ELK HERD UNIT MANAGEMENT PLAN
Elk Herd Unit # 11
Nine Mile
October 2016

BOUNDARY DESCRIPTION

Uintah, Duchesne, Carbon, and Emery counties - Boundary begins at Duchesne and US-191; southwest on US-191 to US-6; south 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 on the Green River to the Duchesne River; west along this river to US-40; west on US-40 to Duchesne and US-191.

Land Ownership

The following tables show land ownership of seasonal elk habitat by subunit. Approximately 75,448 of the private acres in elk habitat in the Range Creek subunit are managed as Cooperative Wildlife Management Units (CWMU's). They comprise portions of summer, winter, and yearlong ranges.

Table 1a. RANGE AREA AND APPROXIMATE OWNERSHIP* SUBUNIT 11A (ANTHRO)

	Yearlong range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	12,401	8	57184	95	30116	19
Bureau of Land Management	120,019	76	1050	2	21346	13
Utah State Institutional Trust Lands	19,681	12	225	<1	2442	1
Native American Trust Lands	748	<1	0	0	56296	36
Private	4,988	3	1446	2	40644	26
Utah Division of Wildlife Resources	0	0	0	0	7562	5
TOTAL	157,838	100	59905	100	158406	100

Table 1b. RANGE AREA AND APPROXIMATE OWNERSHIP* SUBUNIT 11B (RANGE CREEK)

	Yearlong range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Bureau of Land Management	126778	51	43097	27	253027	83
Utah State Institutional Trust Lands	26876	11	8866	5	26537	9
Private	92765	37	103344	64	24459	8
Utah Division of Wildlife Resources	1564	1	5316	3	0	0
TOTAL	247983	100	160623	100	304038	100

UNIT MANAGEMENT GOALS

Manage for a population of healthy animals capable of providing a broad range of recreational opportunities including hunting and viewing. Maintain an elk population consistent with available range resources that is in balance with other range uses such as livestock grazing and watershed protection. Consider impacts of the elk herd on other land uses and public interests including private property rights, agricultural crops and local economies.

Maintain and enhance existing elk habitat through vegetative manipulation, sound domestic grazing practices, and other management techniques that will meet habitat objectives. Minimize and mitigate any habitat losses, degradation, or fragmentation from oil and gas development, road construction, urban expansion, increased recreation or other land use impacts.

UNIT MANAGEMENT OBJECTIVES

Population

Population Objective 1: Maintain healthy elk populations at biologically and socially sustainable levels
Population Objective 2: Foster support among stakeholders for Utah's elk management program.
Population Objective 3: Achieve a proper distribution of elk on private and public lands.

Target Winter Herd Size – Manage toward a short term winter elk population objective of 2,500 elk (computer modeled population) distributed in the subunit populations listed below. This represents a 200 elk increase on the Range Creek Subunit.

Anthro Subunit	-	700 elk
Range Creek Subunit NW of Nine Mile Canyon	-	250 elk
Range Creek Subunit south of Nine Mile Canyon	-	1,550 elk
Total		**2,500 elk**

In the event that range conditions decline and diminish the ability to sustain additional elk and/or landowner tolerance for elk diminishes, the Division will immediately reduce the short term population objective to 1,600 on the Range Creek subunit.

Herd Composition Maintain a three-year average age of 5.5-6 years of harvested bulls on the Anthro subunit.

Utilize limited entry bull permit harvest on most of the Anthro subunit. Utilize General Season Any Bull hunting strategy on the Range Creek subunit and a small portion of the Anthro unit near the town of Duchesne to address depredation/public safety concerns (See Appendix A for boundary descriptions)

Utilize antlerless harvest to maintain elk populations at or below population objectives. Promote public hunting access on private lands where applicable.

Habitat

The unit habitat objectives will follow the goals and objectives outlined in the statewide elk plan with the primary goal to "Conserve and improve elk habitat

throughout the state." This will be done by maintaining sufficient habitat to support elk herds at population objectives, reducing competition for forage between elk and livestock, and reducing adverse impacts to elk herds and elk habitat.

