

**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

Ownership	Yearlong range		Summer Range		Winter Range	
	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.

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

BOUNDARY DESCRIPTION

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

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

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

UNIT MANAGEMENT GOALS

- Expand and improve mule deer populations within the carrying capacity of available habitats and in consideration of other land uses.
- Provide a diversity of high-quality hunting and viewing opportunities for mule deer throughout the unit.
- Conserve and improve mule deer habitat throughout the unit with emphasis on crucial ranges.

POPULATION MANAGEMENT OBJECTIVES

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

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

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

< **Herd Composition** –

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

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

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

POPULATION MANAGEMENT STRATEGIES

Monitoring

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

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

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

Limiting Factors (May prevent achieving management objectives)

- < Crop Depredation - Minimize depredation as prescribed by state law and DWR policy.
- < Habitat - Public land winter range availability, landowner acceptance and winter range forage conditions will determine herd size. Excessive habitat utilization will be addressed with hunting.
- < Predation - Follow DWR predator management policy:
 - < - If the population estimate is less than 90% of objective and fawn to doe ratio drops below 70 for 2 of the last 3 years or if the fawn survival rate drops below 50% for one year, then a Predator Management Plan targeting coyotes will be implemented on that subunit.
 - < - If the population estimate is less than 90% of objective and the doe survival rate drops below 85% for 2 of the last 3 years or below 80% for one year, then a Predator Management Plan targeting cougar would be implemented on that subunit.
- < Highway Mortality - Highway mortality is a significant factor in reduced population growth in deer. Work should continue in cooperation with UDOT, Uintah and Duchesne Counties, Universities, local conservation groups, and landowners to minimize highway mortality by identifying locations of high deer-vehicle collisions and erecting sufficient wildlife crossing structures in those locations. Evaluate the effectiveness of the crossing structures over time and implement new technologies to improve future wildlife crossing structures.
- < Disease - The impact of disease on deer herds is difficult to assess. Monitoring should be continued for diseases that have been found in the state. Those diseases include: bluetongue, epizootic hemorrhagic disease (EHD), pneumonia, enterotoxemia and Chronic Wasting Disease (CWD). CWD has been documented on the Vernal and Diamond Mountain subunits. Between 2003 and 2008 six samples tested positive for CWD. Since 2008 there have been no positive samples for CWD on this unit or in the vicinity. Since 2002 when CWD monitoring was initiated samples from 6 deer have tested positive for CWD out of 4,130 samples tested from across the North Slope and the South Slope and an additional 1610 elk samples that have all tested negative.
- < Illegal Harvest - Support law enforcement efforts to educate the public concerning poaching and reduce illegal taking of deer.

HABITAT MANAGEMENT OBJECTIVES

- < Maintain mule deer habitat throughout the unit by protecting and enhancing existing crucial habitats and mitigating for losses due to natural and human impacts.
- < Improve the quality and quantity of vegetation for mule deer on crucial range.
- < Provide improved habitat security and escapement opportunities for deer.

HABITAT MANAGEMENT STRATEGIES

- < Continue to monitor permanent Big Game Range Trend Studies of crucial mule deer range across the unit.
- < Continue annual seasonal range rides and range assessments to evaluate forage condition and utilization.
- < Work with land management agencies, conservation organizations, private landowners, and local leaders through the regional Watershed Restoration Initiative working groups to identify and prioritize mule deer habitats that are in need of enhancement or restoration.
- < Initiate broad scale vegetative treatment projects to improve mule deer habitat with emphasis on drought or fire damaged sagebrush winter ranges, ranges that are being taken over by invasive annual grass species, and ranges being diminished by encroachment of conifers into sagebrush or aspen habitats.
- < Properly manage elk populations to minimize competition with mule deer on crucial ranges.
- < Work with state and federal land management agencies to properly manage livestock to enhance crucial mule deer ranges
- < Minimize impacts and mitigate for losses of crucial habitat due to human impacts and energy development.
- < Work with county, state, and federal agencies to limit the negative effects of roads by reclaiming unused roads, properly planning new roads, and installing fencing and highway passage structures where roads disrupt normal mule deer migration patterns.
- < Utilize antlerless deer harvest to improve or protect forage conditions if and when vegetative declines are attributed to deer overutilization or are expected due to severe weather conditions.

PERMANENT RANGE TREND SUMMARIES

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

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

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

range condition can be improved.

