

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 13
La Sal
October 2015

BOUNDARY DESCRIPTIONS

Grand and San Juan counties - Boundary begins at the junction of I-70 and the Green River; south on the Green River to the Colorado River; north on the Colorado River to Kane Springs Creek; southeast along this creek to Hatch Wash; southeast along this wash to US-191; south on US-191 to the Big Indian Road; east on this road to the Lisbon Valley Road; east on this road to the Island Mesa Road; east on this road to the Colorado State Line; north on this line to I-70; west on I-70 to the Green River.

This boundary includes two subunits including:

Subunit 13A - La Sal, La Sal Mountains - Grand and San Juan counties—Boundary begins at I-70 and the Green River; south along the Green River to the Colorado River; north along this river to Kane Springs Creek; southeast along this creek to Hatch Wash; south east along this wash to US-191; south on US-191 to Big Indian Road; east on this road to Lisbon Valley Road; east on this road to Island Mesa Road; east on this road to the Utah-Colorado state line; north on this state line to the Dolores River; northwest along this river to the Colorado River; northeast along this river to the Utah-Colorado state line; north on this state line to I-70; west on I-70 to the Green River.

Subunit 13B - La Sal, Dolores Triangle - Grand County - Boundary begins at the Utah-Colorado state line and the Colorado River; south along the state line to the Dolores River; northwest along the Dolores River to the Colorado River; northeast along this river to the Utah-Colorado state line.

LAND OWNERSHIP

Subunit 13A - La Sal, La Sal Mountains

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Yearlong range		Summer Range		Winter Range	
	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service	0	0%	104267	57%	36273	12%
Bureau of Land Management	20389	46%	2302	1%	212749	73%
Utah State Institutional Trust Lands	1203	3%	29227	16%	16915	6%
Private	2417	5%	46231	25%	25542	9%
Department of Defense	32	<1%	0	0%	0	0%
National Parks	17900	41%	0	0%	0	0%
Utah Department of Transportation	0	0%	0	0%	70	<1%
Department of Natural Resources	2065	5%	0	0%	194	<1%
TOTAL	44007	100%	182027	100%	291743	100%

Subunit 13B - La Sal, Dolores Triangle

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	0	0%	0	0%	87718	87%
Utah State Institutional Trust Lands	0	0%	0	0%	9553	9%
Private	0	0%	0	0%	3514	4%
TOTAL	0	0%	0	0%	100785	100%

UNIT MANAGEMENT GOALS

Maintain a healthy mule deer population within the long term carrying capacity of the available habitat, based on winter range trend studies conducted by the DWR every five years.

Manage the deer population at a level capable of providing a broad range of recreational opportunities, including hunting and viewing.

Balance deer herd goals and objectives with impacts on human needs, such as private property rights, agricultural crops and local economies.

POPULATION MANAGEMENT OBJECTIVES

Target Winter Herd Size - Manage for a target population of 19,400 wintering deer (modeled number) 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. Biologists will continue to carefully monitor winter ranges and make recommendations to improve and protect winter habitat. Should over-utilization and range damage by deer occur, recommendations will be made to reduce deer populations to sustainable levels in localized areas.

Long-term Objective - Achieve a winter target population of 19,400 deer.
(13,000 deer on **La Sal Mountains** subunit and 6,400 deer on **Dolores Triangle** subunit).

Short-term Objective

La Sal Mountains - No change needed in population objective. Desirable Components Index (DCI) scores from the 2014 range trend survey show that out of 9 undisturbed monitoring sites, 4 sites are in the "good" to "fair" classification range and 5 sites are in the "poor" to "very poor" classification range. Disturbed/treated sites have improved from "very poor" to "poor - fair" classification range, post disturbance/treatment. Trend of DCI scores from previous surveys is stable, however there is some continued declines in browse cover and perennial forb cover in concentrated areas. These areas are slated for habitat restoration projects in the near future.

