Livestock Grazing Management & Research Activities

Beginning in November 2007, a new livestock grazing management scheme was implemented on the Santa Rita Experimental Range (Santa Rita) under the supervision of Dr. George Ruyle, School of Natural Resources (gruyle@ag.arizona.edu) and in cooperation with Andrew McGibbon who owns the livestock. This new management replaces the "Santa Rita Grazing System" experiment that was in place since 1972 (Martin and Severson. 1988. J. Range. Man. 41:291-295., and Mashiri et al. 2008. Rangeland Ecol. Manage. 61:368-379.)

The new scheme applies adaptive grazing management principles to establish expected dormant season grazing capacity based on summer forage production, and summer grazing periods based on avoiding the re-grazing of plants in the summer growing season. The adaptive management elements include 1) use of summer production values to re-adjust stocking rates each fall, 2) start and duration of the summer growing season to determine when livestock should be moved between pastures, and 3) flexible pasture use to support the variety of research projects being performed on the Santa Rita.

Currently, there are two herds moving through multiple pastures to consolidate livestock handling activities and more precisely manage grazing use. The large herd of ~540 animals will move through a combination of 18 pastures, 14 are located on the Santa Rita, and 3 on the Coronado National Forest, and 3 on Arizona State Lands. The small herd, ~60 animals will move through 11 pastures all but two are on the Santa Rita.

Dr. Ruyle and associates are measuring forage production and utilization, livestock movement patterns, and developing methods to forecast forage availability and likelihood of re-grazing plants in the summer growing season.

Researchers, instructors, and other interested parties are advised to consult the accompanying tables and maps to learn the specific location, timing and number of livestock expected in each pasture; as well as the actual use in those areas. Be aware that 1) some animals may appear in pastures outside these expected periods because of handling problems, 2) livestock use of unintended pastures is not shown in the report below, and 3) adjustment to timing and numbers can be made to accommodate research and instruction needs.

Starting in November 2008, there will be a new practice of opening pasture gates 1-2 days before the official start-date for grazing in the new pasture. Typically, the gates will open 1 day earlier, but the 2-day window will be common when there are frequent moves (every 10 days) during the summer growing season. This practice is being adopted to prevent the separation of calves from cows during the move between pastures.

Planned Livestock Grazing on the Santa Rita Experimental Range

01 November 2011 - 31 October 2012

Below are the projected livestock grazing days for the “large herd,” “small herd,” and “special herds” of livestock on the Santa Rita Experimental Range for the grazing year 01 November 2011 - 31 October 2012, and extended to December 2012 for planning purposes. Projected grazing use is based on our current best estimates of available forage and the commencement of summer rains. The projected grazing dates as well as herd size may change as forage conditions change and monitoring data are analyzed. Assume accuracy of projected dates to increase as those dates become closer. See the Grazing Management Map (below) for spatial details. Questions may be addressed to George Ruyle (gruyle@ag.arizona.edu) or Mitch McClaran (mcclaran@u.arizona.edu).

