

WILDLIFE MANAGEMENT UNIT 19 - WEST DESERT

Boundary Description

Tooele, Utah, Juab, and Millard counties - Boundary begins at the Utah-Nevada state line and I-80 in Wendover; east on I-80 to the Dugway road at Rowley Junction; south on this road to the Pony Express Road; east on this road to SR-36; north on SR-36 to SR-73; east on SR-73 to I-15; south on I-15 to US-6 at Santaquin, west and southwest on US-6 to its junction with US-50 near Delta; west on US-50 and 6 to the Utah-Nevada state line; north along this state line to I-80 at Wendover.

Management Unit Description

Management unit 19 is subdivided into three smaller subunits, Deep Creek (19A), Vernon (19B), and Tintic (19C). Of the total land area within unit 19, the majority is categorized as either transitional or winter range. Winter, transitional, and summer ranges make up 61%, 23%, and 16% of the area, respectively. The vast majority of the land within unit 19 is managed by the Bureau of Land Management.

As with nearly all of the management units within the state, the deer herds are managed to achieve a buck to doe ratio of 15:100, with 30% of the bucks being 3-point or better. The estimated winter herd size was 7,650 in 2002, 6,200 in 2003, 6,900 in 2004, and 7,000 in 2005. The management plan calls for a wintering population of 11,200 deer (Hersey and McLaughlin 2005). The management plan objectives for elk in this unit are 200 wintering animals. This objective was reached from 2002 to 2005 (Hersey and McLaughlin 2005). Most of the elk in this unit are found on the Deep Creek (subunit 19A).

Population and Habitat Management Strategies

The Vernon subunit (19B) is currently managed under the limited entry hunting status. Other portions of unit 19 are open to general season hunting for deer. Some factors that may limit success in reaching management objectives include drought conditions, crop depredation, habitat loss, and predation by cougars. To minimize these limiting factors, the following habitat management strategies will be used: 1) monitor the permanent range trend studies throughout the unit, 2) maintain and/or enhance forage production through direct range improvements throughout the unit, and 3) work with private and federal agencies to maintain and protect critical summer ranges from future losses and degradation (Deer Herd Unit Management Plan 2001).

WILDLIFE MANAGEMENT UNIT - 19A - WEST DESERT, DESERT MOUNTAIN RANGES

Boundary Description

Tooele, Utah, Juab, and Millard counties - Boundary begins at the Utah-Nevada state line and I-80 in Wendover; east on I-80 to the Dugway Road at Rowley Junction; south on this road to the Pony Express Road; southwest on this road to the Dugway Valley Road; south on this road to SR-174; southeast on SR-174 to US-6 to its junction with Highway US-50; west on US-50 and 6 to the Utah-Nevada state line; north along the Utah-Nevada state line to I-80 at Wendover and beginning point.

Management Unit Description

With few exceptions, deer summer range on the Deep Creek Mountains is generally above 7,500 feet (2,286 m) in elevation. Quality summer range and water distribution are the limiting factors for the deer population. There are approximately 65,654 acres (26,569 ha) of winter range in the unit. A majority of the winter range (72%) is located on Bureau of Land Management (BLM) administered land. Very little winter range is located on private land or on the Goshute Indian Reservation. Some winter range is also located on Division of Wildlife Resources and State Trust Lands. Winter range surrounds the Deep Creek Mountains and ranges in elevation from 7,500 feet (2286 m) down to 5,800 feet (1,768 m). Some transitional range exists, most of which is located on BLM lands.

Range Trend Studies

In 1983, six key areas were identified, on which trend studies were established. Two additional studies were added in 1989. All studies within the unit were reread in 1997. In 2002, five studies were suspended and two new studies were established. Suspended studies included Sevy Canyon (19A-3), Chokecherry Spring (19A-5), Granite Creek (19A-6), and The Basin (19A-8). Sevy Canyon, Granite Creek, and The Basin all lie within BLM wilderness study areas and were not accessible. The study at Chokecherry Spring is located on Indian lands within Nevada. It is not critical range for big game and was not read after consultation with the biologist. Two new studies, Rocky Canyon (19A-9) and Rocky Spring (19A-10) were established in 2002 to monitor big game use on west-facing slopes that border privately owned lands near Rocky Canyon. In 2007, after consultation with the area habitat biologist, Durse Canyon (19A-4) was also suspended. A new study, Ibapah Harrow (19A-11) was established on the west side of the Deep Creek Mountains to monitor the effects of a Dixie harrow on a population of Wyoming big sagebrush and big game use.

