

Collaborative Adaptive Rangeland Management



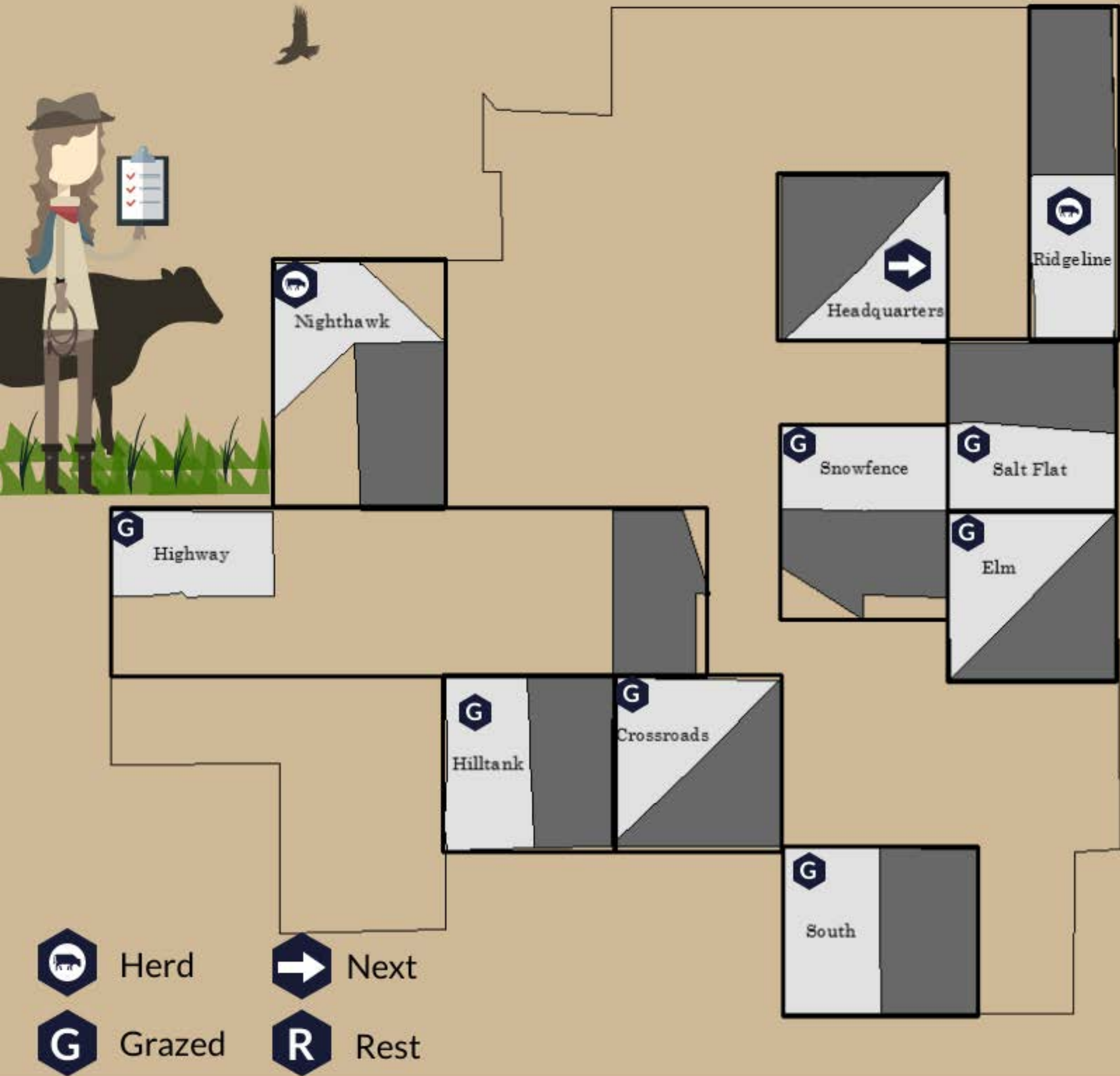
Review where it all began





Dive into the details...

CARM 2 moved!



