

## WILDLIFE MANAGEMENT UNIT 9 - SOUTH SLOPE

### Boundary Description

**Wasatch, Summit, Daggett, Uintah, Duchesne counties** -- Boundary begins at the junction of Highway US-40 and Highway SR-87 in Duchesne; then north on SR-87 to Highway SR-35; then northwest on SR-35 to the Provo River; north along the Provo River to the North Fork Provo River; north along the North Fork Provo River to Highway SR-150; northerly along SR-150 to the Summit/Duchesne county line (summit of the Uinta Mountains); east along the summit of the Uinta Mountains to Highway SR-191; north along SR-191 to Cart Creek; northeast along Cart Creek to Flaming Gorge Reservoir; east along Flaming Gorge Reservoir to the Green River; east along the Green River to the Utah-Colorado state line; south along the Utah-Colorado state line to the White River; west along the White River to the Green River; north along the Green River to the Duchesne River; northwest along the Duchesne River to US-40 at Myton; west along US-40 to SR-87 in Duchesne and beginning point; excludes Dinosaur National Monument and all Indian Tribal Lands.

### Management Unit Description

This management unit encompasses the land area of two former deer herd units, the Vernal unit (9) and the South Slope unit (8A & 8B). Currently, the South Slope unit contains an estimated 2.8 million acres of deer range with summer, year-long, and winter ranges making up 40%, 35%, and 25% of this area respectively. Of all the land area classified as deer range, 32% is managed by the U.S. Forest Service, 25% by the Bureau of Land Management, and 22% are privately owned lands. In addition, 13% are Native American trust lands, and 5% are State of Utah trust lands. The South Slope unit also contains about 1.7 million acres classified as elk range. Of this amount, 64% is classified as elk summer range, 32% elk winter range, and 4% year-long range. The U.S. Forest Service and Bureau of Land Management manage 53% and 13% of the acreage classified as elk range, with private and Native American trust lands each making up 15% of the area.

Winter range within the old Vernal deer herd unit (11) is comprised mainly of closely associated areas of pinyon-juniper woodlands on the south-facing slopes and foothill benches of Diamond, Blue, and Taylor Mountains. The upper limits generally follow the 8,500 foot contour. The lower limits are defined by agricultural lands and the desert below Vernal. Winter ranges within the old South Slope (12) unit are more limiting, and management is complicated in that a large portion of these lands are part of Uintah and Ouray Indian Reservations. Summer range within the new South Slope unit are plentiful, ranging from aspen and conifer communities, to mountain big sagebrush and mountain brush communities.

### Key Areas

Key areas for winter range consist of the small sagebrush/grass parks found throughout the pinyon-juniper woodlands, especially on the Vernal side of the unit. The sparse pinyon-juniper type predominates the foothills where diversity and productivity of desirable browse is usually relatively low. Areas with a sagebrush understory or sagebrush/grass associations are more productive. Therefore, these areas normally receive more use by big game and livestock. Key areas that sample this type are Red Mountain, Dry Fork Mountain, Island Park, and Brown's Park. Key areas at Steinaker Draw, Toliver Creek, and Brown's Park sample winter range in the pinyon-juniper type, including areas that have either been chained or burned. Higher winter ranges in the mountain brush and mountain big sagebrush zones also provide important winter range for big game in this unit, especially along the south slope of the Uinta Mountains. Key areas within these vegetation types include: Little Hole, John Starr Flat, Red Pine Canyon, Mosby Mountain, Gooseberry Spring, and Seep Hollow. Key areas in transitional and summer ranges are sampled on Taylor, Mosby, and Diamond Mountains.