Last Plan Update: 31 October 2012

SRER Large Herd (Herd 1 on map) Last Update: 31-Oct-2012

		Projected				Actual			
	Pasture (*acres*)	Herd Size (AU's)	Start Date	End Date	Grazing Days	Herd Size (AU's)	Start Date	End Date	Grazing Days
2011	**2S** (*1389*)	446	01-Nov	15-Nov	15	409	01-Nov	17-Nov	17
	12A (*995*)	446	16-Nov	28-Nov	13	405	05-Nov	28-Nov	13
	12C (*1886*)	446	29-Nov	19-Dec	21	405	29-Nov	03-Jan	36
2012	**State***	540	20-Jan	14-Feb	57	493	29-Dec	15-Mar	78
	12B (*4112*)	540	15-Feb	11-Mar	26	371	16-Mar	02-May	48
	3 (*4104*)	540	12-Mar	12-Apr	32	453	19-Apr	06-Jun	49
	5S (*4699*)	540	13-Apr	02-May	20	240	02-Jun	26-Jul	55
	5 Mid (*3448*)	540	03-May	04-Jun	33	341	24-Jun	06-Aug	44
	5N (*2025*)	540	05-Jun	24-Jun	20	393	27-Jul	13-Aug	18
	6B (*1677*)	540	25-Jun	04-Jul	10	260	10-Aug	04-Sep	26
	6D (*1978*)	540	05-Jul	14-Jul	10				
	6A (*2686*)	540	15-Jul	24-Jul	10	523	27-Sep	17-Oct	19
	Helvetia North*	540	25-Jul	03-Aug	10	502	23-Aug	26-Sep	33
	Helvetia South*	540	04-Aug	13-Aug	10				
	6E (*910*)	540	14-Aug	23-Aug	10	442	16-Oct	31-Oct	16
	2N (*4585*)	540	24-Aug	02-Sep	10	427	30-Oct	31-Oct	02
	2S (*1389*)	540	03-Sep	12-Sep	10				
	12A (*995*)	540	13-Sep	18-Sep	06				
	12C (*1886*)	540	19-Sep	19-Oct	31				
	State*	540	20-Oct	08-Dec	50				

* These pastures are not part of the Santa Rita Experimental Range.

