ELK HERD UNIT MANAGEMENT PLAN
Elk Herd Unit 14
SAN JUAN
December 2023

BOUNDARY DESCRIPTIONS

Grand and San Juan counties - Boundary begins at the confluence of the San Juan and Colorado rivers; north along 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 and north on this road to the Lisbon Valley road; southeast on this road to the Island Mesa road; east on this road to the Utah-Colorado state line; south on this state line to the Navajo Indian Reservation boundary; west and south on this boundary to the San Juan River; west along this river to the Colorado River.

This boundary includes two subunits including:

San Juan Bull Elk (limited entry)- Grand and San Juan counties - Boundary begins at the confluence of the San Juan and Colorado rivers; north along 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 and north on this road to the Lisbon Valley road; southeast on this road to the Island Mesa road; east on this road to the Utah-Colorado state line; south on this state line to US-491; west on US-491 to US-191; south on US-191 to the San Juan River; west on this river to the Colorado River.

San Juan, Montezuma Canyon (any bull) - San Juan County - Boundary begins at the Utah-Colorado state line and US-491; west on US-491 to US-191; south on US-191 to the Navajo Indian Reservation boundary; east on this boundary to the Utah-Colorado state line; north on this state line to US-491.

LAND OWNERSHIP

Approximate Elk Habitat and Ownership San Juan Bull Elk

	Yearlong Range		Summer Range		Winter Range		Spring/Fall	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Bureau of Land Management	46,750	30	63	<1	254,076	51	4,545	8
National Park Service	0	0	0	0	10,539	2	0	0
Private	96,670	63	452	<1	29,034	6	6,036	11
Utah State Institutional Trust Lands	7,385	5	5	0	25,609	5	543	1
Utah Department of Transportation	0	0	0	0	1	<1	0	0
United States Forest Service	2,824	2	128,584	99	176,199	36	45,047	80
TOTAL	153,629	100	129,104	100	495,457	100	56,171	100

Approximate Elk Habitat and Ownership for San Juan, Montezuma Canyon

	Yearlong Range		Summer Range		Winter Range		Spring/Fall	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Bureau of Land Management	45,035	44	-	-	5,509	33	-	-
National Park Service	-	-	-	-	-	-	-	-
Private	51,669	51	-	-	10,440	62	-	-
Utah State Institutional Trust Lands	4,640	5	-	-	681	4	-	-
Utah Department of Transportation	-	-	-	-	0.6	<1	-	-
United States Forest Service	-	-	-	-	77	<1	-	-
TOTAL	101,344	100	-	-	16,707.6	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 the population at a level that is within the long-term capability of the available habitat. Consider increases in population objective when forage production from habitat projects could increase carrying capacity. Consider impacts of the elk herd on other land uses and public interests including private property rights, agricultural crops and local economies.

Maintain and protect existing crucial elk ranges sufficient to support the population objectives. Seek cooperative projects to improve the quality and quantity of elk habitat and to minimize conflicts with livestock and other wildlife. Promote enhancement of habitat security and escapement areas for elk.

UNIT MANAGEMENT OBJECTIVES

Population

Target Winter Herd Size - Maintain a winter population of 1,300 elk with no more than 1,000 elk wintering west of highway US-191.

Bull Harvest Age Objective - Maintain a 3-year average bull harvest age of 6.5–7.0 years old on the San Juan Bull Elk limited entry subunit. Manage the San Juan, Montezuma Canyon subunit under a general any-bull hunt strategy.

Habitat

Summer Range - Maintain and improve summer forage availability on the Abajo Mountains and Elk Ridge through aspen regeneration and oakbrush thinning projects.

Winter Range - Maintain and improve winter foraging areas through browse regeneration and pinyon-juniper removal projects.

CURRENT STATUS OF ELK MANAGEMENT

Population

The elk population on the San Juan unit is currently at the management objective of 1,300 elk, based on modeling efforts. The last helicopter survey was conducted in January 2021, and a total of 1,236 elk were counted yielding a population estimate of 1,450 elk. Antlerless harvest has been utilized at levels sufficient to stabilize elk numbers at the management objective.

