

ELK UNIT MANAGEMENT PLAN
Elk Herd Unit # 16
MANTI
2023

BOUNDARY DESCRIPTION

Utah, Carbon, Emery, Sevier, and Sanpete counties - Boundary begins at the junction of US-6 and I-89 in Spanish Fork Canyon; southeast on US-6 to Price and SR-10; south on SR-10 to I-70; west on I-70 to US-89; north on US-89 to US-6 in Spanish Fork Canyon.

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 are 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

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.

Unit habitat objectives will include:

- Coordinate with federal agencies to protect and enhance aspen communities on summer habitats
- Management techniques that assure a diverse age structure of aspen communities will be utilized
- Cooperate with federal agencies to improve summer range forage production and forest health by actively managing vast acreages of beetle-killed conifer stands. This may include salvage logging, prescribed fire, and other techniques
- Remove pinion-juniper encroachment into winter range sagebrush parks and summer and transitional range mountain brush communities
- Pursue protection of crucial habitats to development through conservation easements
- Minimize and mitigate for habitat loss and displacement of elk as a result of coal, oil and gas development and urban expansion
- Cooperate with livestock operators and federal agencies to improve range management practices in such a way to optimize both livestock and elk forage production and thus minimize conflicts

Population - Desired elk population levels are guided by habitat conditions and public tolerance of elk.

Target Winter Herd Size Objective - Maintain a wintering elk population of 12,000. This is the same objective as the previous plan.

Bull Elk Harvest Objectives - Maintain an average age of harvested bulls between 5.5-6.0 years. Utilize general season spike-only hunting and limited entry any bull hunting to accomplish herd composition objectives. Utilize private lands only permits, depredation permits, and CWMU permits to increase antlerless harvest on private lands.

CURRENT STATUS OF ELK MANAGEMENT

Habitat - There are approximately 25 permanent range trend study locations on the Manti unit that occur primarily on elk winter ranges. The Manti unit was read in 2019. Most range trend locations target winter ranges for deer but in many cases show trends in elk winter range productivity. Most range trend sites across the unit show declining trends in browse density and cover on low elevation deer ranges inhabited primarily by deer. Range Trend Study locations at mid elevations where elk typically winter show a better trend. The majority of range trend sites monitored on predominantly elk ranges were in fair to good condition with stable browse and herbaceous understory components. The average of all of the DCI scores on elk winter ranges suggest the winter elk habitat is in fair to good condition.

One of the habitat limiting factors on the unit is encroachment of pinyon juniper into shrub communities. On summer ranges, introduced perennial grasses are present and may become invasive and outcompete native species. Some mountain browse sites are experiencing heavy use by elk which can lead to decreased shrub and herbaceous vigor. The threat of noxious weeds from development, disturbance, and grazing is high on winter ranges.

Cooperative DWR/BLM/USFS spring range rides have shown relatively stable to declining elk utilization patterns on winter ranges with some localized areas being over utilized. Declines in elk use can be attributed to aggressive antlerless harvest that has reduced the overall population and changed migration patterns.

Elk summer habitat appears to be in stable condition. This unit has benefitted from numerous wildfires in the last decade that have promoted early successional species that will likely benefit elk. These wildfires have changed elk distribution and migration patterns. Domestic sheep graze much of the summer range on the unit. Although there may be localized competition between sheep and elk, stocking rates are well below historical averages. Summer ranges are also impacted by fairly high recreation use during the summer months. This tends to displace elk from portions of important summer range. High levels of development and recreation pose risks to habitat from direct loss to introduction of noxious weeds.

Crop depredation by elk on this unit is most pronounced during late winter and spring when elk migrate to low elevation ranges and inhabit irrigated fields at the mouths of most major drainages. Depredation to haystacks, standing alfalfa crops, and fencing can at times be significant. This depredation is mitigated by aggressive antlerless harvest on private lands and payments.

Several habitat improvement projects that will benefit elk have been completed or are planned by federal agencies, UDWR, and private landowners (see Appendix I). These projects should allow elk numbers to be maintained at the population objective without creating conflicts with other land uses.