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

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

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

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

Unit 9a, South Slope, Yellowstone Subunit

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

Three of the four Mid Potential trend sites (7,000'-7,900') are rated in Good or Excellent condition, while the other site is rated in Poor condition due primarily to being burned by the Neola North fire. The other three are up slightly from 2005.

All four of the High Potential sites (7,000'-8160') are rated in Good or Excellent condition. The condition of these mid elevation sites all appear to be improving.

There is a real need for additional monitoring sites at lower elevation wintering areas which become crucial in hard winters. For example: the Clay Basin area near Bluebell (6300') suffered high sagebrush mortality due to the drought 2003. That area historically wintered large numbers of deer but will take decades to recover. Additional monitoring is needed in those types of areas.

Duration of Plan

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

APPENDIX**Unit 9a South Slope, Yellowstone Subunit**

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

Unit 9b South Slope, Vernal Subunit

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

Unit 9c South Slope, Diamond Mountain Subunit

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

Unit 9d South Slope, Bonanza Subunit

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

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

BOUNDARY DESCRIPTION

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

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

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

UNIT MANAGEMENT GOALS

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

POPULATION MANAGEMENT OBJECTIVES

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

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

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

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

(Subunit boundary descriptions are provided in the Appendix)

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

POPULATION MANAGEMENT STRATEGIES

Monitoring

- < Population Size - Utilizing harvest data, postseason and spring classifications and mortality estimates, a computer model has been developed to estimate winter population sizes. Wintering populations may be computer modeled for each herd subunit when deemed advantageous or when animal numbers appear to be reaching the objective.
- < Buck Age Structure - Monitor age class structure of the buck subpopulations through the use of tooth sampling, checking stations, postseason classification, uniform harvest surveys and field bag checks.
- < Harvest - The primary means of monitoring harvest will be through the statewide uniform harvest survey and the use of checking stations. Achieve the target population size by use of antlerless harvest using a variety of harvest methods and seasons. Recognize that buck harvest will be above or below what is expected due to climatic and productivity variables. Buck harvest strategies will be developed through the RAC and Wildlife Board process to achieve management objectives for buck: doe ratios.

Limiting Factors (May prevent achieving management objectives)

- < Crop Depredation - Take all steps necessary to minimize depredation as prescribed by state law and DWR policy.
- < Habitat – The vast expanse of the Book Cliffs herd unit is public land managed under a “multiple use”

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

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

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

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

HABITAT MANAGEMENT OBJECTIVES

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

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

- < Provide improved habitat security and escapement opportunities for deer.

- < Mitigate impacts from energy development activities.

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

HABITAT MANAGEMENT STRATEGIES

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

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

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

PERMANENT RANGE TREND SUMMARIES

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

Mountain Brush Sites (High)

North Book Cliffs (n=5)

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

Mountain Big Sagebrush Sites (Mid)

North Book Cliffs (n=8)

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

Wyoming Big Sagebrush Sites (Low)

North Book Cliffs (n=9)

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

Wyoming Big Sagebrush Sites (Low)

South Book Cliffs (n=7)

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

Unit 10 Book Cliffs, South Book Cliffs Subunit

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

Unit 10 Book Cliffs, North Book Cliffs Subunit

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

Duration of Plan

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

**DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 11
(Nine Mile)
March 2012**

BOUNDARY DESCRIPTION

Carbon, Duchesne, Emery and Uintah Counties—Boundary begins at US-40 and US-191 in Duchesne; southwest on US-191 to US-6; southeast on US-6 to I-70; east on I-70 to Exit 164 and SR-19 near the town of Green River; north and west on SR-19 to Hastings Road; north on this road to the Swasey boat ramp and the Green River; north along this river to the Duchesne River; west along this river to US-40 at Myton; west on US-40 to US-191 in Duchesne.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Yearlong range		Summer Range		Winter Range	
	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service	7240	1%	35036	10%	57349	11%
Bureau of Land Management	315657	59%	111058	31%	296492	57%
Utah State Institutional Trust Lands	38845	7%	28819	8%	38596	8%
Native American Trust Lands	48508	9%	0	0%	48686	9%
Private	116726	22%	178895	51%	70679	14%
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	4890	1%	0	0%	6906	1%
TOTAL	531866	100%	353808	100%	518708	100%

UNIT MANAGEMENT GOALS

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

- Provide a diversity of hunting and viewing opportunities for mule deer throughout the unit.
- Conserve and improve mule deer habitat throughout the unit with emphasis on crucial ranges.

