

2.5 Grazing

2.5.1 Key Issues

Key issues for grazing include:

- Temporary and permanent loss of Animal Unit Months (AUMs);
- Temporary and permanent loss of water-related range improvements;
- Temporary and permanent loss of other range improvements; and
- Increased number and distribution of livestock water sources (i.e., artificially created creeks and ponds) as a result of water being discharged from oil, gas, and mine development operations.

2.5.2 Study Area

The study area for grazing includes all or portions of Sheridan, Johnson, Campbell, and Converse counties (see **Figure 1-1**). It includes most of the area administered by the BLM Buffalo Field Office, a portion of the area administered by the BLM Casper Field Office, and a portion of the TBNG, which is administered by the FS (see **Figure 1-2**). State and private lands also are included in the study area (see **Figure 1-3**).

2.5.3 Current Conditions

BLM- and FS-administered allotments in the Wyoming PRB study area include privately owned and state owned land, as well as federally-administered lands. Because the majority of the Wyoming PRB study area consists of rangeland, most of which is privately owned, livestock grazing is one of the primary land uses within the study area. Livestock grazing also occurs on lands administered by the BLM, FS, and State of Wyoming. BLM-administered rangeland within the Wyoming PRB study area is managed by the Buffalo Field Office (Sheridan, Johnson, and Campbell counties) and the Casper Field Office (northern portion of Converse County). FS-administered rangeland within the study area is part of the TBNG, which is managed by the Douglas Ranger District. A summary of the number of allotments, lessees, and AUMs on federally-administered lands in the Wyoming PRB study area is presented in **Table 2.5-1**. Discussions relative to rangeland administered by the various BLM and FS offices in the study area are presented below. State-administered rangeland is leased for livestock grazing and is managed by the State of Wyoming.

2.5.3.1 BLM-administered Rangeland

Livestock grazing that occurs within the Wyoming PRB study area on BLM-administered rangeland in the Buffalo Field Office area includes all or part of 479 grazing allotments, which cover a total of approximately 761,000 acres with an associated 398 lessees and 433 grazing leases (**Figure 2.5-1**). The majority of BLM grazing allotments that occur in the study area are leased by an individual lessee, although several allotments are leased by two or more lessees. The majority of leases have year-long authorization, which means the lessees have the option to use the public lands when they choose during the year; however, it does not allow for year-round grazing. Most grazing lessees use a rotation grazing system. The allotments with large parcels of public rangeland are divided into numerous pastures. Livestock grazing within these allotments occurs on a rotational basis.

The majority of ranch operations in the BLM Buffalo Field Office management area consist of cow/calf pairs (approximately 86 percent) and yearlings, and the remainder consist of sheep operations (approximately 10 percent), horses (approximately 4 percent), and indigenous livestock (i.e., bison and yaks) (less than 1 percent). Based on an average stocking rate for these allotments of 5 to 7 acres per AUM (BLM 2012), the preferred livestock use on BLM-administered land within the Wyoming PRB study area averages approximately 126,833 AUMs. However, average stocking rates may vary widely based on ecological site conditions and annual precipitation levels (BLM 2012). As a result, the currently

authorized livestock use on BLM-administered land within the Wyoming PRB study area is approximately 35,583 AUMs (BLM 2012). An AUM is the amount of forage necessary to support 1 cow and calf, 5 sheep, 1 horse, or 1 indigenous animal for 1 month. There are no suspended AUMs on any of the allotments.

Table 2.5-1 Rangeland Summary for Federally-administered Lands in the Study Area

Allotments, Lessees, and AUMs ¹	BLM-administered Rangeland	FS-administered Rangeland	Total
Number of Grazing Allotments	530	73	603
Acres of Rangeland ²	853,000	247,000	1,100,000
Number of Lessees ³	450	NA	NA
Number of Grazing Leases ³	485	NA	NA
AUMs ⁴	143,560	56,977	200,537

¹ Reflects portions of allotments within the Wyoming PRB study area.

² Acreages include lands managed under the Bankhead-Jones Farm Tenant Act. The FS administers all Bankhead-Jones land that falls within the TBNG, and the BLM administers those outside the TBNG.

³ Data not available.

⁴ Total AUMs calculated based on average stocking rates for the respective management areas.

Sources: BLM 2012; FS 2012.

