

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 18
(Oquirrh-Stansbury)
May 2014

BOUNDARY DESCRIPTION

Salt Lake, Tooele and Utah counties--Boundary begins at I-15 and I-80 in Salt Lake City; south on I-15 to SR-73; west on SR-73 to SR-36; south on SR-36 to Pony Express Road; west on this road to the Skull Valley road; north on this road to I-80 at Rowley Junction; east on I-80 to I-15. The Carr Fork Wildlife Management Area is closed to motorized travel year-round. **EXCLUDES ALL NATIVE AMERICAN TRUST LANDS WITHIN THIS BOUNDARY.**

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	SUMMER RANGE		WINTER RANGE		TOTAL RANGE
	Area (acres)	%	Area (acres)	%	Area (acres)
Forest Service	48386	28.8%	20269	7.2%	68,655
Bureau of Land Management	45,888	27.3%	88,076	31.3%	133,694
Utah State Institutional Trust Lands	5,727	3.4%	20319	7.2%	26,046
Native American Trust Lands	28	0%	28,777	10.2%	28,805
Private	64,177	38.2%	108,703	38.6%	172,880
Department of Defense	3,969	2.4%	15,263	5.4%	19,232
Utah State Parks	0	0%	0	0%	0
Utah Division of Wildlife Resources	0	0%	0	0%	0
TOTAL	168,175	100%	281,407	100%	449,582

UNIT MANAGEMENT GOALS

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

POPULATION MANAGEMENT OBJECTIVES

- < Target Winter Herd Size - Achieve a target population size of 11,600 wintering deer.

Unit 18

2006 – 2013 Objective: 10,600

2014 – 2019 Objective: 11,600

Increase: 1,000

- < 5 year Winter Herd Size – Manage for a 5-year target population of 11,600 wintering deer during the five-year planning period unless range conditions become unsuitable, as evaluated by DWR. Range Trend data coupled with annual browse monitoring will be used to assess habitat condition. If habitat damage by deer is occurring due to inadequate habitat, measures will be taken to reduce the population to sustainable levels.
- < Herd Composition Maintain a three year average postseason buck to doe ratio according to the statewide plan (unit 18 is managed for 15-17 bucks per 100 does).
- < Harvest – General Buck Deer hunt regulations, using archery, Rifle, and Muzzleloader hunts apply on Oquirrh/Stansbury, Unit 18.

POPULATION MANAGEMENT STRATEGIES

Monitoring

- < Population Size - Utilizing harvest data, postseason and spring sex and age classifications and mortality estimates, a computer model has been developed to estimate winter population size. The 2013 model estimates the population at 10,800 deer.
- < 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.

Limiting Factors (May prevent achieving management objectives)

- < Crop Depredation - Take all steps necessary to minimize depredation as prescribed by state law and DWR policy.
- < Hunter Access - Because of the large amount of private land on this unit, its location and the number of owners, public access for deer hunting will continue to be a problem. Formation of the Heaston East CWMU may help in this regard on the North Oquirrh Mountains.
- < Habitat - At present, the availability of high quality summer range may be more limiting to this deer population than winter range. Condition of winter ranges is a long-term problem. Fire and encroachment by pinyon and juniper trees results in the loss of forage production, diversity and quality.
- < Predation - Refer to DWR predator management policy.
 - < If the population estimate is less than 90% of objective and postseason fawn to doe ratio drops below 55 for 2 of the last 3 years or if the fawn survival rate drops below 40% 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 could be implemented on that subunit.
- < Highway Mortality - Cooperate with the Utah Dept. Of Transportation in construction of highway fences, passage structures and warning signs etc.
- < Illegal Harvest - If illegal harvest is identified as a significant source of mortality, an attempt to develop specific preventive measures within the context of an action plan will be developed in cooperation with the Law Enforcement Section.

HABITAT MANAGEMENT OBJECTIVES

- < Maintain and protect existing critical deer ranges sufficient to support the population objectives. Seek cooperative projects to improve the quality and quantity of deer habitat. Promote enhancement of habitat security and escapement areas for deer.