- Improve forage and cover values on elk summer ranges. Practices will include prescribed fire, selective logging, and mechanical treatments that promote a diverse age structure in aspen communities. Over 300 acres per year will be targeted.
- Remove pinyon-juniper encroachment into winter range sagebrush parks and summer range mountain brush communities. Over 500 acres per year will be targeted using primarily mechanical treatments.
- Improve wet meadow habitats through shrub treatments in high elevation habitats.
- Improve limited water resources on the unit by developing and maintaining existing springs and guzzlers and installing wildlife guzzlers where needed.
- Minimize conflicts between elk and wild horses through habitat improvement and encouraging wild horse gathers when horse numbers exceed population objectives.
- Improve existing canyon bottom riparian communities by treating greasewood and overmature sagebrush through chemical, mechanical, and other methods, and minimize impacts on croplands in these habitats.
- Protect crucial habitats from oil and gas development and assure best possible location of wells to minimize habitat losses using best information available.

CURRENT STATUS OF ELK MANAGEMENT

Population

Elk populations on both Anthro and Range Creek subunits were well above population objectives in 2011. Aggressive antlerless harvest over the past 5 years reduced elk populations significantly. Modeled population estimates suggest 1,300 elk reside on the Range Creek subunit and 1,000 elk reside on the Anthro subunit. Both units were last surveyed by helicopter in January, 2013. Summer classification counts suggest an average of 41 calves per 100 cows on both Anthro and Range Creek subunits over the past 5 years.

Tables 4a and 4b shows the trend in bull and antlerless elk harvest on the Nine Mile unit. Large amounts of antlerless permits are issued on this unit in order to control an expanding elk population. The Anthro subunit is managed as a Limited Entry Bull unit, while the Range Creek subunit and a portion of the Anthro subunit near Duchesne have been managed as General Season Any Bull hunts. Furthermore, a significant portion of the harvest on the Range Creek Subunit occurs on CWMU's.

On the Anthro subunit, the Ute Tribe has changed their elk hunt strategy to allow general season elk hunting by tribal members. The tribe owns 36% of the winter range on the Anthro sub-unit. While the Anthro sub-unit is currently meeting age objectives on harvested bulls, if tribal harvest increases it may be difficult to maintain limited entry age objectives and hunt quality for permit holders in the future. If harvested bull ages decline below age objective, and we experience a significant decline in harvest success rates, and/or hunter satisfaction we may

consider changing the elk hunt strategy on the Anthro subunit to match the corresponding Tribal hunting strategy.

Table 4a. Summary of Harvest. Nine Mile, Anthro Subunit. 2011-2015

YEAR	# of Elk on Unit	LE BULL HARVEST (PUBLIC)	CWMU BULL HARVEST	GEN.SEASON ANY BULLHARVEST	AVE. AGE OF HARVESTED BULLS	ANTLERLESS HARVEST
2011	1450	12	0	0	7.4	115
2012	850	19	0	12	6.0	187
2013	900	18	0	12	6.1	126
2014	950	16	0	16	4.7	76
2015	1,000	15	0	8	5.2	131

Table 4b. Summary of Harvest Nine Mile, Range Creek Subunit 2011-2015

YEAR	# of Elk on Unit	LE BULL HARVEST (PUBLIC)	CWMU BULL HARVEST	GEN.SEASON ANY BULLHARVEST	AVE. AGE OF HARVESTED BULLS	ANTLERLESS HARVEST
2011	1700	16	56	112	9.5	100
2012	1700	0	66	117	7.7	168
2013	1550	0	70	137	8.8	115
2014	1400	0	72	136	9.2	131
2015	1300	0	65	108	8.7	105

Habitat

Habitat Conditions - Summer range is limiting on this unit. Summer elk habitat is restricted to a fairly narrow band of high elevation aspen/Douglas fir communities and elk are found at relatively high densities. Summer ranges and high elevation winter ranges (Mountain big sagebrush communities) appear to be in stable condition according to permanent range trend studies conducted by DWR in 2015. There were a total of 13 permanent range trend study locations that were read in 2015 on the unit. Of these, 7 sites are within elk winter range.
Browse and herbaceous trends appear to be stable over the past 20 years and mid-potential winter ranges where elk typically winter have DCI scores indicating "Fair to Good" winter range.

