Practice Stocking Rate Question 2018

Information from the Web Soil Survey is attached for the Blackburn Draw Allotment just northeast of Hanksville, UT. This is a BLM allotment situated between Capital Reef and Canyon Lands National Parks.

- Look at the range resources in the Blackburn Draw Allotment (download at https://goo.gl/yoF3HC).
- The allotment, is dominated by native grasses and salt-desert or sand shrubs. The vegetation production is low because the long-term average precipitation from the area is only 5.6" per year occurring mostly in the fall (August through October).

Forage Availability – Based on the information in the Web Soil Survey, how much forage is available on the ranch? Basic assumptions:

- About 240 acres of the Sheppard Loamy Fine Sand (Soil Map Unit = 99) is quite far from water. Only about half of the forage on this 240 acres is accessible.
- Because precipitation is low in the region, a proper use factor of about 40% would be appropriate.
- There are no restrictions due to slope or other factors.

1) How many pounds of available forage is grazable in a **FAVORABLE** year? *9,025,480 *.4 = 3,610,192 lbs*

Henry Mountains Area, Utah, Parts of Garfield, Kane, and Wayne Counties

Map unit symbol	Map unit name	Acres	Accessible Acres	Favorable (lbs/acre/year)	Total Production
35	Farb-Farb,very shallow-Rock outcrop complex	1,055	1,055	230	242,650
64	Monue loamy fine sand	1,877	1,877	540	1,013,580
99	Sheppard loamy fine sand	10,843	10,723	630	6,755,490
113	Trachute-Sheppard complex	1,920	1,920	528	1,013,760
	Total =	15,695	15,575		**9,025,480**

Accessible Acres × lbs/arce/year

Suptact 120 acres because only half of 240 acres is accessible.

Forage Demand -

- The primary wildlife on the allotment are pronghorn. The BLM estimates that there are about 20 antelope that live on the allotment year-round. (Average weight 100 lbs; with intake factor of 3.5% of body weight/day)
- There is also occasional occurrence of wild horses that wander into the allotment from the Robber's Roost Herd Management Area. The BLM estimates that there is about 45 horse days of use each year. (Average weight 850 lbs; with intake factor of 3.5% of body weight/day)

2) How much forage do you expect **pronghorns** eat in a season? *25,550 lbs*
*100 lbs × 3.5% = 3.5 lbs/day * 365 = 1,277.5 lbs * 20 = 25,550 lbs for pronghorn*

3) How much forage do you expect **horses** eat in a season? *1,339 lbs*
*850 lbs × 3.5% = 29.75 lbs/day * 45 horse days = 1,339 lbs for horses*

4) After pronghorn and horses are accounted for, how many pounds of forage will be available for cattle on the ranch? *8,998,591* pounds
3,610,192 - 25,550 - 1,339 = 3,583,303 lbs

What is a reasonable stocking rate including livestock, pronghorn, and horses? *3.28* acres/AUM
3,583,303 lbs/750 lbs = 4,778 AUMs (Note: divide by 750 because there 1 AUM = 750 lbs)
15,695 acres/ 4778 AUMs = 3.28 acres/AUM