Aerial surveys can be beneficial for population estimate trends but should not be relied on solely for age or sex classification data, given the inherent social behavior of elk during survey sessions, when bulls tend to be by themselves away from large cow groups and often in rugged, hard to survey locations. Observer error is also greater at this time when classifying calves, given their body size at this time. Data from both aerial surveys and summer classification indicate that calf production and bull:cow ratios are stable on this unit.

Bull harvest on this unit has stayed somewhat stable over the past 5 years, with a 5-year average of 72 bulls harvested per year. Average age of bulls harvested has slightly fluctuated, with a 5-year average of 7.9 years old. Harvest results for the San Juan Bull Elk limited entry subunit over the past 5 years are listed below (includes CWMU harvest).

Year	LE Bull Permits	LE Bull Harvest	LE Bull Avg. Age	Spike Bull Harvest	Antlerless Harvest
2018	84	62	8.3	20	160
2019	84	77	7.6	23	105
2020	85	76	7.8	48	114
2021	95	73	7.7	39	180
2022	89	74	8.3	66	177

Habitat

This herd unit is summer range limited, and, as such, the number of elk on this unit is primarily determined by trends in annual precipitation on the mountain range. There are 26 active permanent range trend study locations on the unit of which 24 are found within elk use areas. Summer ranges and upper elevation winter ranges generally appear to be in good, stable condition according to permanent range trend studies conducted by UDWR in 2019. The upward trend in summer range conditions is primarily due to increases in perennial grasses and forbs. Winter range trend sites are generally in poor condition. Only one site is in fair-condition with the remaining 92 percent of sites being in fair condition or less. Elk use on these low elevation ranges has been relatively light, particularly in mild winters that have allowed elk to winter at higher elevations. Interagency spring range transects have shown slight increases in utilization by elk. USFS and BLM range assessments of current vegetative trends on the unit have not indicated over utilization by elk.

The majority (44 percent) of elk habitat on the unit serves as year-long habitat. Summer range habitat is limited to 11 percent of available elk habitat with the remaining being winter range and spring fall range (34 percent and 11 percent respectively). The number of range trend study sites varies across habitat types. Aspen on the unit generally increased in cover and density, but one site experienced a die-off during between the 2014-2019 sampling periods. Preferred browse shows a decreasing density trend in ponderosa pine. Herbaceous cover has also decreased but remains abundant.

Across summer range habitats there is a lack of diversity in plant communities that is being reduced by aggressive perennial grass species. Restoring diverse native grass communities in aspen, ponderosa pine, mountain big sagebrush, and oak communities may be needed. Introduced annual grasses may pose an additional threat to ponderosa pine communities. Woodland succession and conifer encroachment may need to be addressed in mountain big sagebrush, mountain browse, and oak

communities as density and cover increases. In mountain browse communities, annual grasses have been observed and have the potential to increase fuel loads and increase fire risk. According to LANDFIRE Existing Vegetation Coverage Model (2019), over 28 percent of the unit was comprised of pinyon and juniper woodlands. Encroachment into historic shrublands reduces the availability of elk forage including browse and herbaceous components. Winter range condition fluctuates across the unit. Areas in poor condition lack preferred browse and have high annual plant cover.

Common habitat restoration treatments across the unit have included prescribed fire to promote aspen, pinyon juniper reduction from browse areas, and seeding. Development, increased recreation, and extended drought threatens habitats. One area experiencing noticeable increased disturbance is the Hart's Point winter range area.

This unit could most likely support a larger elk population, however, given the current livestock grazing rates, social and political climate, and lower deer population status, the current population management objective is at the acceptable level. Several habitat improvement projects have been completed or are planned by federal agencies, UDWR, and private landowners (see Appendix I).

BARRIERS TO ACHIEVING UNIT MANAGEMENT OBJECTIVES

Population

Big Game / Livestock Competition - Resistance of livestock operators to increasing elk herds and concerns of impacts from a large elk population to a struggling deer population. Lack of public understanding of habitat relationships between elk and livestock.

Crop Depredation - Chronic crop depredation problems could result in reducing elk numbers in specific areas. There is continual crop depredation by elk on this unit, primarily during the summer on croplands east of highway US-191. Monetary damages have been significant on crops such as sunflower, corn and beans. These damage problem areas are often adjacent to CWMU units with large elk numbers. Some landowners are reluctant to enroll these properties in CWMUs because they feel that participation in the CWMU program does not adequately compensate them for losses sustained from elk depredation.

