the rehabilitation and/or acquisition of critical winter range and other range improvement projects as opportunity permits.

POPULATION MANAGEMENT OBJECTIVES

- Target Winter Herd Size - The population objective has been reduced from 12,500 to 12,000 wintering deer in 2006 to accommodate the permanent loss of about 4% of the unit's winter range and 2.5% loss of summer range since 2001. This population objective remains for both the short-term

and long term, barring significant changes in range conditions.

< Herd Composition – Maintain a three-year average post-season in accordance with the statewide plan.

Unit 4

1994-2005 Objective:	10,750
2003 Objective:	12,500
2006-2013 Objective:	12,000
Change since 2003:	-500 (due to permanent loss of 4% of winter range)

POPULATION MANAGEMENT STRATEGIES

Monitoring

< Population Size - Utilize checking station data, field collection of harvest data, post season and spring classification counts and range ride data in a computer model to estimate the winter population.

< Harvest Strategy - Harvest strategies may include any or all of the following; buck only hunts, limited either sex permits, antlerless permits and access management - to provide increased security for big game.

Limiting Factors (May prevent achieving management objectives)

< Crop Depredation - All depredation problems will be addressed as dictated by Utah Code and Division of Wildlife Resources policy.

< Habitat - Excessive over utilization of available habitat by elk will be addressed. The 2006 post-season winter survey found excessive numbers of elk, greatly exceeding the population objective of the unit. The elk population will be reduced to objective to address this problem.

< Predation - Cougar populations will be managed at levels consistent with the deer population as determined by the management objective. Cougar permits will be authorized as determined by their population and depredation incidents. Animal Damage Control (Wildlife Services) will be utilized when livestock depredation occurs. Wildlife Services, livestock operator or bear permittee according to current rules and regulations may handle bear predation on livestock. Harvest permits will be authorized for cougar and bear according to the populations as determined by the DWR.

HABITAT MANAGEMENT OBJECTIVES

< To maintain, enhance and protect all big game habitat within the unit to sustain a healthy population of deer as stated in the population objective.

< Improve critical winter range habitat. Cooperate with private landowners and public land managers to improve 1,000 acres of critical winter habitat each year.

< Provide big game escape cover/security by implementing access management where warranted.

Condition of deer winter range on Unit 4, as indicated by DWR range trend surveys.

Year	Mean DCI score for Unit	Classification	Unit-specific DCI score range: Poor	Unit-specific DCI score range: Fair	Unit-specific DCI score range: Good
1996	52	Fair	27 to 40	41 to 55	56 to 71
2001	62	Fair			

HABITAT MANAGEMENT STRATEGIES

< The Division of Wildlife Resources range trend survey crew will continue to monitor range conditions on a five to six year rotational basis as presently scheduled.

< Cooperation and open working relationship with government agencies, private landowners/operators and local entities will be actively pursued to address land use planning and all habitat related issues for the Morgan-South Rich unit. Range improvement projects will be considered and proposed for the benefit of all users of the rangelands.

< Public access to the Division of Wildlife Resources Henefer-Echo Wildlife Management Area (WMA) will be by horseback or foot only to reduce harassment and to encourage big game to remain on the area and to reduce depredation on adjacent private agricultural land.

< Identify critical areas. Critical deer winter range starts at Cottonwood Canyon (southeast of Browning Arms in Morgan County) and follows the foothills all the way to Lost Creek dam; Cedar Canyon to Heiners Canyon in Summit county. Murphy Ridge to Woodruff Creek just below Woodruff Creek Reservoir in Rich County; and the south slopes from Magpie Canyon around to Bennett Creek in Weber County.

< Acquisition needs (easements, leases, trades, purchases): Additional winter range needs to be purchased, leased or protected as it becomes available.

PERMANENT RANGE TREND SUMMARIES (Added 2001)

Unit 4, Morgan South Rich

There are 17 permanent range trend study sites in the Morgan-South Rich management unit. All but two of the transects were read in 1990 and again in 1996 and 2001. Big Hollow and Causey Dam were the only two sites that were not read in 1996, and will be discontinued from the trend study list.