Cooperative BLM/UDWR spring range transects have shown stable to declining utilization by elk. Pellet group counts and browse utilization have decreased slightly in recent years. BLM range assessments in the area have not noted any deteriorating range conditions or overutilization by elk.

Biological range carrying capacity - When looking at biological carrying capacity for this plan, the UDWR has taken into account the following barriers: 1) private landowner tolerance/depredation issues, 2) winter range carrying capacity, 3) social and political factors, 4) current range improvements, 5) future range improvements and 6) range health and competition potential with other species.

Factors that reduce carrying capacity of unit - Drought is the primary factor that impacts elk population carrying capacity. Forage production and vigor as well as water distribution is severely limited during drought years. Oil and gas

development is becoming a major factor affecting both winter and summer ranges, especially on the Anthro subunit. Oil and gas development will continue to fragment existing elk habitat and displace elk to less productive areas. Oil and gas activities may eventually expand onto summer ranges that are already limiting. Crop depredation by elk on this unit is relatively minor on this unit and typically occurs during the spring months. Competition with domestic livestock is a potential conflict on portions of the unit. Many livestock operators are not stocking ranges at full permitted numbers. If operators elect to graze at full numbers, competition would likely be evident due to increased elk numbers that have filled the void of reduced cattle use. Competition with wild horses on the Range Creek subunit is pronounced as horse numbers are well above objectives and competing with elk for declining resources in the Cold Springs and Cedar Ridge areas. Bison populations emigrating from Ute Tribal Lands are also increasing which could significantly change elk habitat quality and quantity.

Habitat projects completed and proposed - Federal agencies, private landowners and the UDWR have cooperated on habitat improvement projects targeted at wildlife species that have also benefited elk (Tables 2 and 3).

Table 2. Completed Habitat Treatment Projects Benefitting Elk on the Nine Mile Unit, 2012-2016.

Dugout Creek Pinyon/Juniper Removal	210.67
Cold Springs Conifer Removal/Aspen Regeneration	20.72
Dugout Creek Fuels Reduction and Habitat Restoration: Phase III	507.37
Cold Springs Aspen Enhancement Phase 2: Tavaputs Ranch	190.33
Lighthouse Fire Rehabilitation	880.92
Bruin Point Discretionary Seed	7.97
Cold Springs Aspen Enhancement	489.32
Cottonwood Ridge P/J Removal Arch. Clearance	0
Cold Springs Conifer Removal/Aspen Regeneration Phase II	45.5
Dugout Creek Fuels Reduction and Habitat Restoration: Phase II	1,036.22
Interplanetary Airstrip Lop and Scatter	1,295.26
Cottonwood Ridge PJ Removal	2,069.86
Nutter Ranch Thurber Fescue Treatments	50.00
Total	**6,804.14**

Table 3. Proposed Habitat Treatment Projects Benefitting Elk on the Nine Mile Unit, 2016 - 2021.

Tavaputs Plateau Sagebrush Restoration	4000

BARRIERS TO ACHIEVING UNIT MANAGEMENT OBJECTIVES

Population

- Much of the unit is not accessible to public hunters. Limited public access to both private and public lands makes it difficult to achieve adequate harvest of antlerless elk and quality opportunities for bull

hunting.
- Equitable elk distribution across the herd unit.

Habitat

- Drought impacts to forage condition, vigor and abundance.
- Limited summer range on the unit.
- Habitat fragmentation, loss and disturbance as a result of oil and gas development.
- Pinion-Juniper invasion in limited sagebrush park areas.
- Conifer encroachment in overmature aspen communities
- Wild horse utilization on elk ranges.
- Low elevation canyon bottoms are dominated by greasewood and overmature basin big sagebrush with little forage/cover value for elk.
- Competition with domestic livestock if operators stock at full permitted numbers.