Harvest Age Objective - Maintaining high bull numbers to achieve harvest age objective and reduction of antlerless population to achieve population objective. Public resistance to increasing numbers of bull hunting permits to reduce average age of harvest.

Landowner Participation in Cooperative Wildlife Management Unit Programs – Resistance of landowners to join CWMU units because of a lack of knowledge of the program or because of inadequate compensation from CWMU operators for crop depredation losses.

Habitat

Drought - Impact of prolonged drought to range condition and forage availability.

Limited Summer Range - Amount of quality summer habitat for foraging and reproductive activities is limited and shared with livestock and other big game.

Habitat Loss – Plant succession changes in important summer areas (conifer encroachment in aspen stands) and winter areas (pinyon-juniper invasion in mountain brush-sagebrush communities) reduces forage for elk. Lack of browse regeneration and invasion of annual grasses on lower elevation winter ranges also impact habitat quality.

Other Barriers

Elk Distribution - Congregation of large elk herds on some areas may result in excessive utilization and could displace deer herds to less productive ranges.

Land Resource Activities - Impacts from habitat fragmentation and disturbance as a result of energy development and timber management activities. The resent designation of Bear's Ears National Monument could impact elk habitat on this unit. A change, or restrictions, in land management practices could potentially cause a reduction in habitat projects on the unit, causing less desirable vegetative communities and potentially distributing elk into lower quality areas.

Predation - The San Juan Unit has healthy black bear and cougar populations. Black bears are known to take elk calves and cougars will prey on all ages of elk. With that said, predation does not appear to have a significant impact on elk survival rates on this unit.

Illegal Harvest - Extent of illegal harvest on this unit is unknown, but because of the unit's reputation for trophy-quality animals, the potential for illegal activities is elevated. Illegal harvest of mature bulls has the potential to affect the availability of limited entry permits.

Disease - Chronic wasting disease has been documented in deer and elk on the adjacent La Sal Mountain range and in deer on the Abajo Mountains.

STRATEGIES FOR REMOVING BARRIERS AND REACHING UNIT MANAGEMENT OBJECTIVES

Population Monitoring

Population Size - The population is monitored using harvest data, aerial trend counts and classification, preseason classification, and survival estimates. Investigate and incorporate research findings on differential sightability of cow-calf groups, spike bulls, and mature bulls during aerial surveys.

Bull Age Structure - Monitor age class structure of the bull population using checking stations, harvest surveys, tooth analysis, field bag checks, preseason classification and aerial classification.

Harvest - The primary means of monitoring harvest will be through the statewide mandatory harvest reporting. The target population size will be achieved through antlerless harvest using a variety of harvest methods and seasons.

Management Actions to Remove Population Barriers

Big Game/Livestock Competition - Continue to work with land management agencies and public grazing operators, as well as private landowners to assure that proposed population objectives are reasonable and attainable. Antlerless harvest through limited entry, private lands only (PLO) and mitigation permits will be the primary strategy utilized to achieve and maintain population objectives and to address specific habitat concerns and depredation problems. Keep public informed of deer and elk population trends and incorporate elk management strategies that have minimal impacts to the deer population. Educate the public about habitat and dietary overlap between elk and livestock.

Crop Depredation - Work with private landowners to make sure depredation is maintained within tolerable levels and will not become a limiting factor. Utilize depredation hunts, fencing and other actions where appropriate to reduce/mitigate crop depredation. Consider other options for attaining antlerless harvest east of highway US-191 such as reciprocal agreements on CWMUs. The CWMUs have recently participated in compensating landowners for crop damages adjacent to their units. The southeast portion of this unit is being managed under general any bull and liberal antlerless harvest strategies to alleviate depredation problems in this area.

Harvest Age Objective - Continue public relations to provide information on effect of changing permit numbers in relation to average age of harvested bulls. Continue spike-only bull hunts to increase hunting opportunities.