All sites read in 1996 indicated stable to improving soil trends and all but two show stable to improving browse trends. The most notable problem of the unit is the poor condition and composition of the herbaceous under stories. Most sites have under stories dominated by annual grasses and weedy undesirable forbs. Due to the rocky nature of many sites in association with southern aspects, higher winter soil temperatures give competitive advantage to the winter annuals over the perennial native grasses, especially when spring grazing is permitted. Overall, desirable grasses and forbs are in a stable to poor condition although the quantity is up slightly on several sites. The 2001 survey indicated an improving trend on most sites probably due to lower winter utilization from lower overall deer populations. However, high elk use seems to be a continuing problem on some critical winter range areas.

Approximately 3,500 acres of winter range burned on the Henefer-Echo Wildlife Management

Area in 1999 and was subsequently reseeded. The reseeding appears to be very successful, and due to the mild winters since the burn, deer use has been moderate but elk use has been high. High winter use by elk is impacting the recovery of the range treatments. Another fire burned about 600 acres of winter range on private land adjacent to the town of Echo, Summit County. High numbers of elk on critical winter ranges appears to have a significant impact on deer range and deer survival.

CURRENT POPULATION STATUS

Year	Buck Harvest	Post-Season F/100 D	Post-Season Buck/100 D	Post-Season Population	Objective	% of Objective
2010	839	84	41	9,900	12,000	83%
2011	600	61	39	10,000	12,000	83%

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.

Draft 04/09/2012

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit #5
(East Canyon)
April 2012

BOUNDARY DESCRIPTION

Morgan, Summit, Salt Lake and Davis counties - Boundary begins at the junction of I-80 and I-84 (Echo Junction); southwest on I-80 to I-15; north on I-15 to its junction with I-84 near Ogden; east on I-84 to Echo Junction and I-80.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Yearlong range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service	561	14%	45802	19%	18626	21%
Bureau of Land Management	0	0%	173	0%	314	0%
Utah State Institutional Trust Lands	0	0%	754	1%	59	0%
Native American Trust Lands	0	0%	0	0%	0	0%
Private	3516	86%	188243	79%	65865	75%
Department of Defense	0	0%	193	0%	773	1%
USFWS Refuge	0	0%	0	0%	0	0%
National Parks	0	0%	0	0%	0	0%
Utah State Parks	0	0%	0	0%	840	1%
Utah Division of Wildlife Resources	0	0%	2296	0%	1273	2%
TOTAL	4077	100%	237461	100%	87750	100%

UNIT MANAGEMENT GOALS

To manage the deer population at optimum levels consistent with available habitat, and to cooperate in the improvement and/or acquisition of winter range as opportunity permits.

POPULATION MANAGEMENT OBJECTIVES

< Target Winter Herd Size – Maintain a wintering population of 7,000 deer on the East Canyon Unit.

- Davis and Salt Lake County part (5A) - This part of the unit contains most of the public lands within the unit. The winter ranges are adjacent to the heavily populated "Wasatch Front" and are becoming very limited due to the impact of urban development. This area has been impacted heaviest and has had a 50% reduction of winter range. Therefore, the post-season winter population objective for this portion of the unit is approximately 1,500 deer.

- Morgan & Summit County part (5B) -A majority of the land within this portion of the unit is privately owned, and depredation can be a significant factor in determining the tolerable winter population objective. However, based on the past several years, 5,500 wintering deer is the current objective. Private landowners and local interest groups must be involved in management recommendations. Without their support and cooperation, management objectives may not be realized and deer population control may not be possible.

These population objectives apply to both the short-term (5-year life of this plan) and long term, barring significant changes in range conditions.

< Herd Composition – Maintain a three-year average post-season buck to doe ratio in accordance to the statewide plan.

	Unit 5	**Subunit 5A**	**Subunit 5B**
1994-2005 Objective:	9,500		
2003 Objective:	8,500	3,000	5,500
2006-2013 Objective:	7,000	1,500	5,500
Change since 2003:	-1,500	-1,500	0
		(due to loss of winter range in subunit 5A)	

POPULATION MANAGEMENT STRATEGIES

Monitoring

< Population Size - Utilize checking station data, field collection of harvest data, post season and spring classification counts and range ride data in a computer model to estimate the winter population.

< Harvest - Harvest strategies may include any or all of the following: general season buck only hunts, limited either sex permits and limited antlerless permits. These strategies will be used to provide a variety of hunter opportunities and to control deer populations as required, and to address depredation or range management objectives. Access management may also be used on certain parcels of winter range where appropriate, to alleviate excess harassment and provide increased security of big game.

