DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 20
(Southwest Desert)
April 2012

BOUNDARY DESCRIPTION

Beaver, Iron, and Millard counties - Boundary begins at US-50&6 and the Utah-Nevada state line; east on US-50&6 to SR-257; south on SR-257 to SR-21; south on SR-21 to SR-130; south on SR-130 to I-15; south on I-15 to SR-56; west on SR-56 to the Lund Highway; northwest on the Lund Highway to the Union Pacific railroad tracks at Lund; southwest on the Union Pacific railroad tracks to the Utah-Nevada state line; north on this state line to US-50&6.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Year-long range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	0	0%	0	0%	0	0%
Bureau of Land Management	132752	95%	711554	84%	167425	85%
Utah State Institutional Trust Lands	6650	5%	92989	11%	16492	8%
Native American Trust Lands	0	0%	0	0%	0	0%
Private	645	<1%	36326	4%	9788	5%
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	1%	6775	1%	3487	2%
TOTAL	140047	100%	847644	100%	197192	100%

UNIT MANAGEMENT GOALS

Overall deer numbers on this unit are considerably below recent averages and greatly below historic highs and averages. Significant increase in deer numbers will be pursued if conditions allow. Buck:doe ratios are within the minimum statewide guideline and should be maintained within that guideline.

POPULATION MANAGEMENT OBJECTIVES

< Target winter herd size - Manage for a winter population of 3,200 deer through 2014, or until this plan is amended. This is a short-term reduction of 20% from the previous plan period and is justified as based on the discussion in Permanent Range Trend Summaries at the end of this document. The long-term objective of 4,000 deer remains unless and until a permanent change occurs in the quantity or quality of deer range on the unit.

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

	Objective from past plan (2001)	Long-term Objective	2006-2014 Objective	Change
Southwest Desert	4,000	4,000	3,200	- 800

POPULATION MANAGEMENT STRATEGIES

Monitoring

< Population Size - Herd composition and population size will be monitored through post season and spring classification, hunter check stations, harvest surveys and computer modeling.

< Buck Age Structure - Age structure will be monitored at hunter check stations.

< Harvest - The main harvest strategy will be general buck hunting.

Limiting Factors (May prevent achieving management objectives)

< Crop Depredation - Agricultural damage is almost non-existent. If problems appear, antlerless removal will be directed at specific problem areas where appropriate.

< Habitat - Summer range is a limiting factor on this unit. Winter range seems to be abundant.

< Predation - Predator losses on this unit may be significant, given the drastically reduced deer numbers. Alternative prey species for lions exist in the form of abundant elk and wild horses in many areas. Lion numbers will be assessed in light of deer population objectives and lion harvest adjusted accordingly. A predator management plan is currently being prepared for this unit.

< Highway Mortality - Highway mortality is not a limiting factor on this unit.

< Illegal Harvest - There is no evidence that illegal harvest is a limiting factor on the unit.

< Interspecific competition - No limitation generated by elk/deer interactions has been documented.

HABITAT MANAGEMENT OBJECTIVES

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

< Maintain critical fawning habitat in good condition. Fawn recruitment is a major concern on this unit and may be the single greatest factor limiting the population.

Condition of deer winter range on Unit 20, as indicated by DWR range trend surveys Desired Components Index.

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
1998	59	Fair	36 - 50	50 - 65	66 - 81
2003	45	Poor			

HABITAT MANAGEMENT STRATEGIES

< Evaluate and implement potential habitat improvement projects on BLM, state, and private lands

< Manage riparian areas in critical fawning habitat to furnish water, cover and succulent forage from mid- to late summer.

< Evaluate opportunities to address problems created by closed canopy pinyon-juniper.

< Cooperate with BLM on proposed Wilson Canyon Vegetation Treatment.

< Continue existing monitoring studies, and coordinate with BLM on additional riparian monitoring.

PERMANENT RANGE TREND SUMMARIES (Added 2001)

Unit 20, Southwest Desert

There are six range trend study transects on the Southwest Desert area. Two of these were established on DWR lands (Indian Peak WMA) in 1985 and four additional studies were added in 1998-99. All six transects are located on deer winter range, although some may be considered high elevation winter range. Trend data collected in 2003 showed a stable trend in browse species at one of two Indian Peak sites (20-1) and a slightly downward trend at the other (20-2). Browse trend along the other four transects was stable or improving, with the exception of a decrease at the South Spring (20-7) site. The condition rating for soils and herbaceous understory at the six range trend study sites was downward in most cases.

The overall DCI rating for this unit in 2003 was in the “poor” condition category. This low rating is partly a result of five years of extreme drought. However, pinyon and juniper encroachment is prevalent throughout this unit at many elevations. Additionally, forage competition is substantial in many areas of this unit and feral horse use is a problem. Summer range is limiting on this unit and a lack of aspen and good riparian areas on this range is limiting deer production. The potential for vegetative improvement by mechanical

treatment and/or burning is tremendous and would accomplish much toward reversing these conditions.

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 #21
Fillmore
April 2012

BOUNDARY DESCRIPTION

Millard, Sevier, Sanpete and Juab counties - Boundary begins at I-70 and I-15; north on I-15 to the Black Rock road; west on the Black Rock road to SR-257; north on SR-257 to US-50 and 6; east on US-50 and 6 to US-6; north on US-6 to SR-132; east on SR-132 to SR-28; south on SR-28 to US-89; south on US-89 to I-70; west on I-70 to I-15.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Year-long range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	**0**	**0%**	**325288**	**85%**	**140100**	**24%**
Bureau of Land Management	**2995**	**1%**	**15470**	**4%**	**188601**	**32%**
Utah State Institutional Trust Lands	**17**	**82%**	**2367**	**1%**	**34616**	**6%**
Native American Trust Lands	**0**	**0%**	**0**	**0%**	**1357**	**0%**
Private	**662**	**18%**	**40623**	**11%**	**202590**	**35%**
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%**	**119**	**0%**	**14977**	**3%**
TOTAL	**3674**	**100%**	**383867**	**100%**	**582241**	**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 long-term capability of the available habitat to support.

POPULATION MANAGEMENT OBJECTIVES

< Target Winter Herd Size - Achieve a target population size of 12,000 (2,000 on 21A, and 10,000 on 21B)) wintering deer (modeled number). These population objectives are short term, spanning the life of this plan. Long term population objectives remain at 2,500 deer on subunit 21A and 10,000 deer on subunit 21B.

	Unit 21	Subunit 21A	Subunit 21B
2003 Objective:	12,500	2,500	10,000
2006-2014 Objective:	12,000	2,000	10,000
Change since 2003:	-500	-500	0

The change in subunit 21A management objective represents a 20% reduction based upon poor range trend survey values (see Habitat Management Objectives section below).

< Herd Composition – maintain three-year average post-season buck to doe ratio in accordance with the statewide plan on the general season portion of the unit. On the Oak Creek Limited Entry portion of the unit (Sub-unit 21A), the herd will be managed for three-year average post-season ratios ranging from 25-35 bucks per 100 does.

POPULATION MANAGEMENT STRATEGIES

Monitoring

< Population Size - Herd composition and population size will be monitored through post season and spring classification, hunter check stations, harvest surveys and computer modeling.

< 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 - Monitor DWR lands in Millard County. Protect newly reseeded areas. 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 USDA/Wildlife Services when deer populations are depressed and where there is a reasonable chance of gaining some relief through a predator control effort. Concentrate USDA/Wildlife Services control efforts during and immediately prior to the fawning period.

- Recommend cougar harvest to benefit deer while maintaining the cougar as a valued

resource in its own right.

< Highway Mortality - Work with UDOT to have deer proof fence from Holden to Fillmore and along I-70.

< Illegal Harvest - Specific preventive measures will be implemented through Action Plans developed in cooperation with the Law Enforcement section should illegal kill become an identified and significant source of mortality.

< Interspecific competition - No limitation generated by elk/deer interactions has been documented.

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 21B, 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
1998	38.64	FAIR	21-35	36-53	54-71
2003	41.94	FAIR			

Condition of deer winter range on Unit 21A, 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
1998	20.03	POOR	21-35	36-53	54-71
2003	18.70	VERY POOR			

HABITAT MANAGEMENT STRATEGIES

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

< Manage vehicle access on Division of Wildlife Resources land to limit human disturbance during times of high stress, such as winter and fawning.

< With the use of land exchange, block Division of Wildlife properties on this deer unit.

PERMANENT RANGE TREND SUMMARIES

Unit 21-Fillmore

Fourteen (14) permanent range trend study transects are located on the Fillmore unit, 11 of which monitor deer winter range. The remaining 3 were established on sensitive areas on the Pahvant Mountains that are used by deer and elk during summer. Transects were established in 1985 and are read at five-year intervals with the most recent data collected in 2003. Based upon the 2003 data, soil

erosion has not been a problem on most sites across the unit. The herbaceous under story is also relatively stable, although perennial forbs are lacking. The majority of the winter browse on this unit is provided by cliffrose, bitterbrush and big sagebrush. The 2003 study rated browse as decreasing on 6 sites, stable on 4, and improving on 1 location. Browsing by deer was moderate-to-heavy on many sites and the average deer use on winter range studies across the unit increased from 86 deer days per acre in 1998 to 108 deer days per acre in 2003. It is interesting to note that even though precipitation was below average between 1998 and 2003 the average DCI actually increased.

