ELK HERD UNIT MANAGEMENT PLAN
Elk Herd Unit #20
SOUTHWEST DESERT
2023

BOUNDARY DESCRIPTION

Beaver, Iron and Millard counties - Boundary begins at the Utah-Nevada state line and US-6/50; east on US-6/50 to SR-257; south on SR-257 to SR-21; south on SR-21 to SR-130; south on SR-130 to I-15; south on I-15 to SR-56; west on SR-56 to the Lund highway; northwest on this highway to Lund and the Union Pacific railroad tracks; southwest along these tracks to the Utah-Nevada state line; north on this state line to US-6/50.

Hunt unit boundaries

Southwest Desert, North (Sept. Archery and HAMSS unit) - Beaver, Iron and Millard counties - Boundary begins at the Utah-Nevada state line and US-6/50; east on US-6/50 to SR-257; south on SR-257 to SR-21; west on SR-21 to the Utah-Nevada state line.

Southwest Desert, South (Limited entry) - Beaver, Iron and Millard counties - Boundary begins at the Utah-Nevada state line and US-6/50; east on SR-21; south on SR-21 to SR-130; south on SR-130 to I-15; south on I-15 to SR-56; west on SR-56 to the Lund highway; northwest on this highway to Lund and the Union Pacific railroad tracks; southwest along these tracks to the Utah-Nevada state line; north on this state line to US-6/50.

UNIT MANAGEMENT GOALS

- Manage for a population of healthy animals capable of providing a broad range of recreational opportunities, including hunting and viewing
- Balance elk 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 support capability of the available habitat
- Maintain and enhance forage and cover habitat through vegetative manipulation, domestic grazing and other management techniques
- Manage for increased water distribution which will in turn distribute ungulates
- Mitigate against habitat fragmentation, degradation and loss stemming from an increased wild horse population, energy development, roads, increased recreation and other impacts

UNIT MANAGEMENT OBJECTIVES

Habitat - The 2023 committee set the following goals for the next cycle of unit plan revisions. A unit committee will be assembled in 3-5 years to assess the status and discuss if any changes to the objective or any unit boundaries are warranted.

- Treat 30,000 acres on the SWD unit
- Support additional wild horse removal
- Implement antlerless hunts in specific areas with high elk use
- Continue collaring elk to show areas of high use
- Continue to coordinate with Nevada on elk populations, flights, etc.
- Be cognizant of drought and poor habitat conditions and issue antlerless permits accordingly, a trigger for this action would be if livestock on public land are removed early
- Three water developments in elk habitat
- Implement targeted hunts to distribute elk out of conflict areas
- Managed within the objective

Population - Following a lot of discussion, a consensus on an objective range of 1050-1250 for the Southwest Desert. A range will allow DWR to be reactive to changing climatic conditions. During years where forage availability is low due to drought, DWR will target the low end of the objective and make recommendations to keep the population at 1050 or possibly lower in extreme conditions. One of the triggers for targeting the lower end will be if land management agencies ask for livestock to leave public grazing leases early. During years where forage availability is adequate, DWR will target the upper end of the objective at 1250. For reference, the previous population objective was 975.

The 2023 committee also discussed the possible need of holding targeted cow elk hunts when it is necessary for private land conflicts, and range health on public land. Ideas included standard public antlerless hunts, but also more quick reaction efforts like depredation hunter pool hunts. These would allow for DWR to have hunters on the ground within a week to put pressure on elk and distribute them to other areas. DWR will also continue to be aggressive with issuing mitigation permits, doing DWR removals on cropland, and holding depredation hunts for private land conflicts. (August 1-January 31 legal season dates)

Target Winter Herd Size Objective - Manage toward a herd unit modeled elk winter population size of 1050 – 1250 (previous objective 975). This new objective was settled on by the 2023 committee after the evaluation and of the goals that were set in the 2016 plan that stated that an increase would be considered if a minimum of three of five goals listed below had been reached. Those Goals and what was completed are listed below.