Dolores Triangle - A 20% reduction in population objective to 5,100 deer was implemented in 2006 due to poor range conditions indicated by low DCI values. The reduced short-term population objective will remain until range conditions improve to an overall "fair" DCI rating.

Antlerless removal is not needed immediately because the current deer population is <50% of objective and fawn production is poor. If the deer population approaches the short-term objective, antlerless removal in specific problem areas will be utilized. Although the DCI score from the 2010 range trend survey is at lower end of “poor” classification range, there is no apparent trend of DCI scores from previous surveys. Slight fluctuations in the DCI scores have been primarily due to changes in perennial and annual grass cover. The heaviest browse utilization is in small sagebrush parks in lower Westwater that are adjacent to agricultural fields. These fields concentrate large numbers of wintering deer in the area. Losses in browse cover and increases in annual grasses in the trend study plots in Westwater are largely responsible for the very poor DCI score. Browse utilization in other areas is not excessive however, 2010 DCI scores on three other sites are at very poor classification. Biologists will keep an eye on these areas throughout the life of this plan and act appropriately if habitat conditions continue to decline. This deer herd is primarily managed by Colorado hunting strategies. The number of deer wintering in this unit is dependent on winter severity, but even with normal snow levels, recent deer numbers using this winter range have declined considerably due to low population.

Subunit	Long-term Objective	2015-2019 Objective
La Sal Mountains	13,000	13,000
Dolores Triangle	6,400	5,100
UNIT TOTAL	19,400	18,100

Herd Composition

La Sal Mountains - Maintain a three-year average postseason ratio of 15-17 bucks per 100 does, in accordance with the statewide plan. Caution will be used when adjusting permits and trends of population indicators will be considered.

Dolores Triangle - Maintain a three-year average postseason ratio of 25-35 bucks per 100 does, in accordance with the statewide plan.

Harvest

La Sal Mountains - Continue general season unit by unit buck deer hunt management, using archery, rifle and muzzleloader hunts. Antlerless removal will be implemented when needed to achieve the target population size and to address specific localized crop depredation or range degradation concerns, using a variety of harvest methods and seasons. It is recognized that buck harvest may fluctuate due to climatic and productivity variables. Buck harvest strategies will be developed through the RAC and Wildlife Board process to achieve management objectives.

Dolores Triangle - Continue limited entry hunting to maintain herd composition objectives and quality hunting opportunities. Utilize antlerless harvest when population objectives are met or to address specific habitat and depredation concerns.

POPULATION MANAGEMENT STRATEGIES

Monitoring

Population Size

La Sal Mountains - Population estimate will be made based on fall and spring herd composition counts conducted by biologists, harvest surveys, and mortality estimates based on radio collar studies and range rides. These data will be used in computer models to determine a winter deer herd population size. The modeled population estimate for the winter of 2015 was 6,900 deer on the La Sal Mountains subunit.

Dolores Triangle - Deer population will be modeled by the Colorado Division of Parks and Wildlife as part of their Unit #40 deer herd. About 40% of this herd winters in Utah; therefore, 40% of Colorado's population estimate for Unit #40 was used as Utah's population estimate. The modeled population estimate for the winter of 2015 was 2,100 deer on the Dolores Triangle subunit.

Buck Age Structure - Monitor age class structure of the buck population through the use of check 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 check stations.

Research - Continue radio telemetry survival study on regional representative unit (San Juan). At the conclusion of the San Juan study, consider switching the study to the La Sal Mountains to document habitat use, survival, and seasonal ranges of deer. Also consider cooperating with Colorado Division of Parks and Wildlife in initiating a black bear predation study.