Nighthawk

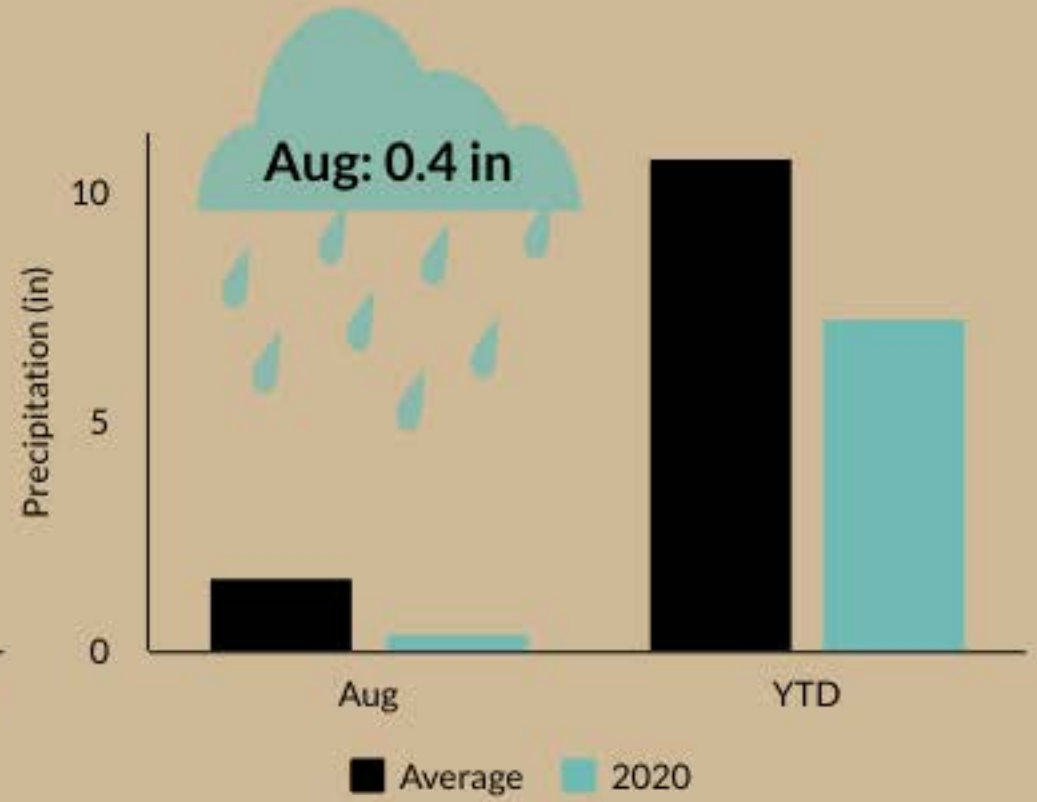
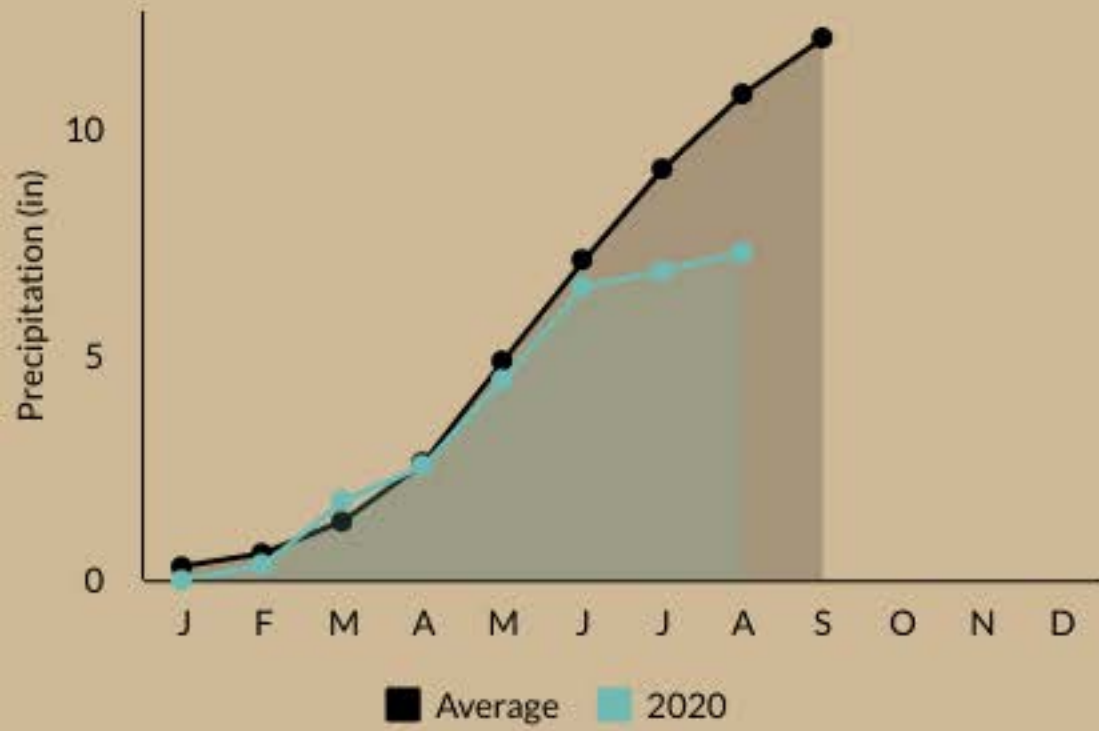
Ridgeline

- Loamy Soils
- Warm Season Grasses
- Vegetation Threshold:
 - 300 pounds/acre

- Mixed Soils
- Cool & Warm Season Grasses
- Vegetation Threshold:
 - 400 pounds/acre

Highlights of Happenings

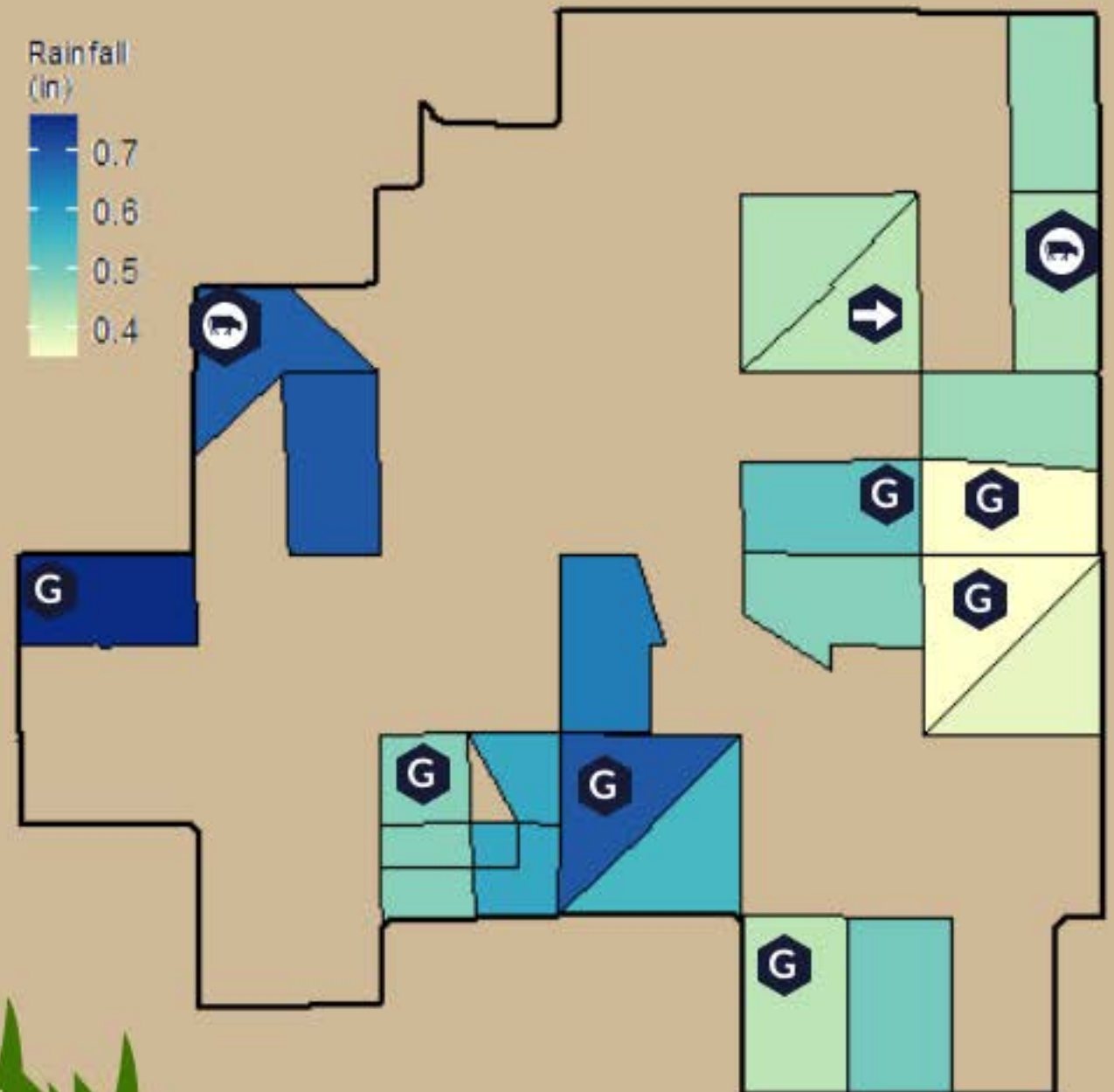
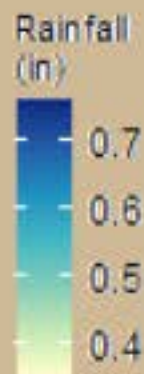
Rainfall Totals



