Writing a Prescribed Grazing Plan

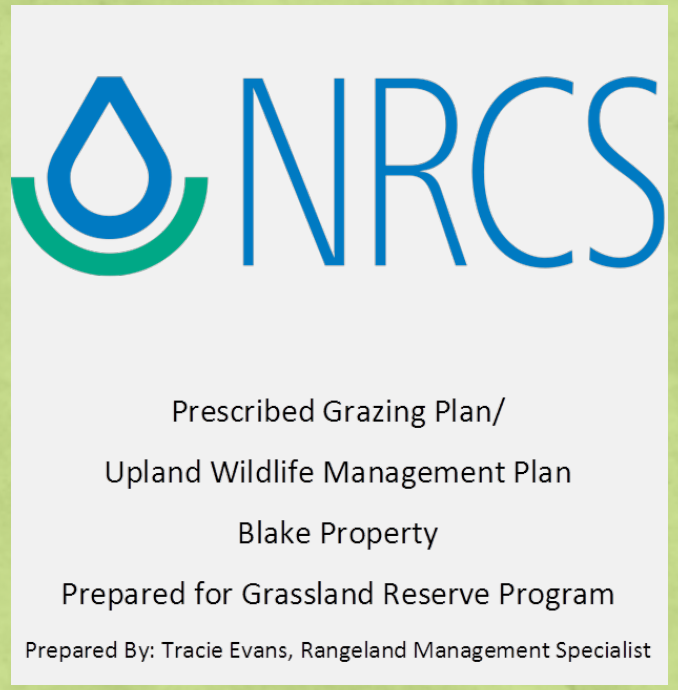
Brendan Brazee
State Rangeland Management Specialist
Idaho NRCS

Prescribed Grazing

- **Managing the harvest of vegetation with grazing and/or browsing animals to :**
  - Improve or maintain desired species and vigor of plant communities
  - Improve or maintain quantity and quality of forage for grazing and browsing animals' health and productivity
  - Improve or maintain surface and or subsurface water quality and quantity
  - Improve or maintain riparian and watershed function
  - Reduce accelerated soil erosion, and maintain or improve soil condition
  - Improve or maintain the quantity and quality of food/cover available for wildlife
  - Manage fine fuel loads to achieve desired conditions

Developing The Plan

- **Prescribed grazing is developed as a narrative grazing plan which includes the following information and supporting documentation for the planned land units.**
  - Goals and Objectives
  - Resource Inventory
  - Forage Inventory
  - Analysis of Resource Conditions
  - Forage Animal Balance
  - Grazing Schedule
  - Contingency Plan
  - Monitoring Plan



Developing The Plan

- **Goals and Objectives**
  - Clearly defined and recorded goals and objectives will assist the land manager in achieving desired results on grazing lands
  - Objectives should be specific, measurable, and achievable with in a given timeframe
  - Inventory and Analysis may help facilitate development of certain resource objectives

Developing The Plan

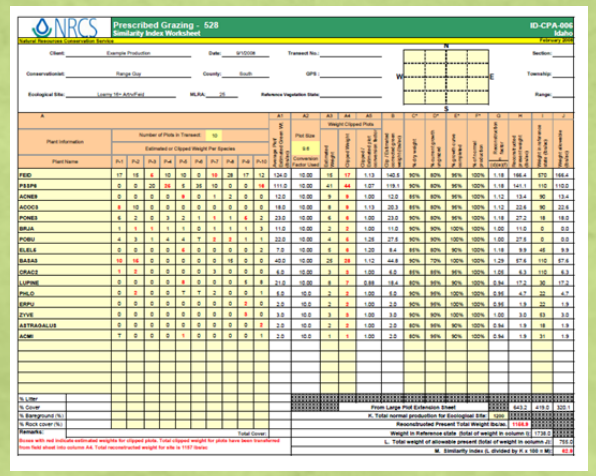
- **Resource Inventory**
  - Collection of information about the operation and includes :
    - **Maps** – Identify land use and ownership, grazing units, structural improvements such as fences and water developments, areas of concern, and location of key areas and monitoring sites.
    - **Soils** – Maps and descriptions of soils and Ecological sites
    - **Animal Inventory** – Kind and classes of livestock. Include wildlife species that may impact feed and forage balance
    - **TES and Cultural Resources** – Resources may impact some of the planning decisions