1. Complete 15,000 acres of additional habitat treatments.
   - Acres treated in Elk Habitat – 31,077 = $9,982,089.63
   - Acres treated out of Elk Habitat – 33,351 = $9,488,142.68
   - Total acres treated on the SWD – 66,428 = $19,470,232.31

2. Install a minimum of 3 new wildlife guzzlers.
   Five Guzzlers were constructed - $175,000
   - Wah Wah Summit
   - Mt. Home East
   - Headlight
   - Mormon Gap
   - Oak Tree

3. Elk population is managed to 975 or below for the next survey cycle.
   - SWD elk population estimate in January 2021 aerial survey – 975
   - Elk population has been maintained at that number post-season since then.

4. Reduce wild horse population.
   - 2016-2022 SW Desert unit horse gathers removed 3,585 horses
   - 2018-2021 In the adjacent Eagle HMA (Nevada) 2,864 horses removed

5. Livestock grazing AUM's that have been suspended due to drought or habitat restoration have been reinstated or increased beyond original levels.
   - The 5-year average of actual livestock use in elk habitat is currently half of what is permitted. Grazing AUM's have been in non-use for various reasons. Cedar City BLM manages for 40% forage utilization. All allotments in Elk habitat have been at or below that number. Allotment trends are static to improving overall.

Bull Age Structure Objective - Maintain a 3-year average bull harvest age of 6.0 – 6.5 years for limited entry hunts on the Southwest Desert, South. This is a reduction of ½ year and was approved in the 2022 statewide elk plan. Maintain a success rate of 20%-40% OR a 3-year average bull harvest age of 3.5 – 4.5 years for the September archery and HAMSS hunts on the Southwest Desert, North.

Recruitment Objective - Determine annual recruitment and population status of the herd through annual pre-season classification and every third year winter trend counts.

Harvest Objective - Maintain antlerless harvest that will stabilize the population and keep the population within the range of its objective. Use limited entry bull harvest and general season spike bull harvest to provide hunting opportunities and maintain healthy population sex and age ratios.

Since the 2021 hunting season the portion of the unit north of Highway 21 has been managed as a Limited Entry HAMS unit. This management strategy has allowed the DWR to offer a different hunting opportunity with increased bull harvest in that area that has not affected the quality of the bull harvest on the remainder of the unit.

CURRENT STATUS OF ELK MANAGEMENT

Habitat - The current BLM assessment is that habitat is stable on this unit; although it may be declining on a few allotments. Actual forage use by elk on BLM lands is estimated to be less than 10 percent that of livestock. The land ownership of the elk habitat on this unit is largely public land with some of the key areas still being on private lands. There is currently a Landowners Association working with the DWR to address the benefits that elk receive on private lands. Tolerance of elk on these and other private rangelands on this unit are one of the factors affecting the population objective of elk on this unit.

The population objective of elk is impacted by the following factors: 1) water distribution, 2) horse population that is beyond DWR control, 3) social and political factors, 4) current and future range improvements, and 5) range health and species competition potentials. Drought over the past decade has affected elk habitat. Pinion and juniper invasion is reducing more beneficial forage production and threatening open and mosaic habitats. Canopy cover is closing in mid elevation mature pinion and juniper communities. This limits and slowly removes valuable perennial understory species. Limited livestock forage competition has occurred during the drought. Agricultural depredations are generally minimal but do occur.

Numerous habitat improvement projects have been completed during the past seven years through the WRI program. These include taking advantage of naturally caused wildland fires through reseeding and other more labor-intensive accomplishments. In total, more than 31,000 acres of habitat improvement have been completed in elk habitat in the past seven years. In that same time frame, five 10,200-gallon big game guzzlers have been newly built or rebuilt to expand their capacities. The Hamlin Valley EA is completed and covers 78,000 acres. It is planned that a minimum of 6,000 acres of improvements be done each year over the next 5 years. BLM is also working on an EA to retreat, old treatments on the unit and new EA's for Mountain Home and Pine Valley areas. Specific project areas and acreage totals of projects completed are given below.