Population Trends and Harvest for the La Sal, La Sal Mountains (13a) Deer Subunit

Year	Buck harvest	Post-Season F/100 doe	Post-Season B/100 doe	Post-Season Population	Objective	% of Objective
2012	587	48	11	7,200	13,000	55%
2013	562	53	17	6,300	13,000	48%
2014	545	56	14	7,100	13,000	55%
3 Year Avg	565	52	14			

Population Trends and Harvest for the La Sal, Dolores Triangle (13b) Deer Subunit

Year	Buck harvest	Post-Season F/100 doe	Post-Season B/100 doe	Post-Season Population	Objective (Short-term)	% of Objective
2012	10	65	22	2,500	5,100	49%
2013	13	65	24	2,600	5,100	51%
2014	13	47	19	2,300	5,100	45%
3 Year Avg	12	59	22			

Disease Management

Investigate and manage diseases that threaten mule deer populations and continue monitoring for chronic wasting disease (CWD) as stated in the Statewide plan. The La Sal Mountains subunit is a CWD positive unit. The deer population and sex ratio should be managed on this unit at levels necessary to reduce the risk of CWD transmission. Continue surveillance through check stations and other methods to document prevalence, and location of positive animals.

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 range conditions and deer use to maintain habitat quality necessary to achieve population objectives (see Habitat Management Strategies). Identify areas on the **La Sal Mountains** where deer escapement could be enhanced through permanent or temporary road closures or other restrictions on motorized access. The **Dolores Triangle** subunit is entirely winter range for the Colorado unit #40 deer herd. Excessive habitat utilization will be addressed through antlerless harvest in specific problem areas.

Predation - Follow DWR predator management policy:

- If the population estimate is less than 90% of objective and is stable or decreasing 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 trend is increasing the population must be below 65% of objective and meet the above criteria in order to initiate Predator Management for Coyotes. In 2015, the La Sal unit qualified for predator management specific to coyotes as the population trend was stable and <90% of objective with <70 fawns:100 does for 2 of the last 3 years.
- 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. This unit qualified for predator management specific to cougars in 2015 as adult doe survival has been below 85% for 2 of the past 3 years.

Highway Mortality - Cooperate with the Utah Dept. of Transportation in construction of highway fences, passage structures and warning signs, etc. Collect highway mortality data. Propose analysis of SR-46 to minimize highway mortalities in the future. Highway mortality will be monitored and the need for additional highway fences, passage structures and warning signs will be evaluated.

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

HABITAT MANAGEMENT OBJECTIVES

Protect, maintain, and/or improve deer habitat through direct range improvements to support and maintain herd population management objectives.

Work with private landowners and federal, state, and local governments to maintain and protect critical and existing ranges from future losses and degradation through grazing management and OHV and Travel Plan modifications.

Work with federal, private, and state partners to improve crucial deer habitats through the WRI process.

Work with federal and state partners in fire rehabilitation on crucial deer habitat through the WRI process

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

Minimize and mitigate impacts from energy development activities.

Minimize deer vehicle collisions along highways on the unit.

HABITAT MANAGEMENT STRATEGIES

Continue to improve, protect, and restore summer and winter range habitats critical to deer, such as aspen and sagebrush steppe communities. Cooperate with federal land management agencies and private landowners in carrying out habitat improvements such as pinion-juniper removal, reseeding, controlled burns, mechanical treatments, grazing management, water developments etc. on public and private lands. Continue to monitor permanent range trend studies located throughout the unit.

Conduct cooperative seasonal range assessments to evaluate forage condition and utilization. Determining opportunities for habitat improvements will be an integral part of these surveys. This will also be pivotal in determining if antlerless harvest is necessary.

Work toward long term habitat protection and preservation through the use of agreements with federal agencies and local governments and the use of Conservation Easements etc. on private lands.

Support, 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.

Work with land management agencies in managing riparian areas in critical fawning habitat to furnish water, cover and succulent forage from mid- to late summer.

Protect deer winter ranges from wildfire by reseeding burned areas, creating fuel breaks and vegetated green strips and reseed areas dominated by annual grasses with desirable perennial vegetation.

Reduce expansion of Pinion-Juniper woodlands into sagebrush habitats and improve habitats dominated by Pinion-Juniper woodlands by completing habitat restoration projects like lop & scatter, bullhog, and chaining.