.

CONDITION INDEX (DCI) OF WINTER RANGE TREND STUDY SITES DEER UNIT 21 (FILLMORE)			
Study Site	**Type**	**1998**	**2003**
M Hill	MB	60.88	51.92
Bennet Field	T	20.59	40.33
Smith's Ridge	V	59.16	44.77
Wide Canyon BLM	W	34.03	41.96
Wide Canyon DWR	W	45.97	53.55
Dog Valley	MB	-15.05	-4.77
Dameron	V	39.77	62.24
Walker Creek	T	26.69	48.73
Meadow Creek	V	52.51	21.44
East Cemetery	V	49.08	42.24
Baker Canyon	W	51.41	58.92
Unit Average		**38.64**	**41.94**

Sub-unit 21A-Fillmore Oak Creek Limited Entry

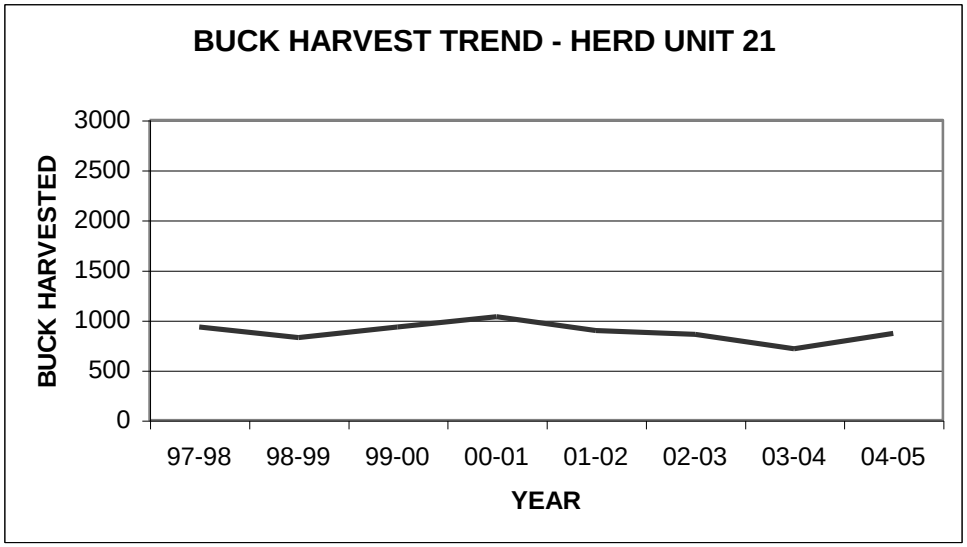
Four (4) transects are used to monitor winter range trend on the Oak Creek limited entry sub-unit. All are situated along the west slope of the Canyon Mountains. Soil and herbaceous understory are relatively stable across all sites. Wildfires have been frequent on this sub-unit and have reduced the density of browse species. Average deer use on winter range study sites across the unit decreased from 9 deer days per acre in 1998 to 3.5 deer days per acres in 2003. Many deer also have been wintering on alfalfa stubble growing in fields northeast of Oak City. The reliance of deer on these agricultural areas close to Oak City and the expansion of the town onto winter range have increased deer-human conflicts and there are problems with deer moving into town during the winter and damaging fruit trees and ornamental shrubs.

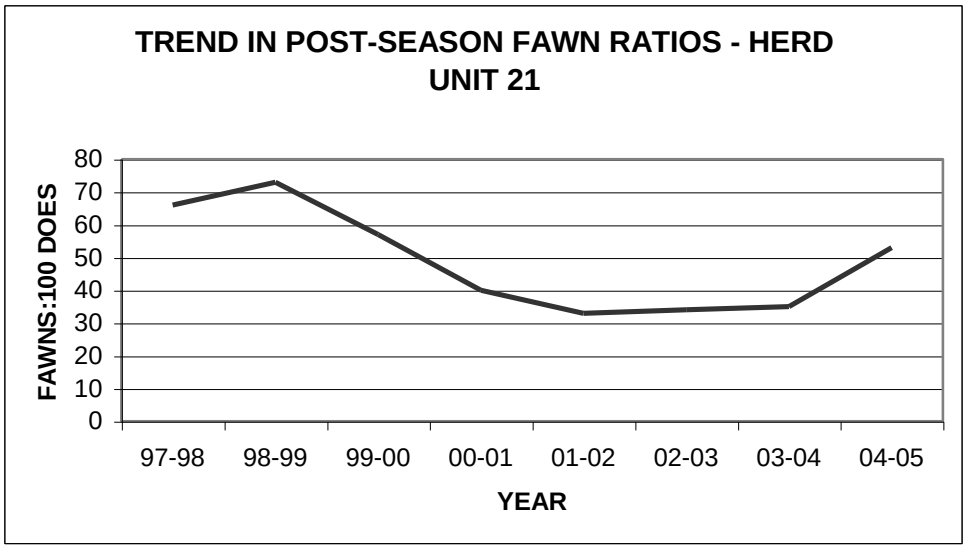
CONDITION INDEX (DCI) OF WINTER RANGE TREND STUDY SITES DEER UNIT 21A (OAK CREEK LIMITED ENTRY)			
Study Site	**Type**	**1998**	**2003**
Long Canyon	MB	42.78	38.34
Lovell Hollow	DES	1.72	-4.89
Cascade Spring	W	26.19	26.06
Horse Hollow	W	9.44	15.30
Sub-unit Average		20.03	18.70

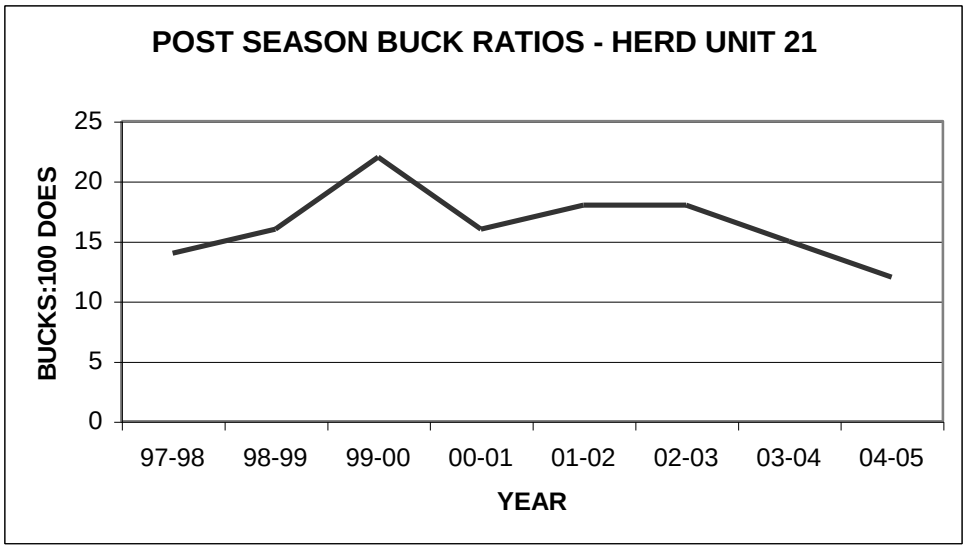
Duration of Plan

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 – HARVEST AND CLASSIFICATION DATA






POST SEASON BUCK RATIOS - HERD UNIT 21
BUCKS:100 DOES
25
20
15
10
5
0
97-98
98-99
99-00
00-01
01-02
02-03
03-04
04-05
YEAR

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit #22
(Beaver)
April 2012

BOUNDARY DESCRIPTION

Iron, Garfield, Piute, Beaver and Millard counties - Boundary begins at SR-130 and I-15; north on SR-130 to SR-21; north on SR-21 to SR-257; north on SR-257 to the Black Rock road; east on the Black Rock road to I-15; south on I-15 to I-70; east on I-70 to US-89; south on US-89 to SR-20; west on SR-20 to I-15; south on I-15 to SR-130.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Yearlong range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	0	??	213388	70%	83337	14%
Bureau of Land Management	0	??	65991	22%	396598	68%
Utah State Institutional Trust Lands	0	??	7386	2%	44367	8%
Native American Trust Lands	0	??	0	0%	205	0%
Private	0	??	18436	6%	53769	9%
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%	0	0%
Utah Division of Wildlife Resources	0	??	0	0%	2288	0%
TOTAL	0	??	305201	100%	580564	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 long-term capability of the available habitat to support.

POPULATION MANAGEMENT OBJECTIVES

< Target Winter Herd Size - Achieve a target population size of 11,000 wintering deer (modeled number). This population objective remains for both the short-term (life of this plan) and long term, barring significant changes in range conditions.

Unit 22

2003 Objective:	11,000
2006-2014 Objective:	11,000
Change since 2003:	0

< Herd Composition – Maintain a unit three-year average post-season buck to doe ratio in accordance with 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 should result in an expected annual buck harvest of 1500 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 (May prevent achieving management objectives)

< Crop Depredation - Take all steps necessary to minimize depredation as prescribed by state law and DWR policy. Closely monitor Sulfurdale, Wildcat, North and South Creek on the West and Marysvale Ten-Mile on the east.

