DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 3
(Ogden)
October 2017

BOUNDARY DESCRIPTION

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

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Yearlong range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	0	--	19,859	10%	12,011	9%
Bureau of Land Management	0	--	0	0%	76	<1%
Utah State Institutional Trust Lands	0	--	8,216	5%	0	0%
Native American Trust Lands	0	--	0	0%	0	0%
Private	0	--	139,478	70%	112,589	80%
Department of Defense	0	--	0	0%	5	<1%
USFWS Refuge	0	--	0	0%	0	0%
National Parks	0	--	0	0%	0	0%
Utah State Parks	0	--	0	0%	20	<1%
Utah Division of Wildlife Resources	0	--	30,516	15%	15,206	11%
TOTAL	0	--	198,069	100%	139,907	100%

UNIT MANAGEMENT GOALS

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

POPULATION MANAGEMENT OBJECTIVES

< Target Winter Herd Size – Maintain a target population size of 11,000 wintering deer. This population objective remains for both the short-term (5 year life of this plan) and long term, barring significant changes in range conditions.

< Herd Composition – Maintain a minimum 3-year average postseason buck to doe ratio of 18-20:100 in accordance with the statewide plan.

	Unit 3
2006-2013 Objective:	11,000
2013-2018 Objective:	11,000
2018-2023 Objective:	11,000
Change:	0

POPULATION MANAGEMENT STRATEGIES

Monitoring

Population Size - Utilizing harvest data, postseason and spring classifications and mortality estimates, a computer model will be used to estimate winter population size. Annual mortality will be estimated based on survival of radio collared animals on a nearby representative unit.

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

Harvest - The primary technique used to estimate harvest over the unit is the statewide uniform harvest surveys.

Limiting Factors (May prevent achieving management objectives)

Crop Depredation - Address depredation issues as prescribed by state law and DWR policy. Some geographic populations may be maintained at lower levels due to conflicts with crop production and private landscapes.

Habitat – Winter range condition is the major limiting factor on the Ogden unit. Range condition is currently poor due to past fires, and competition from introduced weedy species. Excessive habitat utilization will be addressed by antlerless harvests.

Predation - Consistently high fawn/doe ratios seem to indicate that predation is not a primary limiting factor for deer on the Ogden unit. Coyote removal through a bounty system is currently underway and future fawn/doe ratios will be used to determine if the removal was effective.

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

Illegal Harvest, Crippling Loss, Disease and Parasites - Although poaching losses appear insignificant on the Ogden Unit, due primarily to a highly visible law enforcement effort, crippling losses are a concern, especially under buck-only hunting. Hunter survey studies (Austin, D.D. 1992. Great Basin Naturalist 52:364-372) suggests as many as 18 deer may be left in the field per 100 hunters. Disease is very difficult to evaluate, but high mortality is often associated with malnutrition and disease. The animal disease diagnostic facility associated with Utah State University acts as the laboratory to identify disease problems. Chronic Wasting disease is of further concern though it has not yet been detected on the unit. Surveillance has been implemented and will continue by testing hunter-harvested animals as well as targeted surveillance of symptomatic animals.

Urban Deer - Continued development across this Unit has lead to an increase in nuisance deer complaints. The Urban Deer Control Rule, R657-65, will be used to help municipalities address urban deer issues. Additional hunting opportunities outside of municipal boundaries will also be used to address nuisance complaints.

HABITAT

Habitat Description

The Ogden Management Unit is located within Weber, Cache, Box Elder, and Morgan counties. Municipalities located within or along the unit boundaries include: Hyrum, Wellsville, Mantua, Perry, Willard, Ogden, Mountain Green and Huntsville. The major drainages are the Little Bear River, Ogden River and Box Elder Creek. Smaller drainages are Davenport Creek, Paradise Dry Canyon, Hyrum Dry Canyon, Hyrum Green Canyon, Perry Canyon and Willard Canyon. The topography is steep and rough on the western face of the Wasatch Mountains above Willard, Perry, Ogden, east of Avon and Paradise, and more gentle in-between.

