CLIFTON RANGER DISTRICT
APACHE/SITGREAVES NATIONAL FOREST'S
ANNUAL OPERATING INSTRUCTIONS (AOI)
MAXWELL, VIRGIL AND WANDA

ALMA MESA ALLOTMENT
2011

I. **PERMITTED USE**:
The following table illustrates the number of livestock and period of use permitted on the **ALMA MESA** Allotment as per Term Grazing Permit # 030202 issued to **MAXWELL, VIRGIL AND WANDA** on April 12, 2007.

KIND	CLASS	TERM PERMIT		PERMITTEDPERIOD OF USE
		Numbers	AUMs	
Cattle	Cow/Calf	682		03/01 – 02/29/12
	Yearling			
	Bull			
Horses	Mature	18		03/01 – 02/29/12
	Total			

II. ACTUAL USE: The following numbers and classes of livestock are authorized to graze on the **ALMA MESA** Allotment this year. The authorized number of livestock, AUM's, and period of use is herby modified according to the following table.

KIND	CLASS	AUTHORIZED by AOI		PROPOSED PERIOD OF USE
		Numbers	Annual AUMs	
Cattle	Cow/Calf	8		3/1 – 2/29/12
	Yearling	7		3/1 – 2/29/12
	Bull	4		3/1 – 2/29/12
Horses	Mature	13	Back & forth on private	3/1 – 2/29/12
	Total			

III. GRAZING MANAGEMENT PROPOSED ROTATION SCHEDULE: Actual dates may vary dependent upon climatic conditions, wildfire, noxious weeds, soil and range conditions, conflicts with or for protection of wildlife, water developments (pending grant improvements) and when utilization levels are reached and time required moving livestock. The total number of livestock listed below is authorized livestock for **ALMA MESA** Allotment.

Pasture	Proposed Number of Cattle	Proposed Season of Use
Charlie Moore	19	3/1 – 2/29/12
Horses will pasture near headquarters	13	3/1 – 2/29/12

Actual dates for season of use may vary dependant upon climate conditions and when utilization levels are reached.

IV. ALLOWABLE USE STANDARDS Allowable use of forage is based on the amount and kind of forage on the allotment, plant needs, range condition, trend, and grazing management strategy. Duration, frequency, and timing may be manipulated within the grazing schedule to meet allowable use standards.

The allowable use levels for this allotment are established for key areas and key species by pasture for the time period livestock are in a pasture. The use on key species in key areas will ultimately determine the length of the grazing period in each pasture. The establishment of the utilization standards is consistent with 36 CFR 222 regulations, FSM 2210 and 2230, and FSH 2209.21.

For simplicity, key areas are generally considered as follows: 1) full capacity rangeland located on ridgetops/mesas within a 1/4 mile from available water sources; 2) canyon bottoms/riparian areas with free flowing water or springs regardless of distance from water; 3) any area containing full capacity range with erosive soils and insufficient/marginal ground cover to protect the soil; or 4) areas containing habitat, whether occupied, suitable and unoccupied, or potentially suitable habitat, for threatened, endangered, or proposed species that are of concern to the Forest Service.

Key areas may be designated in cooperation with the Forest Service and the permittee.

Allowable Use

Range Condition Site	Dormant Season Use 9/1 to 5/30	Growing Season Use 5/31 to 8/31
Very Poor	15%	15%
Poor	20%	20%
Fair	40%	30%
Good	45%	35%
Excellent	45%	35%

V. ADMINISTRATION

1. The permittee will record actual use as it occurs; including livestock numbers and dates your permitted livestock are in a pasture. This information will be reported at the next annual validation meeting.
2. Any change or deviation from this Annual Operating Instructions is to be coordinated and confirmed in advance with the District. If emergency conditions require making a change immediately, the permittee will notify the District as soon as practical.
3. Livestock remaining in pastures beyond the specified rotation date, that are allowed to drift between pastures, or grazing in rested pastures may be considered a violation of your Term Grazing Permit.
4. Livestock should be moved when forage utilization objectives have been met or within 1 week of planned rotation dates, unless changes have been confirmed with District Range personnel.
5. The District may spot check range improvements before the entry date to insure improvements are in a satisfactory condition. Livestock will not be allowed to enter pastures if assigned improvements are not maintained to proper standards. Livestock are not allowed to enter pastures if fences will not keep livestock where they are placed

VI. SALT AND MINERAL BLOCK

Typically, salt or mineral blocks are not to be placed within a quarter mile of water or drainage bottoms. Salt may be placed closer than a quarter of a mile to water for treatment purposes. If salt is placed less than a quarter mile from water, it will be moved every day or within 4 days at the most to a new location no matter where the salt is placed. Salt will be used to attract cattle to areas of a pasture typically not utilized and or for soil/range condition treatment purposes. Blocks may be removed by the District if found near water, over-utilized areas, meadow bottoms or roads. Blocks should be placed in a way that does not encourage erosion but treats the soil to upgrade it from the present condition.