< Habitat - (winter/summer range conditions) Closely monitor winter ranges on the southern part of the unit where overuse currently has been documented. No increase in deer numbers is possible in this area unless habitat projects increase carrying capacity. Maintain or improve fawning habitat and summer waters west of I-15. 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 WS control efforts during and immediately prior to the 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 Department 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.

< Interspecific competition - No limitation generated by elk/deer interactions has been documented.

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 Federal agencies to improve critical winter ranges adjacent to the crop depredation areas identified above.

< Work closely with the BLM on maintaining and improving critical winter range conditions south of Beaver and east of I-15.

< Improve riparian areas in fawning habitat west of I-15 to furnish water, cover, and late to mid summer succulent forage.

< 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 22, 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
2003	37	FAIR	18-32	33-50	51-69

HABITAT MANAGEMENT STRATEGIES

< Habitat - Assist BLM in developing a plan for improving winter ranges south of Beaver. Identify methods to reduce pinyon-juniper encroachment. Continue assisting BLM with planned habitat projects south of Fremont Canyon.

< Work closely with BLM and private landowners to manage and improve riparian habitat conditions west of I-15.

Cooperate with BLM to enhance winter range west of I-15.

< Monitoring - Herd composition and population will be monitored through post season classification, spring classification, annual spring range rides, hunter check stations, harvest surveys, and computer

modeling. Continue to monitor the permanent range trend studies located throughout the seasonal ranges.

< Harvest - Antlerless harvest will be identified in amounts adequate to prevent crop damage, protect habitat and maintain buck objectives.

< Depredation - Damage to crops will be minimized by herding, landowner permits and depredation hunting. Antlerless permits will be made available to public in areas identified.

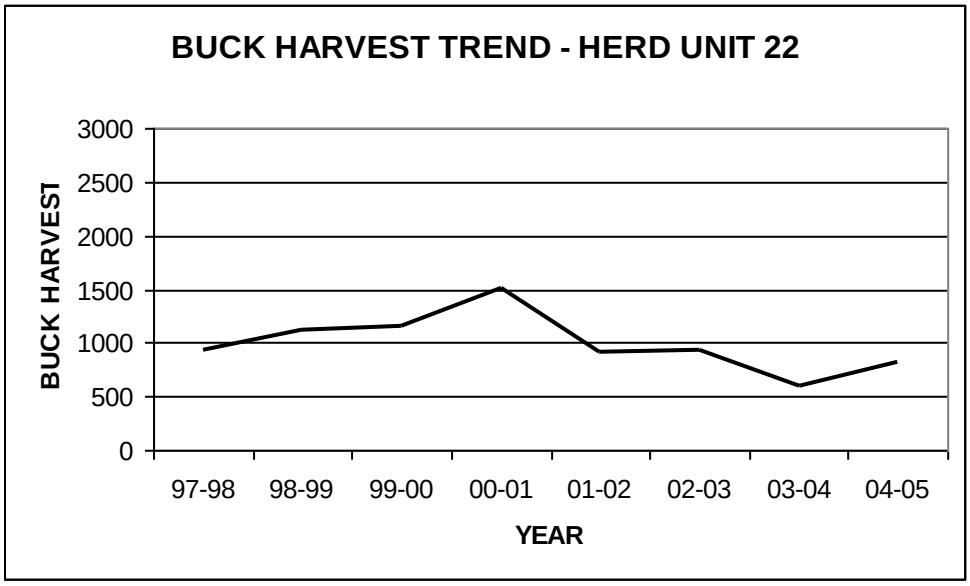
PERMANENT RANGE TREND SUMMARIES

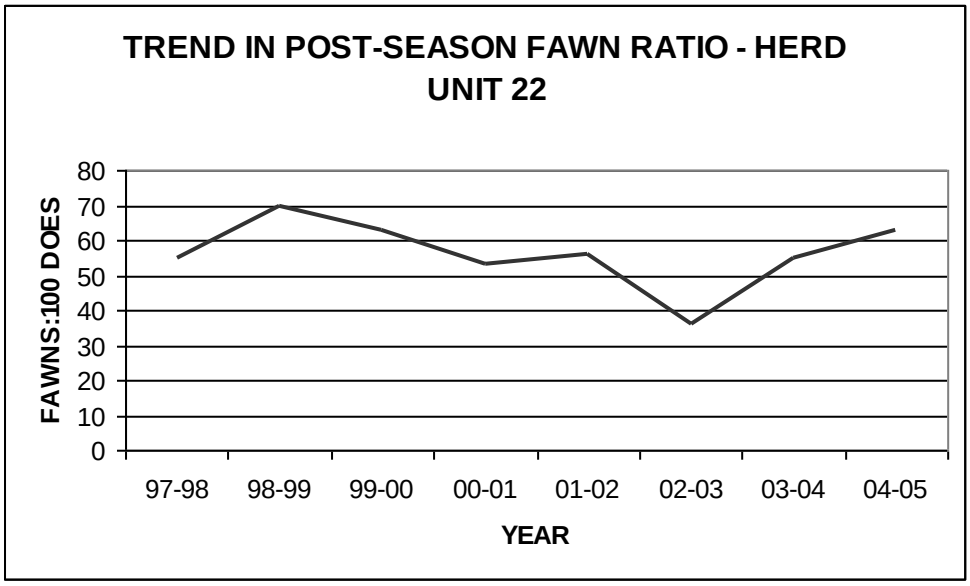
Fourteen (14) range trend study sites were initially established on the Beaver in 1985. Additional sites were added in South Creek and Fremont Wash in the late 1990s. All sites were read in 2003. Only two sites had improving trends over the entire unit and these were due to fire rehabilitation efforts. For all other sites trends for soil, herbaceous, and browse components were split evenly between stable and decreasing classifications.

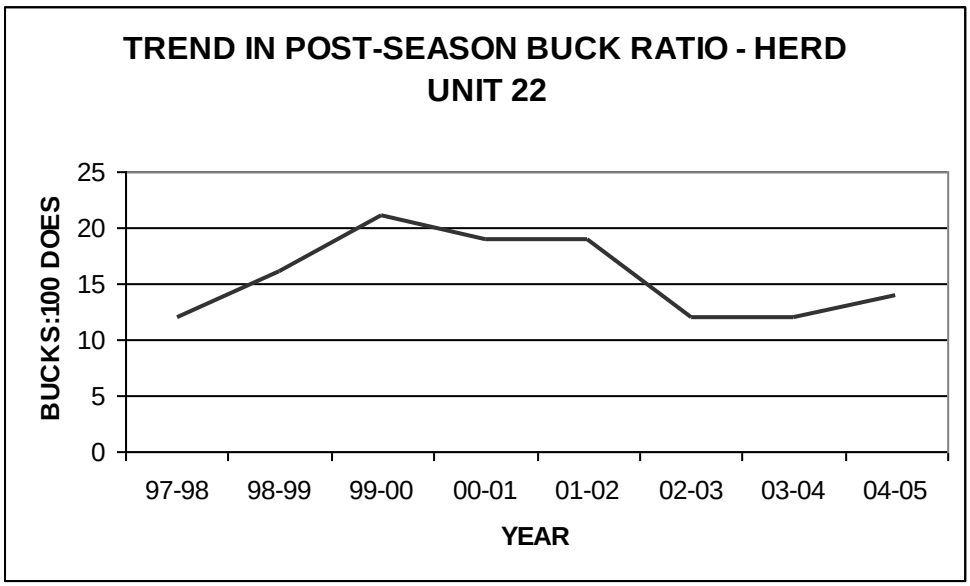
Duration of Plan

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 – HARVEST AND CLASSIFICATION DATA






TREND IN POST-SEASON BUCK RATIO - HERD UNIT 22
BUCKS:100 DOES
25
20
15
10
5
0
97-98
98-99
99-00
00-01
01-02
02-03
03-04
04-05
YEAR

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit #23
Monroe
April 2012

BOUNDARY DESCRIPTION

Piute and Sevier counties - Boundary begins at I-70 and US-89 north of Sigurd; south on US-89 to SR-24; south on SR-24 to SR-62; south and west on SR-62 to US-89; north on US-89 to I-70 near Sevier; north on I-70 to US-89 north of Sigurd.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Year-long range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	**0**	**??**	**112284**	**75%**	**43465**	**24%**
Bureau of Land Management	**0**	**??**	**8724**	**6%**	**99873**	**56%**
Utah State Institutional Trust Lands	**0**	**??**	**9942**	**7%**	**15034**	**9%**
Native American Trust Lands	**0**	**??**	**0**	**0%**	**640**	**0%**
Private	**0**	**??**	**18382**	**12%**	**15283**	**9%**
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%**	**0**	**0%**
Utah Division of Wildlife Resources	**0**	**??**	**0**	**0%**	**3753**	**2%**
TOTAL	**0**	**??**	**149332**	**100%**	**178048**	**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 long-term capability of the available habitat to support.