Limiting Factors (May prevent achieving management objectives)

< Depredation Strategy - All depredation problems will be addressed as dictated by Utah Code and Division of Wildlife Resources policy.

< Habitat - Excessive habitat utilization will be addressed.

< Predation - Cougar populations will be managed at levels consistent with the deer population as determined by the management objective. Cougar permits will be authorized as determined by their population and depredation incidents. Animal Damage Control (Wildlife Services) will be utilized when livestock depredation occurs. Bear predation on livestock may be handled by Wildlife Services, livestock operator or bear permittees according to current rules and regulations. Harvest permits will be authorized for cougar and bear according to the populations as determined by the DWR.

HABITAT MANAGEMENT OBJECTIVES

< To maintain, enhance and protect all big game habitat within the unit to sustain a healthy population of deer as stated in the population objective.

< Improve critical winter range habitat.

< Provide big game escape cover/security by implementing access management where warranted.

Condition of deer winter range on Unit 5, as indicated by DWR range trend surveys.

Year	Mean DCI score for Unit	Classification	Unit specific DCI score range: Poor	Unit specific DCI score range: Fair	Unit specific DCI score range: Good
1996	40	Poor	35 to 49	50 to 64	65 to 79
2001	51	Fair to Poor			

HABITAT MANAGEMENT STRATEGIES

< The Division of Wildlife Resources range trend survey crew will continue to monitor range conditions on a five to six year rotational basis as presently scheduled.

< Cooperation and open working relationship with government agencies, private landowners/operators and local entities will be actively pursued to address all habitat related issues for the East Canyon unit. Range improvement projects will be considered and proposed for the benefit of all users of the rangelands.

< Public access to the Division of Wildlife Resources Red Rock Canyon Wildlife Management Area (WMA) will be by horseback or foot only to reduce harassment and to encourage big game to remain on the area and to reduce depredation on adjacent private agricultural land.

< Identify critical areas. The winter range below East Canyon Reservoir is very critical to significant number of deer. Fire burned a large area in 1991. Reseeding has been successful. In addition, volunteers planted browse in 1995, 1996 and 1997 but the plants require enough time to establish themselves. Consequently, deer numbers must not be allowed to increase too rapidly. The population was reduced significantly in the winter of 1992-3, allowing the range to recover slightly from decreased use. However, the deer are expected to increase quickly providing there are normal winters for the next few years.

< Acquisition needs (easements, leases, trades, purchases): Additional winter range needs to be purchased, leased or protected as it becomes available.

PERMANENT RANGE TREND SUMMARIES (Added 2001)

Unit 5, East Canyon

The East Canyon management unit is a highly human populated area and dominated by private land. Managing big game winter ranges therefore is often very difficult and a matter of educating the private landowner of the benefits of providing quality winter ranges for big game.

There are currently nine permanent range transect sites within the East Canyon unit, and they were last read and analyzed in 2001. All of the transects showed stable to improving conditions of soil, grasses and forbs. In addition, all but one site indicated stable to upward trends in browse vitality, although the amount of winter range continues to decrease due to

human urban development. Two new transects were established in 1996, and showed range improvement in 2001. Red Rock Canyon is a DWR management area, and is an important wintering area for deer. Overall the range conditions appear to be stable to improving.

CURRENT POPULATION STATUS

Year	Buck Harvest	Post-Season F/100 D	Post-Season Buck/100 D	Post-Season Population	Objective	% of Objective
2010	626	75	26	9,100	7,000	130%
2011	659	61	34	9,200	7,000	131%

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.

Draft 04/09/2012

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 6
(Chalk Creek)
April 2012

BOUNDARY DESCRIPTION

Summit and Duchesne counties - Boundary begins at the junction of I-84 and I-80 near Echo; northeasterly on I-80 to the Utah-Wyoming state line; southeast along this state line to SR-150; south on SR-150 to Pass Lake and the Weber River Trail head; west on this trail to Holiday Park and the Weber River road; west on this road to SR-32; northwest on SR-32 to I-80 and Wanship; north on I-80 to I-84 near Echo.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Yearlong range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service	0	??	33,719	11%	91	.1%
Bureau of Land Management	0	??	507	.2%	324	.4%
Utah State Institutional Trust Lands	0	??	363	.1%	259	.3%
Native American Trust Lands	0	??	0	0%	0	0%
Private	0	??	271,558	88.7%	71,612	96%
Department of Defense	0	??	0	0%	0	0%
USFWS Refuge	0	??	0	0%	0	0%
National Parks	0	??	0	0%	0	0%
Utah State Parks	0	??	0	0%	131	.2%
Utah Division of Wildlife Resources	0	??	0	0%	2,044	3%
2006 TOTAL	0	??	306,147	100%	74,461	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 with human needs, such as private property rights, agricultural crops and local economies.