Total Rainfall

2020-07-29 to 2020-08-05

Rainfall Distribution



Drought Monitor

Grass-Cast



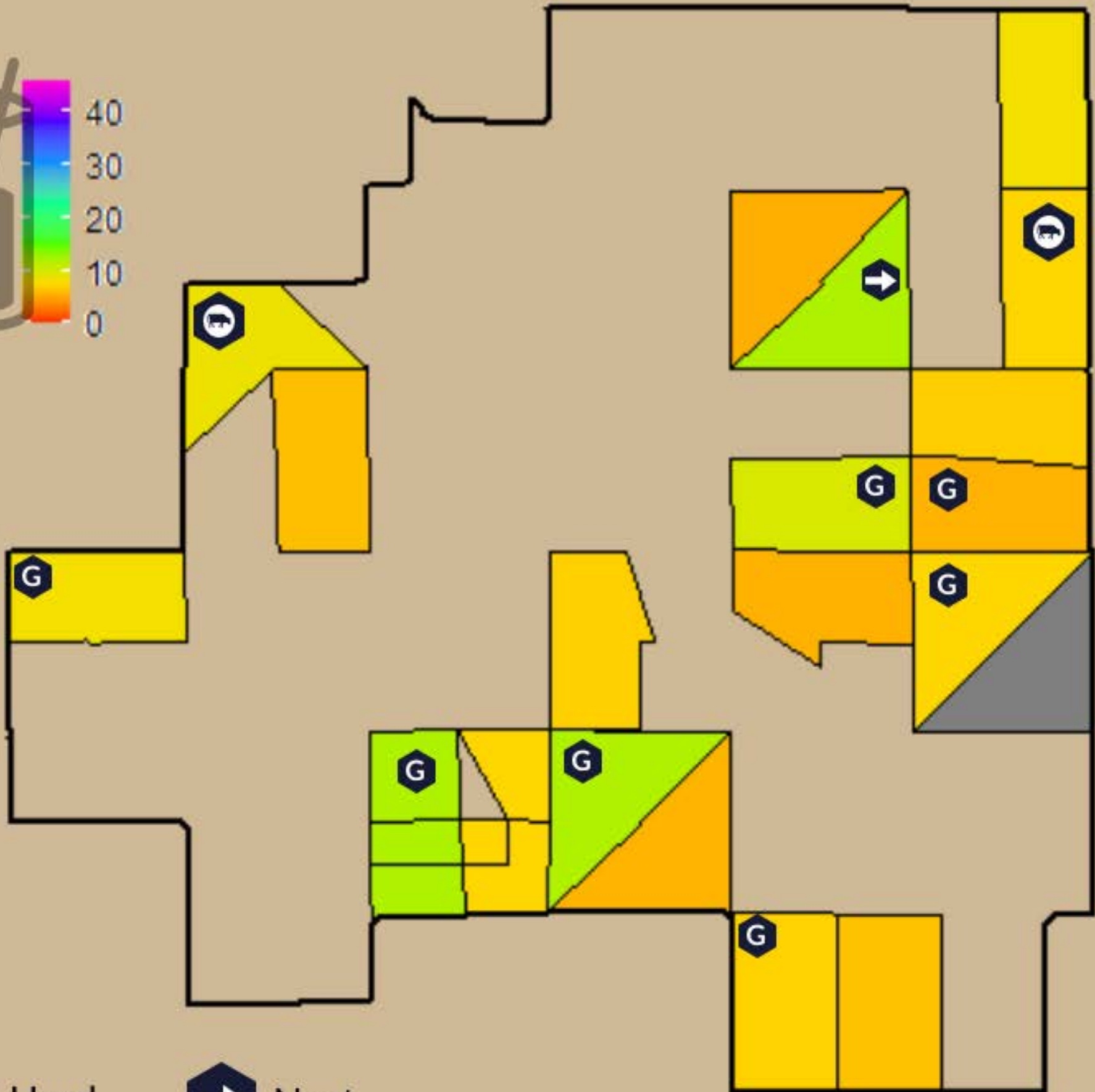
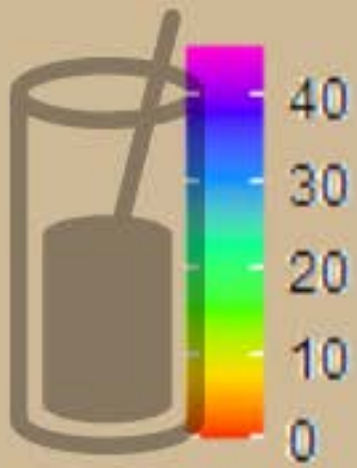
Soil Moisture Distribution

What's in our cup?