## Grazing Summary

Grazing on BLM managed lands occurs under several different allotments. They are generally grazed by cattle in spring and/or summer. The Red Mountain allotment is grazed under a deferred system in either spring or fall, but not both. Dry Fork Mountain is grazed from approximately June 1 to September 15 for 470 AUM's. Actual use averages 334 AUM's per year due to a lack of water. The BLM Spring Creek allotment below Taylor Mountain has been grazed by cows in the spring (May) and late fall (November 26 to December 15) for the last 12 years. The Little Hole allotment is grazed from June 1 to October 15 for 330 AUM's. The Warren Draw allotment is permitted for 376 AUM's from May 15 to October 31. Cows use the lower areas of Browns Park on the Taylor Flat allotment in spring. The intensive annual grazing from April 1 to May 31 is planned to reduce grass-shrub competition and to promote sagebrush vigor. However, better livestock distribution is needed. Furthermore, this will not work during drought because the cattle will heavily utilize sagebrush during this grazing period when grasses are not available. There have been 1,000 AUM's permitted since 1970. The land in the drainages above Brown's Park that were burned in the 1980's are grazed only one out of every three years.

Forest Service land on Taylor Mountain is managed in a six pasture rest-rotation system with grazing occurring from June 1 to September 15. The unit in which the trend study is located supports about 500 AUM's in non-rested years for a grazing intensity of 2.9 suitable acres/AUM. The Lake Mountain allotment is grazed by 276 cows/calves from June 21 to September 30, on a four unit rest-rotation system. The Mosby Mountain allotment consists of several grazing units and has been in a rest-rotation system since 1960. Currently, this allotment is permitted for 402 cattle from June 11 to September 30. The Red Pine Canyon area is in the Whiterocks Canyon allotment and is grazed by 50 cattle on a deferred rest system. The Farm Creek allotment is on a four unit rest-rotation system permitted for 576 cattle with a season of use from June 11 to September 10. Gooseberry Spring falls in the Pigeon Water allotment which is grazed by 172 cattle on a rest-rotation system with a season of use from June 16 to September 25.

## Big Game Herd Unit Management Objectives

Deer herd population management goals call for a wintering herd size of 25,000 animals, distributed in the following sub-populations: 12,000 animals in the Yellowstone sub-unit; and 13,000 animals in the Vernal, Bonanza, and Diamond Mountain sub-units combined. The desired composition of the herd in all areas except Diamond Mountain is a post-season buck to doe ratio of 15:100 with 30% of the bucks being 3-point or better. The Diamond Mountain sub-unit will be managed for a post-season buck to doe ratio of 25:100 with the southern slope being managed as a limited entry unit (DeBloois et al. 2000).

Elk population management objectives call for a target population of 6,400 wintering animals distributed in the following sub-populations: 3,900 in the Yellowstone sub-unit; 1,300 in the Vernal/Bonanza sub-units combined; and 1,200 in the Diamond Mountain sub-unit. The desired herd composition is for a bull to cow ratio of 8:100, with at least half of the bulls being 2½ years of age or older. In the Diamond Mountain sub-unit (limited entry), a 5½ year old age class is to be maintained for harvest, with the rest of the unit being managed for general open bull hunting (DeBloois et al. 2000).

## Study Site Description

Currently, this management unit contains 22 trend studies. Twelve of these existed in the old Vernal unit (11), 8 existed in the old South Slope unit (12), and 2 new studies were established in 2000. Fourteen studies were established in 1982, and 3 additional studies were established in both 1988 and 1995 in addition to the 2 new studies established in 2000 already mentioned. Depending upon when they were established, sites were re-read in 1988, 1995 and 2000. In 2000, the study at Toliver Creek in the untreated pinyon-juniper was not read because it is in very poor condition and there was very little wildlife use. This study was originally established

to compare with the adjacent Toliver Creek Chaining trend study. The study at Mud Springs Draw was also not read due to road closures and lack of access. In 2005, four sites were suspended and one site that was suspended in 2000, Mud Springs Draw, was added back to the rotation. Dry Fork Canyon was suspended because it had recently burned and Red Pine Canyon was suspended because the access road had been washed out. Rye Grass and Brown's Park Burn and PJ were suspended because they had showed little big game use and were in close proximity to other sites.