HABITAT MANAGEMENT STRATEGIES

Monitoring

- < Determine trends in habitat condition through permanent range trend studies, spring range assessments, pellet transects, and field inspections. Land management agencies will similarly conduct range monitoring to determine vegetative trends, utilization and possible forage conflicts.
- < Range trend studies will be conducted by DWR to evaluate deer habitat health, trend, and carrying capacity using the deer winter range Desirable Component Index (DCI) and other vegetation data. The DCI was created as an indicator of the general health of deer winter ranges. The index incorporates shrub cover, density and age composition as well as other key vegetation variables. Changes in DCI suggest changes in winter range capacity. The relationship between DCI and the changes in deer carrying capacity is difficult to quantify and is not known.

Habitat Protection and Maintenance

- < Work with public land management agencies to develop specific vegetative objectives to maintain the quality of important deer use areas.
- < Continue to coordinate with land management agencies in planning and evaluating resource uses and developments that could impact habitat quality.
- < Work toward long-term habitat protection and preservation through the use of agreements with land management agencies and local governments, and through the use of conservation easements, etc. on private lands.

Habitat Improvement

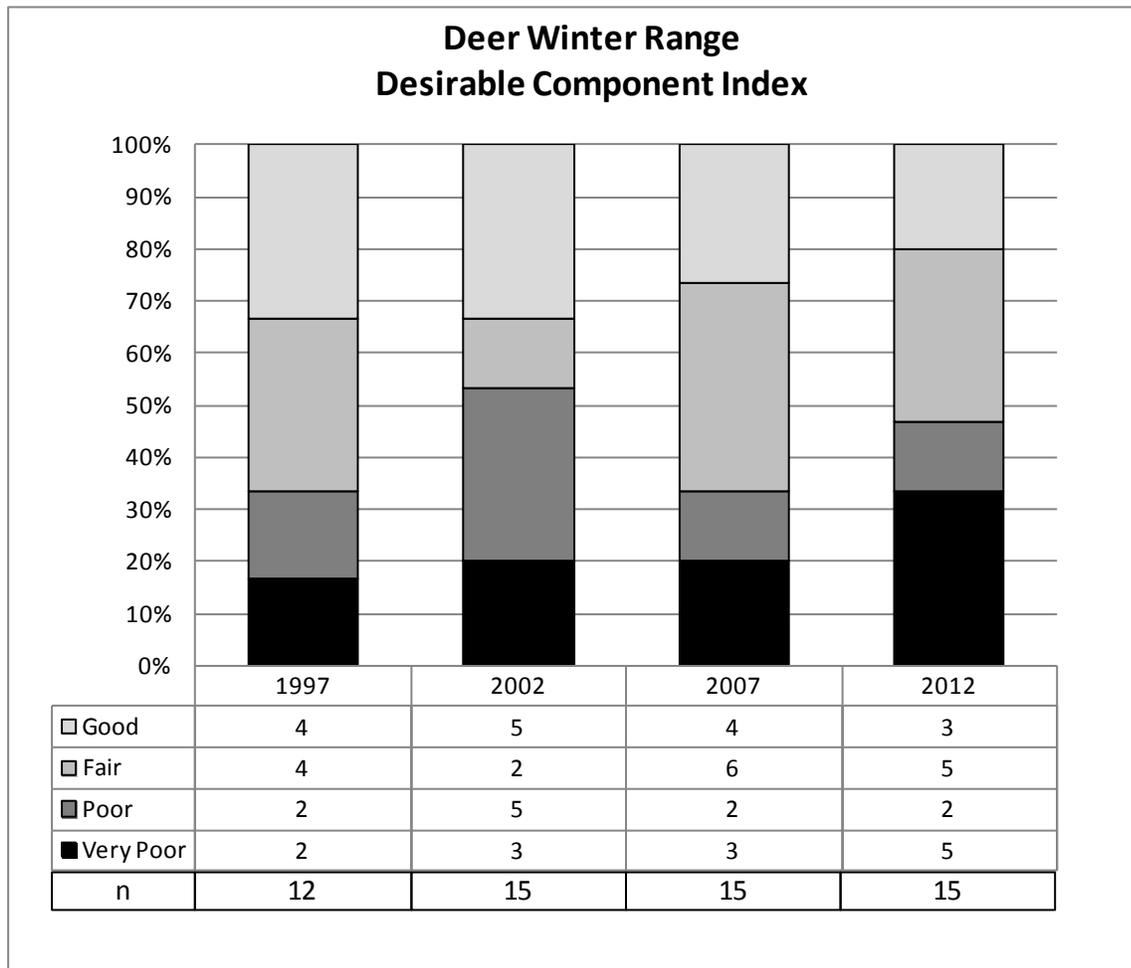
- < Cooperate with federal land management agencies and private landowners in carrying out habitat improvement projects. Protect deer winter ranges from wildfire by reseeding burned areas, creating fuel breaks and vegetated green strips and reseed areas dominated by Cheatgrass with desirable perennial vegetation.
- < Reduce expansion of Pinyon-Juniper woodlands into sagebrush habitats and improve habitats dominated by Pinyon-Juniper woodlands by completing habitat restoration projects like lop & scatter, bullhog and chaining.
- < Cooperate with federal land management agencies and local governments in developing and administering access management plans for the purposes of habitat protection and escape or security areas.
- < Future Pinyon Juniper work should be concentrated on the following areas.
 - < North East Stansbury Mountains, South of Grantsville.
 - < South West portion of the Oquirrh, including Manning and Pole Canyon also SITLA ground north of Cedar Fort.