Elevation ranges from 4,400 feet near Willard to 9,764 feet on Willard Peak with approximately 139,907 acres of deer winter range and 198,069 acres of summer range in the unit. A majority of the winter range (80%) and summer range (70%) is on private land. The U.S. Forest Service administers 10% of the summer range and 9% of the winter range. The Division of Wildlife Resources maintains 15% of the deer summer range and 11% of the winter range on the unit. Major deer wintering areas are found between 4,600 feet and 7,000 feet on the Wasatch face above Willard and Perry; between 5,100 to 7,000 feet north and east of Mantua Reservoir; from 5,600 to 7,000 feet in Threemile Canyon; and between 5,400 and 7,000 feet along the slopes on the southeast side of Cache Valley above Paradise and Avon. During severe winters, snow restricts deer use to Threemile Canyon, the East Fork of the Little Bear River, the area south of Porcupine Reservoir, Paradise Dry Canyon, Hyrum Dry Canyon, Perry Canyon and the southeast corner of the unit south of Willard (King and Muir 1971). In addition, deer winter regularly in the Middle Fork and South Fork drainages of Ogden Valley, and on foothills from Brigham Face to Weber Canyon.

Habitat Concerns

Mule deer habitat on the Ogden Unit is fairly abruptly divided between summer range and winter range. The summer range is mostly at higher elevations. Summer range habitat concerns are mainly the loss of aspen stands due to conifer encroachment and the continued expansion and development of summer home and subdivisions in the Monte Cristo, Ant Flat and Powder Mountain areas.

Lower elevation winter range is the major limiting factor for mule deer populations on the Ogden Unit. The winter range areas are also those areas that are most at risk to vegetative changes and development. The largest threat to mule deer habitat in the Ogden Valley areas is the direct loss of crucial winter range acres due to development and urbanization.. Most of the increase in home building is occurring on the foothills in what was historic deer winter range.

Additional threats and losses to deer winter range is the reduction in habitat quality due to the loss of critical browse species (sagebrush, bitterbrush, etc.). This loss has been attributed to a number of

factors, fire, agriculture, drought etc. However, the abundance of weedy annual grass species, and the increase of the exotic, weedy, perennial grass, and bulbous bluegrass are also a likely causes of sagebrush decline. These weedy species can form dense mats of cover that compete with seedling and young sagebrush plants, which limits establishment of new sagebrush plants into the population. As the sagebrush population matures, decadence increases and density decreases as old plants begin to die. Annual grass species such as cheatgrass can also increase fuel loads and increase the chance of a catastrophic fire event.

Mule deer winter range habitat has seen a decrease in sagebrush density. Causes of sagebrush decline are varied and multiple causes may have compounded effects on the low potential studies in this unit. The moderate drought in recent years has likely caused increased stress on plants, and negatively impacted them. Sagebrush age structure across the area is generally old and one age class. The lack of regeneration of the stand through establishment of young sagebrush is a concern. Annual grass species are present but not prevalent through most of the areas. However, the range trend does show increases of weedy species such as cheatgrass and bulbous bluegrass in many of the low potential studies in this unit. Perennial grass and forb species have increased on many of the studies as browse species decline, and may compete with browse establishment.

Habitat Management

Loss of critical winter ranges to development is the highest cause of loss of mule deer habitat in the Ogden unit. The loss of sagebrush and other browse species on the remaining winter range is important when considering habitat quality. Contributing factors to the loss of browse species such as the impact of the increase in weedy species, particularly annual grasses, lack of browse regeneration and other variables are all of a concern in the habitat management of the Ogden Unit.

To address the direct loss of habitat, efforts will be made towards the protection and conservation of remaining mule deer habitat. Efforts must be made to work with counties, cities, private landowners and federal agencies to maintain and protect critical and existing winter range from future losses. Through existing partnerships and developing new conservation partners efforts are being made to identify and prioritize critical habitat areas. Conservation easements will be an important part of this effort. Other conservation efforts are ongoing throughout the unit.

To address habitat quality and degradation, habitat improvement projects have been and will continue to be planned throughout the unit. Habitat projects have been and are being done on UDWR Wildlife Management Areas, and private lands throughout the unit. The habitat projects are designed to address the specific issues within each project area. Recent past projects have included annual grass control and shrub plantings on the Middle Fork WMA. Other areas targeted for habitat projects within the unit over the next three to four years include Middle Fork and Brigham Face WMA winter range rehabilitation and enhancement through scalping and hand planting browse species.