Range Area and Approximate Ownership

| Ownership | Yearlong range | | Summer Range | | Winter Range | |
|--------------------------------------|----------------|-----|--------------|-----|--------------|-----|
| | Area (acres) | % | Area (acres) | % | Area (acres) | % |
| Bureau of Land Management | 8447 | 4 | 1054 | <1 | 111,282 | 16 |
| Private | 64292 | 30 | 100,262 | 19 | 165180 | 23 |
| Utah State Institutional Trust Lands | 1572 | 1 | 3539 | 1 | 85913 | 12 |
| Forest Service | 134218 | 62 | 429328 | 80 | 295502 | 42 |
| Utah State Parks | 78 | <1 | 17 | <1 | 386 | <1 |
| Utah Division of Wildlife Resources | 6269 | 3 | 2608 | <1 | 45733 | 6 |
| TOTAL | 214878 | 100 | 536808 | 100 | 703996 | 100 |

Population - The elk population on the Manti unit was reduced to 9300 elk in 2019 as a result of aggressive antlerless harvest the previous several years. Since then, the population has been allowed to slowly increase. The aerial survey data collected in January 2023 suggests a current population of 11,700 elk. Calf production based on summer preseason classification counts has averaged 47 calves per 100 cows over the past 5 years. Limited entry bull harvest on the unit has steadily increased during this period. Despite these increases, the average age of harvested bull has remained stable at 6.6 years. Spike harvest has remained stable.

| Year | Population Estimate | LE Bull Harvest (public and CWMU) | Gen. Season Spike Harvest | AVE. Age of Harvested Bulls | Antlerless Harvest |
|------|---------------------|-----------------------------------|---------------------------|-----------------------------|--------------------|
| 2017 | 11300 | 385 | 257 | 6.1 | 468 |
| 2018 | 11300 | 366 | 383 | 6.5 | 731 |
| 2019 | 9300 | 364 | 301 | 6.4 | 629 |
| 2020 | 9500 | 408 | 292 | 6.8 | 537 |
| 2021 | 9900 | 428 | 412 | 6.6 | 455 |
| 2022 | 11700 | 451 | 418 | 6.6 | 534 |

BARRIERS TO ACHIEVING UNIT MANAGEMENT OBJECTIVES

Habitat -

- Loss of winter range due to development and urban expansion
- Drought impacts to rangeland forage condition and abundance
- Loss of winter ranges and summer shrub habitats to pinion-juniper encroachment and shrub decadence
- Conifer encroachment on essential aspen communities
- Large expanses of beetle-killed conifer stands are providing little elk habitat value and are susceptible to large scale fires
- Competition for forage with domestic livestock on both summer and winter ranges

Population -

- Elk / Livestock Competition - Elevated concern about depredation on crops and competition with domestic livestock on rangelands occur when elk are near or above the population objective.
- Harvest Age Objective - Public resistance to increasing numbers of bull hunting permits to reduce average age of harvest to meet the plan objective.

Other Barriers -

- Agricultural Depredation - Elk on privately owned crops and rangelands may decrease public support for elk on this unit. Elk numbers may be maintained at levels below the stated objective if excessive levels of crop depredation or forage consumption on private rangelands occur.
- Weather Extremes - Periodic climatic extremes, especially severe winters or long term drought conditions, can cause great fluctuations in overall population size, sex ratios, and age structure.
- Other Mortality Causes - Disease outbreaks, highway mortalities, poaching, predation, etc.

STRATEGIES FOR REMOVING BARRIERS AND REACHING UNIT MANAGEMENT OBJECTIVES

Habitat -

- 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
- Continue to cooperate with federal agencies to establish natural fire policies that will allow wildfires to burn in beneficial and non-threatening areas to recover lost elk habitat
- Continue to improve forage production on winter range and other shrublands by aggressive pinion-juniper removal
- Support and coordinate with land management agencies on projects that maintain a diverse age structure of aspen communities on summer habitats
- Pursue conservation easements on critical parcels of private property to protect important elk habitat from development
- Continue to cooperate with land management agencies and development interests to attempt to protect key areas and minimize or mitigate losses due to development
- Cooperate with federal agencies to develop access management plans to enhance elk habitat value. This may include seasonal road closures or vehicle restrictions.