## SUMMARY

### MANAGEMENT UNIT 9 - SOUTH SLOPE

Management unit 9 has 25 trend studies, of which 20 were reread in 2005. The five sites that were not reread in 2005 include: Dry Fork Mountain (burned), Rye Grass, Toliver Creek P-J, Browns Park PJ Burn, and Red Pine Canyon (road washed out). The study at Toliver Creek in the untreated pinyon-juniper was not reread because it is in very poor condition and there was very little wildlife sign on the site. This study was originally established to compare untreated woodland with the adjacent Toliver Creek Chaining study (9-10). It may be reread in the future but it is apparent that no significant changes have taken place since 1995. Rye Grass was suspended because of little sign of wildlife use. Dry Fork Canyon was suspended because it had recently burned and Red Pine Canyon was suspended because the access road had been washed out.

In 2000, the browse and herbaceous understory components, on the majority of studies in this unit, showed the negative effects due to drought. Because of the long term effects of drought, this trend continued in 2005 for the browse trend, but the herbaceous trends typically improved with above normal precipitation in 2005. Of the 20 trend studies reread in 2005:

The key browse species of Wyoming and mountain big sagebrush, especially important during the winter months of January thru March, have shown continuing increases in the number of decadent plants, continuing increases in the number of plants classified as dying, and corresponding decreases in their respective populations since 1995. Mountain big sagebrush, because of its inherently better site potential, has declining population characteristics that are not as severely depressed as those for Wyoming big sagebrush which always appears to occur on sites of poorer site potential. The following three series of values are averages listed in order of year sampled (1995, 2000, and 2005). These values best illustrate the differences between mountain big sagebrush and Wyoming big sagebrush sites and the continuous downward condition of sagebrush ranges in this management unit. These averages are as follows:

- percent decadence...15%, 25%, and 28% for mountain big sagebrush
- percent decadence...22%, 46%, and 62% for Wyoming big sagebrush
- percent dying..... 9%, 15%, and 21% for mountain big sagebrush
- percent dying.....12%, 22%, and 44% for Wyoming big sagebrush
- population changes..2,965 (1995) and 2,843 (2005) plants/acre for mountain big sagebrush
- population changes..3,413 (1995) and 2,366 (2005) plants/acre for Wyoming big sagebrush

The perennial herbaceous understories associated with mountain big sagebrush and Wyoming big sagebrush have similar correlated trends with regard to the innate site potentials of the two sagebrush subspecies. The following values show percent change in nested frequency for perennial grasses and forbs for both subspecies of sagebrush from 1995 to 2005:

