Western National FFA Rangeland Assessment Event
Management Scenario- Fall 2013

Bear River Ranch

Recently, you have purchased the Bear River Ranch in Evanston, Wyoming. The ranch is situated on the sagebrush hills overlooking the Bear River.

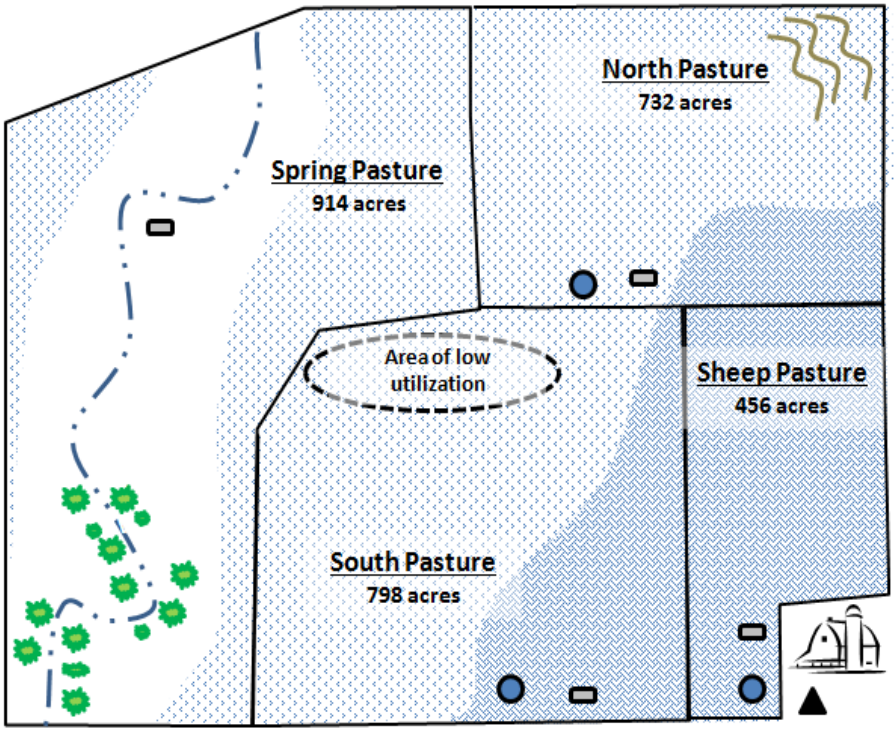
- Sage-Grouse, mule deer, and pronghorn are common across the ranch.
- The North Pasture, Sheep Pasture and South Pastures each contain one water trough that is connected to a well located near the ranch headquarters and the Spring Pasture has an ephemeral creek that only runs water early in the season.
- While touring the ranch you noticed off-road vehicle trails on the slopes in the North Pasture. Runoff from recent rains have begun to form gullies and rills on the trails.

Current Grazing Plan

The ranch is currently grazing 432 cows, 10 bulls and 350 ewes with lambs, and you would like to know if you should increase or decrease the number of livestock grazing on the ranch. You are also planning to follow the same grazing program as the previous owner. Your grazing program would go as followed:

Cows (1100 lbs each)	Bulls (2000 lbs each)	Ewes (200 lbs each)
• Cows winter and calve off the ranch • Spring Pasture: May 25th - June 25th (32 days) • North Pasture: June 25th - July 25th (30 days) • BLM allotment: July 25th - October 15th (not included in this problem) • South Pasture: Oct. 15th - Nov. 18th (35 days)	• Only on the ranch for 37 days during the breeding season • May 25th - June 30th	• Sheep winter and lamb off the ranch • Sheep Pasture: May 1st - June 1st (32 days) • South Pasture: June 1st - July 3rd (33 days) • North Pasture: July 3rd - Aug. 10th (39 Days) • BLM allotment (not included in this problem)

- According to the previous owner the Sheep Pasture has always been grazed by the sheep early in the spring because it is easy to keep an eye on the new lambs. However, you have noticed that most pastures have a good diversity of forbs except for the Sheep Pasture.



Well
Ephemeral stream
Salt
Salt cedar
Headquarters
Water trough
Rills and gullies

Sites

Three ecological sites occur on the ranch that have a recommended utilization rate of 45%

Crooked Creek Silt Loam, 0 to 6% slope. Site occupies 25% of total acres on ranch. This site consists of willow species, greasewood, sedges, and rushes near the stream areas. This site receives 8-12 inches of precipitation annually. On a normal year the site produces 1075 lbs/acre. Noxious weeds such as salt cedar may be present in riparian areas.