PERMANENT RANGE TREND SUMMARIES

Purpose of Range Trend Studies

The ability to detect changes in vegetation composition (range trend) on big game winter ranges is an important part of the Division's big game management program. The health and vigor of big game populations are closely correlated to the quality and quantity of forage in key areas. The majority of the permanent range trend studies are located on deer and elk winter ranges. Range trend data are used for habitat improvement planning purposes.

Objective -

Monitor, evaluate, and report range trend at designated key areas throughout the state, and inform Division biologists, public land managers, and private landowners of significant changes in plant community composition in these areas.

Expected Results and Benefits

Range trend studies are resurveyed every five years, and vegetation condition and trend assessments are made for key areas.

Summary and Excerpts of 2016 Range Trend Result

Unit 3 Ogden

Range Trend studies have been sampled within WMU 3 on a regular basis since 1984, with studies being added or suspended as was deemed necessary. Due to changes in sampling methodologies, only data collected following the 1992 sample year is included in this summary. Monitoring studies of WRI projects began in 2004, when possible. WRI monitoring studies are established prior to treatment and sampled on a regular basis following treatment. Due to the long-term nature of the studies, many of the Range Trend and WRI studies have had some sort of disturbance or treatment prior to or since study establishment.

Deer Winter Range Condition Assessment

The condition of deer winter range within the Ogden management unit has continually changed on the sites sampled since 1996. The Range Trend sites sampled within the unit are considered to be in very poor to fair-good condition as of the 2016 sample year. Clay Valley went from good to fair-good condition and Middle Fork went from fair to poor condition. The NE Mantua Reservoir, Anderson Ranch, Threemile Canyon, and Geertsen Canyon studies are considered to be in very poor or very poor-poor condition generally due to the lack of browse cover, sagebrush diversity, and/or presence of annual grasses. The treated study sites range from very poor to very poor-poor. The treated study sites, NE Mantua Reservoir and Anderson Ranch, are also considered to be Range Trend sites and are therefore discussed above. Given more time and continual monitoring, it is possible that these sites might improve.

Desirable Components Index: The desirable components index (DCI) for deer was created as a tool to address condition and/or value of winter ranges for mule deer. This index was designed to score mule deer winter range based upon several important vegetation components (i.e., preferred browse cover, shrub decadence, shrub young recruitment, cover of perennial grasses, cover of perennial forbs, cover of annual grasses and cover of noxious weeds). Although the index may be useful for assessing habitat for other species (i.e. sage grouse and elk), the rating system was devised to specifically address mule deer winter range requirements.

This index is used primarily to determine if a particular site has the vegetation components necessary to be a good winter range for mule deer. It can also be used to identify areas where habitat restoration projects may be needed and assist land managers in determining possible rehabilitation options. Because it does not take into account factors such as soil stability, hydrologic function, and other environmental factors, it should not be used to assess a sites function and/or condition as typically used by the Federal land management agencies. Desirable mule deer winter range provides 12-20% of preferred browse cover, 20% or less shrub decadency, and 10% or more of the shrub population is young. The herbaceous understory contains 8-15% perennial grasses cover, 5% perennial forb cover, and less than 5% annual grass cover.

Deer Desirable Components Index (DCI): The mid-level potential deer DCI has remained fairly stable since 1996, with rankings ranging from poor to poor-fair throughout the sample years. Attributes of preferred browse species have decreased slightly since 1996, but perennial grass cover has increased and annual grass cover has decreased.

Deer winter range Desirable Components Index (DCI) summary by year of Range Trend sites for WMU 3, Ogden

	1996	2001	2006	2011	2016
Good	0	2	0	1	0
Fair-Good	1	0	1	0	1
Fair	3	2	2	2	0
Poor-Fair	0	1	0	1	0
Poor	2	1	1	0	1
Very Poor-Poor	0	0	1	0	2
Very Poor	2	2	1	2	2

Number of Study Sites

More detailed information regarding Range Trend data, results, trends, tables and summaries can be found at the Utah's Big Game Range trend Studies web site at https://wildlife.utah.gov/range-trend.html

Current Population Status

Year	Buck Harvest	Post-Season F/100 D	Post-Season Buck/100 D	Post-Season Population	Population Objective	% of Objective
2014	711	69	18	8,500	11,000	77%
2015	805	63	25	9,700	11,000	88%
2016	929	57	21	9,400	11,000	85%

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.