It will be interesting to see how much of this week's rain will end up in our cup.

Current Soil Moisture

2020-08-05

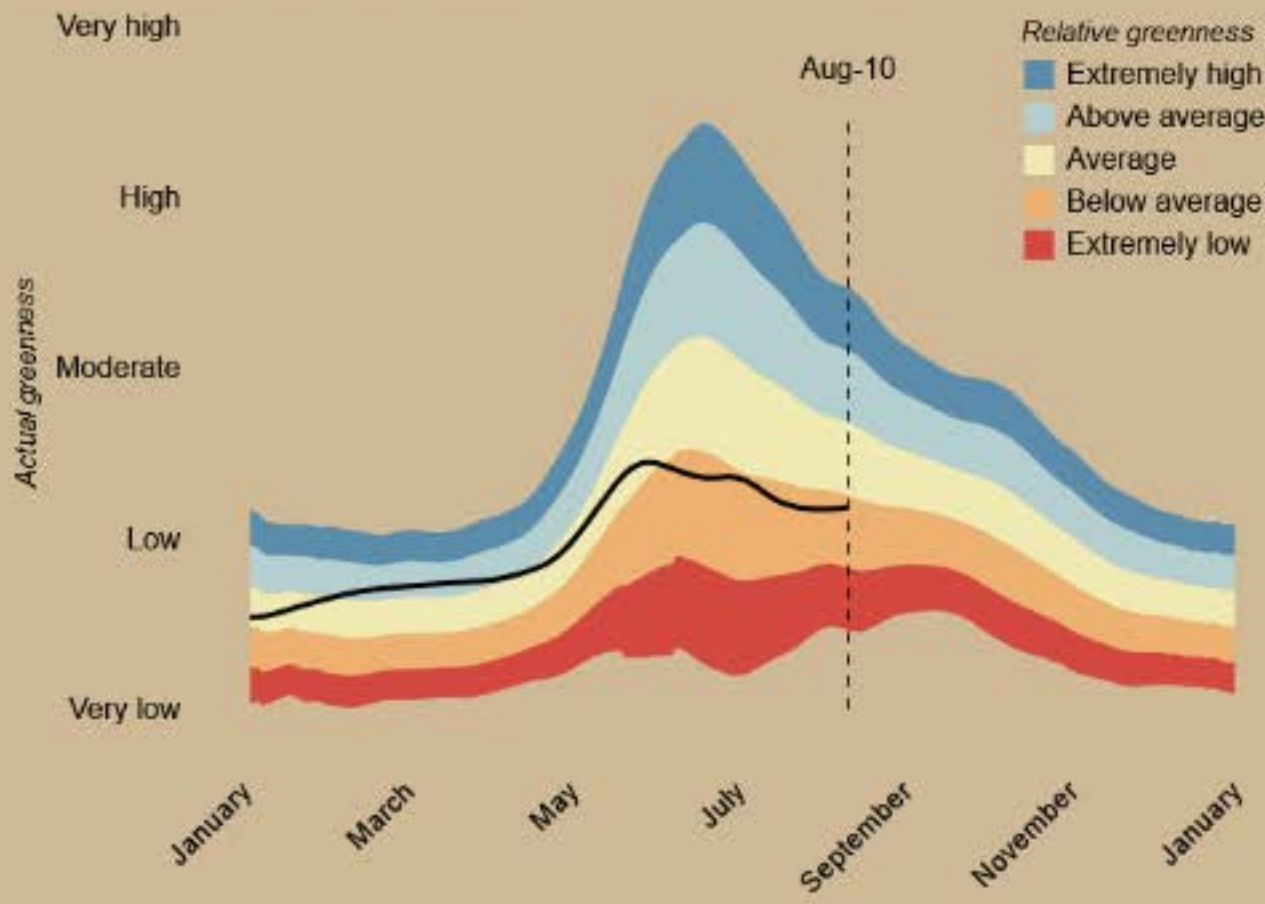
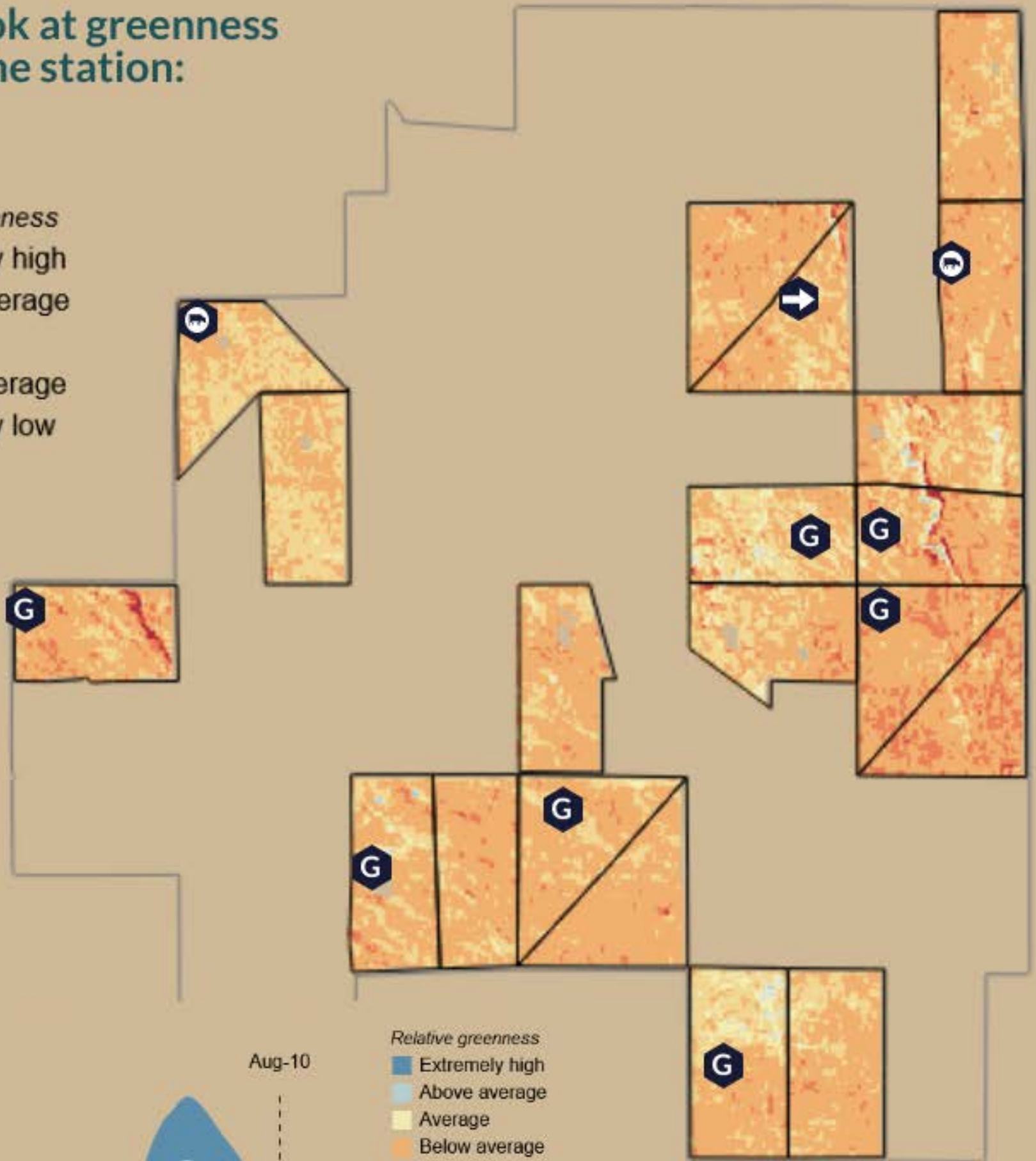