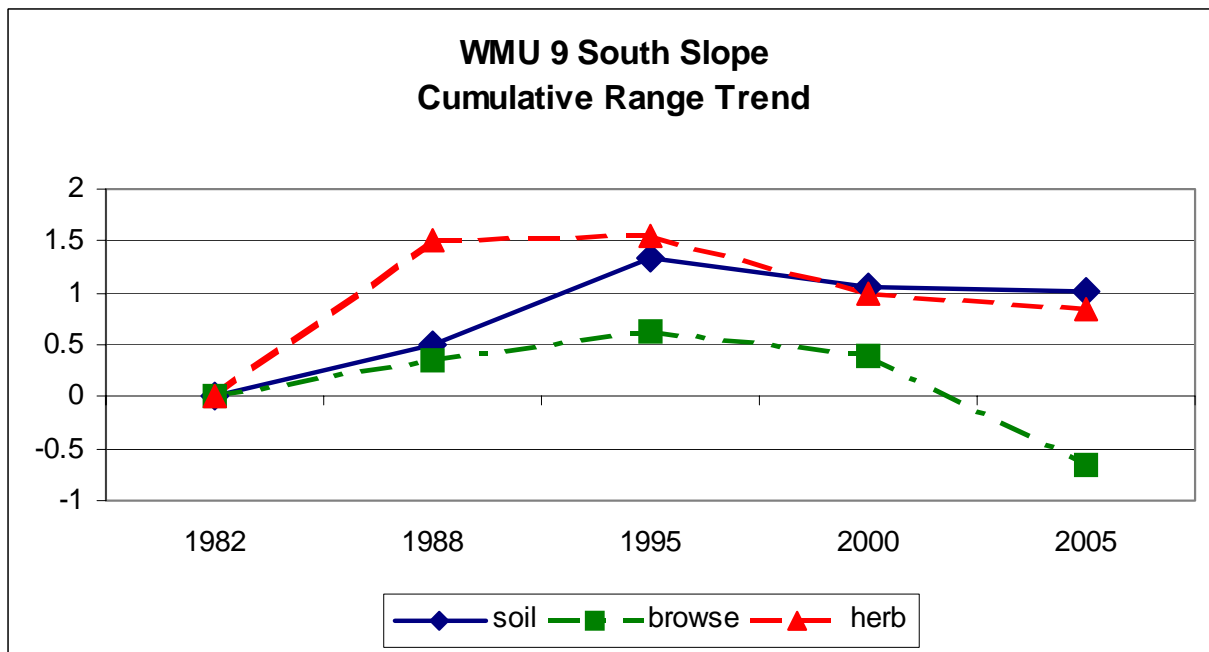
- percent change for perennial grasses... -8% for mountain big sagebrush
- percent change for perennial grasses... -20% for Wyoming big sagebrush
- percent change for perennial forbs..... -9% for mountain big sagebrush
- percent change for perennial forbs..... -29% for Wyoming big sagebrush

Increases in decadency and poor vigor in key browse populations, specifically sagebrush, resulted in a downward browse trend on over three-fourths of the studies in 2005. Above normal precipitation in 2005 helped the browse population, but several were beyond recovery levels. Seedlings were abundant on many of the sites and future observations will determine if they become established and persist in the population. The

herbaceous vegetation was more positively affected by the above normal precipitation. The trends did not necessarily reflect this change, because several of the increases were of undesirable species. Seven studies were assessed as having up or slightly up herbaceous understory trends in 2005. However, not one these sites were Wyoming sagebrush sites. Eight sites had down or slightly down trends, these were all Wyoming sagebrush sites. It should be understood that these upward trends are from 2000 are not necessarily improved from what there was in 1995. Continued normal precipitation in the future should help reduce shrub decadency and improve vigor as well. This should also result in increases in frequency and abundance for perennial herbaceous species.

Cumulative Range Trends -- WMU 9 South Slope

	1982	1988	1995	2000	2005
soil	0	0.5	1.3	1.1	1.0
browse	0	0.4	0.6	0.4	-0.7
herb	0	1.5	1.6	1.0	0.8
	14 sites	20 sites	22 sites	20 sites	20 sites



Trend Summary

	Category	1982	1988	1995	2000	2005
9-1 Red Mountain Allotment	soil	est	0	+1	0	+1
	browse	est	-1	0	-1	-2
	herbaceous understory	est	0	-1	-2	-2
9-2 Taylor Mountain	soil	est	+2	0	0	0
	browse	est	+2	0	0	-1
	herbaceous understory	est	+2	0	-1	0
9-3 Dry Fork Mountain	soil	est	+1	+1	0	NR
	browse	est	0	+1	0	NR
	herbaceous understory	est	+2	+1	0	NR
9-4 Sawtooth - Flat Spring	soil	est	+1	0	0	-1
	browse	est	+1	0	+1	0
	herbaceous understory	est	+1	0	-1	+1
9-5 Island Park	soil	est	-1	+1	0	0
	browse	est	-1	-2	-2	-2
	herbaceous understory	est	+2	+1	-2	-1
9-6 Above Steinaker Draw	soil		est	0	0	0
	browse		est	+1	-1	-2
	herbaceous understory		est	-2	-2	-1
9-7 Warren Draw	soil	est	0	0	0	0
	browse	est	+1	+1	0	-1
	herbaceous understory	est	+2	+1	-2	+1
9-8 Rye Grass	soil	est	0	+1	0	NR
	browse	est	-1	+1	0	NR
	herbaceous understory	est	+2	-2	-1	NR
9-9 Little Hole	soil	est	0	0	0	0
	browse	est	0	+1	-1	-1
	herbaceous understory	est	+2	0	-2	+2