Range Area and Approximate Ownership

	Southwest Desert Unit Land		Yearlong range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	55,545	1.70	0	0.0
Bureau of Land Management	2,602,306	78.10	729,801	83.4
Utah State Institutional Trust Lands	313,722	9.40	87,436	10.0
Native American Trust Lands	0	0.00	0	0.0
Private	348,302	10.50	47,736	5.5
Department of Defense	163	<1	0	0.0
USFWS Refuge	0	0.00	0	0.0
National Parks	0	0.00	0	0.0
Utah State Parks	0	0.00	0	0.0
Utah Division of Wildlife Resources	10,270	<1	10,253	1.2
TOTAL	3,330,308	100.0	875,225	100.0

Habitat Projects Completed 2016 2020

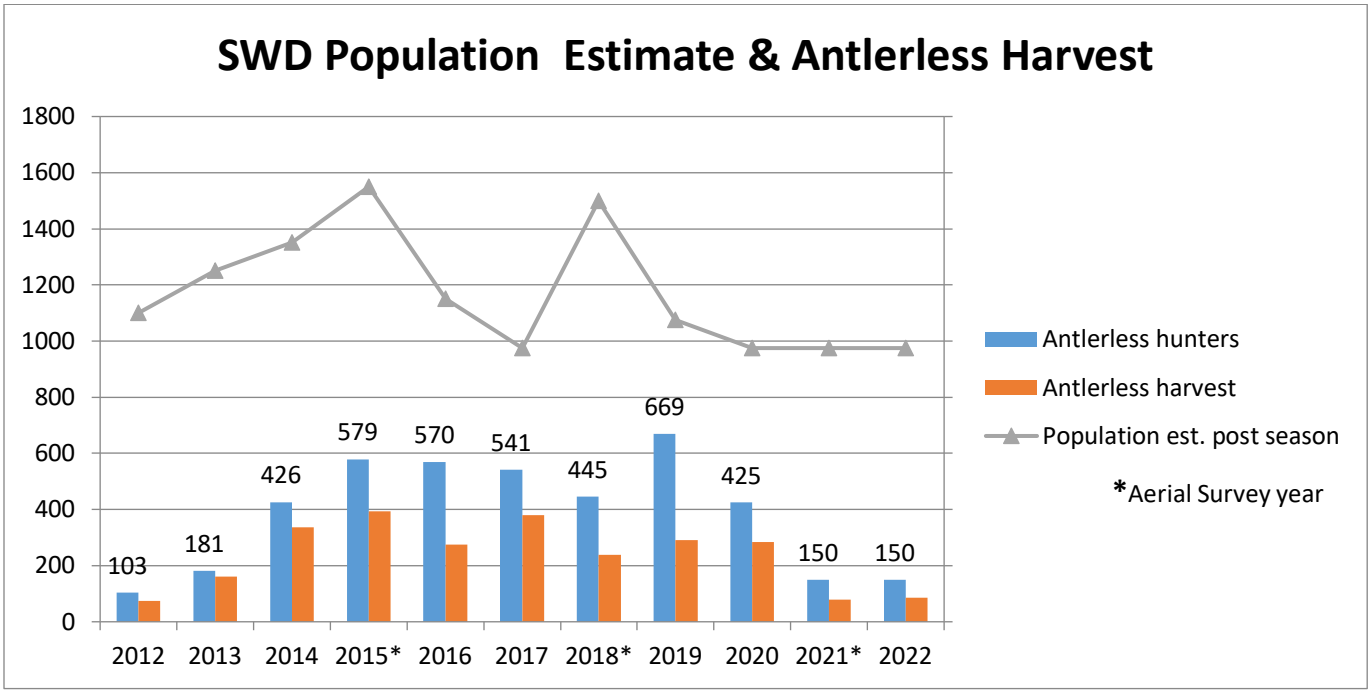
FY	Project Name	TreatmentType	Acres
2016	Spanish George Bullhog	Bullhog	1424
2016	Butcher Trough Lop and Scatter	Lop and scatter	1622
2017	Blawn Wash Lop and Scatter	Lop and scatter	764
2017	Jackson Wash Lop and Scatter	Lop and scatter	1306
2017	Jackson Wash Bullhog	Bullhog	1614
2017	Jackson Wash Chaining	Anchor Chain	1891
2017	Indian Peaks WMA Lop and Scatter Phase I	Lop and scatter	990
2018	Mackleprang Homestead Bullhog	Bullhog	201
2018	Spanish Georg North/Atchison Creek Bullhog	Bullhog	707
2018	Miners Cabin Chaining	Anchor Chain	2262
2018	Indian Peaks WMA Lop and Scatter Phase II	Lop and Scatter	751
2018	South Pine Valley Lop and Scatter	Lop and scatter	4879
2018	Stateline to Butcher Bullhog	Bullhog	841
2020	Blawn Wash Chaining	Anchor Chain	1110
2021	Blawn Mountain/Seeps Lop and Scatter	Lop and scatter	2365