Habitat Monitoring

Habitat Condition and Trend – Continue analysis of trends in habitat condition through permanent range trend studies, 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 continue to be conducted by DWR to evaluate elk habitat health and trend. Conduct range utilization studies in areas of perceived conflicts to evaluate competition between elk and livestock.

Management Actions to Remove Habitat Barriers

Limited Summer Range - Work with public land management agencies to develop specific vegetative objectives to maintain the quality of important elk use areas. Respond to any range deterioration concerns and address documented excessive forage utilization. Continue to investigate and develop habitat projects on summer range to improve forage availability for both elk and cattle.

Habitat Loss - Cooperate with federal land management agencies and private landowners in carrying out habitat rehabilitation projects such as reseedings, controlled burns, water developments etc. on public and private lands to maintain or increase forage quantity and quality. Completion of habitat projects to improve forage availability for both elk and cattle would allow potential increases in the elk population.

Management Actions to Remove Other Barriers

Elk Distribution - Utilize antlerless harvest in specific areas when necessary to target elk concentrations impacting range conditions and/or important deer areas.

Land Resource Activities - Continue to coordinate with land management agencies and energy development companies in planning and evaluating resource uses and developments that could impact habitat quality. Work to develop and administer access management plans for the purposes of habitat protection and escape or “security” areas. Continue to coordinate and work with land management agencies regarding wildlife management within the Bear’s Ears National Monument.

Predation - Maintain hunting seasons to control bear and cougar populations. Maintain high quality summer habitats to protect important calving areas (see “Management Actions to Remove Habitat Barriers”).

Illegal Harvest – Implement action plans to focus law enforcement efforts in areas where illegal bull harvest has been documented.

Disease - Continue testing of suspect animals to detect presence of CWD in the elk population.

DURATION OF THIS MANAGEMENT PLAN

This Unit Management Plan was revised in 2023 following the revision of the Statewide Elk Management Plan. This Unit Management Plan will be revised after the next Statewide Elk Management Plan revision to ensure all current management tools are being used. Revision of this plan may also take place as needed to address future issues or incorporate new management strategies. Unit elk plan goals, objectives, recommendations and strategies are constrained within the sideboards set in the Statewide Elk Plan, which supersedes unit plans. It is possible that changes to the Statewide Elk Plan may affect unit plans. Additionally, changes to Utah State Code and/or Administrative Rule may also affect elk plans.

Appendix I. Completed habitat projects on the San Juan unit.

Habitat Projects

Completed Projects Fall 2016-Spring 2023

Project ID	*Project Name*	*Acres**	*Treatment Type*
3773	North Elk Ridge Aspen Restoration Phase II	84	Thinning, fence
3774	Mormon Mountain Pasture Wildlife Habitat Improvement Phase I	1232	Mastication, thinning
3939	Blanding East Phase II	604	Lop and pile
4018	Dark Canyon Plateau Phase 4	1123	Mastication, pond cleaning
4024	Devil Canyon Phase III	988	Bullhog, seed
4103	La Sal/Elk Ridge Prescribed Burn Projects	0.5	Lop
4323	Blanding East Phase III	479	Lop and scatter
4423	Cedar Mesa "Buck Pasture" Seeding	1080	Lop and scatter, seed
4476	Devil's Canyon	412	Prescribed fire, bullhog
4619	Devil Canyon Phase I Maintenance	1573	Lop and Scatter, pile and burn
4627	Peter's Point Maintenance	2097	Lop and scatter
4858	Moab Mule Deer Winter Range Habitat Improvement-Phase 4	476	Lop and scatter
4860	Shingle Mill Phase I	949	Bullhog
4902	Canyon Country Fuels Monitoring 2019		Monitoring fuels on Blanding East, Dark Canyon, Little Baullie
5032	Wildlife Crossing Us 191 MP 62.6 to 67		Wildlife fence
5066	Cottonwood Allotment Water Developments		Install 3 troughs, clean 10 ponds, construct fence 3 springs

5218	La Sal/Abajo Prescribed Fire FY21	1750	Prescribed fire
5234	Southeastern Utah Sagebrush and Shrub Planting	0.5	Planting bareroot stock
5527	La Sal/Abajo Rx and MX FY 22	1166	Bullhog

**Total project area, not all necessarily in elk habitat*