SUMMARY

WILDLIFE MANAGEMENT UNIT - 19A - WEST DESERT, DESERT MOUNTAIN RANGES

Community types

Studies for management subunit 19A are in and around the Deep Creek mountain range of the west desert, on the Utah-Nevada border. Six trend studies were monitored in 2007. Two were dominated by mountain big sagebrush, one by basin big sagebrush, one by Wyoming big sagebrush, one by Stansbury cliffrose and black sagebrush, and one by desert shrub.

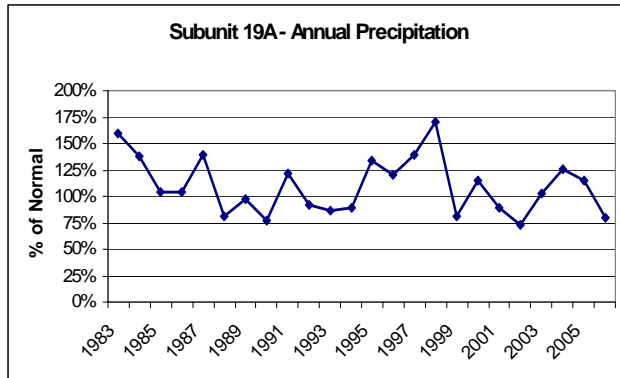


Figure 1. Percent of total annual precipitation for West Desert unit 19A from weather stations at Ibapah, Callao and Partoun (Utah Climate Summaries 2007).

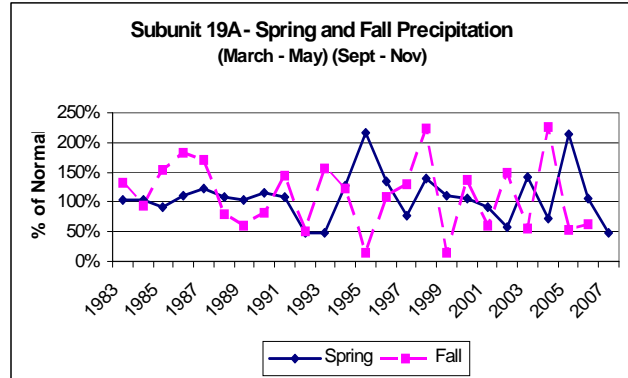


Figure 2. Percent for spring and fall precipitation for West Desert unit 19A from weather stations at Ibapah, Callao, and Partoun (Utah Climate Summaries 2007).

Precipitation

Precipitation data collected at weather stations in Ibapah, Callao and Partoun show alternating wet and dry cycles from 1983 to 2007 (Figures 1 and 2). Precipitation is the single most important factor determining the type and productivity of vegetation in and area (Holechek, 2004). The average annual precipitation for the subunit was near or below 75% of normal (drought conditions) in 1990 and 2002 (Figure 1). Spring precipitation was less than 75% of normal in 1992, 1993, 2002, 2004 and 2007 (Figure 2). Spring precipitation is important for shrub, perennial grass and forb recruitment. Fall precipitation was less than 75% of normal in 1989, 1992, 1995, 1999, 2001, 2003, 2005, and 2006 (Figure 2). Fall precipitation is important for the germination of many weedy winter annuals like cheatgrass. Two or more consecutive years of drought have far more impact on vegetation than 1 year of drought followed by normal or above-normal precipitation (Holecheck, 2004).

Browse

The cumulative browse trend shows improving browse conditions from 1983 to 1997, and declining conditions from 1997 to 2007 (Figure 3). This decline was attributed to high decadence and lack of recruitment of key species associated with drought conditions (Utah Climate Summaries 2007). Ochre Mountain (19A-2) was the only basin big sagebrush study sampled in the subunit. Average basin big sagebrush density decreased 33% in 2002 and increased 100% in 2007 (Figure 4), while average cover remained stable at 16%-17% (Figure 5). Average basin big sagebrush decadence increased 55% in 2002 and decreased 18% in 2007 (Figure 6). Mountain big sagebrush was