Population -

- Population Size - The population is monitored using harvest data, aerial trend counts and classification, preseason classification, and survival estimates
- Bull Age Structure - Monitor age class structure of the bull population through the use of annual preseason ground classification and winter aerial classification. Average age of harvest will be determined by tooth age data from limited entry harvest
- Harvest - The primary means of monitoring harvest will be through mandatory harvest reporting. Target population size will be maintained through the use of antlerless harvest using a variety of harvest methods and seasons
- Utilize tools outlined in statewide plan to address elk herds that habitually move into agricultural areas
- Utilize Private-Lands Only permits to achieve adequate harvest on private lands
- Cooperate with private landowners to fence haystacks and provide compensation when necessary in high winter depredation areas
- Utilize antlerless hunts to address range concerns in specific areas
- Utilize depredation bull hunts and extended archery season options if needed to address depredation and public safety issues by bulls according to DWR depredation policy
- Cooperate with UDOT to pursue funding to reduce vehicle mortalities

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 and Proposed Habitat Treatment Projects on the Manti Unit, 2016 – 2023.

| Habitat Projects | | |
|---|---------------|---|
| Completed Projects Fall 2016-Spring 2023 | | |
| <i>Project Name</i> | <i>Acres*</i> | <i>Treatment Type</i> |
| North Springs PJ Removal Phase II | 1531 | Lop and Scatter |
| Birdseye WMA Bullhog Project | 230 | Bullhog |
| Swasey Wildlife Habitat Improvement and Hazardous Fuels Reduction Project Phase VII | 621 | Bullhog |
| Gordon Creek Tamarisk and Russian Olive Removal | 427 | Herbicide |
| Spring City Fuels Reduction and Habitat Improvement | 533 | Lop and Scatter, Bullhog |
| Willow creek Habitat Improvement and Fuels Reduction | 447 | Pile and Burn, Bullhog |
| LeeKay Phase III Land Exchange | 5523 | Land Acquisition |
| Swasey Wildlife Habitat Improvement and Hazardous Fuels Reduction Project Phase 8 | 353 | Bullhog |
| South Horn Wildlife Habitat Improvement Project | 609 | Bullhog |
| Grimes Wash Phase 2 | 111 | Bullhog, Seeding |
| Ephraim Foothills PJ Removal | 254 | Bullhog |
| Trail Mountain Wildlife Habitat Enhancement and Aspen Regeneration Project | 985 | Prescribed Fire |
| Miller Creek Watershed Restoration | 1098 | Lop and Scatter, Bullhog, Pile and Burn, BDA, Pond Cleaning |
| Muddy Creek riparian, wetland, and upland restoration Ph. 1 | 208 | Invasive Species Removal |
| Willow Fuels Project-Phase 1 | 801 | Bullhog, Herbicide |
| White Hill WMA Plateau Project | 296 | Herbicide |
| Trail Mountain Fire | 1500 | Seeding |
| Coal Hollow Fire Rehabilitation Project | 4823 | Seeding, Chaining |
| Hilltop Fire Rehabilitation Project | 1732 | Seeding, Chaining |
| Pole Creek/Bald Mountain Fire Rehabilitation | 5075 | Seeding |
| Dairy Fork Bullhog | 505 | Bullhog |
| Six Mile WMA In-House Bullhog Project- Phase 1 | 447 | Bullhog |
| Grimes Wash Phase 3 | 465 | Seeding |
| Dry Wash Units 4, 5, 9 | 117 | Lop and Scatter |