POPULATION MANAGEMENT OBJECTIVES

Long Term Objective –

Manage for a winter population of 8,500 deer, distributed across the Range Creek and Anthro subunits

Anthro subpopulation: 2,500
Range Creek subpopulation: 6,000

Herd Composition –

All Nine Mile subunits are General Season subunits and will be managed for a 3-year average postseason buck to doe ratio in accordance with the statewide plan.

POPULATION MANAGEMENT STRATEGIES

Monitoring

- **Population Size** - Winter population size will be estimated using a computer model that was developed to utilize harvest data, postseason and spring classifications and radio collar based survival estimates.
- **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 and the use of checking stations. Achieve the target population size by use of antlerless harvest using a variety of harvest methods and seasons. Recognize that buck harvest will be above or below what is expected due to climatic and productivity variables. Buck harvest strategies will be developed through the RAC and Wildlife Board process to achieve management objectives for buck: doe ratios

Limiting Factors (May prevent achieving management objectives)

- **Crop Depredation** - Take all steps necessary to minimize depredation as prescribed by state law and DWR policy.
- **Habitat** - Public land winter range availability, landowner acceptance and winter range forage conditions will determine herd size. Excessive habitat utilization will be addressed with hunting.
- **Predation** - Follow DWR predator management policy:

- If the population estimate is less than 90% of objective and fawn to doe ratio drops below 70 for 2 of the last 3 years or if the fawn survival rate drops below 50% for one year, then a Predator Management Plan targeting coyotes will be implemented on that subunit.
- If the population estimate is less than 90% of objective and the doe survival rate drops below 85% for 2 of the last 3 years or below 80% for one year, then a Predator Management Plan targeting cougar would be implemented on that subunit.
- Highway Mortality - Work with UDOT, 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 mule deer habitat throughout the unit by protecting and enhancing existing crucial habitats and mitigating for losses due to natural and human impacts.
- Improve the quality and quantity of vegetation for mule deer on crucial range.
- Provide improved habitat security and escapement opportunities for deer.

HABITAT MANAGEMENT STRATEGIES

- Continue to monitor permanent Big Game Range Trend Studies of crucial mule deer range across the unit.
- Continue annual seasonal range rides and range assessments to evaluate forage condition and utilization.
- Work with land management agencies, conservation organizations, private landowners, and local leaders through the regional Watershed Restoration Initiative working groups to identify and prioritize mule deer habitats that are in need of enhancement or restoration.
- Initiate broad scale vegetative treatment projects to improve mule deer habitat with emphasis on drought or fire damaged sagebrush winter ranges, ranges that are being taken over by invasive annual grass species, and ranges being diminished by encroachment of conifers into sagebrush or aspen habitats.
- Properly manage elk populations to minimize competition with mule deer on crucial ranges.
- Work with state and federal land management agencies to properly manage livestock to enhance crucial mule deer ranges
- Minimize impacts and mitigate for losses of crucial habitat due to human impacts and energy development.
- Work with county, state, and federal agencies to limit the negative effects of roads by

reclaiming unused roads, properly planning new roads, and installing fencing and highway passage structures where roads disrupt normal mule deer migration patterns.

PERMANENT RANGE TREND SUMMARIES

Unit 11a, Nine Mile, Anthro Subunit

The following table summarizes the condition of deer winter range on Unit 11a, as indicated by DWR permanent Big Game Range Trend studies:

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
1995	62	Good	10 – 24	25 – 44	45 - 64
2000	47	Good			
2005	65	Excellent			
2010	69	Excellent			

There are four range trend sites on the Anthro portion of the Nine Mile Management Unit. Two of these are on summer range areas and two on winter range sites to the north. The studies were revisited in 2010 but only data for the two winter range sites has been summarized and made available for DCI index comparisons.

Pinyon and junipers stands dominate much of the area but contain sufficient natural openings to provide good quality winter range. There is potential to provide more forage during the fall-spring period with treatment of pinyon-juniper sites. The limited, xeric summer range remains an important limiting factor for deer populations on this subunit.

The two winter range study sites are located in Cottonwood Canyon and Nutters Canyon and are in low potential vegetative types. Both locations showed improvement from the 2005 indices when they were visited in 2010. The Cottonwood Canyon site produced a 69 index in 2010 and the Nutters Canyon site rated a score of 68. These ratings both provide an excellent DCI index. The combined winter range average DCI rating was 69 for the Anthro subunit. This figure indicates that deer winter range is in the excellent condition range

Unit 11b, Nine Mile, Range Creek Subunit

The following tables summarize the condition of deer winter range on Unit 11b, as indicated by DWR permanent Big Game Range Trend studies:

DCI Scores for Mid-Level Potential Winter Ranges on the Nine Mile Range Creek Subunit 1994-2010 (n=4).