- Herd
- Next
- Grazed
- Rest

A detailed look at greenness across the station:



- Relative greenness*
- Extremely high
 - Above average
 - Average
 - Below average
 - Extremely low



- Relative greenness*
- Extremely high
 - Above average
 - Average
 - Below average
 - Extremely low

- H Herd
- G Grazed
- Next
- R Rest

Nighthawk



E F
NOTE: Empty (E) is set at 300 lbs/acre

Ridgeline



E F
NOTE: Empty (E) is set at 400 lbs/acre

Moved In: Aug 6th

Moved In: Jul 20th

Entry VOR: 488 lbs/acre

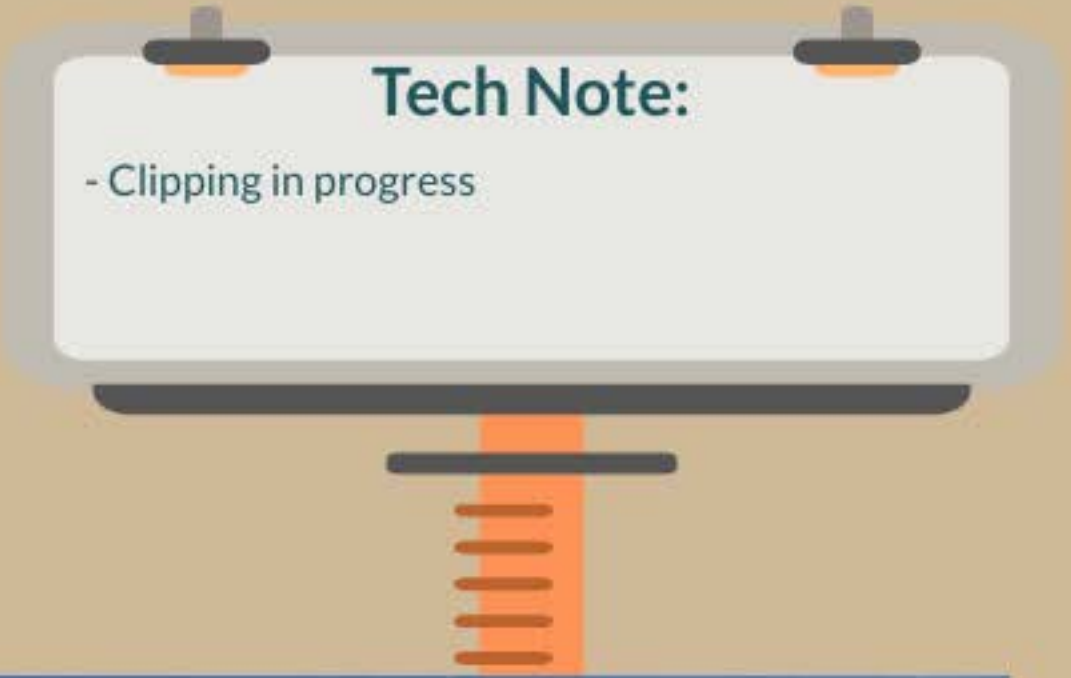
Entry VOR: 581 lbs/acre

July Drought Meeting Conclusion:
Should carry to end season,
possibly 6-10 days short.

July Drought Meeting Conclusion:
Graze to VOR Threshold,
finish season in HQ.

What we've left behind







**Ridge-
line**



**last
week**

Nighthawk



Let's recall what we planned:

Rotation 5:

Start Date: September 21

Max Days: Until Oct 2

CARM1 in Nighthawk and CARM2 Ridgeline.

About 10 days in last pastures.

Grazing 9 pastures and only resting one, which is HQ.

Rest: Headquarters to ensure a grassbank/heterogeneity.