VII. MONITORING

Monitoring and evaluation is an essential aspect of good rangeland management. Monitoring and evaluation can be described as the gathering of information so the manager knows what is happening to rangeland resources and why. The intent of monitoring and evaluation is to test the success of the management strategy and if needed, make adjustments. The following types of monitoring can be used providing the Forest Service a copy of monitoring reports, forms and/or summaries.

1. Forage Production
2. Forage Utilization
3. Photo Points
4. Condition of Improvements
5. Actual Use
6. Grazing Response Index
7. Precipitation.

1. Forage Production	
What	Forage production is the current growth of browse and herbaceous plants that is palatable and available to all herbivores. Forage may vary by pasture, season of use and kind of livestock.
Where	In key areas identified by Forest Service personnel and permittee. Key areas will be delineated on the allotment map.
Why	Measuring production will help the manager in determining stocking levels of a pasture prior to use.
Example	*Year #1 Production in Pasture "A" is 400 lbs/acre. Year #2, Production measured in Pasture "A" is 270 lbs/acre. This example indicates a 33% reduction in forage production. This may indicate a need for a decrease stocking rate or shorter period of use in Pasture "A"*
How	Estimate forage production by using the 0.96 square foot loop, scissors, bag and gram scale provided in monitoring kit. Step 1. At a pre-determined pace interval place the 0.96 loop at the tip of your boot. Step 2. Weigh bag Step 3. Clip Perennial forage within .96 sqft loop Step 4. Weigh forage in bag Step 5. Deduct Bag weight from total weight for forage weight per hoop Step 6. Repeat steps 1-5 ten times and total the weight of the ten hoops. Step 7. Multiply total forage by ten for lbs/acre If grasses are still green, place bag in dry area. When all grasses are dry, weigh bag and multiply weight of grass (in grams) (minus the weight of the bag) times 10 to equal total pounds of forage per acre. (See example below).
Example	*(10 Forage Clippings + Bag Weight) - (Bag Weight) X 10 = lbs/acre* *(35g) - (10g) X 10 = (25 X 10) = 250lbs/acre*
When	Measure pasture before use

2. Forage Utilization	
What	Forage use can be measured and expressed in two ways: the amount of forage left after grazing (residue), or the amount of forage removed by grazing (utilization).
Where	Forage utilization will be measured in Key Areas identified by Forest Service personnel and the permittee. Key areas will be delineated on allotment map. These areas will serve as indicators of forage use for the entire pasture.
Why	The manager needs to know when use is occurring, and to what extent. Utilization data helps the range manager (permittee) assess the degree of livestock use to comply with allowable use guidelines set fourth in the AOI. Use data will aid the permittee in deciding when to move livestock out of a pasture.
Example	*Example: Allowable use in Pasture "A" is 35%, Midpoint utilization estimate in Pasture "A" is 30%. This example would indicate that the allowable use is almost met and it is time to leave the pasture. Conversely, if the midpoint utilization was 10% this example would indicate that you may be able to extend grazing for a longer period of time.*
How	Three acceptable methods: **1. Paired Plot Method:** Plots within a cage or unused area are clipped and weighed and compared to plots in grazed area. **2. Key Forage Plant Method:** Utilization is based on ocular estimates on key species. For training you eye, simulate grazing on key species in a 0.96 sq. ft. plot. Estimate percent removed. Place in bag and weigh. Clip rest of plant and weigh. Percent removed is the weight of the simulated grazing portion divided by the total weight. **3. Height Weight Method:** Heights of plants within a cage or unused area are measured and compared to plant heights in grazed area. Percent utilization is determined with the aid of a utilization gauge. *See: Forms in monitoring kit folder*
When	Measure utilization shortly after the mid-point of grazing schedule. If grazing is planned in a pasture for 90 days check use between the 45th and 60th day of the planned grazing period. Utilization can be measured earlier if conditions warrant. Utilization should be measured as often as the manager feels comfortable in not exceeding allowable use guidelines. Midpoint and Ending utilization measurements are the minimum monitoring requirement.

3. Fixed Point Photographs	
What	Photgraphs that are repeatable from year to year.
Where	Take photos at Production and Utilization Transects and of improvements. In key areas (small areas) that are representative of the pasture/allotment. In areas of concern like Riparian systems, creek crossings etc. .
Why	To obtain a photographic record of range trend, condition of riparian etc.
How	Take both a close up and overall picture of the area inventoried. Try to include a prominent feature within the photograph that will be easily recognizable in subsequent years. Retake photos annually. Use expandable ruler in monitoring kit to show scale. The date and location of the photograph is important. Use the chalkboard provided in the monitoring kit to record date and location of photograph.
When	Each time a Production or Utilization transect is conducted. Completion/progress of improvements. After major events such as a flood, fire etc. Use photos in conjunction with written reports to support field data.