Rickman Loam, 6 to 10% slope. Site occupies 45% of total acres on ranch. This site consists of Wyoming big sagebrush, Bluebunch wheatgrass, Letterman's needlegrass, and Sandberg bluegrass. It receives 10-12 inches of precipitation annually. On a normal year the site produces 1200 lbs/acre.

Elkol Clay Loam, 6 to 10% slope. Site occupies 30% of total acres on ranch. This site is dominated by shrubs such as winterfat, Wyoming big sagebrush and rabbitbrush. Grasses include Indian ricegrass and Bottlebrush squirreltail. The site receives 8-10 inches of precipitation annually. On a normal year the site produces 900 lbs/acre.

CHAPTER NAME: KEY _____ STUDENT ID #: _____

Part 5 - Stocking Rate and Management Recommendations

90 pts

Completed at beginning or end of event -- *Students will complete the problem individually but at the same time as a group.*

Supply of usable forage = 1,407,768.8 pounds AND 1877 AUMs *30 pts*

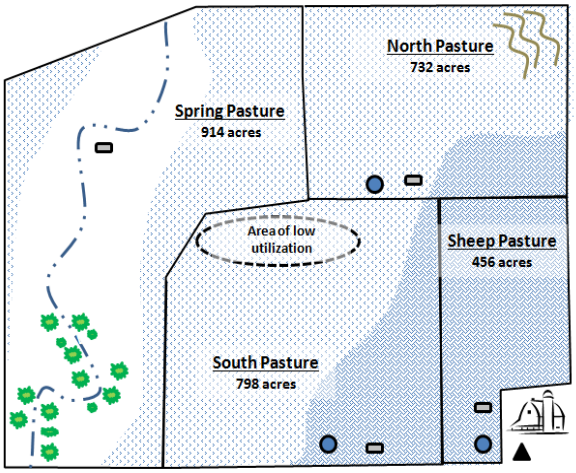
Forage demand = 1,352,860 pounds AND 1803.8 AUMs *30 pts*

Determine if the stocking rate is appropriate for the site. (Check appropriate box) *10 pts*

❒ Decrease Stocking Rate ❒ Increase Stocking Rate ✖ Keep Rate the Same

Because the stocking rate is within 5% of the current one you would keep the stocking rate the same

Space for Calculations:



Supply

Total acres: 2900

Crooked creek: 25% of 2900 acres = 725 acres x 1075 lbs/acre = 779375 lbs
Rickman: 45% of 2900 acres = 1305 acres x 1200 lbs/acre lbs = 1566000 lbs
Elkol: 30% 0f 2900 aces = 870 acres x 900 lbs/acres = 783000 lbs

Total lbs = 3,128,375 x 45% (utilization rate)

= 1,407,768.8 lbs usable forage / 750
= 1877 usable AUMs

Demand (2 ways to figure it)

Cow - 1100 lbs x 2.5% = 27.5 lbs x 432 cows = 11880 lbs x 97 days = 1152360 lbs
Ewes - 200 lbs x 2.5% = 5 x 350 ewes = 1750 lbs x 104 days = 182000 lbs
Bulls – 2000 lbs x 2.5% = 50 x 10 bulls = 500 lbs x 37 days = 18500 lbs

1,352,860 total lbs forage demand / 750 = 1,803.8 total AUM demand

Cows – 1100 lbs / 1000 lbs AU = 1.1 AUE
97 days/30 days in month = 3.2 months
1.1 x 432 cows = 475.2 AUM x 3.2 months = 1520.64 AUM
Bulls – 2000 lbs / 1000 lbs AU = 2 AUE
37 days /30 days = 1.2 months
2 AUE x 10 bulls = 20 AUMS x 1.2 months = 24 AUMs
Ewes – 200 lbs /1000 lbs AU = .2 AUE
104 days / 30 days a month = 3.5 months
.2 AUE x 350 sheep = 70 AUMs x 3.5 months = 245 AUMs

Total AUMs – 1789.6 x 750 lbs = 1,342,200 total lbs

Both answers were accepted

Choose management activities that apply to this site *(Select "Yes" for all that apply; 2pts each)* *20 pts*

Yes	No		Yes	No	
✖	❒	Defer from spring grazing	✖	❒	Control brush, trees and/or noxious weeds
❒	✖	Rest from grazing for a growing season	❒	✖	Seed or interseed with adapted species
✖	❒	Install a rotation grazing system	✖	❒	Reduce human recreation activities on site
❒	✖	Add or revise fencing	❒	✖	Manage for endangered species
✖	❒	Develop additional water sites	✖	❒	Change salt location