Entered Nighthawk 6 weeks earlier than planned.

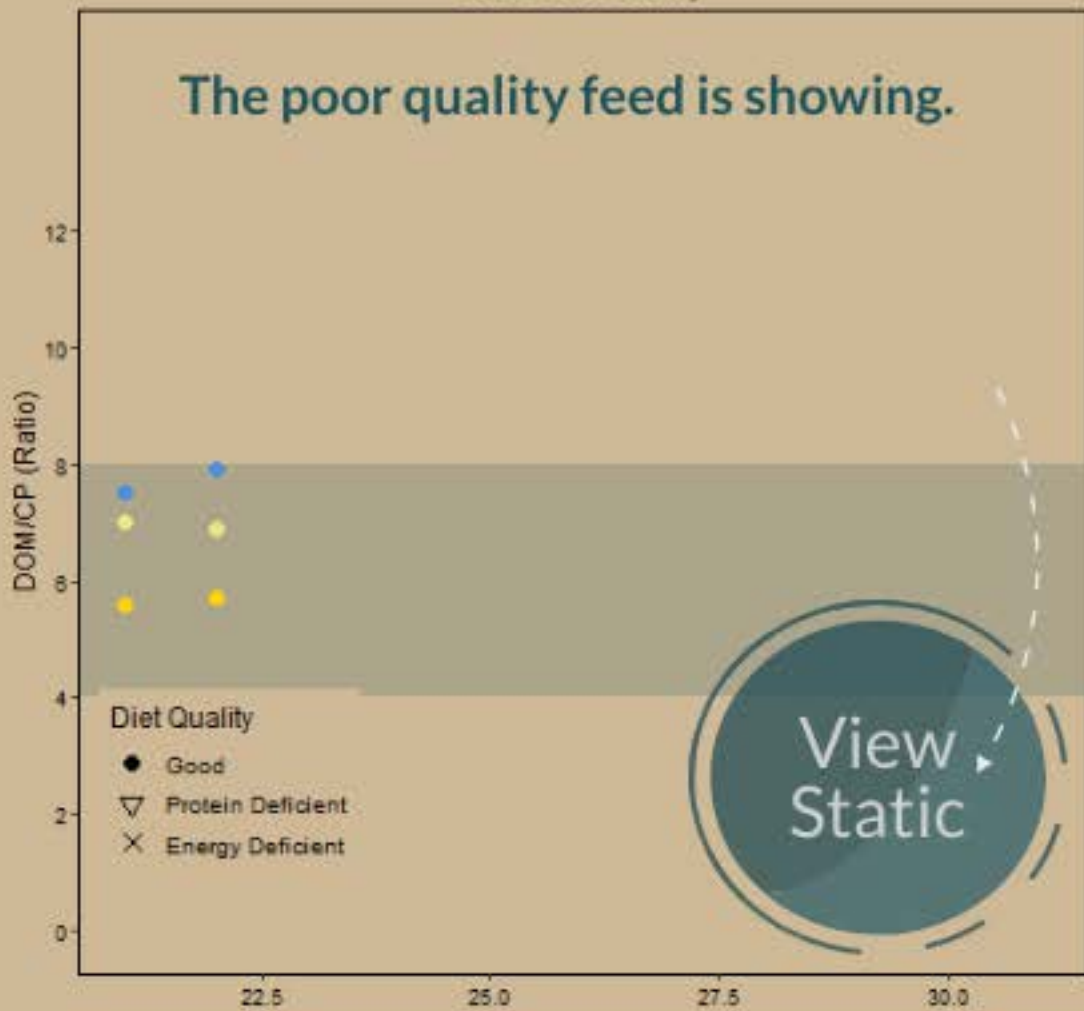
April discussion and votes: The group unanimously voted to confirm: there will be a Max day trigger of 42 on rotations 3 and 4, but the same VOR trigger will also be in place; 2020 will use the same drought triggers as the 2019.

When options get slim, appears cattle will graze on just about anything.



**Red Three-awn
Aristida purpurea**

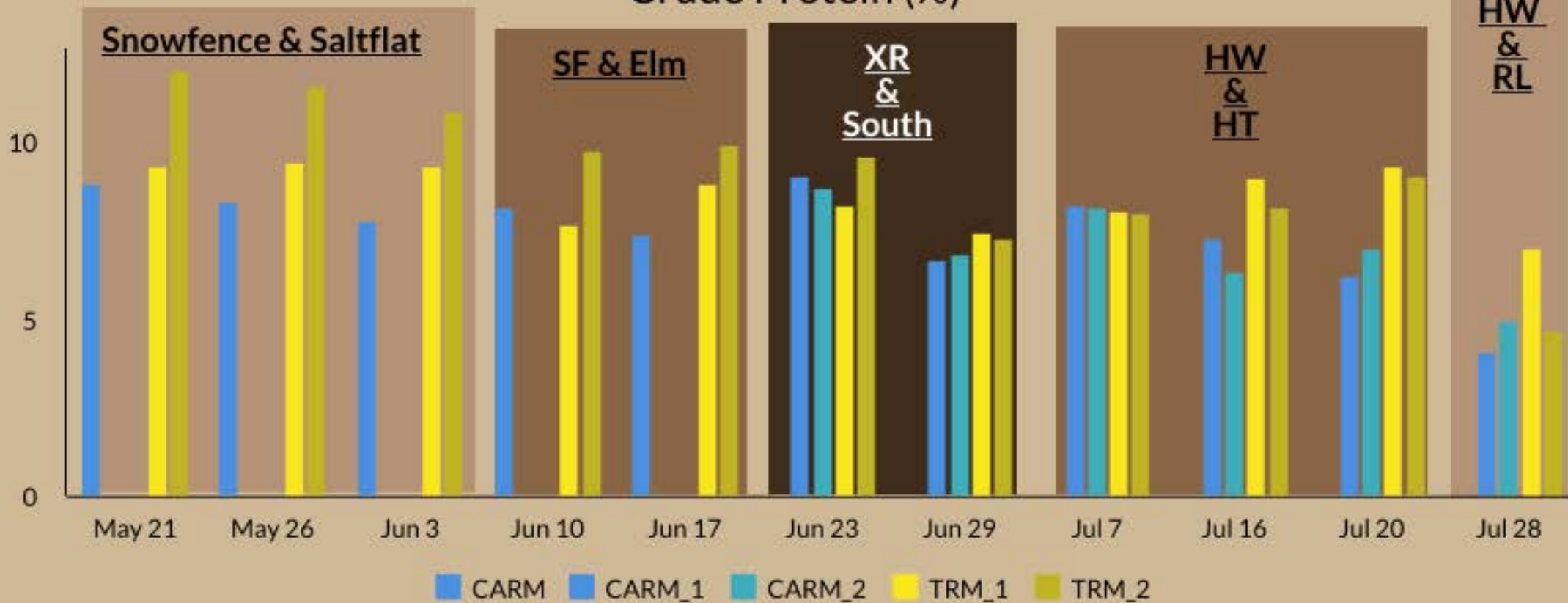
The poor quality feed is showing.