Seek opportunities to increase browse in burned areas of critical winter range.

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

PERMANENT RANGE TREND SUMMARIES

Unit 13A - La Sal, La Sal Mountains

Deer Winter Range Condition Assessment

The condition of deer winter range within the La Sal Mountains management unit has continually changed on the sites sampled since 1994. The undisturbed sites samples within the unit are considered to be in very poor to good condition as of the 2014 sampling year (Figure 1.44). Amasas Back and round Mountain remained in poor condition due to the amount of annual grass present, having few perennial forbs, and the lack of diversity within the sagebrush demographics. Two Mile Chaining, Buck Hollow, and Lower Lackey Fan ranged from fair to poor, Slaughter Flat and Below Polar Rim ranged from poor to good, and North Beaver Mesa and Hideout Mesa remained mostly in good condition. The treated study sites have gone from very poor to poor (Figure 1.45). The three treated studies that fall within winter range are Black Ridge, Black Ridge Fuels Reduction, and Pack Creek. They all started out in very poor condition prior to treatment and since treatment have improved to fair condition (Map 1). It is possible given more time and continual monitoring that these sites will continue to improve. See Utah Big Game Range Trend Unit Summaries 2014 Wildlife Management Units 13A, 14, 15, 16B/16C (Publication No. 15-10) for more information.

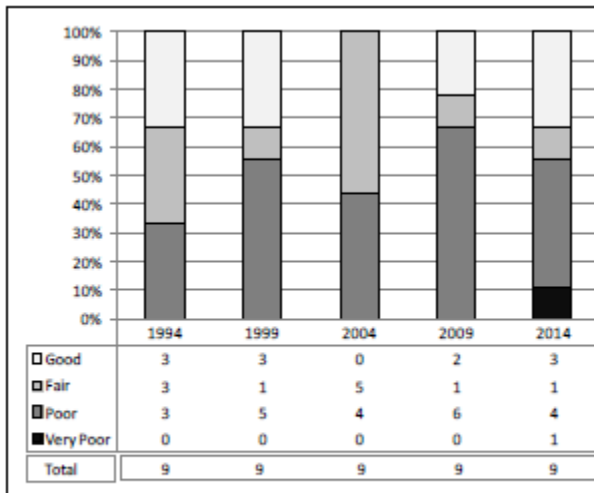


Figure 1.44: Deer winter range Desirable Components Index (DCI) summary by year of undisturbed sites for WMU 13A La Sal Mountains.