- Maintain the population at a level that is within the short-term capability or "carrying capacity" of the available habitat, based on winter range trend studies conducted every five years. Using the long-term population objective as a guide, the short-term objective will be adjusted according to the percent change of the most recent range trend assessments of the Desired Components Index (DCI). [The DCI is a measurement of the condition of the big game

winter range and relates to the potential "carrying capacity" of big game on that range. As the DCI changes, the short-term population objective may increase or decrease].

POPULATION MANAGEMENT OBJECTIVES

< **Target Winter Herd Size** – A population of 10,500 wintering deer. This population objective applies to both the short-term and long term, barring significant changes in range conditions on the unit.

< **Herd Composition** - A three-year average postseason buck to doe ratio in accordance with the statewide plan.

Unit 6

1994-2005 Objective:	11,500
2006-2013 Objective:	10,500
Change	- 1,000

The population objective was reduced to account for loss of deer winter habitat due to residential and urban development.

POPULATION MANAGEMENT STRATEGIES

Monitoring

< Population Size – A computer model will be used to estimate the wintering population size, by utilizing harvest data, postseason and spring classifications and mortality estimates.

< Buck Age Structure - Monitor age class structure of the buck population through the use of 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. Achieve the target population size, through antlerless and either sex hunting, using a variety of harvest methods and seasons. The winter population should result in an expected annual buck harvest of approximately 1,4 00 when normal conditions occur, but 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 to 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 -Winter and summer forage conditions, public land range availability and landowner acceptance will determine herd size. Excessive habitat utilization will be addressed.

-Loss of habitat due to human expansion and development.

< Predation - Use the DWR predator management policy

- The population trend and percent of herd size objective, will determine the need for predator

control by species, geographic area and season of year.

- DWR will seek assistance from Wildlife Services when deer populations are depressed and where there is a reasonable chance of gaining some relief through a predator control effort. Wildlife Services efforts will be concentrated during and immediately prior to the fawning period.

-Cougar harvest will be recommended to benefit deer while maintaining the cougar as a valued resource in its own right.

< Highway Mortality - Cooperate with the Utah Dept. Of Transportation in constructing of highway fences, passage structures and warning signs etc.

< Illegal Harvest - Should illegal kills be identified as a significant source of mortality, specific preventive measures will be developed within the context of an Action Plan. This plan will be developed in cooperation with the Law Enforcement Section.

HABITAT MANAGEMENT OBJECTIVES

< Maintain and/or enhance forage production through direct habitat improvements throughout the unit on winter range to achieve population management objectives.

< Work with private landowners and federal, state and local government agencies to maintain and protect critical and existing winter range from future losses.

< Maintain or improve habitat security and escapement opportunities for deer.

Condition of deer winter range on unit 6, as indicated by DWR range trend surveys

Year	Mean DCI Score for Unit	Classification	Unit-specific DCI Score Range: Very Poor	Unit-specific DCI Score Range: Poor	Unit-specific DCI Score Range: Fair	Unit-specific DCI Score Range: Good	Unit-specific DCI Score Range: Excellent
1996	57	Fair	< 36	36 - 50	51 – 64	65 - 81	> 82
2001	54	Fair					

HABITAT MANAGEMENT STRATEGIES

< Continue to monitor the permanent range trend studies located throughout the winter range.

< 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 if and when vegetative declines are attributed to deer over utilization.

< Cooperate with and provide input to land management planning efforts dealing with management decisions affecting habitat security, quality and quantity.

PERMANENT RANGE TREND SUMMARIES

Unit 6, Chalk Creek

The overall range trend (from2001) within this unit is stable to slightly down, with a DCI of 51 to 64 in 2001

indicating a fair condition. Some areas within this unit suffered from an extended drought. This is reflected in the DCI rating for these sites.