| | | |
|---|-------|--|
| Willow Fuels Project-Phase 2 | 892 | Lop, Pile, and Burn |
| Willow-New Canyon Phase 1 | 303 | Lop, Pile, and Burn |
| Lake Fork Allotment Water System Repair-Helicopter Lift Project | | Spring Development, Water Troughs |
| Jolly Mill Solar Pump and Pipeline | | Pipeline, Trough, Solar Pump, Storage Tank |
| Gordon Creek WMA Livestock Water Improvement | | New Pond Construction (8) |
| Thistle Creek Watershed Restoration and Fire Rehab Project | 3497 | Bullhog, Seeding |
| New Canyon Watershed Restoration Phase 2 | 107 | Lop, Pile, and Burn |
| Swasey/Dry Wash/Grimes Wildlife Habitat Improvement and Hazardous Fuels Reduction | 2092 | Bullhog, Prescribed Fire, Lop and Scatter |
| Miller Creek 3.0 | 269 | Lop and Scatter, Planting |
| Muddy Creek riparian, wetland, and upland maintenance | 207 | Spot Treatment |
| Salina Creek Ecosystem Restoration Project Phase 3 | 9994 | Bullhog, Prescribed Fire, Lop, Chaining |
| Trail Mountain Ignition Slash Lines | 843 | Lop and Scatter |
| Cowboy Fire Seeding Project | 150 | Seeding |
| Ephraim Watershed Restoration Phase 3 | 1679 | Bullhog, Prescribed Burn, Lop and Chip, Herbicide, Planting, BDA |
| Thistle Creek Watershed Restoration Phase 2 | 748 | Bullhog, BDA |
| Manti-La Sal Healthy Forest Restoration | 14938 | Prescribed Fire, Bullhog, BDA |
| Mount Pleasant Twin Creek Habitat Improvement Project | 30 | Chaining, BDA |
| Lower Fish Creek Forest Health Restoration | 178 | Lop, Pile, and Burn, Herbicide |
| Price Slashing | 790 | Lop and Scatter |
| Bear Fire | 3553 | Seeding |
| Bennion Fire Rehabilitation Project | 2547 | Seeding |
| Mahogany Point Sage Grouse Habitat Improvement Phase 2 | 1492 | Lop and Pile, Bullhog, Prescribed Fire |

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|--|------|--|
| Twelve Mile Watershed Restoration Project FY 23 | 2047 | Bullhog, Lop and Scatter, BDA, Spring Development, Pond Construction |
| Salina Creek Ecosystem Restoration Phase 4 | 7194 | Prescribed Fire, Bullhog, Lop |
| Spanish Fork River Watershed Post Fire Restoration Phase III | 32 | BDA |
| Bear Fire Weed/Herbicide Treatment | 2252 | Herbicide |
| Upper Price River Watershed | 2885 | Lop and Scatter, Pile Burn, Wet Meadow Enhancement |

| Habitat Projects | | |
|---|----------------|---|
| Projects in Progress | | |
| <i>Project Name</i> | <i>Acres *</i> | <i>Treatment Type</i> |
| Central Utah Habitat Maintenance Project Phase III | 627 | Lop and Scatter |
| Salina Creek Phase 5 | 9732 | Prescribed Fire, Bullhog |
| Upper Price River Watershed FY24 | 5312 | Lop, Pile, and Burn, Lop and Chip, Prescribed Fire, Herbicide, Planting |
| Twelve Mile Watershed Restoration Project FY 24 | 2793 | Lop, Pile, and Burn, Thinning, BDA, Pond Construction, Pipeline |
| Thistle Creek Watershed Restoration - Phase 3 | 58 | BDA, Check Dam, Fence |
| Central Region Riparian Restoration FY24 | 3 | BDA |
| Southern Region Riparian Restoration FY24 | | Beaver Relocation |
| Ephraim Watershed Restoration Phase 4 (FY24) | 2903 | Prescribed Fire, Lop, Pile, and Burn, Buck and Pole Fence |
| West Emery County Watershed Restoration | 9638 | Bullhog, Prescribed Fire, Herbicide, Guzzler Construction (3) |
| East Mountain Boreal Toad Fence Improvement | | Buck and Pole Fence |
| Carbon and Emery County Habitat Restoration and Maintenance | 195 | Lop and Scatter |