POPULATION MANAGEMENT OBJECTIVES

< Target Winter Herd Size - Achieve a target population size of 7,500 wintering deer (modeled number).

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

	Objective from past plan (2001)	Long-term Objective	2006-2014 Objective	Change
Monroe	7,500	7,500	7,500	0

POPULATION MANAGEMENT STRATEGIES

Monitoring

< Population Size - Herd composition and population size will be monitored through post season and spring classification, hunter check stations, harvest surveys and computer modeling.

< 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. 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. Closely monitor Annabella and South Monroe agricultural areas.

< Habitat - (winter/summer range conditions) Monitor and protect the Poverty Flat burn (reseeded November 1997) to restore critical winter range. 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 USDA/Wildlife Services when deer populations are depressed and where there is a reasonable chance of gaining some relief through a predator control effort.

Concentrate USDA/Wildlife Services control efforts during and immediately prior to the 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 Department of Transportation in construction of highway fences, passage structures and warning signs, etc.

< Illegal Harvest - Specific preventive measures will be implemented through Action Plans developed in cooperation with the Law Enforcement section should illegal kill become an identified and significant source of mortality.

< Interspecific competition - No limitation generated by elk/deer interactions has been documented.

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 23, 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
1998	43	Fair	20-34	35-52	53-70
2003	35	Fair/Poor Threshold			

HABITAT MANAGEMENT STRATEGIES

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

< Monitoring - Range trend studies, pellet transects, annual spring range rides with agencies and the public.

< Cooperate with land management agencies and private landowners to identify critical areas and work together to maintain and enhance deer habitat.

< Work closely with Monroe Demonstration Steering Committee to obtain funding and coordinate habitat improvement projects.

PERMANENT RANGE TREND SUMMARIES

Unit 23, Monroe

There are currently 6 permanent range trend study transects on this unit. These are located in deer winter ranges identified by BLM, USFS and DWR personnel in 1985. The most recent trend data was collected in 2003. Currently all six sites show stable trends for soils, browse and herbaceous under stories.

DCI was down 20.0% from 1998 to 2003, likely as a result of severe drought conditions. Pinyon and juniper have increased by 10% on transects in this unit and several thousand of acres of critical deer winter range have recently been subjected to wildfires. Several of these areas are being invaded by cheat grass, a non-native species. Browse conditions on these burned areas have not yet recovered to the point where they are useful as deer winter range. However, favorable weather patterns in the last two years have increased the amount of feed available for big game in most areas. In addition, several vegetation treatments have been completed during the past five years in important deer habitats and more are in the planning stages. Deer herds are currently well below objective and are not expected to increase beyond the capacity of existing and treated winter ranges. Current and planned habitat improvement projects should result in higher DCI values in the near future. If this occurs, the short-term objective should be raised.

Summer range condition is probably not a limiting factor on this deer unit.

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 #24
(Mt. Dutton)
April 2012

BOUNDARY DESCRIPTION

Garfield and Piute counties - Boundary begins at US-89 and SR-62; south on US-89 to SR-12; east on SR-12 to the Widtsoe-Antimony road; north on the Widtsoe-Antimony road to SR-22; north on SR-22 to SR-62; west on SR-62 to US-89.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Year-long range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	8374	34%	131391	100%	106357	42%
Bureau of Land Management	1166	5%	0	0%	76366	30%
Utah State Institutional Trust Lands	623	2%	20	1%	35768	14%
Native American Trust Lands	0	0%	0	0%	0	0%
Private	14450	59%	30	0%	28772	11%
Bankhead Jones	0	0%	0	0%	7225	3%
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%	0	0%	244	0%
TOTAL	24663	100%	131440	100%	254733	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 long term capability of the available habitat to support.

POPULATION MANAGEMENT OBJECTIVES

- Target Winter Herd Size - Achieve a target population size of 2,700 wintering deer (modeled number).

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

	Objective from past plan (2001)	Long-term Objective	2006-2014 Objective	Change
Mt. Dutton	2,700	2,700	2,700	0

POPULATION MANAGEMENT STRATEGIES

Monitoring

- Population Size - Herd composition and population size will be monitored through use of post- season and spring classification, hunter check stations, hunter harvest surveys and computer modeling.

- Buck Age Structure - Monitor age class structure of the buck population through the use of checking stations, post-season 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 expected annual buck harvest of 250 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 (May prevent achieving management objectives)

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

- Habitat - Pinon/Juniper encroachment on traditional winter rangelands is decreasing diversity and vigor of browse plants. Browse trends averaged slightly down. Four sites had downward trends for browse, 4 others were stable, and 2 sites showed improving trends. Average percent decadence of sagebrush, the key browse species, on the winter range sites more than doubled, increasing from 25% in 1997 to 56.5% in 2003. Young recruitment, on winter range sites, dropped nearly 6 fold from an average of 553 young plants/acre per site to 97 plants/acre. Herbaceous trends were down slightly overall. Six study transects had a downward herbaceous trend, 3 sites were stable, and 1 site, North Pole Canyon, was upward. The upward herbaceous trend on North Pole Canyon was due to an increase in the warm season grass, blue grama. Cover and frequency of crested wheatgrass decreased on three transects, Mud Spring Chaining (24-4), Prospect Seeding (24-4), and Marshall Basin (24-12). Winter ranges on this unit all have very poor forb cover and frequency. Average forb cover on winter ranges was poor at less than ½ of 1% estimated at only 0.23% in 1997, declining to 0.08% in 2003. Forb cover and frequency were much higher along the summer and transitional range transects, but drought conditions have caused a decline here as well. Wyoming big sagebrush at Prospect Seeding is in extremely poor condition and it appears that sagebrush will die out there completely in the near future. A special study transect was established at Sanford to sample an aspen/conifer prescribed burn. It was first read in 1998 prior to the fire of 2002 and the downward soil and herbaceous trends found in 2003 are due to the burn treatment.

- Predation - Refer to DWR predator management policy.

- A predator management plan is in place for the benefit of mule deer on the summer ranges of this unit..

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

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

- Highway Mortality - Highway mortality occurs on U.S. 89 and SR 62, but is not a serious problem on this unit.

- Illegal Harvest - Specific preventive measures will be implemented through Action Plans developed in cooperation with the Law Enforcement Section should illegal kill become an identified and significant source of mortality.

HABITAT MANAGEMENT OBJECTIVES

Work with private and federal agencies to maintain and protect critical and existing winter range from future losses. **Winter range restoration efforts must be completed for this deer herd to reach its population objectives. Pinyon and juniper reduction treatments and sagebrush restoration are necessary to stabilize winter range conditions and allow this herd to withstand heavy winters.**

Condition of deer winter range on Unit 24, 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
1997	48	Fair	20-34	35-52	53-70
2003	37	Poor			

-

HABITAT MANAGEMENT STRATEGIES

- Continue to monitor the permanent range trend studies located throughout the seasonal ranges.

- A downward trend is indicated on the 12 permanent range inventory transects. Implement habitat restoration treatments to reverse the trends on the Mt. Dutton unit.

- Several significant habitat projects have been implemented or completed since 1995. Funds were made available through the Utah DWR Habitat Fund, Rocky Mountain Elk Foundation, U.S. Forest Service, and BLM.

  Completed Projects:
  USFS, rebuilt guzzler - Bear Flat
  USFS, new guzzler - Corral Flat
  USFS/DWR, Jones Corral prescribed burn and reseed
  USFS/DWR, Johnson Bench prescribed burn and reseed
  USFS/DWR, Hoodle Creek Water Line
  DWR, Black Canyon riparian area

USFS/DWR Seeding after Sanford wildfire of 2002

Partially Completed or Planned Projects:
USFS pinyon juniper thinning Mud Springs and Prospect Creek
BLM, Horse Valley prescribed burn
BLM/SITLA/DWR, Pinyon juniper thinning and removal in the lower winter ranges of Deer Creek, Cow Creek and Cottonwood Creek.

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 #25
(Plateau)
April 2012

BOUNDARY DESCRIPTION

Sevier, Garfield, Piute, and Wayne counties - Boundary begins at SR-24 and US-89 at Sigurd; south on SR-24 to SR-62; south on SR-62 to SR-22; south on SR-22 to the Widtsoe-Antimony road; south on the Widtsoe-Antimony road to SR-12; east on SR-12 to the Burr Trail at Boulder; east on the Burr Trail to the Notom Road; north on the Notom Road to SR-24; east on SR-24 to the Caineville Wash road; north on the Caineville Wash road to I-70; west on I-70 to US-89; south on US-89 to SR-24.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Year-long range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	**5733**	**90%**	**659953**	**85%**	**355829**	**27%**
Bureau of Land Management	**109**	**1%**	**18051**	**2%**	**495507**	**38%**
Utah State Institutional Trust Lands	**0**	**0**	**54940**	**7%**	**107656**	**8%**
Native American Trust Lands	**0**	**0**	**0**	**0%**	**27**	**0%**
Private	**544**	**9%**	**38111**	**5%**	**119243**	**9%**
Bankhead Jones	**0**	**0**	**0**	**0%**	**341**	**0%**
Wilderness Area	**0**	**0**	**598**	**1%**	**24843**	**2%**
National Parks	**0**	**0**	**304**	**0%**	**193967**	**15%**
Utah State Parks	**0**	**0**	**0**	**0%**	**1080**	**0%**
Utah Division of Wildlife Resources	**0**	**0**	**0**	**0%**	**1092**	**1%**
TOTAL	**6385**	**100%**	**772484**	**100%**	**1299640**	**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 long-term capability of the available habitat to support.