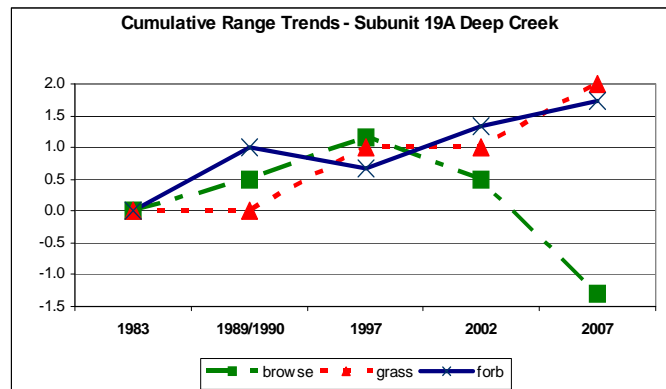


Figure 3. Cumulative range trends for subunit 19A.

sampled at Rocky Canyon (19A-9) and Rocky Spring (19A-10) beginning in 2002. Average density decreased 35% from 2002 to 2007 (Figure 4). Changes in average cover (Figure 5) of mountain big sagebrush coincided with changes in plant density (Figure 4). Mountain big sagebrush decadence increased 13% in 2007 (Figure 6). Black sagebrush was sampled at Trail Gulch (19A-1), Ochre Mountain (19A-2), and Rocky Canyon (19A-9). Average black sagebrush density increased 32% in 2002 and 24% in 2007 (Figure 4). Average cover remained stable at 2%-3% (Figure 5). Decadence increased 63% in 2002 and 19% in 2007 (Figure 6).

Grass

The cumulative grass trend was stable from 1983 to 1989, increased from 1989 to 1997, remained stable from 1997 to 2002, then increased again from 2002 to 2007 (Figure 3). Perennial grasses improved in nested frequency and cover from 1997 to 2007 (Figures 7 and 8). Cheatgrass nested frequency declined in 2002, and increased slightly in 2007 (Figure 7), while its average cover decreased in 2002 and remained stable in 2007 (Figure 8). Drought conditions, particularly recent multiple years of fall drought conditions (Figure 2) seem to correlate with a decline in cheatgrass densities. Bulbous bluegrass was sampled at only Rocky Canyon (19A-9) in 2002, and at Rocky Canyon and Rocky Springs (19A-10) in 2007.

Forb

The cumulative perennial forb trend improved in 1989, declined slightly in 1997, remained stable and increased in 2002 and 2007 (Figure 3). Perennial forbs increased steadily in nested frequency and cover between 1997 and 2007 (Figures 7 and 8).

Desirable Components Index

The DCI scores are divided into three categories based on ecological potentials, which include low, mid-level, and high. The average Desirable Components Index (DCI) rating remained fair from 1997 to 2007 for the mid-level potential scale studies (Figure 9). For the low potential scale studies, the DCI rating decreased slightly, from poor-fair in 1997 to poor in 2002, and increased slightly to fair-poor in 2007. The decrease in the DCI was due to a slight decrease in perennial grass and browse cover in 2002, and may be a product of the drought in 2002.

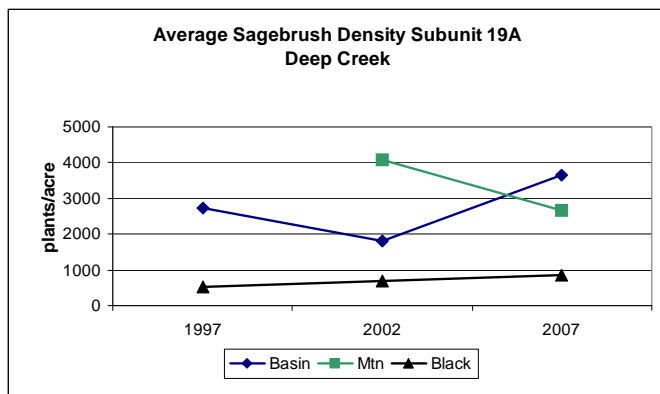


Figure 4 Average density of mountain, basin, and black sagebrush for subunit 19A.