2021	Culver Spring Lop and Scatter	Lop and scatter	881
2021	Lund Fire Chaining	Anchor Chain	455
2021	Hamlin Valley Wash Chaining	Anchor Chain	1203
2021	Big Summit Fire Rehab Chaining/Bullhog	Bullhog	108
2021	Big Summit Fire Rehab Chaining/Bullhog	Anchor Chain	780
2022	Cougar Fire Chaining	Anchor Chain	310
2022	Blawn Mountain Bullhog	Bullhog	1557
2022	Blawn Mountain Chaining	Anchor Chain	2037
2022	Blawn Mountain Lop and Scatter Phase II	Lop and scatter	602
2022	Choke Cherry Fire Chaining	Anchor Chain	417
2016	Cottonwood Meadow riparian fence	Fence	
2018	Demille Spring Pipeline	Pipeline	
2018	Pine Grove Pipeline	Pipeline	
2021	Hamlin Valley Wash Chaining Pipeline	Pipeline	
2021	Hamlin Valley Wash Chaining fencing	Fence	
2021	Big Summit fire fencing	Fence	
2020	Blawn Wash Chaining fencing	Fence	
2022	Blawn Mountain Bullhog fencing	Fence	
2018	DeMille Spring development	Spring Development	
2018	Demille Spring ringtanks	Tank	
2018	Pine Grove Pipeline Reconstruction/ring	Tank	
2020	Pine Valley Mesic Meadow Habitat	Cultural Clearance	
2021	Smith Spring	Spring Development	
2021	Kiln Spring	Spring Development	
2021	Hamlin Wash Chaining 2 troughs	Troughs	
2017	Wah Wah Summit Guzzler	Big Game Guzzler 10,200 gal	
2017	Mountain Home East Guzzler	Big Game Guzzler 10,200 gal	
2017	Headlight Guzzler	Big Game Guzzler 10,200 gal	
2020	Mormon Gap Guzzler	Big Game Guzzler 10,200 gal	
2020	Oak Tree Guzzler	Big Game Guzzler 10,200 gal	
	Total acres treated		31,077