POPULATION MANAGEMENT OBJECTIVES

< Target Winter Herd Size - Achieve a target population size of 25,000 wintering deer (modeled number). This objective remains the same for both short-term (the life of this plan) and into the

foreseeable future, barring any significant change in the condition of deer range on the unit.

< Sub-unit #25A - 10,000; DCI is presently at the fair/poor threshold.

Depredation issues will continue to be addressed, resulting in some doe harvest. Habitat is not currently being negatively impacted by deer use. Over 11,600 acres of habitat have been treated on this sub-unit since 2001. These treatments should raise the DCI in the next five years.

< Sub-unit #25B - 3,000; DCI is currently at the good/fair threshold.

Depredation issues will continue to be addressed, resulting in some doe harvest. Habitat is not currently being negatively impacted by deer use. Over 1,100 acres of habitat have been treated on this sub-unit since 2001. These treatments should raise the DCI in the next five years.

This Limited Entry unit is too small to support a self-sustaining deer population and deer regularly move between this sub-unit and the Fishlake sub-unit (25A) on the west and, to a lesser degree, the Boulder sub-unit (25C) on the south. In addition, only public lands are open to Limited Entry hunts, while private lands are managed as a general season deer hunt. This land ownership/hunt boundary arrangement complicates management of this sub-unit. In consideration of these issues, the Thousand Lakes sub-unit (25B) should be combined with the Fishlake sub-unit (25A) in the future.

< Sub-unit #25C -12,000; DCI is currently in the fair range.

Depredation issues will continue to be addressed, resulting in some doe harvest. Habitat is not currently being negatively impacted by deer use. Over 6,800 acres of habitat have been treated on this sub-unit since 2001. These treatments should raise the DCI in the next five years.

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

	Objective from past plan (2001)	Long-term Objective	2006-2014 Objective	Change
Plateau, Fishlake # 25A	10,000	10,000	10,000	0
Plateau, Fishlake Thousand Lakes #25B	3,000	3,000	3,000	0
Plateau, Boulder #25C	12,000	12,000	12,000	0
UNIT TOTAL	25,000	25,000	25,000	0

POPULATION MANAGEMENT STRATEGIES

Monitoring

< Population Size - Herd composition and population size will be monitored through post season and spring classification, hunter check stations, harvest surveys and computer modeling.

< 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 - The Division of Wildlife Resources will maintain aggressive programs to eliminate or lessen the burden of deer depredation on private cultivated and stored agricultural crops. Crop depredation problems will be addressed as provided for in applicable laws, rules and policies, and procedures of Utah's Landowner Assistance Program for big game. When necessary, control hunts will be implemented through the RAC process. When a problem needs immediate attention, local biologists may call depredation hunts and issue mitigation permits to keep deer away from cultivated and stored agricultural crops. These control hunts will be specified in areas where only offending animals will be harvested. Applicable laws, polices, and procedures will also be followed to lessen the burden of big game on private rangelands.

< Habitat - Habitat decline is a critical problem. Opportunities to reverse this trend seem to be diminishing. Because of this long-range decline, the Plateau Unit cannot support the deer herds of earlier years. Increase from current low populations can be achieved, however. Winter browse throughout the unit is old, decadent, and disappearing. The major concern throughout the unit is encroaching pinyon pine and juniper forest. An additional concern is the encroachment of spruce-fir into aspen habitats. The Utah Big Game Range Trend Studies for the Plateau Unit generally show a stable trend. The most notable trends was a general loss of litter cover, vegetative basal cover, and an increased percentage of decadence in key browse species, caused by the long term drought experienced on these ranges. This is expected to turn around with the anticipated end to the state's prolonged pattern of drought. There is no evidence the downward vegetative trends are due to deer use. Attainment of management goals will depend on reversal of recent drought conditions. Excessive habitat utilization will be addressed.

< Predation - The DWR recognizes the need to efficiently and effectively manage predators. The DWR strongly promotes a predator management philosophy and recognizes predator management to be a viable and legitimate wildlife management tool that must be available to wildlife managers when needed.

-The DWR will work cooperatively with the USDA/Wildlife Services to manage coyote populations in areas where deer populations are threatened by coyote.

- The DWR will recommend cougar harvest to benefit deer while maintaining the cougar as a valued resource to assure their future ecological, intrinsic, scientific, educational and recreational values.

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

< Illegal Harvest - Specific preventive measures will be implemented through Action Plans developed in cooperation with the Law Enforcement section should illegal kill become an identified and significant source of mortality.

< Interspecific competition - No limitation generated by elk/deer interactions has been documented.

HABITAT MANAGEMENT OBJECTIVES

< Develop cooperative programs that encourage public and private land managers to maintain a stable or upward trend in vegetative composition, with emphasis on high use areas, especially around critical agricultural depredation problem areas.

< Encourage vegetation manipulation projects and seeding to increase the availability, abundance and nutritional content of browse, grass, and forb species.

< Deer habitat will be monitored by current long-term vegetative trend studies, pellet trend studies, and seasonal monitoring range tours.

< Condition of deer winter range on Unit 25, as indicated by DWR range trend surveys.

Subunit	Year	Mean DCI score for Subunit	Classification	Unit-specific DCI score range: Poor	Unit-specific DCI score range: Fair	Unit-specific DCI score range: Good
25-A	1999	48	Fair	22-36	37-53	54-71
	2004	36	Fair/poor Threshold			
25-B	1994	51	Fair	20-34	35-52	53-70
	1999	63	Good			
	2004	53	Fair/Good			
25-C	1994	52	Good	20-34	35-52	53-70
	1998	59	Good			
	2003	48	Fair			

PERMANENT RANGE TREND SUMMARIES (Added 2001)

Unit 25A, Plateau/Fish Lake

There are 17 range trend studies on this sub-unit of the Plateau Management Unit. Five of the 17 are on intermediate range. Twelve are on critical winter range. Two of the twelve were established in 1999. The most recent trend data gathered on these sites was in 2004. The five intermediate range sites showed stable soil trends with a stable browse trend and a downward herbaceous understory trend. The critical winter range sites showed a stable soils trend with a stable browse trend and slightly downward herbaceous understory. Overall, the trend studies showed a lack of forbs. Continued drought patterns have been a serious problem on this unit. Currently deer are not in sufficient numbers to damage winter range areas and it is unlikely that they will increase beyond the long-term objective in the next five years. Several thousand acres of important deer habitat have been treated in the last five years on this unit, which should lead to an increase in DCI.

Unit 25B, Plateau/Thousand Lake Mountain

There are six range trend studies on this sub-unit of the Plateau Management Unit. All six are on critical winter range. The most recent trend data gathered on these sites was

in 2004. The study sites showed stable soil and browse trends and a downward herbaceous under story trend. Even though most sites are showing stable trends for herbaceous species, many of the sites would have to be considered in poor condition because of the low frequencies and low diversity of species, especially forbs, on these sites. Continued drought has been a serious problem on this unit. Currently deer are not in sufficient numbers to damage winter range areas and it is unlikely that they will increase beyond the long-term objective in the next five years. Several large habitat enhancement projects have been implemented in important deer habitat in the last five years on this unit, which should lead to an increase in DCI.

Thick pinyon and juniper stands dominate much of the critical winter range throughout the sub-unit, limiting the winter carrying capacity for big game. There is a great potential to provide more forage for big game by thinning or removing the thick stands of pinyon and juniper. In 2004 a habitat project was completed in Red Canyon and Sage Flat. Part of this treatment involved the removal of PJ by cutting and then seeding with grasses and forbs. Removal of the dense PJ stands opens the canopy allowing more sunlight to reach the soils and plants. Another project of this same type is planned to cover the area from Sage Flat south to Shingle Mill Creek. Fieldwork for this project will begin in 2007.

Unit 25C, Plateau/Boulder Mountain

There are 29 range trend study transects on this sub-unit of the Plateau Management Unit. Four of these measure big game and livestock on deer summer range, two are located on intermediate range, and the remaining 23 are on critical winter range. The most recent trend data gathered on these sites was in 2003. The study sites showed stable soils and browse trends. Herbaceous understory trends were down dramatically overall. Many sites, including those on intermediate and summer ranges, have poor herbaceous under stories lack grasses and forbs. Other sites have a stable but poor herbaceous understory. Continued drought conditions have been a serious problem.

Thick pinyon and juniper stands dominate much of the critical winter range on the Boulder sub-unit, limiting the winter carrying capacity for big game. There is a great potential to provide more forage for big game by treating the thick stands of PJ. Removal of the dense PJ stands opens the canopy allowing more sunlight to reach the soils and plants. Removing PJ stands also releases water that can then be used for more desirable species of forage plants. Habitat treatments implemented on this unit since 2001 should lead to an increase in DCI.