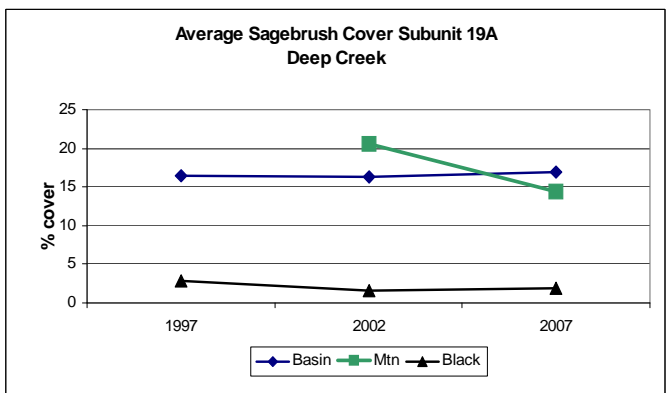


Figure 5. Average cover of mountain, basin, and black sagebrush for subunit 19A.

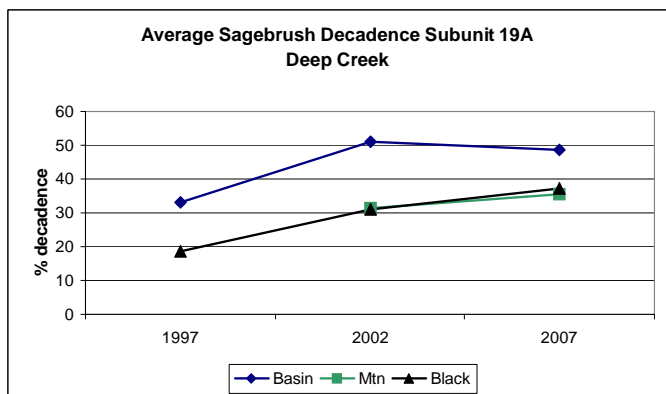


Figure 6. Average decadence of mountain, basin, and black sagebrush for subunit 19A.

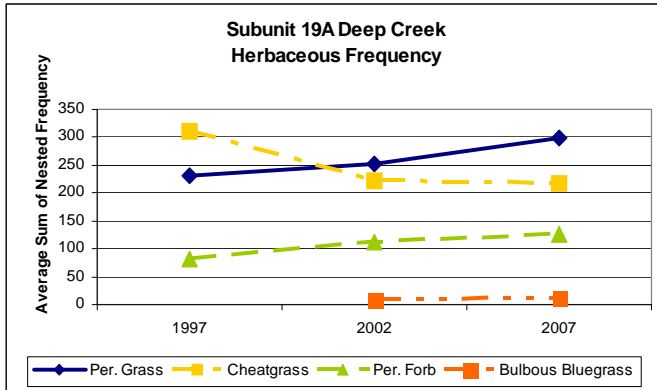


Figure 7. Average herbaceous nested frequency for subunit 19A.

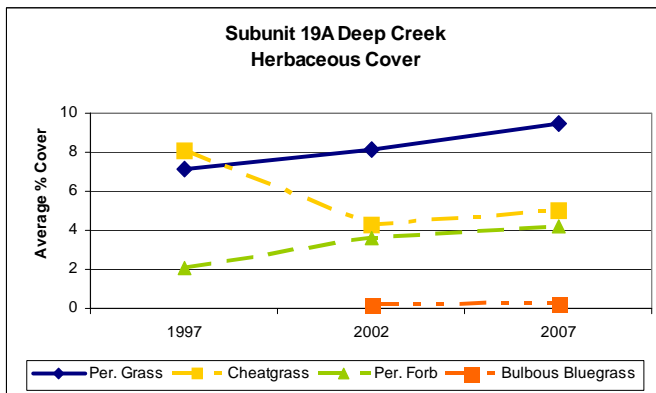


Figure 8. Average herbaceous cover for subunit 19A.

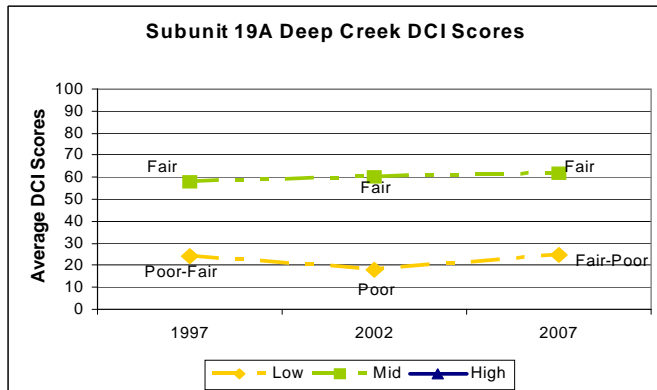


Figure 9. Average Desirable Components Index (DCI) for subunit 19A.