

WILDLIFE MANAGEMENT UNIT 16B - CENTRAL MOUNTAINS, MANTI NORTH

Boundary Description

Utah, Sanpete, Emery, and Carbon counties - Boundary begins at Highway SR-10 and Highway SR-31 in Huntington; then north on SR-10 to Highway US-6; northwest on US-6 to Highway US-89; south on US-89 to SR-31; southeast on SR-31 to Huntington.

Management Unit Description

Management unit 16B covers the east and west sides of the Wasatch Plateau. The eastern and western halves are roughly divided by the Skyline Drive to Soldiers Summit. The eastern half was monitored in 2004 and will next be monitored in 2009. The western half was monitored in 2002 with the Central Region and will be monitored again in 2007.

This unit was previously called the Northeast Manti Deer Herd Unit 30. In the spring of 1998, this unit was incorporated into the much larger Wildlife Management Unit #16. Most of the winter range in subunit 16B lies on the east side of the Wasatch Plateau, which rises straight up from the valley floor to ridges with heights over 9,500 feet. The winter range is a narrow strip of land along the base of the plateau below the 8,000 foot contour. It runs from Price Canyon south to Huntington Canyon. Other important winter ranges include a large section of land along the Price River in the Colton area, below Scofield Reservoir and in the mouths of several side canyons in Huntington Canyon. Elk winter ranges are found on south-facing grassy points at high elevations on the Wasatch Plateau.

Currently, 54% of the winter range in Wildlife Management Unit 16 is managed by the BLM and U.S. Forest Service. The remaining portion is primarily owned by private entities, with a small amount of acreage being owned by the DWR. Summer range is 72% Forest Service lands, 22% privately owned, with the remainder made up of state owned lands.

The Manti-North area has historically supported a variety of wildlife and outdoor recreation, livestock grazing, ranches and farms, energy developments, and some forest industry. Industrial activities on the deer herd unit are associated primarily with coal production, electrical power generation, and oil and gas development. Exploration and development activities for oil and gas have the potential for future increases. Add to this a growing demand for low-sulfur Wasatch coal, and one can begin to visualize the demands placed upon winter ranges in this area.

Power plants, pipe lines, slack piles, coal load-out facilities, ghost towns, railroads, and agriculture compete for valuable winter range property. The Huntington Canyon Power Plant alone has removed over 400 acres of critical winter range. An extensive road system provides year-round access to large portions of the winter range. Heavily used access roads to coal mines dissect important winter ranges all along the east side of the Wasatch Plateau and are accountable for significant highway deer mortality.

Herd Unit Management Objectives

There are no current specific management objectives for subunit 16B, but only unit wide objectives. The current target winter herd size for all of unit 16 is to achieve a target population size of 60,600 (38,000 wintering deer on the Wasatch Plateau or Manti Mountain Portion of the unit and 22,600 on the Nebo portion). A post season buck to doe ration of 15:100 is sought with 30% of these bucks being 3 point or better (UDWR 1998).

Key Areas

Key wintering areas for deer include Wildcat Canyon and the Gordon Creek basin, Consumers Bench, Porphyry Bench, North Spring, several areas in Huntington Canyon, Gentry Mountain, and Spring Canyon drainages. Preferred elk wintering areas include Miles Point, Reynolds Point on Trail Mountain, Telephone Bench, and Diamanti Bench.

The winter range is made up of several habitat types which include pinyon-juniper, sagebrush/grass, mountain brush, grassland, seedings, and other miscellaneous vegetation types. Pinyon-juniper woodland is the most widespread type, accounting for 40 percent of the total winter range. Unfortunately, it is also among the least productive according to the 1980 range inventory. Sagebrush grass communities make up approximately 24 percent of the winter range and probably receive the heaviest use due to the availability of preferred forage.