4. Condition of Improvements	
What	Record condition and location of improvements. For water developments record storage capacity and discharge rates.
Where	Where improvements exist
Why	Ensure improvements are maintained prior to using a pasture and to maintain database of existing improvements.
How	GPS location of improvement and for water developments GPS the point of diversion and the point(s) of use. Record materials used and maintenance and material needed. For water developments complete the water development survey form.
When	Upon completion of new improvements, maintenance of existing improvements and prior to using a pasture.

5. Actual Use	
What	Record the actual use of each pasture
Where	On the Actual Use Form spreadsheet.
Why	To obtain a record of how the allotment was used and the effectiveness of implementing a grazing system.
How	Keep a record of the dates each pasture is used with how many and kind of livestock. Record production and utilization estimates. The date the monitoring was conducted, where it was conducted, by whom and of which key species. Record the monthly precipitation received.
When	Each time a monitoring transect is conducted and after each pasture move.

6. Grazing Response Index	
What	The Grazing Response Index (GRI) was developed to help quantify the expected affects of a grazing event. The GRI takes into consideration the time of year a pasture is used, how long it was used, to what extent and how much rest it received or is expected to receive before it is used by livestock again.
Where	Record the index ratings on the GRI form.
Why	To assess possible affects of past use and to use as a planning tool for future use.
How	Using the information from the Actual Use Form rate each pasture according to the GRI form.
When	Each time a pasture is used and when planning for future use.

7. Precipitation	
What	Monitor precipitation levels.
Where	At the rain guage.
Why	Precipitation and climate has a substanstial affect on production and recovery of forage plants.
How	Place a mixture of 2 parts vegetable oil to 1 part RV antifreeze in the rain guage. Measure the beginning level using the metal measuring stickprovided. DO NOT use a wooden measuring stick as it would soak up the liquid. Record the water level to the nearest 10th of an inch.
When	Once a month.

VIII. RANGE IMPROVEMENT CONSTRUCTION / MAINTENANCE

The permittee will maintain all range improvements that are assigned for maintenance on pages 11 – 14 of the Term Grazing Permit.

Prior year(s) improvements will be first priority unless otherwise stated. When improvements are completed the permittee will inform District Range personnel to schedule an inspection. Before using machinery to clean any pond, the permittee is required to give the District Office at least 45 days advance notice so that the tank can be inspected for threatened or endangered species. All work involving the use of heavy equipment will be accomplished only after prior approval of the District Ranger.

Current Year Improvement Scheduled			YEAR	2011
Permit Mod #	**Improvement Type / ID #**	**Completion Date**	**Description/Comments**	**Status Done /Date**
		Year Long	Routine maintenance as assigned on your permit map shall be conducted throughout the grazing season to help manage livestock use.	

Improvement Accomplishments			YEAR	2010
Permit Mod #	**Improvement Type / ID #**	**Completion Date**	**Description/Comments**	**Status Done /Date**

VIII. PROTECTION

The permittee, his agents and employees, when acting within the scope of their employment, and his contractors and subcontractors will protect the land and property of the United States, waived private land and other land under jurisdiction of the Forest Service covered by and used in conjunction with this permit. Protection will include taking all reasonable precautions to prevent, make diligent efforts to suppress and report promptly all fires on or endangering such land and property. During periods of high fire danger, branding fires will be allowed by permit only.

IX. ALLOTMENT INSPECTIONS

Forest personnel may conduct periodic brief inspections of pastures within the allotment at any time to verify actual use, improvement conditions, or other non-range related activity. The permittee will be notified and invited to participate on extended (3-5 days) inspections.

XI. PERMIT CONDITIONS

This Annual Operating Instructions is hereby made a part of the Term Grazing Permit as provided for in Part 2, Section 8(a). It complies with the standards and guidelines found in the Forest Plan.

Failure to comply with any of the terms and conditions specified in Parts 1, 2, and 3 of your Term Grazing Permit may result in suspension or cancellation, in whole or in part, after written notice. This is found in Part 1, Section 3, of your permit.

This decision is subject to administrative review, pursuant to 36 CFR 251; and any appeal of this decision must be fully consistent with 36 CFR 251.90. In accordance with 36 CFR 251.84, if you file an appeal, I am willing to meet with you to discuss any concerns you may have with my decision. If you file an appeal, you may request an oral presentation in the appeal or at any time prior to closing of the appeal record (36 CFR 251.97). Additionally, if you file an appeal, you may request a stay of my decision in the appeal or at any time prior to closing of the appeal record (36 CFR 251.91).

A notice of appeal must be filed with Chris Knopp, Forest Supervisor, Apache-Sitgreaves National Forest's, P.O. Box 640, Springerville, AZ 85938 within 45 days of the date of this decision. A copy of the notice of appeal must be filed simultaneously with Carol Telles District Ranger, Clifton Ranger District, 397240 AZ 75, Duncan, AZ 85534.

Virgil L Maxwell
PERMITTEE

1-12-11
DATE

Carol Telles
DISTRICT RANGER

1-12-11
DATE