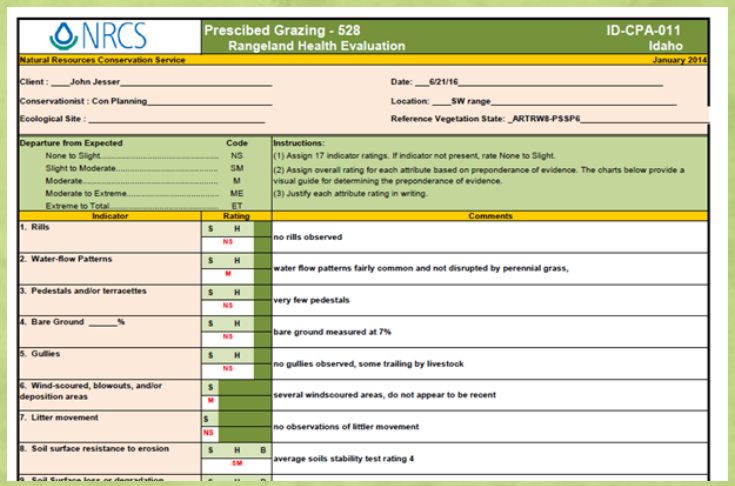
Developing The Plan

- **Forage Inventory**
  - The inventory of expected forage quantity and quality and species of forage in each management unit for the planned grazing period. Additional resources such as hay production, supplemental feeding records, and lease or permit information should be collected.
  - Available forage should be expressed in terms in a quantitative value that is familiar to the landowner such AUM's/ac for rangeland or Cow days/inch for pasture
  - Adjust available forage for operation for items such as distance to reliable water, slopes, and determine best way to present recommended use

Developing The Plan

- **Analysis of Resource Conditions**
  - Interpretation of data and identification of probable resource concerns and potential solutions
  - Common tools such as Rangeland Health and Pasture Condition Scoresheet along with history of the operation can be used to develop ecological and economically sound solutions for the operation.


NRCS Prescribed Grazing - 528 Similarity Index Worksheet ID-CPA-006 Idaho


NRCS Prescribed Grazing - 528 Rangeland Health Evaluation ID-CPA-011 Idaho
Natural Resources Conservation Service January 2014

Developing The Plan

- **Forage Animal Balance**
  - The forage animal balance should be developed as part of a sustainable plan which ensures that forage produced or available meets demands by livestock and wildlife
  - Recommended that a develop a benchmark and planned balance sheet

41	5	ly 12-16	250.0	0.27	POS	67.5	7				16.9	23.6	20.3	3.4			3.4		
42	6	grav loam	500.0	0.08	POS	40	2			4.0	8.0	12.0	10.0	2.0	2.0		2.0		
43	6	ly 8-12	280.0	0.14	POS	39.2	1				3.9	11.8	11.8	3.9	3.9	2.0	2.0		
44	6	dry meadow	20.0	0.21	NEG	4.2	3				0.2	0.8	0.8	1.5	0.4	0.4			
45	7	aftermath	160.0	0.96	STA	153.6	6										76.8	76.8	
46																			
47																			
48					Total AUM's Available		1171.2			11.5	155.2	291.2	268.8	140.5	61.2	36.6	130.8	76.8	
49																			
50																			
51	Livestock - Feed/Forage Balance:					Total	MONTHS												
52						AUM's	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
53	Total forage available (adjusted AUM's)					1171			11.5	155.2	291.2	268.8	140.5	61.2	36.6	130.8	76.8		
54	Total forage needs in AUM's					1188	22.5	22.5	22.5	58.5	134.5	194.5	163.7	163.7	158.5	142.5	82.5	22.5	
55	Difference (+) or (-) AUM's					(17)	(23)	(23)	(11)	97	157	74	(23)	(103)	(122)	(12)	(6)	(23)	
56																			