Eight interagency range trend studies were established in June and July of 1988. Six sites sample the big sagebrush/grass range type. One study is on a higher elevation, steep slope, dominated by perennial grass, and another is in a pinyon-juniper chaining. Two additional studies were added in 1994. Both sites are on sagebrush-grass range, one on Consumer Bench, and the other on Wiregrass Bench. Six of the studies are on BLM land including Ford Ridge (#15), Hardscrabble (#16), North Springs Bench (#19), Poison Spring Bench (#22), Consumer Bench (#23) and Wiregrass Bench (#24). Five studies occur on State land including Starvation Mahogany (#8), Starvation Mountain Brush (#9), Slackpile (#17), Porphyry Bench (#18), and Telephone Bench (#20). One study, Huntington Canyon (#21), occurs on land administered by the U.S. Forest Service.

Six special studies have been established within the last 7 years and were reread in 2004. Two paired studies were established in 1997 to monitor rehabilitation of natural gas pipelines. One pair is located on a low elevation desert shrub community and the other pair is on Porphyry Bench, which is critical winter range. North Slackpile (16R-6) was established in 1998 on Division land near Slackpile (16B-17) to monitor different grazing regimes. Gordon Creek Burn (16R-10) was established in 1999 to monitor the rehabilitation of a prescribed burn near Gordon Creek.

Grazing Summary

Most of the study sites in subunit 16B are administered by the BLM. Ford Ridge is in the Price Canyon West allotment which is grazed by 92 cattle from May 17 to November 15. This sagebrush/grass ridge receives year-round elk use. Hardscrabble is in the Crandall Canyon allotment which is grazed from May 1 to October 31 by 31 cattle. It is an important site for elk in winter. North Spring Bench is permitted for 1,000 sheep from May 1 to June 30. This is critical deer winter range. Poison Spring Bench is in the North Huntington cattle allotment which is currently utilized by 354 cows in the spring (April 22 through June 26) and 282 cows in the winter (November 1 through December 15). The management plan outlines a two pasture deferred rotation system. The upper end of the allotment where the study is located was chained and seeded in the late 1960's. The Consumer Bench site is within the Consumer Wash allotment which is grazed by 54 sheep from October 1 to April 21, when an additional 821 sheep are allotted until June 20. Wiregrass Bench occurs in the Haley allotment which is grazed by 27 cattle from May 16 to October 31 in a two pasture deferred rotation.

There are 4 trend studies that are on Division land. Slackpile and North Slackpile are grazed by cattle to favor shrubs over grasses. These 2 studies are in different pastures that are grazed every other year. This is a critical deer winter range. The other two sites are Porphyry Bench and Telephone Bench which are not grazed by livestock.

Huntington Canyon, is on U.S. Forest Service land. It occurs in the Gentry Mountain cattle allotment which is grazed by 1,440 cattle from June 27 through September 30. It is on a four pasture rest rotation schedule. This

area contains important winter range for elk and portions of the southwest side of Gentry Mountain have been designated by the Forest Service in their Land and Resource Management Plan as "Key big game winter range." This designation stipulates "the area must be available to big game and unencumbered each year during the critical winter period."

SUMMARY

DEER HERD UNIT 16B - CENTRAL MOUNTAINS, MANTI NORTH

Eight of the 10 range trend studies on the old NE Manti unit were monitored in 2004. Six other special studies located within this unit were also monitored.

The range trend studies in this unit focus on two different types of key areas related to the big game species involved. Ford Ridge (#15), Hardscrabble (#16), and Huntington Canyon (#21) were established to monitor key elk winter range. The other studies are on ranges critical to deer, although many receive elk use also. Most of the sites on the unit sample sagebrush-grass ranges. The Poison Spring Bench study (#22) is located in a pinyon-juniper chaining and Huntington Canyon samples a perennial grass range. Two studies established in 1994 at Consumer Bench (#23) and Wiregrass Bench (#24) were established to monitor possible Wyoming big sagebrush die-off on important winter ranges for deer.

The higher elevation site at Ford Ridge was suspended due to lack of use by elk, the primary reason the site was established. Hardscrabble was not read due to access problems. Huntington Canyon was the only high elevation site that was read in 2004 to monitor elk use. It currently shows slightly downward trends, which are most likely due to recent drought conditions.

The other studies in this unit are on sagebrush ranges that are critical for deer winter range. Soil trends are down for this unit. Most sites have downward trends due to loss of vegetative cover and increased bare ground. Increased erosion was noted on a few studies.