Year	Mean DCI score for Subunit	Classification
1994	55.5	Fair
2000	59.6	Fair
2005	62.4	Fair
2010	65.2	Fair-Good

DCI Scores for Low Potential Winter Ranges on the Nine Mile Range Creek Subunit 1994 - 2010 (n=7).

Year	Mean DCI score for Subunit	Classification
1994	33.3	Fair
2000	38.3	Fair
2005	36.3	Fair
2010	40.8	Fair

There were 11 permanent winter range trend sites on the Range Creek subunit of the Nine Mile unit that were read in 2010. Of these sites, 7 are low elevation winter range areas predominated by deer. The remaining 4 winter range sites are on the eastern slopes of the Tavaputs plateau draining in to the Green River and are utilized by both deer and elk, although elk use is more prevalent. These sites were last surveyed in 2010.

The overall trend in relative winter range health as noted by the DCI has been slightly improving over the past 16 years. Trends for the lower elevation deer winter range sites tend to have a declining forb community while grass and browse communities are stable and improving in the last several years. Most range trend sites show improving browse production and vigor with relatively little deer use, while several high use sites show declining browse production. Upper elevation winter range sites showed relatively stable to improving browse condition yet declining herbaceous understory trends.

High quality summer range is limiting on the subunit. A relatively small percentage of the unit occurs at high enough elevations to provide good summer range for deer.

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 # 17
(Wasatch Mountains)
April 2012**

BOUNDARY DESCRIPTION

Salt Lake, Summit, Wasatch, Duchesne, Carbon, Utah counties - Boundary begins at the junction of I-15 and I-80 in Salt Lake City; east on I-80 to US-40; south on US-40 to SR-32; east on SR-32 to SR-35; southeast on SR-35 to SR-87; south on SR-87 to Duchesne and US-191; south on US-191 to US-6; northeast on US-6 to I-15; north on I-15 to I-80 in Salt Lake City.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Yearlong range		Summer Range		Winter Range	
	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service	17268	31.6%	687185	62.0%	104466	21.7%
Bureau of Land Management	0	0%	12105	1.1%	8768	1.8%
Utah State Institutional Trust Lands	0	0%	34450	3.1%	3939	.8%
Native American Trust Lands	4732	8.6%	20930	1.9%	51061	10.6%
Private	28660	52.4%	297425	26.8%	240366	50.0%
Department of Defense	0	0%	0	0%	0	0%
USFWS Refuge	0	0%	0	0%	0	0%
National Parks	235	.4%	0	0%	0	0%
Utah State Parks	401	.7%	9153	.8%	13462	2.8%
Utah Division of Wildlife Resources	3433	6.3%	47363	4.3%	58330	12.1%
TOTAL	54729	100%	1108611	100%	480392	100%

UNIT MANAGEMENT GOALS

- Expand and improve mule deer populations within the carrying capacity of available habitats and in consideration of other land uses.
- Provide a diversity of high-quality hunting and viewing opportunities for mule deer throughout the unit.

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

POPULATION MANAGEMENT OBJECTIVES

Long Term Target Winter Herd Size - population size of 40,800 wintering deer (modeled number).

Avintaquin subpopulation:	3,200
Currant Creek subpopulation:	15,000
Wasatch West subpopulation:	20,600
Salt Lake subpopulation:	2,000

Herd Composition –

All Wasatch Mountains subunits are General Season subunits and will be managed for a 3-year average postseason buck to doe ratio in accordance with the statewide plan.

POPULATION MANAGEMENT STRATEGIES

Monitoring

- Population Size - Winter population size will be estimated using a computer model that was developed to utilize harvest data, postseason and spring classifications and radio collar based survival estimates.
- Buck Age Structure - Monitor age class structure of the buck population through the use of checking stations, postseason classification, tooth cementum annuli analysis, uniform harvest surveys and field bag checks.
- Harvest - The primary means of monitoring harvest will be through the statewide uniform harvest survey and the use of checking stations. Achieve the target population size by use of antlerless harvest using a variety of harvest methods and seasons. Recognize that buck harvest will be above or below what is expected due to climatic and productivity variables. Buck harvest strategies will be developed through the RAC and Wildlife Board process to achieve management objectives for buck: doe ratios