NRCS | Prescribed Grazing - 528 | ID-CPA-020A
Pasture Grazing System Calculations - Pasture Size | Idaho
Natural Resources Conservation Service | April 2011

Landowner: Green Grass Ranch **Date:** 4/13/2011
Planner: Bob the Planner **Grazing Period:** 5/15-9/30
Management Unit : South Circle **Forage Species:** Orchardgrass/Meadow Brome

Determining Daily Forage Requirements for the Grazing Herd (Livestock Inventory)

Type of Livestock	Number of Head	Average Weight	Dry Matter Intake % Daily Req.	Dry Matter Intake % from Pasture	Total Dry Matter Requirements (lbs/day)
Beef cows, ave.milk	135	1100	3.00%	100%	4455
Calves	120	300	3.00%	100%	1080
Replacement Heifers	25	700	3.00%	100%	525
Bulls	6	1800	2.50%	100%	270
				Total Dry Matter Requirements for Herd (lbs/day)	6330

Adjusting Forage Requirements for Planned Utilization

Planned Seasonal Utilization Rate: Proportion of total annual production used during the season **(enter below)**

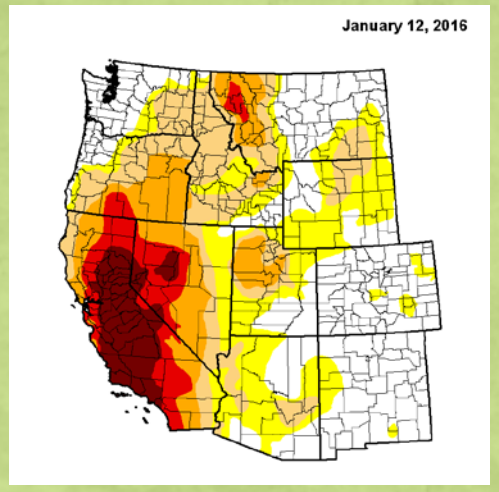
Seasonal Utilization Guidelines	
Grazing Duration - Number of Paddocks	Utilization Rate

Developing The Plan

- **Grazing Plan/Schedule**
  - Properly designed management plan will meet the land managers goals and promote maintenance and/or improvement of the plant, animal, soil, and water resources
  - The system selected by the landowner should consider economics and time constraints of livestock movement and provide for flexibility to adjust based on climatic or other factors
  - Provide adequate rest and recovery periods during the growing season
  - Livestock Movements should be based on plant growth or recommended use levels not calendar dates.

Developing The Plan

- **Contingency Plan**
  - A contingency plan serves as a guide for adjusting a grazing prescription for changes in forage or water availability due to natural events such as drought, fire, or insect outbreaks
  - Describes how decisions will be made regarding management of the operation to ensure economic feasibility and limit resource degradation



Developing The Plan

- **Monitoring Plan**
  - Collection of information to assess if grazing management is meeting goals and objectives
  - Assists landowner/manager with decisions regarding stocking rates and grazing schedule
  - Grazing management plans should incorporate short and long term monitoring protocols

Key Points to Developing a Grazing Plan

- 1 - **Clear Goals and Objectives**
- 2 – **Good Benchmark Inventory**
- 3 – **Flexibility** –A written plan is only a guide for the manager to make decisions
- 4- **Review** of monitoring data and records to plan next grazing season

Questions ?

Brendan Brazee
State Rangeland Management Specialist
Idaho NRCS
brendan.brazee@id.usda.gov
208-378-5722

USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service