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 25a Plateau, Fishlake Subunit

Sevier, Piute, and Wayne counties - Boundary begins at SR-24 and US-89 at Sigurd; south on SR-24 to SR-72 at Loa; north on SR-72 to I-70; west on I-70 to US-89; south on US-89 to SR-24.

Unit 25b Plateau, Thousand Lake Subunit

Sevier, and Wayne counties - Boundary begins at the junction of SR-24 and SR-72 at Loa; southeast on SR-24 to the Cainville Wash road; north on the Caineville Wash road to the junction of I-70 and SR-72; south on SR-72 to SR-24 at Loa.

Unit 25c Plateau, Boulder Subunit

Garfield, Piute, and Wayne counties - Boundary begins at SR-24 and SR-62; south on SR-62 to SR-22; south on SR-22 to the Antimony-Widtsoe road; south on the Antimony-Widtsoe road to SR-12; east on SR-12 to the Burr Trail at Boulder; east on the Burr Trail road to the Notom Road; north on the Notom Road to SR-24; west on SR-24 to SR-62.

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit #26
(Kaiparowits)
April 2012

BOUNDARY DESCRIPTION

Kane and Garfield counties - Boundary begins at the Paria River and the Utah-Arizona state line; north along the Paria River to SR-12; east on SR-12 to the Burr Trail at Boulder; southeast on the Burr Trail to Lake Powell; southwest along the shore of Lake Powell to the Utah-Arizona state line; west along this state line to the Paria River.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Year-long range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	23185	52 %	0	0%	801	0%
Bureau of Land Management	18765	42 %	119564	94 %	559081	93 %
Utah State Institutional Trust Lands	640	1%	0	0%	34120	1 %
Native American Trust Lands	0	??	0	0%	0	0%
Private	2150	5 %	556	1%	22523	4%
Department of Defense	0	??	0	0%	0	0%
USFWS Refuge	0	??	0	0%	0	0%
National Parks	0	??	0	0%	5614	1 %
Utah State Parks	0	??	0	0%	2187	0%
National Recreation Area	0	??	6447	5 %	7013	1 %
TOTAL	44738	??	126567	100%	600638	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 long term capability of the available habitat to support.

POPULATION MANAGEMENT OBJECTIVES

- Target Winter Herd Size - Achieve a target population size of 1,000 wintering deer (modeled number). This population objective remains for both the short-term (life of this plan) and long term, barring significant changes in range conditions.

- This unit has scattered areas of deer habitat and does not support high numbers of deer.

	Objective from past plan (2001)	Long-term Objective	2006-2014 Objective	Change
Kaiparowits	1,000	1,000	1,000	0

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

POPULATION MANAGEMENT STRATEGIES

Monitoring

- Population Size - Herd composition and population size will be monitored through use of post- season and spring classification, hunter check stations, hunter harvest surveys and computer modeling.

- Buck Age Structure - Monitor age class structure of the buck population through the use of checking stations, post-season 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 expected annual buck harvest of 140 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 (May prevent achieving management objectives)

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

- Habitat - Extensive dry desert conditions exist. Limited data suggest annual fawn recruitment is low. Forb production is low, especially on dry years. Large areas of Pinyon/Juniper trees are not productive. Water distribution is limited in some areas. Excessive habitat utilization will be addressed. This unit is almost entirely within the Grand Staircase Escalante National Monument (Monument), Glen Canyon National Recreation Area, and the Dixie National Forest (Canaan Mountain). Extensive federal Wilderness Study Areas (WSA) exist in this unit. Questions involving future management of habitat within the Monument or the WSAs are yet to be determined.

- Predation - Refer to DWR predator management policy.

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

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

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

- Predation by mountain lions and coyotes is significant factor to population growth. Rugged topography makes normal harvest of predators difficult in most areas of unit. Incentives for increasing mountain lion harvest may be helpful. The area is currently a harvest objective cougar unit.

- Highway Mortality - Deer/car collisions are low on this unit. A few kills are recorded on SR-12 each year.

- Illegal Harvest - Specific preventive measures will be implemented through Action Plans developed in cooperation with the Law Enforcement Section should illegal kill become an identified and significant source of mortality.
- Interspecific competition - No limitation generated by elk/deer interactions has been documented.

HABITAT MANAGEMENT OBJECTIVES

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

- **No range transects are monitored on the Kaiparowits unit. Thus, no DCI table is available.**

HABITAT MANAGEMENT STRATEGIES

- Continue to monitor the permanent range trend studies located throughout the seasonal ranges.

- Increase water for wildlife by re-modeling BLM livestock catchments to include year long water availability.

- Several areas within the Grand Staircase-Escalante National Monument need manipulation (fire, chaining, hand cut, etc.) to return vegetation to diversity and production.

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 #27
(Paunsaugunt)
April 2012

BOUNDARY DESCRIPTION

Garfield and Kane counties - Boundary begins at US-89A and the Utah-Arizona state line; north on US-89A to US-89; north on US-89 to SR-12; east on SR-12 to the Paria River; south along the Paria River to the Utah-Arizona state line; west along this state line to US-89A.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Year-long range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	**0**	**??**	**122705**	**37%**	**8279**	**1%**
Bureau of Land Management	**0**	**??**	**76806**	**23%**	**502742**	**85%**
Utah State Institutional Trust Lands	**0**	**??**	**19551**	**6%**	**14011**	**2%**
Native American Trust Lands	**0**	**??**	**0**	**0%**	**0**	**0%**
Private	**0**	**??**	**93122**	**28%**	**48189**	**8%**
Department of Defense	**0**	**??**	**0**	**0%**	**0**	**0%**
USFWS Refuge	**0**	**??**	**0**	**0%**	**0**	**0%**
National Parks	**0**	**??**	**17658**	**6%**	**15098**	**3%**
BLM Wilderness Area	**0**	**??**	**0**	**0%**	**3269**	**1%**
Utah Division of Wildlife Resources	**0**	**??**	**0**	**0%**	**0**	**0%**
TOTAL	**0**	**??**	**329841**	**100%**	**591587**	**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 long-term capability of the available habitat to support. Continue with limited entry hunting. Maintain cooperative DWR/landowner relationships, i.e. Paunsaugunt Landowners Association and Alton Cooperative Wildlife Management Unit.

POPULATION MANAGEMENT OBJECTIVES

< Target Winter Herd Size - The short-term objective will be a target population of 5,200 wintering deer (modeled number). If winter range conditions improve as indicated by DWR range trend data showing a unit-wide desired component index (DCI) in at least the “fair” category or data collected during spring range rides indicate a marked improvement, this herd may be managed to the long-term population objective of 6,500 wintering deer (modeled number).

< Herd Composition - The Paunsaugunt unit will be managed for a post-season buck to doe ratio (average of 3 most recent years) of between 40 and 50 bucks per 100 does.

  < A management buck hunt will be established on this unit to provide additional hunting opportunity and will be the primary means of bringing the buck:doe ratio into compliance with the management objective. The definition of a management buck on the Paunsaugunt will be consistent with the definition provided in the statewide plan for premium limited entry units.

  < If the 3-year average buck:doe ratio exceeds 50/100, management buck permits will be increased to bring the population back to objective within 3 years.

< Buck Harvest – In accordance with the state-wide mule deer management plan, the Paunsuagunt deer herd will be managed for a 3-year average of between 40–55% of the harvested buck deer being 5 years of age or older. If >55% of the harvested bucks (3-year average) are 5 years of age or older, premium limited entry permits will be increased by no more than 10% in any given year until the age objective is met.

POPULATION MANAGEMENT STRATEGIES

Monitoring

< Population Size - Herd composition and population size will be monitored through computer modeling using data collected during post-season classification, hunter check stations, and hunter harvest surveys.

< Buck Age Structure – The age class structure of the harvest will be monitored through the mandatory submission of an incisor (tooth) from each buck harvested on the unit. Additional data on the age class

structure of the population may be obtained through post-season classification, uniform harvest surveys and field bag checks.

< Harvest - The primary means of monitoring harvest will be through the statewide mandatory harvest survey. Buck harvest strategies will be developed through the RAC and Wildlife Board process to achieve management objectives for buck: doe ratios and the age objective for premium limited entry units.

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 - Based on 2008 DWR range trend study data, the general condition of deer winter range on the Paunsaugunt unit continues to decline. Range condition on 10 of the 13 winter range sites was rated as either poor or very poor with only the higher elevation Moon landing and Heaton sites rating good or excellent. Range condition worsened on 6 sites between 2003 and 2008, with the Buckskin Mountain study showing the greatest decline resulting from loss of sagebrush combined with an increasing amount of annuals such as cheatgrass. Range condition did improve slightly on two winter range study sites: Nephi Pasture I, and Five-mile Mountain. The Moon Landing and Heaton studies also showed improvement, but these sites are more characteristic of higher elevation transitional range.

< Predation

- Current and future predator management efforts will be consistent with DWR predator management policy and should only be attempted when deer populations are depressed and where it is deemed that predator removal would provide a reasonable chance of improving herd productivity and survival. Predator management may be conducted with assistance from USDA/Wildlife Services. To be most effective, control efforts should generally occur during and immediately prior to the fawning period.