Digestible Organic Matter (%DOM)

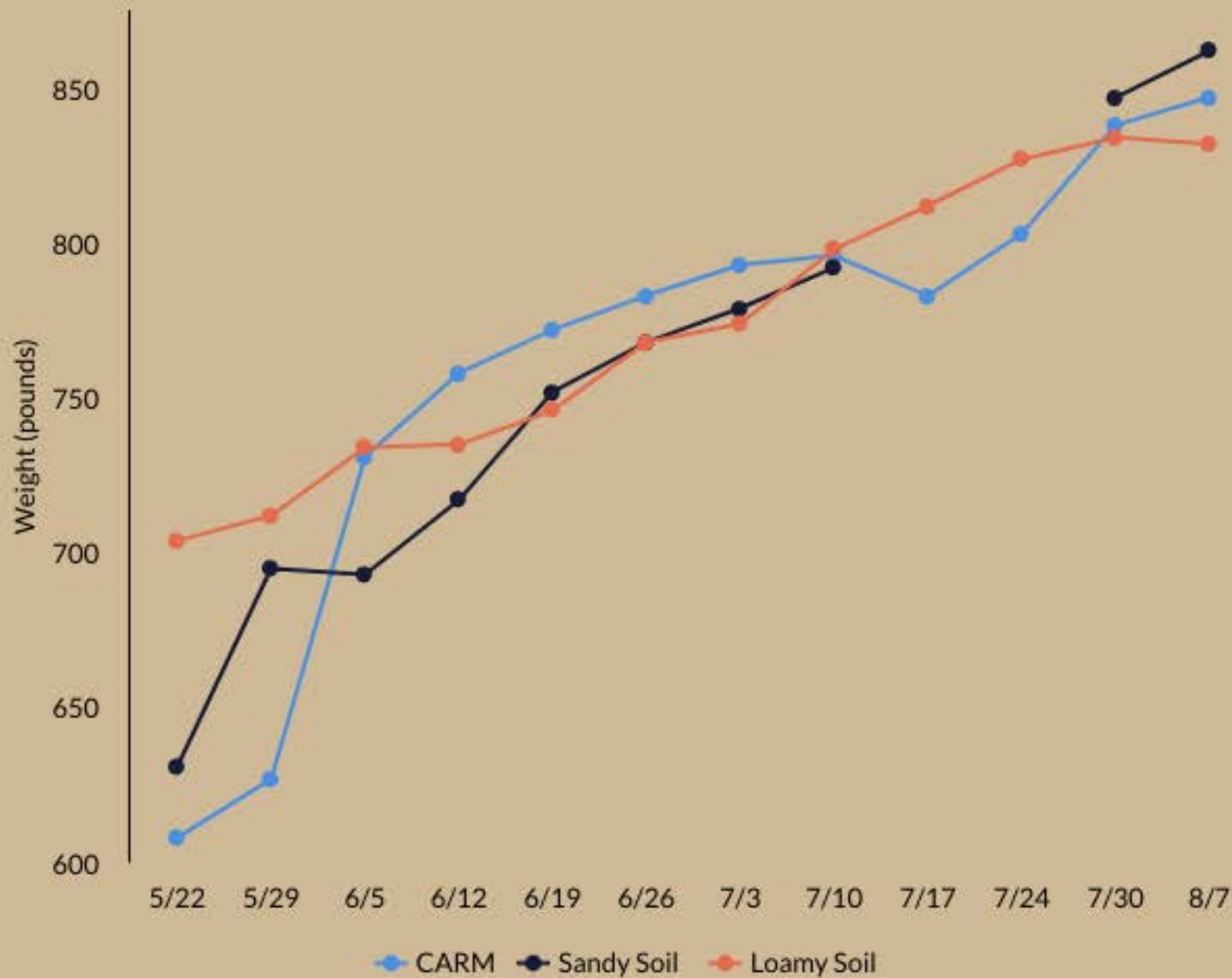


Crude Protein (%)