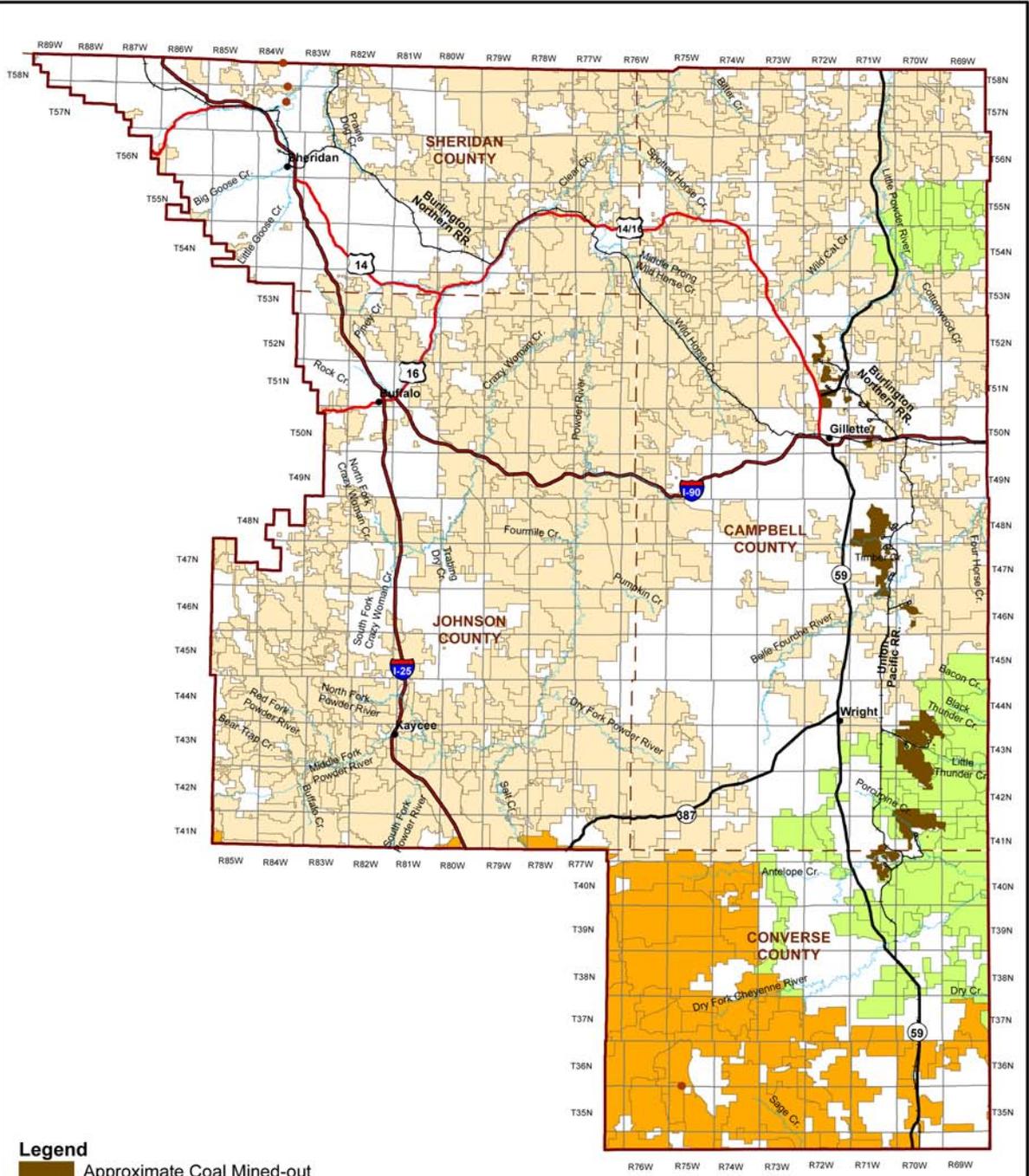
Livestock grazing that occurs within the Wyoming PRB study area on BLM-administered rangeland in the Casper Field Office area includes all or part of 51 grazing allotments, which cover a total of approximately 92,000 acres with an associated 52 lessees and 52 grazing leases (**Figure 2.5-1**). The majority of the BLM grazing allotments that occur in the study area are leased by an individual lessee and most of the leases have year-long authorization. A small number of the allotments include large parcels of public rangeland that are divided into numerous pastures. Livestock grazing within these allotments occurs on a rotational basis despite the fact that the lease often authorizes use for the entire year.

The majority of the ranch operations in the Casper Field Office management area consist of cow/calf pairs (approximately 61 percent) or sheep operations (approximately 31 percent). A small portion of ranch operations consist of horse or goat operations (approximately 7 and 1 percent, respectively). Based on an average stocking rate for these allotments of 5 to 6 acres per AUM (BLM 2012), the preferred livestock use on BLM-administered land within the Wyoming PRB study area averages approximately 16,727 AUMs. However, average stocking rates may vary widely based on ecological site conditions and annual precipitation levels (BLM 2012). As a result, the currently authorized livestock use on BLM-administered land within the Wyoming PRB study area is 3,535 AUMs (BLM 2012). There are no suspended AUMs on any of the allotments.