- Public hunting will be the primary means of managing cougar numbers on the Paunsaugunt unit. Harvest recommendations for cougar will be designed to benefit deer while maintaining the cougar as a valued resource in its own right.

< Highway Mortality - Significant in several areas on U.S. 89, especially east of Kanab.

< Illegal Harvest - Specific preventive measures will be implemented through Action Plans developed in cooperation with the Law Enforcement Section should illegal kill become an identified and significant source of mortality. If possible, the any-weapon season on the Paunsaugunt should not overlap with the general deer rifle hunt.

< Cooperative Management - Approximately 25-30% of deer that summer on the Paunsaugunt Unit migrate south across the Utah/Arizona border to winter in Arizona. Continue cooperative program with Arizona Game and Fish Department for mutual harvest objectives.

HABITAT MANAGEMENT OBJECTIVES

< Participate, as possible, with public and private land managers to rehabilitate and enhance important rangelands.

< Provide needed watering sources on critical wintering areas.

< Implement program for monitoring and reducing migratory highway mortality on U.S. 89 east of Kanab.

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

HABITAT MANAGEMENT STRATEGIES

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

< Planned or In Progress Projects:

DWR/BLM, two large water catchments on Buckskin Mountain and Five Mile Mountain

Pinyon and juniper reduction treatments began on Buckskin Mountain in the fall of 2005 and should continue annually in order to stabilize the downward trend of browse species on deer winter range.

Other pinyon-juniper reduction and sagebrush restoration projects must occur on the winter ranges of the Paunsaugunt unit for this unit to be capable of supporting 6,500 wintering deer.

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit #28
(Panguitch Lake)
April 2012

BOUNDARY DESCRIPTION

Garfield, Iron and Kane Counties - Boundary begins SR-14 and US-89; north on US-89 to SR-20; west on SR-20 to I-15; south on I-15 to SR-14; east on SR-14 to US-89.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Year-long range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	3210	25 %	246285	75%	35427	17%
Bureau of Land Management	4732	37 %	4458	2%	105564	52%
Utah State Institutional Trust Lands	1003	8 %	1708	0%	12271	6%
Native American Trust Lands	0		0	0%	47	0%
Private	3667	29 %	63930	19%	43680	22%
Department of Defense	0		0	0%	0	0%
USFS Wilderness	0		7082	2%	0	0%
National Parks	0		6007	2%		0%
Utah State Parks	0		0	0%	0	0%
Utah Division of Wildlife Resources	0		504	0%	5100	3%
TOTAL	12652	100 %	329972	100%	202088	100%

TOTAL FROM 2001 PLAN	0		339543		200914	
CHANGE (+/-)	+12652		- 9571		+ 1174	

UNIT MANAGEMENT GOALS

Maintain a healthy deer population with post season numbers that are in balance with available winter range. Cooperate with the various publics and agencies in managing deer to provide a diversity of deer hunting and viewing experiences.

POPULATION MANAGEMENT OBJECTIVES

< Target winter herd size: A modeled winter population of 8,500 deer. This population objective remains for both the short-term (life of this plan) and long term, barring significant changes in range conditions.

< Harvest: Antlerless harvest as needed to maintain stable herd size. Winter survival is highly dependent on snow accumulation on winter range on the west side of the unit.

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

	Objective from past plan (2001)	Long-term Objective	2006-2014 Objective	Change
Panguitch Lake	8,500	8,500	8,500	0

POPULATION MANAGEMENT STRATEGIES

Monitoring

< Population Size - Herd composition and population size will be monitored through post season and spring classification, hunter check stations, harvest surveys and computer modeling.

< 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 only hunting will be the general harvest method for this unit, with any other strategies to 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 - Agricultural crop damage will be minimized by deer barrier fences, herding and/or through landowner permits/depredation hunting. A large barrier fence, which will prevent deer depredation in several large alfalfa fields, extends several miles to the north from Paragonah into Buckhorn Flat. Range rehabilitation projects should reduce depredation problems on range and crop lands.

< Habitat - At present, winter range is a limiting factor. Highway construction on the west side of the unit has limited the accessibility to winter range on the west side of I-15. This has created areas of heavy utilization and concentration north of Paragonah. Development has also reduced the amount of available winter range along the east side of I-15, especially in the Cedar City area. Excessive habitat utilization will be addressed through antlerless harvests.

< Predation - Seek the assistance of USDA/Wildlife Services for coyote control where needed prior to and during fawning period. Balance cougar numbers with deer numbers.

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

< Illegal Harvest – Specific preventive measures will be implemented through Action Plans developed in cooperation with the Law Enforcement section should illegal kill become an identified and significant source of mortality.

< Interspecific competition - No limitation generated by elk/deer interactions has been documented.

HABITAT MANAGEMENT OBJECTIVES

< Maintain and protect all winter range where possible.

< Improve forage quality on critical deer winter/spring habitat north of Paragonah and other areas as needed.

< Provide improved habitat security and escape opportunities for deer.

Condition of deer winter range on Unit 28, 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
1998	52	Good	19-33	34-51	52-69
2003	37	Fair			

HABITAT MANAGEMENT STRATEGIES

< Rely on DWR range trend studies and range rides to monitor habitat condition.

< Complete habitat project north of Paragonah to improve spring and winter habitat for deer. The objective is to provide 90,000 lbs. of forage for 1500 deer during the spring/winter period.

<

< Complete cooperative three year pinyon-juniper thinning project on BLM land south of Panguitch in the Dickinson Hill/Sheep Hill areas.

< Continue to cooperate with private landowners and federal agencies on rehabilitation projects such as the recently completed burns on USFS lands on Five Mile Mountain.

< Identify seasonal distribution for specific deer herd segments.

PERMANENT RANGE TREND SUMMARIES

Unit 28, Panguitch Lake

There are fifteen range trend study sites on the Panguitch Lake Unit (WMU #28). The most recent trend data were gathered on these sites in 2003. The majority of the range trends were downward for all categories (soil, browse, and herbaceous understory). Browse trend was downward on 9 out of 10 sites; a result of key browse species showing declines in population densities, increases in percent decadence, an increasing proportion of plants classified as “dying,” and decreased reproduction. These changes were primarily due to decreased precipitation during past years, despite the fact that deer populations have been

reduced from prior levels through low recruitment.

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 #29
(Zion)
April 2012

BOUNDARY DESCRIPTION

Iron, Kane and Washington Counties - Boundary begins at I-15 and the Utah-Arizona state line; north on I-15 to SR-14; east on SR-14 to US-89; south on US-89 to US-89A; south on US-89A to the Utah-Arizona state line; west on the Utah-Arizona state line to I-15.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Year-long range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	**0**	**0%**	**60638**	**20%**	**1270**	**<1%**
Bureau of Land Management	**1270**	**8%**	**19123**	**6%**	**268291**	**58%**
Utah State Institutional Trust Lands	**52**	**<1%**	**9059**	**3%**	**37693**	**8%**
Native American Trust Lands	**0**	**0%**	**0**	**0%**	**2226**	**<1%**
Private	**14149**	**91%**	**177242**	**59%**	**87560**	**19%**
Department of Defense	**0**	**0%**	**0**	**0%**	**0**	**0%**
USFWS Refuge	**0**	**0%**	**0**	**0%**	**0**	**0%**
National Parks	**0**	**0%**	**35501**	**12%**	**67854**	**15%**
Utah State Parks	**0**	**0%**	**0**	**0%**	**0**	**0%**
Utah Division of Wildlife Resources	**0**	**0%**	**0**	**0%**	**0**	**0%**
TOTAL	**15471**	**100%**	**301563**	**100%**	**464894**	**100%**

UNIT MANAGEMENT GOALS

Maintain a healthy deer population with post-season numbers that are in balance with available winter range. A major proportion of this herd unit is on private land and herd size must be compatible with private land uses, particularly in such areas as Smith's Mesa, which has some dry land farming but also is important seasonal range for deer.

Cooperate with the public and land management agencies in managing deer to provide a diversity of deer hunting and viewing experiences.

POPULATION MANAGEMENT OBJECTIVES

< Target winter herd size - A modeled winter population of 9,000 deer on the entire WMU. This population objective remains for both the short-term (life of this plan) and long term, barring significant changes in range conditions.

<

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

	Objective from past plan (2001)	Long-term Objective	2006-2014 Objective	Change
Zion	9,000	9,000	9,000	0

POPULATION MANAGEMENT STRATEGIES

Monitoring

< Population Size - Herd composition and population size will be monitored through post season and spring classification, hunter checking stations, harvest surveys and computer modeling.

< Buck Age Structure - The age class structure of the buck population will be monitored 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. The target population size will be achieved through the use of antlerless harvest. Antlerless harvest will be identified in amounts adequate to reduce crop damage, protect ranges and maintain buck objectives. 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 - Agricultural crop damage will be minimized by herding and/or through landowner permits/depredation hunting.

< Habitat - Winter range may be a limiting factor in localized areas. Overall "very poor" range condition rating may be indicative of decreased carrying capacity (see discussions below).