Other Barriers

- Crop depredation.
- Other mortality factors – extreme weather conditions such as drought or extreme winter, disease, poaching, road mortality.

STRATEGIES FOR REMOVING BARRIERS AND REACHING UNIT MANAGEMENT OBJECTIVES

Population

Monitoring

Population Size - Utilize harvest data, tri-annual aerial trend counts, preseason classification and mortality estimates. A computer model has been developed to estimate winter population size based on the above data.

Bull Age Structure - Monitor age class structure of the bull population through the use of annual preseason classification, checking stations, uniform harvest surveys, field bag checks, and aerial classification. Average age of harvested bulls from Limited Entry portions of the unit will be determined by tooth age data submitted by each hunter.

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. Aggressive and localized antlerless harvest will be used to control elk populations and respond to localized range concerns. Bull harvest strategies will be developed through the RAC and Wildlife Board process to achieve management objectives for bull:cow ratios.

Habitat

Monitoring

- Continue to monitor permanent range trend studies throughout

the winter range.

- Annually inspect rangeland vegetative community impacts and health through cooperative DWR/BLM habitat assessment surveys that include ocular field assessments, utilization transects, and range rides.
- Continue to develop and implement Habitat Management Plans for UDWR owned properties on the unit.

Actions to Remove Habitat Barriers

- Cooperate with private landowners, federal and state agencies to allow wild fires to burn in beneficial and non-threatening areas and to rehabilitate fires in a way that will benefit wildlife.
- Cooperate with private landowners, federal and state agencies to increase vegetative understory and reduce pinion-juniper encroachment in important sagebrush and mountain shrub communities.
- Work with oil and gas interests to protect key areas and minimize, or mitigate for losses due to development.
- Pursue Conservation Easements on critical parcels of private property to protect elk habitat.
- Cooperate with private landowners, oil and gas development companies, federal and state agencies to prepare access management plans to enhance elk habitat value.
- Continue to foster good relationships with private landowners and promote habitat enhancement projects that will benefit wildlife on private lands as well as promote public access for hunting opportunities.

Management Actions to Remove Population Barriers

Access - Public access is a major limiting factor on this unit. A larger portion of the total antlerless harvest must come from private lands. Cooperate with private landowners and Tribal lands to assure adequate antlerless harvest will occur on these lands.

Depredation - Utilize antlerless hunts, landowner mitigation permits, hazing, stackyard fencing and all other means necessary according to DWR guidelines to minimize crop depredation by elk.

Interagency Cooperation - Continue to work closely with federal and state agencies, as well as private landowners and the Ute Tribe. Assure them that proposed population objectives are reasonable and attainable. Respond to any range deterioration concerns.

APPENDIX A. Boundary Description of Subunits used for General Season Bull Hunting Boundaries.

Nine Mile, Range Creek . Carbon, Duchesne, and Emery counties. Boundary begins at the junction of the Green River and I-70; north along this river to Nine Mile Creek; west along this creek to the Nine Mile Canyon road near Bulls Canyon; west on this road to the Argyle Canyon Road; northwest on this Road to US-191; southwest on US-191 to US-6; southeast on US-6 to I-70; east on I-70 to the Green River.

Portion of Anthro subunit that is open to General Season Any Bull Hunting. Duchesne and Uintah counties. Boundary begins at the Green River and the BLM/ Ute Tribal boundary near Pariette Draw; west along the BLM boundary to the junction with the Pleasant Valley/Antelope Canyon Road (CR-31); west along this road to the Antelope Canyon Road (CR-27); south along this road to the Antelope Canyon/Sowers Canyon Road junction; west along the Sowers Canyon Road (CR-24) to the Indian Canyon/Sowers Canyon Cutoff Road (CR-25); west along this road to US-191; north along US-191 to Duchesne and US-40; east on US-40 to the Duchesne River; east on the Duchesne River to the Green River; south on the Green River to the BLM boundary near Pariette Draw.