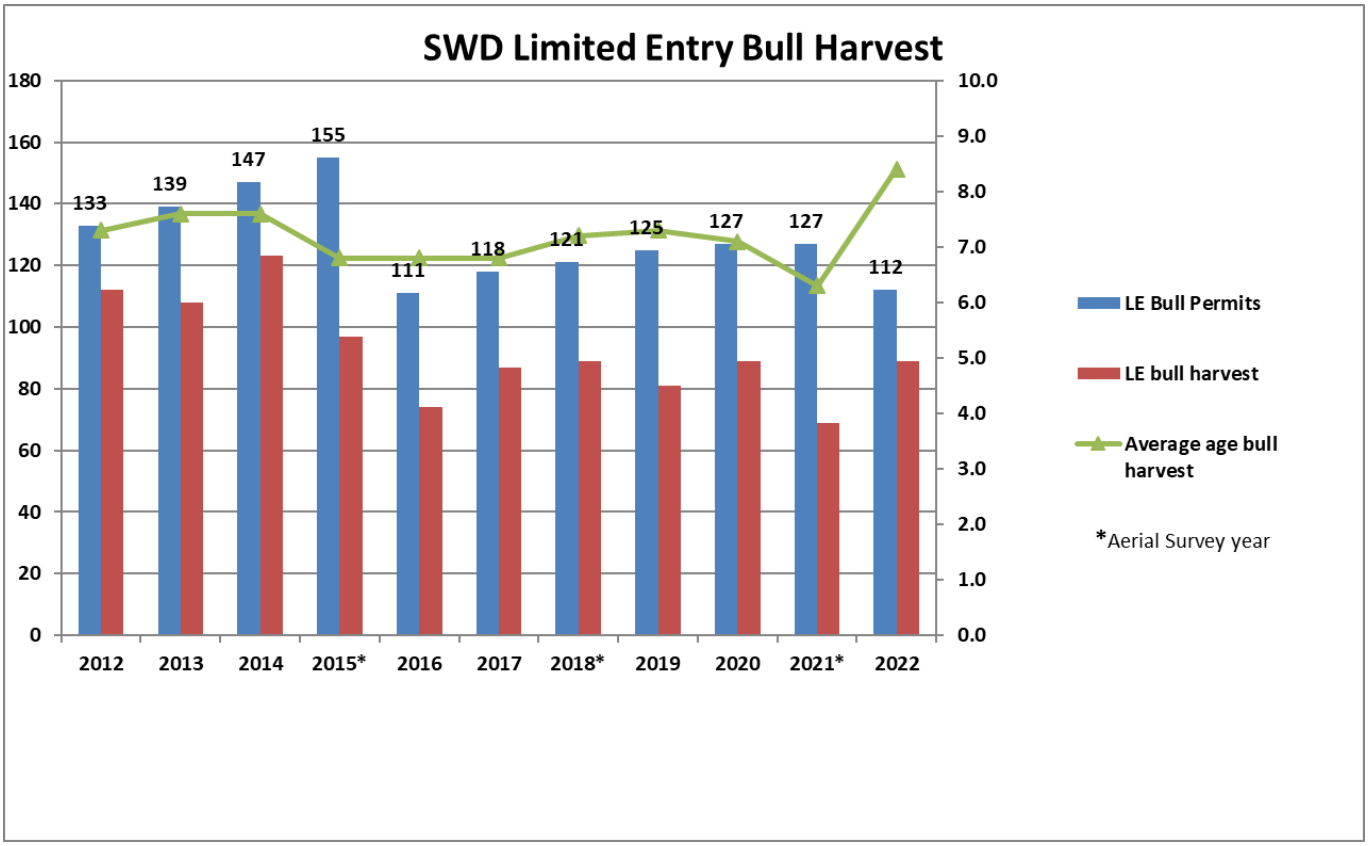
Population

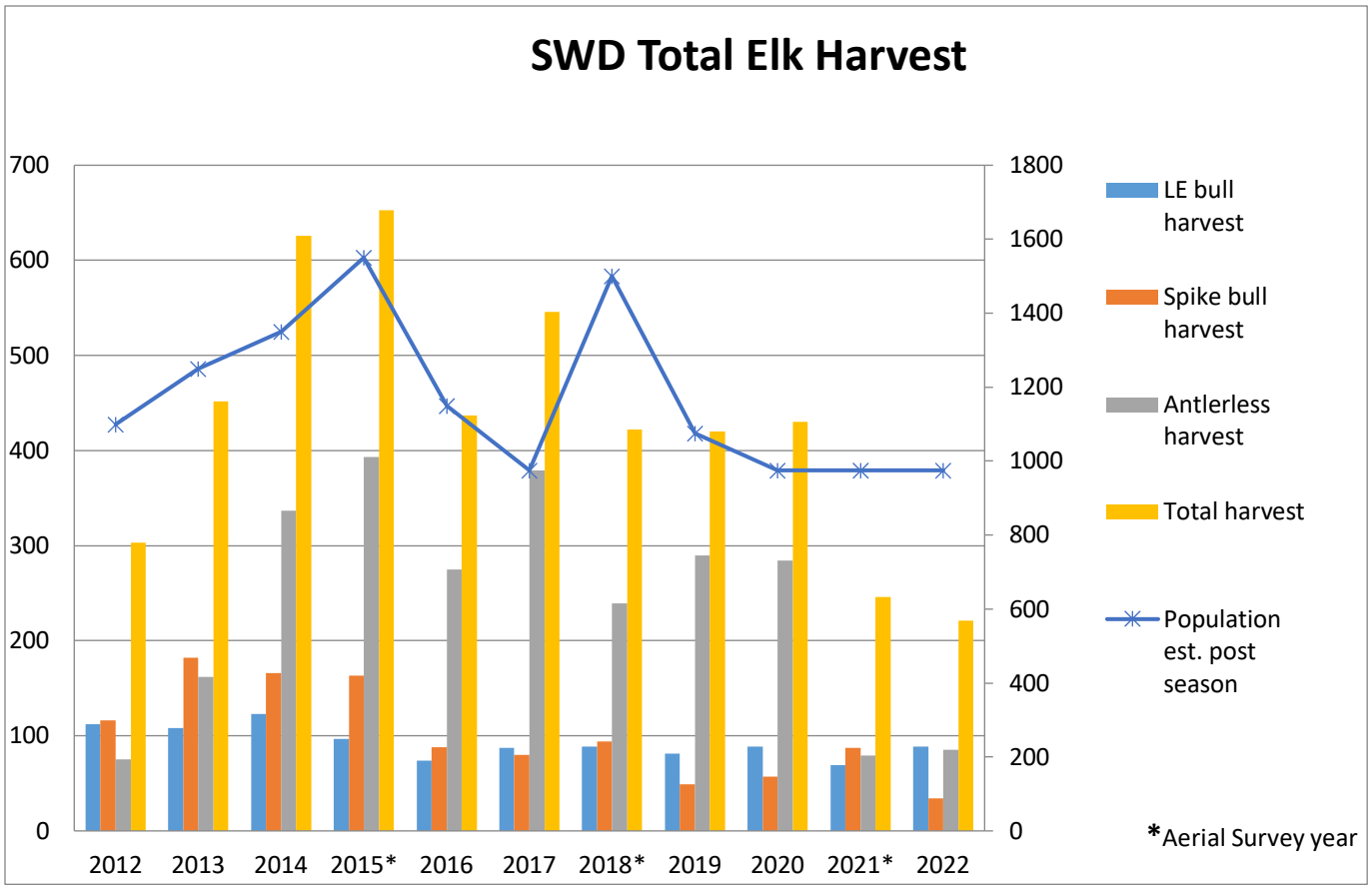
Graph 1. Is a summary of Southwest Desert elk population trend for the past ten years and projection of the population to post season 2022.

Graph 2. Shows limited entry bull permits for the past 10 years and the average age of bulls harvested.

Graph 3. Is a summary of all elk harvest on the Southwest Desert and projected harvest to reach the previous objective of 975 wintering elk.