There are 11 range trend sites on this unit. The most recent reading to these sites was done in 2001. All but 2 of the sites are on private land. Permission to trespass was denied on 2 of these sites in 2001. All of the transects are located on important big game winter range. All sites have a stable to improving soil trend except the Spring Hollow (#6-3) site, which is down slightly. Browse is in a stable to slightly downward trend on all sites. Downward trends continue on the juniper sites due to the lack of desirable browse plants. Overall, this unit's winter range shows a stable to down ward trend for browse, grasses and forbs. Fires in recent years have destroyed winter range in the Grass Creek-Echo and Huff Creek areas. Prime big game winter range in this unit is being lost to development every year. Management options are rather limited in this unit because it is predominantly private land. A problem in this unit is the composition of herbaceous understory, which on most sites is mostly made up of annual species, cheat grass that prohibits sagebrush seedling establishment during hot dry summers.

CURRENT POPULATION STATUS

Year	Buck Harvest	Post-Season F/100 D	Post-Season Buck/100 D	Post-Season Population	Objective	% of Objective
2010	667	71	35	8,500	10,500	81%
2011	612	64	32	8,000	10,500	76%

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.

Draft 04/09/2012

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 7
(Kamas)
April 2012

BOUNDARY DESCRIPTION

Summit and Wasatch counties - Boundary begins at the junction of I-80 and SR-32 (Wanship); south on SR-32 to the Weber Canyon Road at Oakley; east on this road to Holiday Park and the Weber River Trail; east on the Weber River Trail to SR-150 near Pass Lake; south on SR-150 to the North Fork of the Provo river; south along this river to the Provo River; south along this river to SR-35; west on SR-35 to Francis and SR-32; west on SR-32 to US-40 near Jordanelle; north on US-40 to I-80; north on I-80 to SR-32 and Wanship.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Yearlong range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service	0	??	119,932	72.5%	6,511	19%
Bureau of Land Management	0	??	91	.1%	5	.1%
Utah State Institutional Trust Lands	0	??	74	.1%	153	.5%
Native American Trust Lands	0	??	0	0%	0	0%
Private	0	??	44,824	27%	26,084	78%
Department of Defense	0	??	0	0%	0	0%
USFWS Refuge	0	??	0	0%	0	0%
National Parks	0	??	0	0%	0	0%
Utah State Parks	0	??	0	0%	148	.4%
Utah Division of Wildlife Resources	0	??	507	.3%	657	2%
2006 TOTAL	0	??	165,428	100%	33,558	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 with human needs, such as private property rights, agricultural crops and local economies.
- Maintain the population at a level that is within the short-term capability or “carrying capacity” of the available habitat, based on winter range trend studies conducted every five years. Using the long-term population objective as a guide, the short-term objective will be adjusted according to the percent change of the most recent range trend assessments of the Desired

Components Index (DCI). [The DCI is a measurement of the condition of the big game winter range and relates to the potential "carrying capacity" of big game on that range. As the DCI changes, the short-term population objective may increase or decrease].

POPULATION MANAGEMENT OBJECTIVES

< **Target Winter Herd Size** – Maintain a population of 8,000 wintering deer. This population objective applies to both the short and long term, barring significant changes in range conditions on the unit.

< **Herd Composition** – manage for a unit three-year buck to doe ratio average in accordance to the statewide plan.

	Unit 7
1994-2001 Objective:	12,000
2001-2005 Objective:	9,000
2006-2013 Objective:	8,000
Change	- 1,000

The population objective was reduced in 2006 to account for permanent loss of deer winter habitat due to residential and urban development.

POPULATION MANAGEMENT STRATEGIES

Monitoring

< Population Size - A computer model will be used to estimate the wintering population size, by utilizing harvest data, postseason and spring classifications and mortality estimates.

< Buck Age Structure - Monitor age class structure of the buck population through the use of 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. Achieve the target population size by use of antlerless, either sex hunting and a variety of harvest methods and seasons. The winter population should result in an expected annual buck harvest of approximately 1,100 bucks when normal conditions occur, but 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 to 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 - Winter and summer range conditions, public land range availability and landowner acceptance will determine herd size. Excessive habitat utilization will be addressed.

-Loss of habitat due to human expansion and development.

< Predation - Use the DWR predator management policy

- The population trend and percent of herd size objective, will determine the need for predator control by species, geographic area and season of year.