< Predation - Seek assistance of USDA/Wildlife Services for coyote control if needed prior to and during fawning period. Establish annual cougar harvest levels consistent with good multiple use management and to maintain balance with deer objectives.

< Highway Mortality - Highway mortality along I-15 and Highway 14 is significant.

< Illegal Harvest - There is no evidence that illegal harvest is a limiting factor on the unit.

< Interspecific competition - No limitation generated by elk/deer interactions has been documented.

HABITAT MANAGEMENT OBJECTIVES

< Maintain and protect adequate habitat to support herd objectives.

< Improve quality of critical deer winter range east of I-15 and south of Cedar City.

< Reduce highway deer mortality along Interstate I-15 south of Cedar City and along Highway 14 east of Cedar City.

< A major proportion of both summer and winter habitat for deer on this unit is on private land. Therefore, it is paramount to work with private landowners to maintain both summer and winter habitat. Currently, there is one CWMU of 13,000 acres (Mt. Carmel - Zion) in the Muddy Creek drainage on the east portion of this unit. Other landowners have expressed interest in a CWMU and they may be organized in the future.

< Work with BLM to maintain deer winter range between Cedar City and Anderson Junction on the west side of the unit.

Condition of deer winter range on Unit 29, 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
1998	43	Poor	35 - 49	50 - 64	65 - 79
2003	32	Very Poor			

All of Zion National Park is within this deer unit and a significant number of deer winter in the park. Cooperative efforts between DWR and park staff will be required to meet objectives of both agencies.

HABITAT MANAGEMENT STRATEGIES

< Deer mortality on I-15 and SR-14 resulting from vehicle collisions has been a problem for years. A deer barrier fence was recently constructed on I-15 from Anderson Junction to the black ridge. Underpasses are present in this area to permit deer passage. Many deer are killed on I-15 between Ash Creek Reservoir and Cedar City. A solution to this problem needs to be developed.

< Monitoring will be accomplished using DWR range trend studies and range rides.

< Seek agency and landowner cooperative habitat management efforts.

< Continue to cooperate in the ongoing habitat improvements in the Muddy/Meadow Creek drainages.

< Maintain and protect critical winter range from future losses. Protect winter range east of I-15 from development from Cedar City to Anderson Junction. Acquire critical winter range when the opportunity arises.

< Continue cutting invading pinyon-juniper on winter range on BLM lands south of Cedar City.

< Protect wintering areas on Smith Mesa and identify specific cooperative range improvement projects.

PERMANENT RANGE TREND SUMMARIES

Unit 29, Zion

Only six range study transects (3 permanent and 3 special studies) have been established on this unit because of the vast amount of private land in this area. All were last read in 2003 and indicated range conditions had fallen from "poor" to "very poor". Browse, soils, and herbaceous understory conditions at almost all of these sites were in a slightly downward to downward condition. Soil conditions were stable in the Elephant Gap Total Exclosure.

Winter range is a limiting factor on the west side of the Zion Unit from Cedar City south to Toquerville where it is adjacent to Interstate 15. Pinyon-juniper encroachment, browse decadence, and invasion of cheatgrass are winter range problems on the unit.

Low DCI ratings might normally require a reduction in population objectives. However, there is a very low number of range trend study sites on this unit and their placement is severely hindered by the large amount of privately owned land. The deer population on this unit is not large enough to adversely impact winter ranges. There are also, as yet, only limited depredation issues on this unit. Range condition monitoring will be highlighted on this unit and the need for adjustments will be assessed in 2008, following the next round of range trend analyses.

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 #30
(Pine Valley)
April 2012

BOUNDARY DESCRIPTION

Iron and Washington counties - Boundary begins at I-15 and the Utah-Arizona state line; north on I-15 to SR-56; west on SR-56 to the Lund Highway; northwest along the Lund Highway to the Union Pacific railroad tracks at Lund; southwest on the Union Pacific railroad tracks to the Utah-Nevada state line; south on this state line to the Utah-Arizona state line; west on this state line to I-15.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Year-long range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	15557	23%	212454	67%	182357	38%
Bureau of Land Management	47018	70%	36143	11%	210905	44%
Utah State Institutional Trust Lands	830	1%	1446	<1%	22429	5%
Native American Trust Lands	0	0%	5859	2%	141	<1%
Private	3422	5%	13944	4%	64236	13%
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%	309	<1%
Utah Division of Wildlife Resources	0	0%	0	0%	0	0%
Wilderness (USFS & BLM)	0	0%	47881	15%	2350	<1%
TOTAL	66827	99%	317727	100%	482727	100%

TOTAL FROM 2001 PLAN	**1601**	**100%**	**300053**	**100%**	**466484**	**100%**
CHANGE (+/-)	**+ 65226**		**+ 17674**		**+ 16243**	

UNIT MANAGEMENT GOALS

Overall deer numbers are significantly below both long term and recent (1980's) levels. The unit will be managed to permit deer numbers to increase somewhat, while precluding overuse of ranges and reducing agricultural damage. The unit will be evaluated for different hunt strategies.

POPULATION MANAGEMENT OBJECTIVES

< Target winter herd size – For the short term (life of this plan), manage for a winter population of 12,800 deer on the entire WMU. This is a reduction of 20% from the previous plan period and is

justified as based on the discussion in Permanent Range Trend Summaries at the end of this document. If range trend indicators rebound to the Fair category in the future, the population objective will be amended upward to the long term value of 16,000 deer. This change will be contingent on range quality and quantity increasing to levels capable of sustaining populations at long-term objective levels.

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

	Objective from past plan (2001)	Long-term Objective	2006-2014 Objective	Change
Pine Valley	16,000	16,000	12,800	- 3,200

POPULATION MANAGEMENT STRATEGIES

Monitoring

< Population Size - Herd composition and population size will be monitored through post season and spring classification, hunter check stations, harvest surveys and computer modeling.

< Buck Age Structure - The age class structure of the buck population will be monitored 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. The strategy for the Pine Valley unit will be general buck hunting. 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 directed toward agricultural problems, range problems, and population regulation.

Limiting Factors (May prevent achieving management objectives)

< Crop Depredation - Agricultural damage will be addressed through herding, fencing, landowner permits, mitigation permits, depredation hunts, Division removal and damage payments.

< Habitat - Winter range in localized areas may be a limiting factor. Overall “poor” range condition rating may be indicative of a decline in carrying capacity (see discussions below).

< Predator Management - This unit historically had high densities of mountain lions. Lion harvest will be evaluated and adjusted relative to the widely fluctuating deer populations characteristic of this unit. Coyote control will be addressed under statewide predator management direction.

< Interspecific competition - No limitation generated by elk/deer interactions has been documented.

< Highway Mortality - Highway mortality along I-15, SR-56, SR-18 is significant.

HABITAT MANAGEMENT OBJECTIVES

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

< Maintain critical fawning habitats in good condition.

< Manage public lands adjacent to areas with heavy agricultural depredation to promote deer use during late summer.

< Maintain and protect critical winter range from future losses. Acquire critical winter range when the opportunity arises.

Condition of deer winter range on Unit 30, 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
1998	45	Fair	28 - 42	43 - 58	59 - 76
2003	34	Poor			

HABITAT MANAGEMENT STRATEGIES

< Habitat suitability will be assessed through annual "range rides", trend studies and casual observation. Unsuitable habitat condition will be addressed through meetings and negotiations with landowners and land management agencies.

< Implement ecosystem management practices, including controlled burns and fuel wood harvest, in the Ox Valley - Lost Peak area, and the east slope of the Pine Valley Mountain.

< Protect riparian areas to furnish cover, water and succulent forage adjacent to areas with historic agricultural damage.

< Provide guzzlers or other water sources where needed on critical summer fawning areas.

PERMANENT RANGE TREND SUMMARIES

Unit 30, Pine Valley

A total of 22 vegetation transects were read in 2003. Average trend of soil conditions on winter ranges was slightly below stable. Average browse condition on winter ranges was slightly downward, despite the currently low deer populations. Conditions Southwest of Newcastle (30-29), Grapevine Spring (30-42) and Bullion Canyon (30-54) were particularly bad, and considerable sagebrush die-off had occurred there. Herbaceous trends on winter ranges were also downward and have shown a steady decline in trend since 1992. Pinyon/juniper thinning projects in conjunction with fuels reduction have been completed on Tobin Bench, Southwest of Newcastle, Woolsey Reseed, and Quitchapa Canyon. In addition, a pinyon/juniper thinning was completed on the North Hills north of Enterprise on SITLA land. All projects completed should contribute to better conditions for wintering deer.

Summer range trend conditions are better, except for herbaceous understory condition, which continued to decline.

Wildfires have had a significant impact on habitats in the southern and western portions of this unit in recent years. Over 250,000 acres have burned in a variety of vegetative types in Washington County since 2003. Where cheatgrass is prevalent, some locations have burned more than once during that time period. In addition, severe flooding in January 2005 drastically altered riparian communities along Moody Wash, Mogatsu Creek, Beaver Dam Wash, Santa Clara River, Virgin River, and neighboring drainages. Results of these events will impact deer use of these areas for several years.

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.