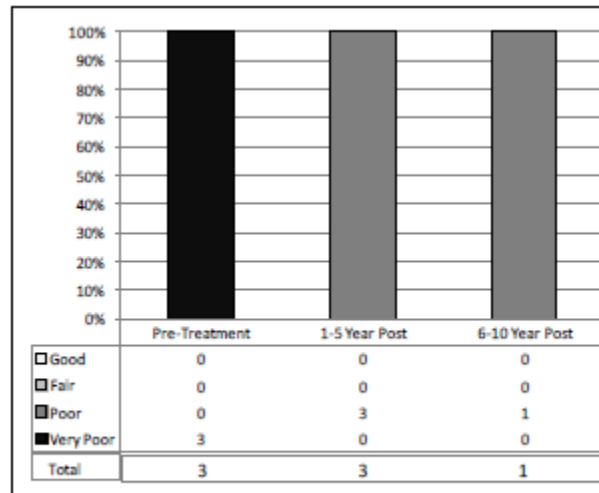
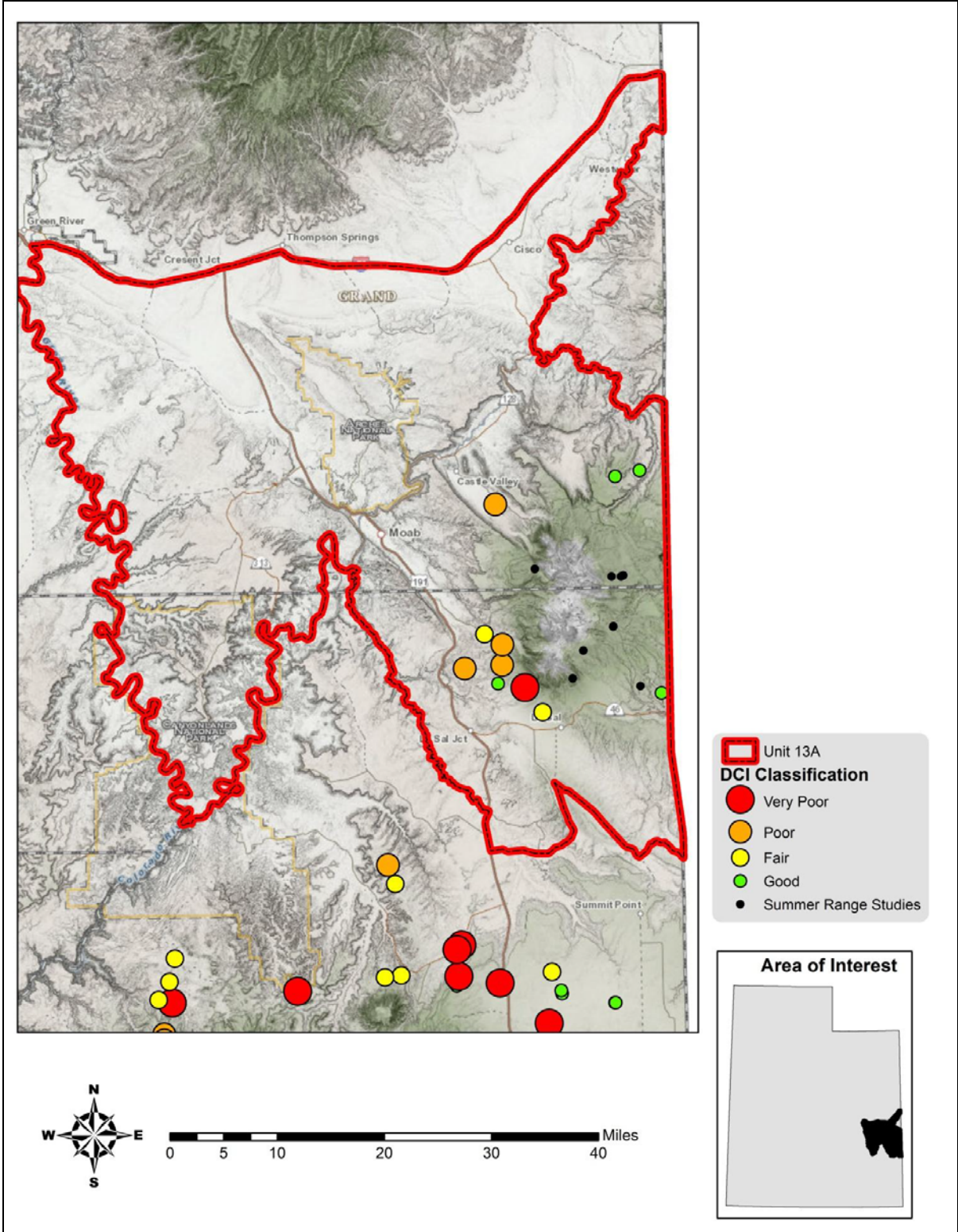


Figure 1.45: Deer winter range Desirable Components Index (DCI) summary by year of treated/disturbed sites for WMU 13A, La Sal Mountains.



Map 1: Deer winter range Desirable Components Index (DCI) ranking distribution by study site of most current sample date as of 2014 for WMU 13A, La Sal Mountains.