2.5.3.2 FS-administered Rangeland

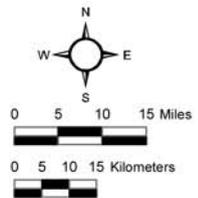
Livestock grazing that occurs within the Wyoming PRB study area on FS-administered rangeland in the southern portion of the TBNG includes all or part of 58 grazing allotments, which cover a total of approximately 200,000 acres (**Figure 2.5-1**). The majority of the FS grazing allotments that occur in the Wyoming PRB study area are leased by an individual lessee, although several allotments are leased by two or more lessees (i.e., community allotments). Within these community allotments, lessees use separate pastures or in rare instances utilize the same pasture at different times of the year. The majority of leases have year-long authorization. A small percentage of lessees choose to utilize rangeland on a year-long basis. A small number of allotments include large parcels of public rangeland that are divided

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Legend

- Approximate Coal Mined-out Area through 2008
- Former Surface Coal Mine Site
- Buffalo Field Office Allotment
- Casper Field Office Allotment
- Thunder Basin National Grassland Allotment
- County
- River or Stream
- Railroad



**Powder River Basin
Coal Review**

Figure 2.5-1
Range Allotments

Sources: BLM 2010, 2012; FS 2012.

into numerous pastures. Livestock grazing within these allotments occurs on a rotational basis despite the fact that the lease often authorizes use for the entire year.

The majority of ranch operations in the southern portion of the TBNG consist of cow/calf pairs and yearlings, and, to a lesser extent, sheep. Based on an average stocking rate for these allotments of 4.5 acres per AUM (FS 2012), the preferred livestock use on FS-administered land within the Wyoming PRB study area averages approximately 44,444 AUMs. However, average stocking rates may vary widely based on ecological site conditions and annual precipitation levels.

Livestock grazing that occurs within the Wyoming PRB study area on FS-administered rangeland in the northern portion of the TBNG (i.e., Spring Creek Unit north of Gillette, Wyoming) includes all or part of 15 grazing allotments, which cover a total of approximately 47,000 acres (**Figure 2.5-1**). The majority of FS grazing allotments that occur in the study area are leased by an individual lessee, although several allotments are leased by two or more lessees (i.e., community allotments). Within these community allotments, lessees use separate pastures or in rare instances utilize the same pasture at different times of the year. The majority of leases have year-long authorization. A small percentage of lessees choose to utilize rangeland on a year-long basis. A small number of allotments include large parcels of public rangeland that are divided into numerous pastures. Livestock grazing within these allotments occurs on a rotational basis despite the fact that the lease often authorizes use for the entire year.

The majority of ranch operations in the northern portion of the TBNG consist of cow/calf pairs (89 percent) and sheep (10 percent). Horses also utilize rangeland within this area but only comprise 1 percent of all grazing within the area. Based on an average stocking rate for these allotments of 3.5 to 4.0 acres per AUM (FS 2012), the preferred livestock use on FS-administered land within the Wyoming PRB study area averages approximately 12,533 AUMs. However, average stocking rates may vary widely based on ecological site conditions and annual precipitation levels.

2.5.3.3 Range Improvements

A wide array of range improvements have been completed on the allotments in the PRB study area to better control livestock for management purposes. These range improvements include fences, cattle guards, weed control, erosion control, prescribed burns, reclaimed areas, springs, water pipelines, reservoirs, water wells, and access roads. Mapped locations for all of the improvements within the study area are not available.

2.5.3.4 Existing Impacts

Based on GIS analysis, the cumulative surface disturbance associated with energy-related development activities in the Wyoming PRB study area (as of the end of base year 2008) have resulted in the loss of approximately 104,082 acres of rangeland, 74,306 acres of which occur on BLM-administered allotments and 29,777 acres which occur on FS-administered allotments. Approximately 2,076 acres of the existing disturbance on the BLM-administered allotments are related to coal mine development. The majority of the surface disturbance in the Wyoming PRB study area has occurred on private property. Using an average stocking rate of 6.0 acres per AUM on BLM-administered land in the study area and an average stocking rate of 4.0 acres per AUM on FS-administered land, existing development-related disturbance has resulted in the loss of 12,384 and 7,444 AUMs, respectively.