SRER Small Herd (Herd 2 on map) Last Update: 31-Oct-2012

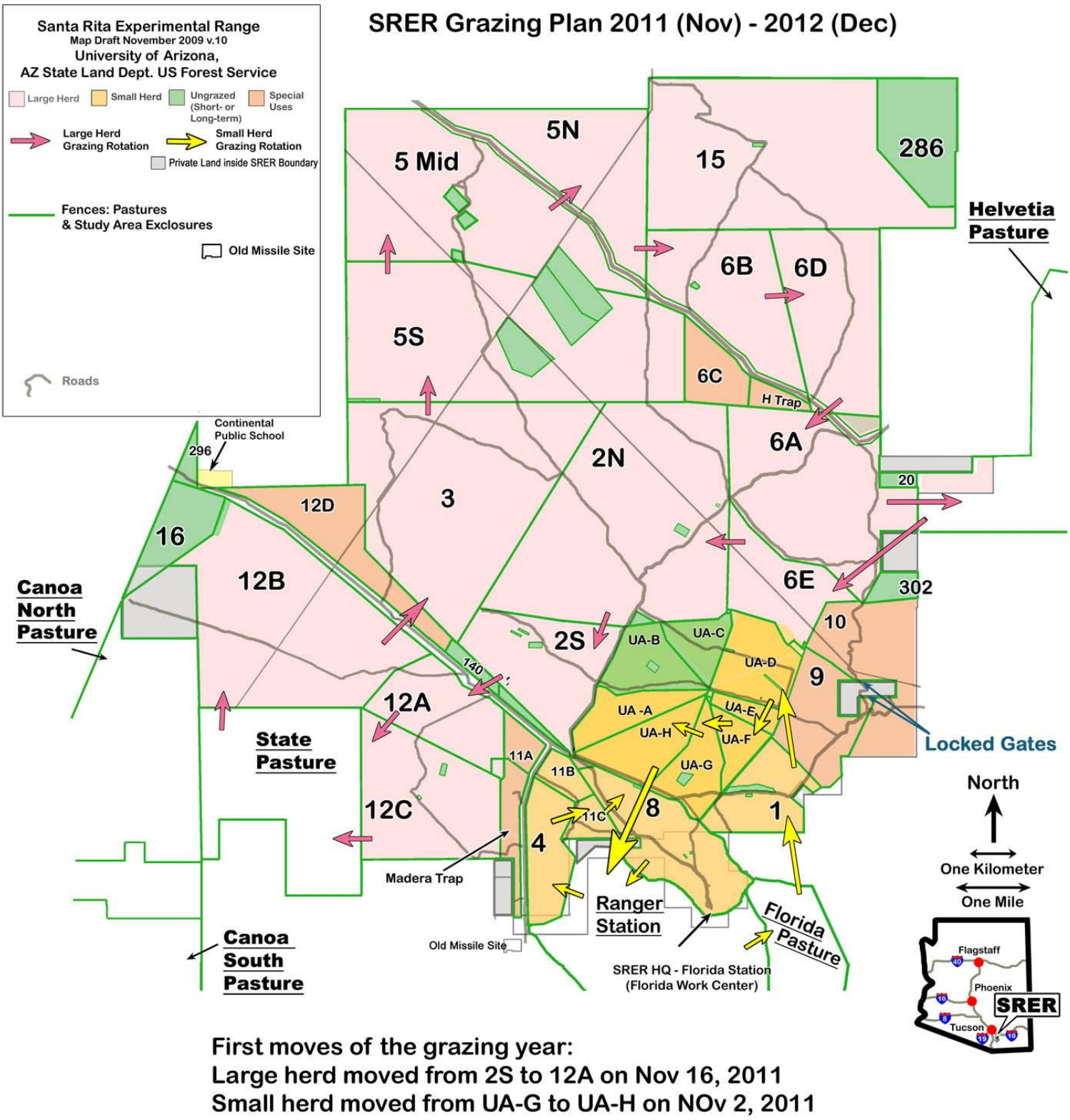
		Projected				Actual			
	Pasture (*acres*)	Herd Size (AU's)	Start Date	End Date	Grazing Days	Herd Size (AU's)	Start Date	End Date	Grazing Days
2011	**UA-G** (*441*)	65	01-Nov	01-Nov	1	65	01-Nov	01-Nov	1
	UA-H (*453*)	65	02-Nov	11-Nov	10	65	02-Nov	11-Nov	10
	Forest Service Pasture*	70	12-Nov	23-Jan	72	55	12-Nov	23-Jan	72
2012	**4** (*670*)	70	23-Jan	13-Mar	51	34	12-Nov	19-Mar	128
	Forest Service Pasture*	70	01-Jun	10-Aug	71	70	20-Mar	01-Apr	13
	11C (*214*)	70	14-Mar	22-Mar	9	70	02-Apr	07-Apr	6
	8 (*815*)	70	23-Mar	31-May	70	58	08-Apr	17-Jun	71
	Forest Service Pasture*	70	11-Aug	14-Sep	35	58	04-Jun	16-Sep	105
	1 (*782*)	70	15-Sep	13-Nov	60	70	17-Sep	31-Oct	45
	UA-D (*663*)	70	14-Nov	01-Dec	18				
	UA-F (*336*)	70	02-Dec	16-Aug	15				
	UA-G (*441*)	70	02-Oct	24-Oct	19				

* These pastures are not part of the Santa Rita Experimental Range. Forest Service Pastures include Ranger and Florida pastures.

SRER Special Herds and Other Pastures Last Update: 31-Oct-2012

Pasture (*acres*)	Use	Projected				Actual			
		Herd Size (AU's)	Start Date	End Date	Grazing Days	Herd Size (AU's)	Start Date	End Date	Grazing Days
UA-A (*549*)	temporary								
UA–B (*552*)	Rest								
UA–C (*365*)	Rest								
UA–E (*156*)	TBD	20			80	16	01-Dec	07-Sep	42
6C (*427*)	temporary								
Huerfano Trap	temporary								
20	Rest								
140 (*154*)	Rest					04	01-Jul	04-July	04
11A (*196*)	temporary								
12D (*1072*)	Bulls								
Madera Trap	Bull calves					07	01-Apr	30-Jun	107
16	Rest					12	10-Apr	13-Apr	4
286	Rest								
302	Rest								

Map of Livestock Grazing Patterns for Two Herds on Santa Rita Experimental Range



First moves of the grazing year:
Large herd moved from 2S to 12A on Nov 16, 2011
Small herd moved from UA-G to UA-H on NOv 2, 2011