- DWR will seek assistance from Wildlife Services when deer populations are depressed and where there is a reasonable chance of gaining some relief through a predator control effort. Wildlife Services efforts will be concentrated during and immediately prior to the fawning period.

- Cougar harvest will be recommended to benefit deer while maintaining the cougar as a valued resource in its own right.

< Highway Mortality - Cooperate with the Utah Dept. Of Transportation in constructing of highway fences, passage structures and warning signs etc.

< Illegal Harvest - Should illegal kills be identified as a significant source of mortality, specific preventive measures will be develop within the context of an Action Plan. This plan will be developed in cooperation with the Law Enforcement Section.

HABITAT MANAGEMENT OBJECTIVES

< Maintain and/or enhance forage production through direct improvements habitat throughout the unit on winter range to achieve population management objectives.

< Work with private landowners, and federal, state and local government agencies to maintain and protect critical and existing winter range from future losses.

< Maintain or improve habitat security and escapement opportunities for deer.

Condition of deer winter range on unit 7, as indicated by DWR range trend surveys

Year	Mean DCI Score for Unit	Classification	Unit-specific DCI Score Range: Very Poor	Unit-specific DCI Score Range: Poor	Unit-specific DCI Score Range: Fair	Unit-specific DCI Score Range: Good	Unit-specific DCI Score Range: Excellent
1996	59	Fair	< 37	37 - 51	52 - 66	67 - 83	> 84
2001	64	Fair					

HABITAT MANAGEMENT STRATEGIES

< Continue to monitor the permanent range trend studies located throughout the winter range.

< 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 if and when vegetative declines are attributed to deer over utilization.

< Cooperate with and provide input to land management planning efforts dealing with management decisions affecting habitat security, quality and quantity.

PERMANENT RANGE TREND SUMMARIES

Unit 7, Kamas

The overall range trend within this unit is stable to slightly down, with a DCI of 64 in 2001 indicating a fair condition. Some areas within this unit suffered from an extended drought. This is reflected in the DCI rating for these sites.

There are 9 study sites in this unit, which were all located on deer winter range. Most of the winter range is on private property. The most recent reading to these sites was in 2001. All sites have a sable to improving soil trend. The browse trend was stable to slightly downward on all sites. On all winter range surveyed, the plant communities have the potential to recover from the downward trends because the plant communities are divers. The goal in this unit is to protect the limited acreage of winter range from urbanization and development.

CURRENT POPULATION STATUS

Year	Buck Harvest	Post-Season F/100 D	Post-Season Buck/100 D	Post-Season Population	Objective	% of Objective
2010	441	76	21	5,950	8,000	74%
2011	446	65	19	6,000	8,000	75%

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.

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 8
(North Slope)
April 2012

BOUNDARY DESCRIPTION

Summit, Daggett counties - Boundary begins at the junction of SR-150 and the Summit-Duchesne county line (summit of the Uinta Mountains); north along SR-150 to the Utah-Wyoming state line; east along this state line to the Utah-Wyoming-Colorado state line (Three Corners); south along the Utah-Colorado state line to the Green River; west along the Green River to Flaming Gorge Reservoir; west along the south shoreline of this reservoir to Cart Creek; south along Cart Creek to US-191; south along US-191 to the Uintah-Daggett County line (summit of the Uinta Mountains); west along the summit of the Uinta mountains to SR-150.

LAND OWNERSHIP

No change has occurred in the acreage for this unit since the last plan revision.

RANGE AREA AND APPROXIMATE OWNERSHIP – April 2012

	Yearlong range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service	0	0%	317491	56%	17277	9%
Bureau of Land Management	0	0%	19056	3%	42696	23%
Utah State Institutional Trust Lands	843	21%	8083	1%	20598	12%
Native American Trust Lands	0	0%	0	0%	0	0%
Private	2716	70%	56583	10%	35768	19%
Department of Defense	0	0%	0	0%	0	0%
USFS & BLM Wilderness Area	0	0%	160104	28%	0	0%
National Recreational Area	366	9%	5753	1%	66084	36%
Utah State Parks	0	0%	0	0%	0	0%
Utah Division of Wildlife Resources	0	0%	984	1%	2162	1%
TOTAL	3925	100%	568054	100%	184585	100%

UNIT MANAGEMENT GOALS

- Manage for a population of healthy animals capable of providing a broad range of recreational opportunities, including hunting and viewing.
- Expand and improve mule deer populations within the carrying capacity of available habitats and in consideration of other land uses.