Projects 2006-2014	# Projects	Acres
Pinyon-Juniper Projects	24	17,050
Sagebrush Improvement Projects	6	1,773
Fire Rehabilitation Projects	10	29,337
Total	40	48,160

Total Habitat Projects and Acres by Project Type

*see appendix A for specific projects

PERMANENT RANGE TREND SUMMARIES



Deer winter range condition on Unit 18, Oquirrh-Stansbury, as indicated by the Desirable Components Index (DCI).

**Unit 18, Oquirrh-Stansbury 2012
DWR Winter Range Trend Assessment**

There were 15 range trend range sites sampled within unit 18 in 2012. All of the study sites are on deer winter range.

There were 6 range trend study sites sampled on the Oquirrh mountain range in 2012. Trends of sagebrush have remained relatively stable across this range. There has been a slight decrease in the density of mountain big sagebrush, but cover has remained similar on study sites. The perennial

herbaceous component has also remained relatively stable throughout the sample years. Of particular concern on this mountain range is the abundance of invasive and weedy grass species, namely cheatgrass and bulbous bluegrass. Summer range makes up about 48% of the area. Winter range comprises 48% of the area. During severe winters the available winter habitat is reduced by half. Another major concern is that 63% and 45% of the summer and winter range respectfully is under private ownership.

There were 9 range trend studies sampled on the Stansbury mountain range in 2012. Wildfires have had a major impact on the deer winter ranges on this mountain range. The Big Pole fire in 2009 and Patch Springs fire in 2013 burned much of the deer winter range on the west side of the mountain. The general response of vegetation to these fires has been a reduction of shrub species and increase in both perennial and annual herbaceous species. Of particular concern on this mountain range is the abundance of invasive and weedy annual grass species, namely cheatgrass. The weedy perennial grass species bulbous bluegrass has also been increasing on sites on the range, especially the lower potential Wyoming big sagebrush communities. Summer range is limited to above 6800 ft contour where it makes up 45% of the range that is classified as suitable for big game. The remainder of the range is considered winter range (55%). The portion of private lands on this big game habitat is 6% and 14% of the summer and winter range respectively.

Apart from the areas impacted by wildfire, the winter range within the unit appears suitable to support planned deer population objectives. The abundance of cheatgrass on the unit is a concern because this annual species can increase fuel loads and increases the chance of a catastrophic fire event. The abundance and increase of bulbous bluegrass is a concern because this perennial species can form dense mats of cover that may compete with other more desirable herbaceous species and with seedlings and young shrubs, which potentially limits establishment of new plants into the population. Encroachment of pinyon and juniper trees into shrub winter ranges is also a concern in areas across the unit. Encroachment of pinyon and juniper can reduce desirable shrub and herbaceous cover.