Treatments/Restoration Work

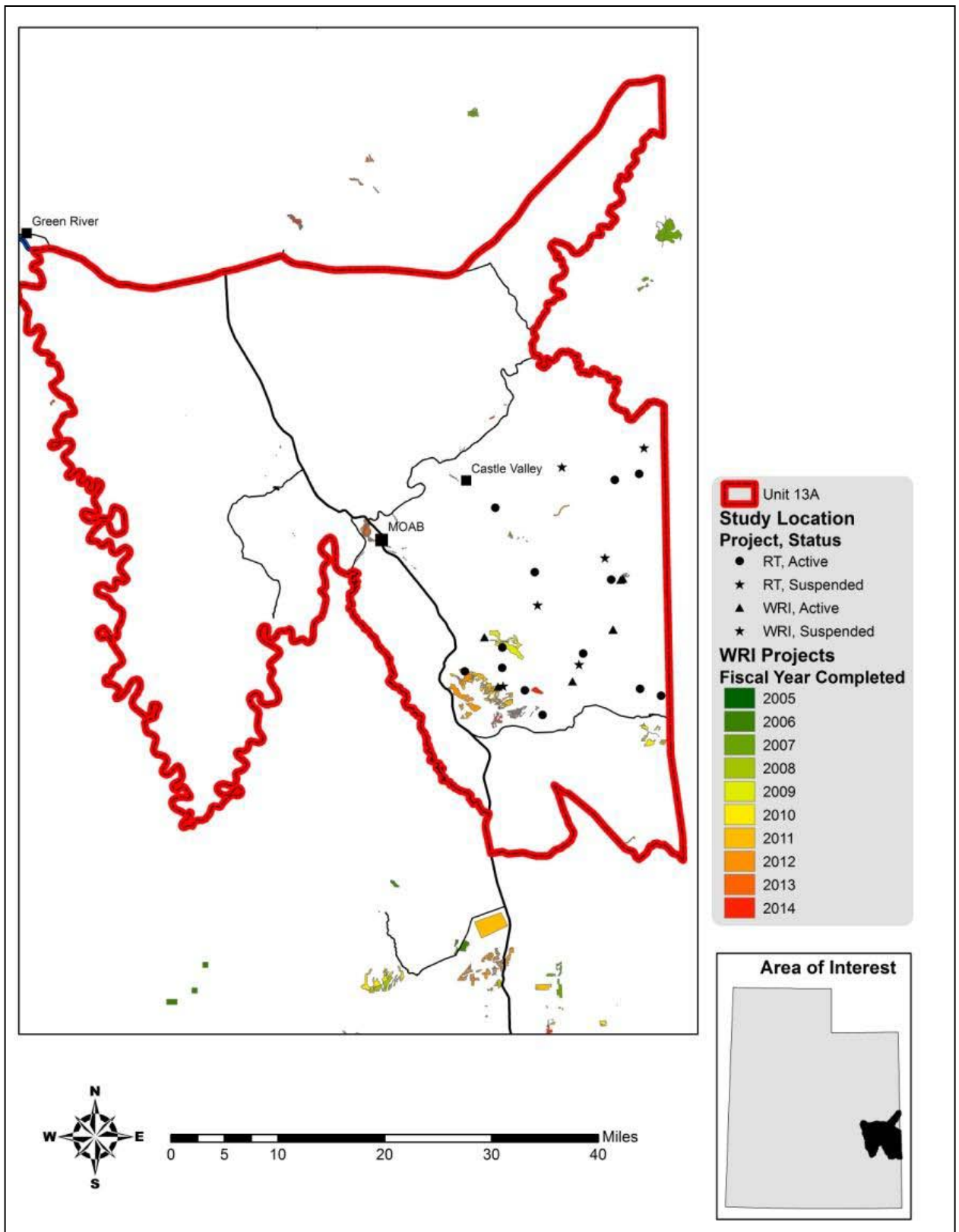
There has been an active effort to address many of the limitations on this unit through the Watershed Restoration Initiative (WRI). A total of 8,502 acres of land have been treated within the La Sal Mountains unit since the WRI was implemented in 2004. Treatments frequently overlap one another bringing the total treatment acres to 11,442 acres for this unit (Table 1) (Map 2). Other treatments have occurred outside of the WRI through independent agencies and landowners, but the WRI comprises the majority of work done on deer winter ranges throughout the State of Utah.