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

POPULATION MANAGEMENT OBJECTIVES

< **Long Term Target Winter Herd Size** – The long-term objective is 6,200 wintering deer (modeled number), which is the same in the last plan objective, and is based on an overall stable DCI rating.

< **Short Term Objective –**No short term objective is needed for this unit

< **Herd Composition** – Maintain a three-year average postseason buck:doe ratio in accordance with the statewide plan.

POPULATION MANAGEMENT STRATEGIES

Monitoring

< Population Size - A computer model will be used to estimate the wintering population size, by utilizing harvest data, postseason and spring classifications and mortality estimates.

< Buck Age Structure - Monitor age class structure of the buck population through the use of 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. Achieve the target population size by use of antlerless harvest using a variety of harvest methods and seasons. The winter population should result in an estimated annual buck harvest up to 700 (500 for West Daggett & Three Corners part, 200 for the Summit part) when normal conditions occur. 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 to 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 - Winter range forage conditions, public land range availability and landowner acceptance will determine herd size. Excessive habitat utilization will be addressed with hunting.

< Predation - Refer to 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 - Work with UDOT, Summit and Daggett 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.

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

HABITAT MANAGEMENT OBJECTIVES

< Maintain and/or enhance forage production through direct range improvements throughout the unit on winter range to achieve population management objectives.

< Work with private landowner and federal, state and local government agencies to maintain and protect critical and existing winter range from future losses.

< Provide improved habitat security and escapement opportunities for deer.

HABITAT MANAGEMENT STRATEGIES

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

< Conduct cooperative seasonal range rides and surveys 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.

< Utilize antlerless deer harvest to improve or protect forage conditions if and when vegetative declines are attributed to deer over utilization.

< 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.

< Cooperate with and provide input to land management planning efforts dealing with actions affecting habitat security, quality and quantity.

< 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.

PERMANENT RANGE TREND SUMMARIES

The following tables summarize the condition of deer winter range on Unit 8, as indicated by DWR range trend surveys:

8bc (West Daggett & Three Corners)

Year	Mean DCI Score for Unit	Classification	Unit-specific DCI Score Range: Low	Unit-specific DCI Score Range: Mid	Unit-specific DCI Score Range: High
1995	74	Good	65	76	76
2000	70	Good	57	74	81
2005	64	Good	54	60	85
2010	68	Good	52	63	87

8a (Summit)

Year	Mean DCI Score for Unit	Classification	Unit-specific DCI Score Range: Low	Unit-specific DCI Score Range: Mid	Unit-specific DCI Score Range: High
1995	90	Good	-	-	90
2000	93	Excellent	-	-	93
2005	88	Good	-	-	88
2010	93	Excellent	-	-	93

Unit 8bc, North Slope / Daggett and Three Corners subunits

Overall range trend within these subunits is good. Some areas within this subunit suffered a sagebrush die-off, primarily due to the extensive seven-year drought. This is reflected in the DCI rating for these sites.

There are ten permanent winter range trend study sites on this portion of the unit. In 2010, two sites had a higher Desired Components Index figure showing an improvement in habitat quality. Study sites in the low ecological potential had a slight decrease in their DCI rating, while the mid potential was up slightly. The overall DCI rating is “Good” at 68, which is up from 64 found in the year 2005.

Two additional range trend sites located in Brown’s Park, south of the Green River, are technically in the South Slope Diamond Mountain subunit, but can be used to show range trend on the Three Corners Subunit. They show both show fair DCI ratings, and both

have low potential ecological potential.

Essential vegetation types monitored include Mountain big sagebrush, Wyoming big sagebrush and mountain brush (which includes bitterbrush, mountain mahogany, curleaf mahogany and service berry).

Unit 8a, North Slope / Summit subunit

The steep slopes on the study sites have high erosion potential. However, the understory, especially the bunch grasses, is dense and vigorous and provides adequate soil stabilization. Browse trends on the unit for the key browse species, mountain mahogany, are stable to slightly up. The sites in this area all show a stable to slightly increasing trend. The slight upward trend in the last 5 years is probably a result of increased precipitation. The overall DCI rating is excellent.