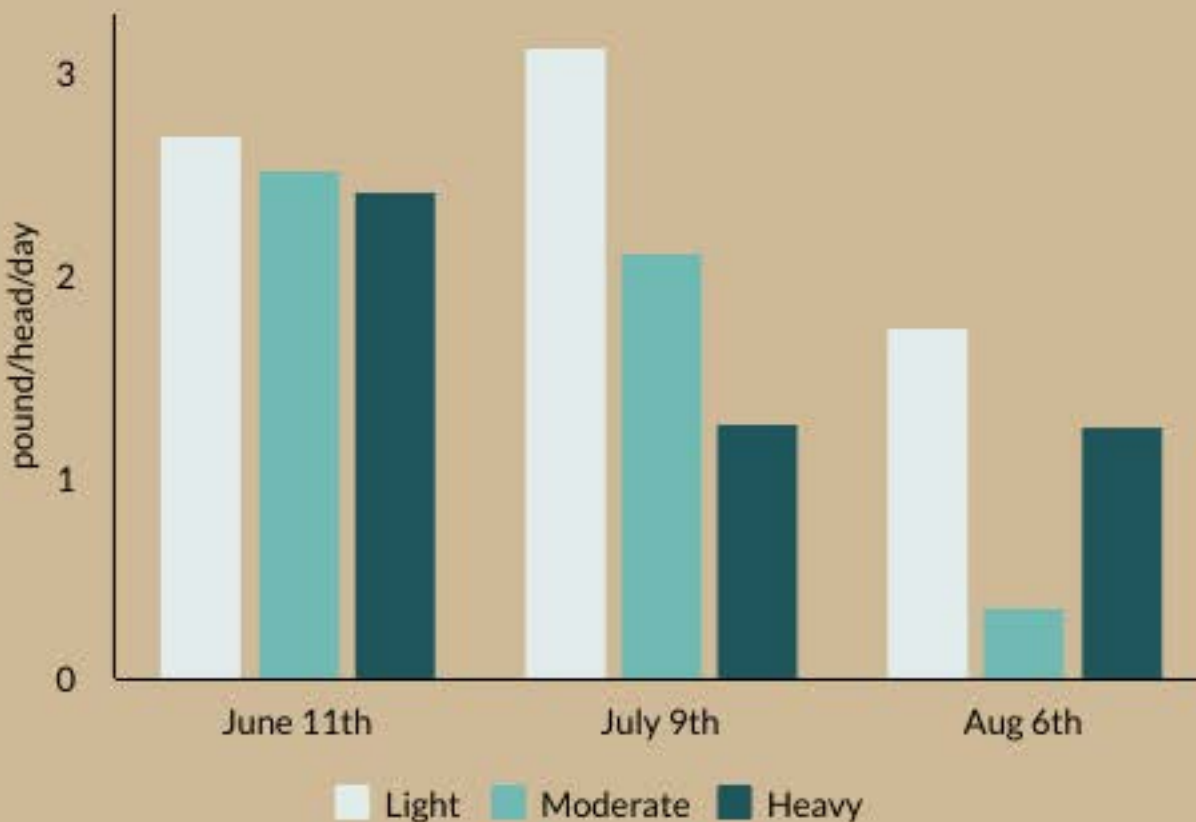
Remote WOW

Walk-over Weigh Scale Data



Average Daily Gains

Average Daily Gains (28 Days)



Stocking Rate

- Light: 17 head
- Moderate: 23 head
- Heavy: 34 head

Steers per 320 acres



No surprise here, when we compare our studies from last year to this year we're coming up short.

Poor grass, poor gains.

Treatment	2019	2020
Light stocking: 1 st 28 days	4.3	3.2
Moderate stocking: 1 st 28 days	3.8	3.0
Heavy stocking: 1 st 28 days	3.7	2.8
Light stocking: 2 nd 28 days	3.8	3.1
Moderate stocking: 2 nd 28 days	3.4	2.1
Heavy stocking: 2 nd 28 days	3.9	1.3
Light stocking: 3 rd 28 days	1.0	1.7
Moderate stocking: 3 rd 28 days	2.2	0.4
Heavy stocking: 3 rd 28 days	1.3	1.3
CARM: first third of grazing season (about 45 days)	3.4	2.4
Low-High-Low: Low-stock density gains (about 80 days)	2.8	2.1



Pictures never do the prairie justice.



CARM 1: Highway, Aug 4th
VOR: 304 lbs/acre, 1.0 cm





**CARM 1:
Highway**

Aug 4th

**CARM 1:
Exclosure**



**CARM 1: Rotation 5
Nighthawk, Aug 6th**



Decision Recap

Current Rotation --->

CARM 1 & 2

Rotation 5:

Start Date: September 21

Max Days: Until Oct 2

CARM1 in Nighthawk and CARM2 Ridgeline.

About 10 days in last pastures.

Grazing 9 pastures and only resting one, which is HQ.

Rest: Headquarters to ensure a grassbank/heterogeneity.

April discussion and votes: The group unanimously voted to confirm: there will be a Max day trigger of 42 on rotations 3 and 4, but the same VOR trigger will also be in place; 2020 will use the same drought triggers as the 2019.

Pasture	What we wanted to happen	What actually happened			
	Notes from April	Date In	Date Out	Trigger Used	Notes
1) Snowfence & Saltflat	Gates open between, Shoot for 21-24 days, measure VOR separate & use average to gauge veg trigger, cattle gains, 5/15 - 6/8	15-May	4-Jun	Max Days	
2) Saltflat & Elm	Gates open between, Shoot for 21-24 days, measure VOR separate & use average to gauge veg trigger, cattle gains, 6/8 - 6/29	4-Jun	18-Jun	VOR Threshold	Left almost two weeks earlier than planned.
3.1) Crossroads	Reduce VO for MCLO (< 5cm) 6/29-8/10	18-Jun	1-Jul	VOR Threshold	Used drought threshold
3.2) South	Reduce VO for MCLO (< 5cm) 6/29-8/10	18-Jun	1-Jul	VOR Threshold	Used drought threshold
4.1) Highway	Reduce VO for MCLO (< 5cm) 8/10 - 9/21	1-Jul	6-Aug	VOR Threshold	Used drought threshold
4.2) Hilltank	MCLO 8/10 - 9/21	1-Jul	20-Jul	VOR Threshold	Used drought threshold
5.1) Nighthawk	9/21 - end of season	6-Aug			
5.2) Ridgeline	9/21 - end of season	20-Jul			
6) Headquarters	Rest				



Private property,
ungrazed

Aug 12th

CARM 2:
Ridgeline

Up & Coming

- August 18th - TRM GPS collar battery swap
- August 19th - CARM 2/3 season weigh, collar battery swap

On behalf of the USDA-ARS
Rangeland Resources & Systems Research Unit,
I thank you all
for your continued participation
in this project.

Happy Trails!



For detailed precipitation
data, maps, last year's
updates, Scientist bios, and
CARM documents, see our
website:



ALL access data!