(-2) = down, (-1), slightly down, (0) = stable, (+1) = slightly up, (+2) = up  
 (est) = site established, (NR) = site not read

	Category	1982	1988	1995	2000	2005
9-10 Toliver Creek Chaining	soil		est	+1	-1	0
	browse		est	+1	+1	-1
	herbaceous understory		est	-2	+2	0
9-11 Toliver Creek P-J	soil		est	+1	NR	NR
	browse		est	-2	NR	NR
	herbaceous understory		est	+1	NR	NR
9-12 Brown's Park P-J and Burn	soil		est	+2	+1	NR
	browse		est	+2	0	NR
	herbaceous understory		est	+2	+1	NR
9-13 John Starr Flat	soil	est	0	0	0	0
	browse	est	+1	+1	0	-2
	herbaceous understory	est	0	-2	-1	0
9-14 Red Pine Canyon	soil	est	0	0	+1	NR
	browse	est	0	0	0	NR
	herbaceous understory	est	+1	-2	0	NR
9-15 Mud Springs Draw	soil	est	0	0	NR	0
	browse	est	+1	+1	NR	-1
	herbaceous understory	est	+1	-1	NR	0
9-16 Mosby Mountain	soil	est	0	+1	0	-1
	browse	est	0	-2	0	-1
	herbaceous understory	est	+2	-1	-1	+1
9-17 Farm Creek	soil			est	0	0
	browse			est	0	-1
	herbaceous understory			est	0	+1
9-18 Gooseberry Spring	soil	est	0	+1	0	0
	browse	est	+2	+1	0	-1
	herbaceous understory	est	+2	-1	-2	+2

(-2) = down, (-1), slightly down, (0) = stable, (+1) = slightly up, (+2) = up  
(est) = site established, (NR) = site not read

	Category	1982	1988	1995	2000	2005
9-19 Mosby Mountain South	soil		est	0	0	0
	browse		est	-2	0	0
	herbaceous understory		est	+2	-1	+2
9-20 Seep Hollow	soil	est	0	+1	0	0
	browse	est	0	+1	0	+1
	herbaceous understory	est	0	+2	-1	+1
9-21 Brown's Park River Corridor-Livestock	soil				est	-1
	browse				est	0
	herbaceous understory				est	-1
9-22 Brown's Park River Corridor-Wildlife	soil				est	-1
	browse				est	-1
	herbaceous understory				est	-2
9-23 Rock Creek	soil					est
	browse					est
	herbaceous understory					est
	Category			1997	2000	2005
9-24 Brush Creek Substation	soil			est	NR	0
	browse			est	NR	-2
	herbaceous understory			est	NR	-1
9-25 Buckhorn Canyon	soil				est	0
	browse				est	-2
	herbaceous understory				est	-1

	Category	1982	1988	1995	2000	2005
<b>Average Range Trend</b>	<b>soil</b>	est	0.5	0.8	-0.3	-0.1
	<b>browse</b>	est	0.4	0.3	-0.2	-1.1
	<b>herbaceous understory</b>	est	1.5	0.1	-0.6	-0.2
Number of Sites Read		14	19	22	20	20

(-2) = down, (-1), slightly down, (0) = stable, (+1) = slightly up, (+2) = up  
(est) = site established, (NR) = site not read

Precipitation graphs for the Vernal unit. Data is percent of normal precipitation averaged for weather stations in Neola, Altamont, and Vernal (Utah Climate Summaries 2005).