Browse trends are down for nearly every study in this unit. Wyoming big sagebrush has been hit hardest by recent drought conditions and sagebrush die off was observed on many studies. Density was significantly lower and the remaining population was decadent. Sagebrush cover was also much lower. Deer use has increased on many of these studies and will be difficult to sustain with the decline in sagebrush. Only 3 trend studies did not have downward browse trends. Poison Spring Bench (16B-22) has a stable population of black sagebrush, but it is not overly abundant. Price Pipeline South (16R-1) has a shadscale population with an upward trend following the pipeline disturbance, but this is not an area heavily used by wildlife. Gordon Creek Burn (16R-10) has an upward browse trend. This study monitors a seeded burn that is now dominated by prostate kochia. This plant is very drought tolerant, down to as little as 5 inches of precipitation per year. It is also very tolerant of heavy winter grazing and has seen a high amount of elk use.

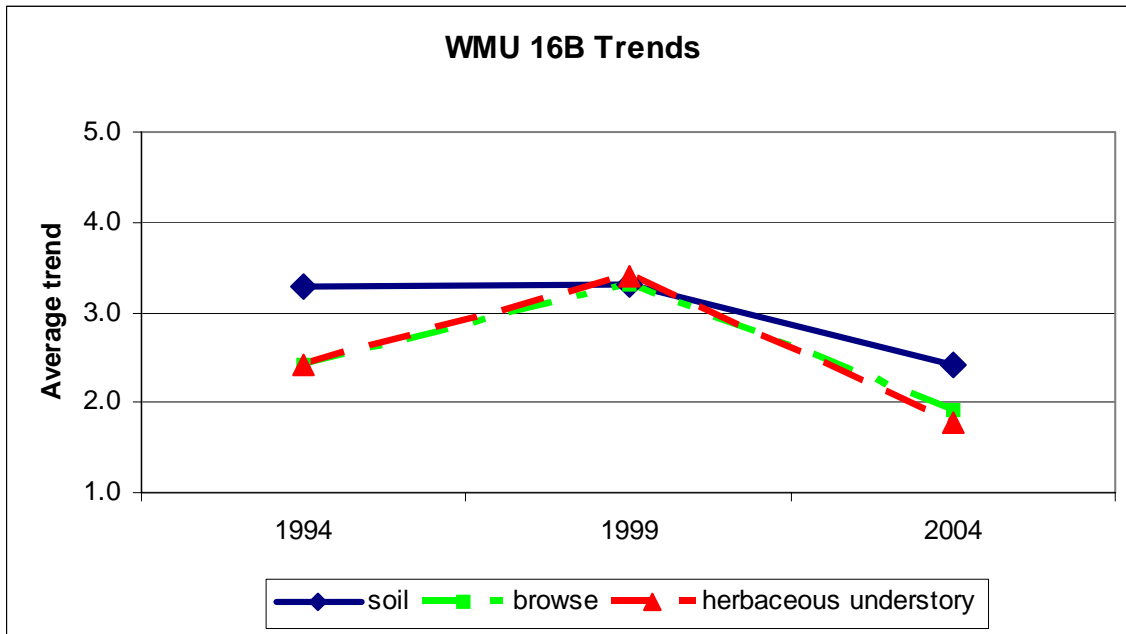
Herbaceous trends are down for every study in this unit except for Wire Grass Bench (16B-24) and a seeded pipeline on Porphyry Bench (16R-4). Drought conditions have caused a decline in herbaceous species on most sites. Trends for perennial grasses are down for each study except for Huntington Canyon (16B-21) and Wire Grass Bench (16B-24). Huntington Canyon is a high elevation site and Wire Grass Bench is slightly higher than most of the other deer winter range studies. Perennial forb trends are also down for nearly every study. Scarlet globemallow was very robust in 2004 and was abundant on most studies, probably in response to lower sagebrush densities.