Herbicide application to remove weeds is the most common management practice. The use of seeding to supplement the herbaceous understory is also very common. Other management practices include bullhog and anchor chain for pinyon pine and Utah juniper removal, greenstripping, and other similar vegetation removal techniques.

Treatment Action	Acres
Anchor chain	627
Bullhog	773
Greenstripping	877
Harrow	21
Herbicide Application	6,139
PJ push	4
Planting/transplanting	16
Prescribed fire	48
Road decommissioning	147
Roller chopper	1
Seeding (primary)	2,269
Vegetation removal / hand crew	520
*Total Land Area Treated	8,502
Total Treatment Acres	11,442

Table 1: WRI treatment action size (acres) for WMU 13A, La Sal Mountains.

*Does not include overlapping treatments.



Map 2: WRI treatments by fiscal year completed for WMU 13A, La Sal Mountains.

Discussion and Recommendations

Summer Range Habitats

Summer habitats at high elevations on this unit include spruce-fir, aspen, alpine, and mountain shrub habitat types. These areas are generally considered to be in good condition for deer summer range habitat. This community supports a diverse herbaceous understory that provides valuable forage during the summer months. While in generally good condition, major concerns include conifer encroachment in to aspen stands, an abundance of introduced aggressive perennial grasses, and noxious weeds. All of which have an impact on the quality and quantity of forb species important to mule deer.

It is recommended that monitoring of this community continue. When reseeding is necessary to restore herbaceous species, care should be taken in species selection and preference should be given to native grass species when possible. Additional actions may be necessary to reduce the presence of noxious weeds within this community type.

Habitat projects that promote aspen and forb communities as well as a diverse age structure of the forest are recommended. Such projects may include: prescribed fire, timber management, mechanical treatment, and grazing management. If reseeding is necessary to restore herbaceous species, care should be taken in species selection and preference should be given to native grass species when possible. Monitoring should also continue in order to watch for the presence of noxious weeds within this community type.

Winter Range Habitats

Winter range habitats include sagebrush steppe, pinyon-juniper woodlands, and salt desert shrub habitats. These mid elevation upland communities are generally variable in deer winter range with many of the communities in poor to very poor condition; however, there are a few communities that are considered to be in good to excellent condition. These communities support many vegetation types including the following: black sagebrush, basin big sagebrush, Wyoming big sagebrush, mountain big sagebrush, antelope bitterbrush, and mahogany species. These communities support large, dense shrub populations that provide valuable browse in mild to moderate winters for deer. These communities are prone to encroachment from pinyon-juniper trees which can reduce understory shrub and herbaceous health if not addressed. Many of these stands show very high utilization by ungulates. As a result, many stands are decadent. Annual grasses, primarily cheatgrass, can be an issue within these communities. Increased amounts of cheatgrass can increase fuel loads and increase the threat of wildfire within these communities. If wildfire occurs within these communities they lose most of their value as deer winter range and reestablishment of valuable browse species is typically slow.

It is strongly recommended that work to prevent and reduce pinyon-juniper encroachment should continue in these communities. When reseeding is necessary to restore herbaceous species, care should be taken in species selection and preference should be given to native grass species when possible. Moreover, care should be taken in selecting treatment methods that will not increase annual grass loads. Treatments to reduce annual grass may be necessary on some sites. Work to diminish fuel loads and create fire breaks should continue in order to reduce the threat of catastrophic fire that results in the loss of preferred browse. If a treatment to rejuvenate sagebrush occurs, care should be taken in selecting treatment methods that will not increase annual grass loads.

Proposed and recommended project locations to improve deer winter habitat on the La Sal Mountains are: Buck Hollow, Middle Mesa, and Adobe Mesa.