Limiting Factors (May prevent achieving management objectives)

- Crop Depredation - Take all steps necessary to minimize depredation as prescribed by state law and DWR policy.
- Habitat - Public land winter range availability, landowner acceptance and winter range forage conditions will determine herd size. Excessive habitat utilization will be addressed with hunting.
- Predation - Follow DWR predator management policy:

- If the population estimate is less than 90% of objective and fawn to doe ratio drops below 70 for 2 of the last 3 years or if the fawn survival rate drops below 50% for one year, then a Predator Management Plan targeting coyotes will be implemented on that subunit.
- If the population estimate is less than 90% of objective and the doe survival rate drops below 85% for 2 of the last 3 years or below 80% for one year, then a Predator Management Plan targeting cougar would be implemented on that subunit.
- Highway Mortality - Work with UDOT, 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 mule deer habitat throughout the unit by protecting and enhancing existing crucial habitats and mitigating for losses due to natural and human impacts.
- Improve the quality and quantity of vegetation for mule deer on crucial range.
- Provide improved habitat security and escapement opportunities for deer.

HABITAT MANAGEMENT STRATEGIES

- Continue to monitor permanent Big Game Range Trend Studies of crucial mule deer range across the unit.
- Continue annual seasonal range rides and range assessments to evaluate forage condition and utilization.
- Work with land management agencies, conservation organizations, private landowners, and local leaders through the regional Watershed Restoration Initiative working groups to identify and prioritize mule deer habitats that are in need of enhancement or restoration.
- Initiate broad scale vegetative treatment projects to improve mule deer habitat with emphasis on drought or fire damaged sagebrush winter ranges, ranges that are being taken over by invasive annual grass species, and ranges being diminished by encroachment of conifers into sagebrush or aspen habitats.
- Properly manage elk populations to minimize competition with mule deer on crucial ranges.
- Work with state and federal land management agencies to properly manage livestock to enhance crucial mule deer ranges
- Minimize impacts and mitigate for losses of crucial habitat due to human impacts and energy development.

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

PERMANENT RANGE TREND SUMMARIES

Unit 17bc, Wasatch Mountains, Currant Creek, and Avintaquin Subunits

The following table summarizes the condition of deer winter range on Unit 17bc, as indicated by DWR permanent Big Game Range Trend studies:

Year	Mountain Brush Sites (n=1)		Mountain Big Sagebrush Sites (n=7)		Wyoming Big Sagebrush Sites (n=8)	
	score	Ranking	score	Ranking	score	ranking
1995	83	Good	59	Fair	49	Good
2000			67	Fair-Good	50	Good
2005	72	Fair-Good	64	Fair-Good	46	Fair-Good
2010	90	Good-Excellent	73	Good	47	Good

Winter range is the critical habitat factor on these subunits. Approximately half of the 200,000 plus acres of winter range is owned and managed by the State while the other half is in private ownership. Most of the privately owned winter range is currently under threat of cabin site & ranchette development (Davis et. al. 1995).

All 16 range trend study sites on these subunits are located in mule deer winter range. Vegetation varies from Pinyon-Juniper at lower elevations to sagebrush-grass and mountain brush communities at the higher elevations.

A total of 16 study sites were read on these subunits in 2010. Range trend varies depending upon the sites ecological potential. The Mid to High potential sites are mostly in Good-Excellent condition. The Low potential sites range from Fair to Excellent. The low potential sites are the most critical deer winter range.

Eight of the study sites are located at sites with a low ecological potential. Of those 8 sites, 5 are in Fair condition, 1 is in Good condition, 1 is in Good-Excellent condition, and 1 is in Excellent condition. Several of these sites have suffered from the drought caused sagebrush die-off in 2003. They are recovering slowly.

Seven study sites are located at sites with a mid to high range ecological potential. Only one of these sites is in Fair condition, three are in Good condition, and 3 are in Good-Excellent condition. These areas did not experience browse die-offs during the drought.