Precipitation

Vegetation trends are dependent upon annual and seasonal precipitation patterns. Precipitation and Palmer Drought Severity Index (PDSI) data for the unit were compiled from the National Oceanic and Atmospheric Administration (NOAA) Physical Sciences Division (PSD) as part of the North Central division (Division 3). The South Central division had a historic annual mean precipitation of 16.51 inches from 1895 to 2012. The mean annual PDSI of the North Central division displays a cycle of several wet years followed by several drought years over the course of study years (Figure 1 and Figure 2) (Time Series Data 2013).

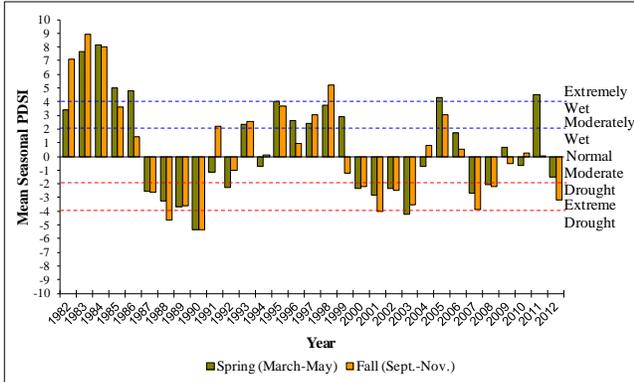


Figure 1. The 31 year mean annual Palmer Drought Severity Index (PDSI) for the North Central division (Division 3). The PDSI is based on climate data gathered from 1895 to 2012. The PDSI uses a scale where 0 indicates normal, positive deviations indicate wet and negative deviations indicate drought. Classification of the scale is ≥ 4.0 = Extremely Wet, 3.0 to 3.9 = Very Wet, 2.0 to 2.9 = Moderately Wet, 1.0 to 1.9 = Slightly Wet, 0.5 to 0.9 = Incipient Wet Spell, 0.4 to -0.4 = Normal, -0.5 to -0.9 = Incipient Dry Spell, -1.0 to -1.9 = Mild Drought, -2.0 to -2.9 = Moderate Drought, -3.0 to -3.9 = Severe Drought and ≤ -4.0 = Extreme Drought (Time Series Data 2013).

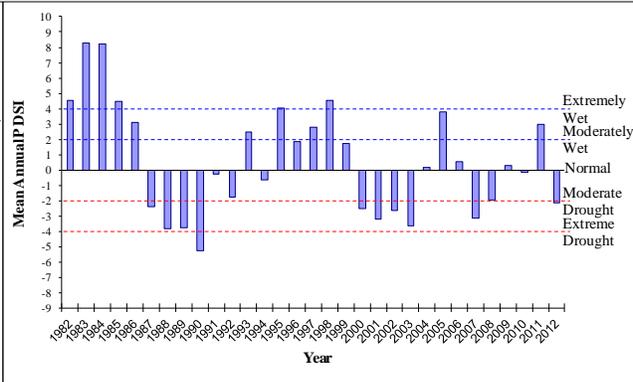


Figure 2. The 31 year mean spring (March-May) and fall (Sept.-Nov.) Palmer Drought Severity Index (PDSI) for the North Central division (Division 3). The PDSI is based on climate data gathered from 1895 to 2012. The PDSI uses a scale where 0 indicates normal, positive deviations indicate wet and negative deviations indicate drought. Classification of the scale is ≥ 4.0 = Extremely Wet, 3.0 to 3.9 = Very Wet, 2.0 to 2.9 = Moderately Wet, 1.0 to 1.9 = Slightly Wet, 0.5 to 0.9 = Incipient Wet Spell, 0.4 to -0.4 = Normal, -0.5 to -0.9 = Incipient Dry Spell, -1.0 to -1.9 = Mild Drought, -2.0 to -2.9 = Moderate Drought, -3.0 to -3.9 = Severe Drought and ≤ -4.0 = Extreme Drought (Time Series Data 2013).

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.