BARRIERS TO ACHIEVING UNIT MANAGEMENT OBJECTIVES

Habitat

- Drought impacts to rangeland forage condition and abundance
- Limited summer range
- Pinion and juniper invasion into sagebrush, mountain browse and aspen communities
- The maturation of pinion and juniper forests resulting in closed canopies, which reduces perennial understory vegetation and limits forage availability and diversity
- Crop depredation could become a barrier but is not at this time
- Wild horse impacts on forage potential and destruction of natural water sources

Population

- Distributing antlerless harvest across the unit to treat localized issues and problems
- Equitable elk distribution across the herd unit
- Data from GPS collared elk is confirming the suspected winter migration from Nevada into Utah that has artificially increased the wintering populations

STRATEGIES FOR REMOVING BARRIERS AND REACHING UNIT MANAGEMENT OBJECTIVES

Habitat

Monitoring

- Continue to monitor long-term rangeland conditions and health through the permanent range trend sites.
- Annually inspect rangeland vegetative community impacts and health through habitat assessment surveys that include ocular field assessments and range rides.
- Monitoring of water sources during drought years.

Actions to Remove Habitat Barriers

- Cooperate with land management agencies to establish natural fire policies that will allow wildfires to burn in beneficial and non-threatening areas.
- Continue to cooperate with land management agencies to effectively reseed and/or rehabilitate wildfires to benefit elk and other wildlife.
- Continue with the aggressive juniper, pinion and other conifer treatment projects that target areas of invasion into sagebrush, mountain browse and aspen communities.
- Develop projects to improve vegetative diversity and perennial understory health in closed canopy pinion and juniper forests.
- The goal has been set to complete a minimum of 6,000 acres of habitat improvements each year.
- Improve existing water catchments and look for opportunities to improve water distribution.
- Work with landowners and associated agencies to limit the impacts and control the population of wild horses within the Southwest Desert.

Population

Monitoring

- Population Size: Aerial helicopter surveys are conducted every three years. Effort will be made to coordinate flights with the Nevada Department of Wildlife and data share to better understand elk population distribution and numbers. These flights and a population model are utilized to track and evaluate the elk herd distribution and annual winter population estimates. Inclusive to these efforts, annual herd classification will be conducted as warranted and possible to estimate herd productivity during non-flight years.
- Bull Age Structure: Harvested bull ages will be monitored annually through cementum annuli lab analysis of hunter-submitted central incisor teeth. Herd composition classification every three years, annual ground classification and modeling will be used to monitor population dynamics.
- Harvest: The primary means of monitoring harvest will be through the statewide uniform harvest survey. Population size will be achieved through utilizing a variety of harvest methods and seasons. Elk distribution inequities across the herd unit may also be treated through selective public antlerless harvest and hunt areas. Bull harvest numbers will be developed through the RAC and Wildlife Board process to achieve harvested bull age management objectives.
- Migration: GPS collars have been deployed on cow elk in several areas along the Utah/Nevada state line and across the unit to monitor habitat use and movement of elk between the two states.

Management Actions to Remove Population Barriers

- Depredation: Antlerless hunts will continue to be the principal means of limiting cropland depredation. Mitigation permits and vouchers will also be used. An active landowner's association receives limited entry bull permits.
- Interagency Cooperation: The increasing demands for all natural resource use within the Southwest Desert mandate close association and cooperation between all resource management agencies. While good cooperation and communication is established, this effort will be a priority and will include private landowners, BLM, SITLA, the public land grazers and sportsmen.
- Elk Population and Distribution: The Southwest Desert herd and the actual optimum population objective will be determined by factors including, but not limited to, water distribution, horse populations, social and political factors, current and future range improvements, range health, and potential species competition. Efforts to encourage elk to more uniformly utilize herd unit resources will include antlerless hunts, habitat improvements to rangeland vegetative communities, as well as water development.
- Migration: Communicate with Nevada Department of Wildlife on the timing of antlerless hunts and try to coordinate hunting seasons so that elk are not being pushed back and forth across state lines and finding refuge.

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. CWMU operators and landowners requested a mid-plan review and revisions may take place when improved data or management tools become available, or to address future issues. Unit elk plan goals, objectives, 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 unit plans.