Unit 17a, Wasatch Mountains, West Subunit

There are 29 total permanent winter range trend study sites on this portion of the unit. There are nine sites in the Diamond Fork area, four sites in the Hobble Creek and five in

the Timpanogos areas. Some study sites were suspended since the 1997 survey. In 2002, only 9 sites had a higher Desired Components Index figure showing an improvement in habitat quality. The overall DCI rating is "Fair" at 52 down from 57. Olsen (1976) estimated 72,209 acres of severe winter range, a bulk of which is in private ownership and of low productivity. Winter habitat is limited in by quality and quantity. Housing developments in recent years have consumed much of this important winter range and will continue to do so in the future. Most winter range has been reduced to a narrow bench above the communities of Alpine, Pleasant Grove, Orem, Springville and Mapleton. Essential vegetation types monitored include antelope bitterbrush, true mountain mahogany, mixed mountain browse, mixed oakbrush/sagebrush, and Stansbury cliffrose. There are 11 range trend study sites around the Heber area of the Wasatch Mountains herd unit. All are located within winter range with the majority being on sagebrush-grass type, two on oakbrush type and one on bitterbrush type. The DCI data has increased only on four of the trend sites. Another 4 have only decreased slightly or are unchanged. DCI rating (52) indicates "Fair" habitat. However, the majority of sites have poor quality herbaceous under-story composition with weeds and cheatgrass making up the major portion of the vegetation. This composition is largely due to fires and heavy grazing by livestock in the past. This situation produces abundant fuel during wet years and wildfires are a concern. Much of the winter range (50%) is privately owned and development was a concern at the time of the last study in 2002. Since then, development has accelerated and some of the most critical range is being converted to housing. Division of Wildlife Resources, State Parks as well as federal lands will be the key to the survival of deer into the future on this portion of the unit.

Unit 17, Wasatch Mountains/Salt Lake County Subunit

Range trend studies have not been done on this subunit since 1983. Lack of access to trend study plots that have not been destroyed by development has resulted in these studies being abandoned. Very little winter range is available on this subunit and deer are forced to winter in an urban setting during more severe winters.

SUB-UNIT	DCI Score	Rating Range	Classification	Current(2011) Population	Proposed Objective	Long Term Objective	Percent Change
Wasatch West	52	50-64 Fair	Fair	17,486	20,600	20,600	0
Salt Lake	NA	NA	NA	1,676	2,000	2,000	0

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 17-Wasatch Mountains, Avintaquin Subunit

Beginning at Duchesne; then south on Hwy US-191 to the Reservation Ridge Road; westerly and northerly on this road to Big Beaver Springs Road; northerly on this road to Big Beaver Springs and Beaver Canyon; northeasterly along this canyon to the Strawberry River; easterly

along this river to Duchesne.

Unit 17-Wasatch Mountains, Currant Creek Subunit

Beginning at Duchesne; then north on Hwy SR-87 to Hwy SR-35; northwesterly on SR-35 to Wolf Creek Pass and the Provo River-Duchesne River drainage divide; south along this drainage divide to Heber Mountain and the Strawberry River-Currant Creek drainage divide; southeast along this divide to Hwy US-40 and the Soldier Creek Dam road; south on this road to the Strawberry River; east along this river to Duchesne.

Unit 17-Wasatch Mountains, Price River Drainage Subunit

Beginning at the junction of Hwy US-191 and the Reservation Ridge road; west on Reservation Ridge road to the Right Fork of the White River road; southwest on this road to Hwy US-6; southeasterly on Hwy US-6 to the junction of US-191; northeasterly on US-191 to the Reservation Ridge road junction.

Unit 17-Wasatch Mountains, Salt Lake Subunit

Beginning at the junction of Hwy I-15 and I-80 in Salt Lake City; then easterly on I-80 to Hwy US-40; southerly on US-40 to the Summit Wasatch county line; southwesterly along this county line to the Salt Lake-Wasatch county line; southwesterly along this county line to the Salt Lake-Utah county line; southwesterly along this county line to I-15; northerly on I-15 to I-80.

Unit 17-Wasatch Mountains, Wasatch West Subunit

Beginning at Hwy I-15 and the Utah-Salt Lake county line; then easterly along this county line to the Utah-Wasatch county line; northerly along this county line to the Wasatch-Summit county line; easterly on this county line to Hwy US-40; westerly on this road to SR-35; east on this road to Wolf Creek Pass and the Provo River-Duchesne River drainage divide; south along this drainage divide to Heber Mountain and the Strawberry River-Currant Creek drainage divide; southeast along this divide to Hwy US-40 and the Soldier Creek Dam road; south on this road to the Strawberry River ; easterly along this river to Beaver Canyon; southwesterly on this canyon to the Reservation Ridge road; southerly on this road to the Right Fork of the White River road; southwesterly on this road to Hwy US-6; westerly on US-6 to I-15; northerly on I-15 to the Salt Lake-Utah county line.