Many of these range trends are driven by precipitation patterns. Utah has been in a drought for the past five years. Data from three weather stations near this subunit (Price, Helper, and Wellington) were analyzed to look at precipitation patterns since 1982 (Utah Climate Summaries 2004). Precipitation was averaged for each station and analyzed as percent of normal precipitation. Below normal precipitation is defined as less than 90% and drought as less than 75% of normal. Total annual precipitation has been below normal since 1998 with the exception of 2000. Drought conditions have persisted since 2001. Drought was also seen from 1988 to 1991. 1993 and 1994 were also below normal. Seasonal distribution of precipitation was also analyzed for spring (April-June) and fall (September-November). Spring precipitation is important for cool season grasses

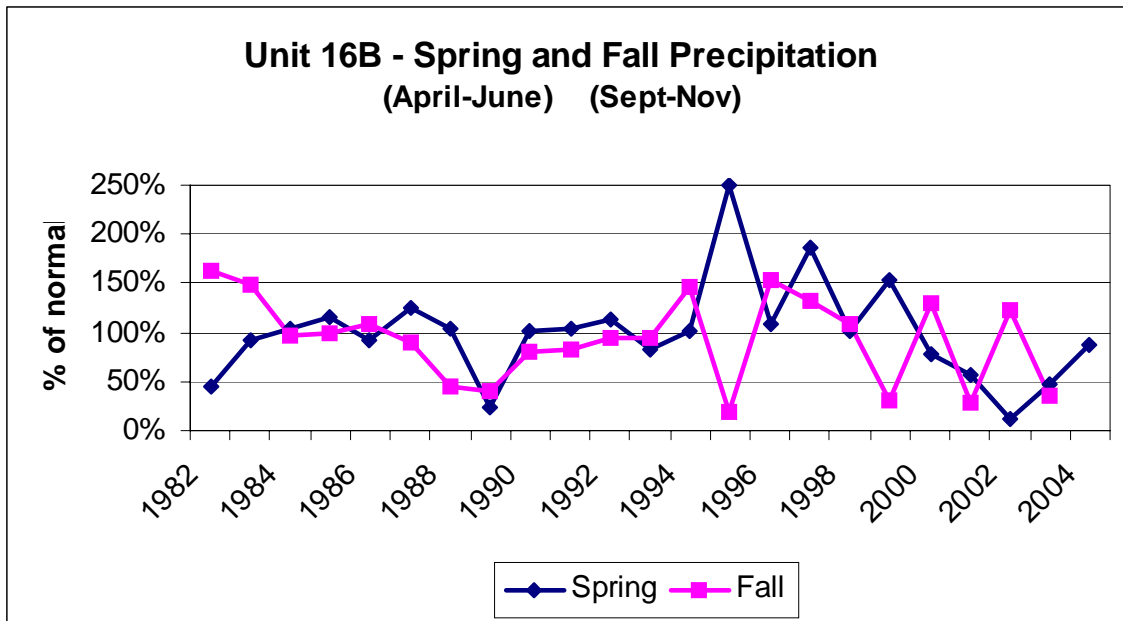
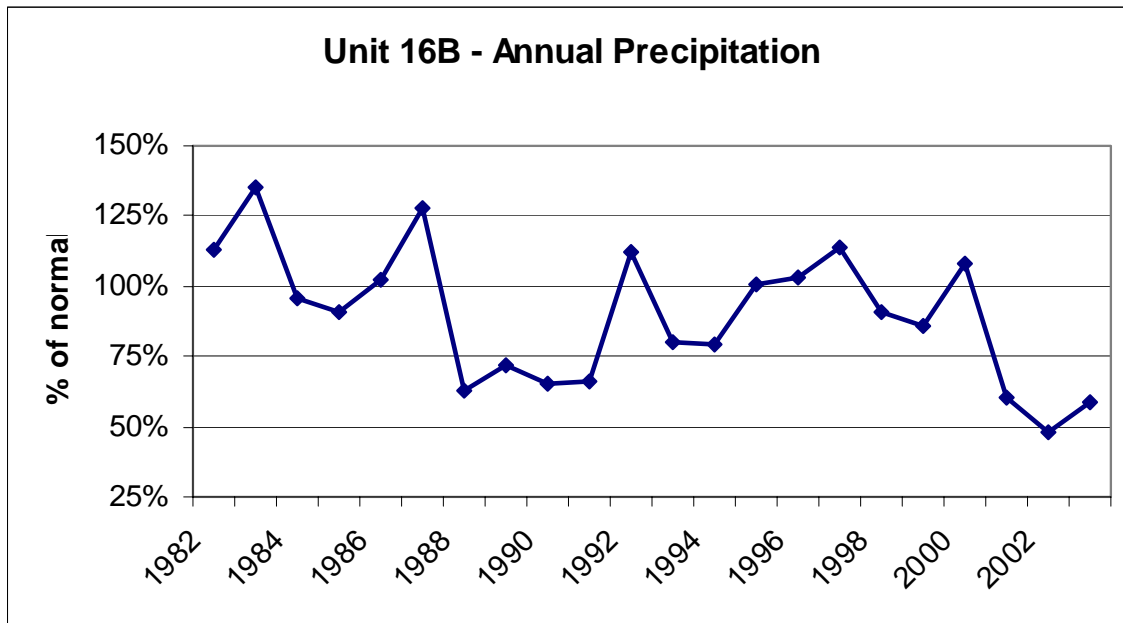
and forbs, as well as shrubs that initiate growth during this period. Spring precipitation has been below normal since 2000. Spring precipitation in 2002 was only 12% of normal and the entire year was only 48% of normal. Fall precipitation was very low at only about 30% of normal in 1999, 2001, and 2003 (see graphs below).

Average Trends -- WMU 16B Manti North

	1994	1999	2004
soil	3.3	3.3	2.4
browse	2.4	3.3	1.9
herbaceous understory	2.4	3.4	1.8
	8 sites	10 sites	16 sites



Precipitation graphs for Manti North unit. Data is percent of normal precipitation averaged for 3 weather stations at Price, Helper, and Wellington (Utah Climate Summaries 2004).



Trend Summary

	Category	1988	1994	1999	2004
16B-15 Ford Ridge	soil	est	3	1	susp
	browse	est	3	2	susp
	herbaceous understory	est	2	4	susp
16B-16 Hardscrabble	soil	est	2	4	NR
	browse	est	3	4	NR
	herbaceous understory	est	2	5	NR
16B-17 Slackpile	soil	est	4	3	2
	browse	est	2	3	1
	herbaceous understory	est	2	3	2
16B-18 Porphyry Bench	soil	est	4	3	2
	browse	est	3	3	1
	herbaceous understory	est	4	3	1
16B-19 North Spring Bench	soil	est	4	4	2
	browse	est	1	4	1
	herbaceous understory	est	2	3	2
16B-20 Telephone Bench	soil	est	3	3	2
	browse	est	2	4	1
	herbaceous understory	est	3	3	2
16B-21 Huntington Canyon	soil	est	3	4	2
	browse	est	3	3	2
	herbaceous understory	est	3	3	2
16B-22 Poison Spring Bench	soil	est	3	3	3
	browse	est	3	3	3
	herbaceous understory	est	2	3	1
16B-23 Consumer Bench	soil		est	4	2
	browse		est	3	1
	herbaceous understory		est	3	1

(1) = down, (2), slightly down, (3) = stable, (4) = slightly up, (5) = up
 (est) = established, (n/a) = no trend, (susp) = suspended, (NR) = not read

	Category	1994	1999	2004
16B-24 Wire Grass Bench	soil	est	4	2
	browse	est	4	2
	herbaceous understory	est	4	3

Special Studies Summary for WMU 16B

	Category	1997	2004	
16R-1 Price Pipeline South	soil	est	3	
	browse	est	4	
	herbaceous understory	est	1	
16R-2 Price Pipeline Native South	soil	est	3	
	browse	est	2	
	herbaceous understory	est	1	
16R-3 Price Pipeline Native North	soil	est	2	
	browse	est	1	
	herbaceous understory	est	2	
16R-4 Price Pipeline North	soil	est	4	
	browse	est	n/a	
	herbaceous understory	est	3	
	Category	1998	2004	
16R-6 North Slackpile		est	2	
		est	1	
		est	2	
	Category	1999	2001	2004
16R-10 Gordon Creek Burn	soil	est	4	3
	browse	est	5	5
	herbaceous understory	est	1	2

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