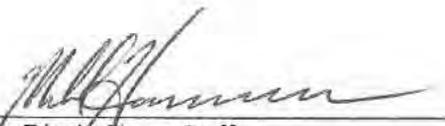


2005 Anderson Springs Allotment Management Plan (AMP)

Mormon Lake Ranger District

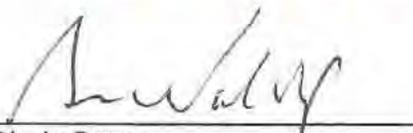
Coconino National Forest

Prepared by: 
District Range Staff

Date 12/16/05

Agreed to/Reviewed by: **(b) (6)**

Date 12/16/05

Approved by: 
District Ranger

Date 1-05-06

Record of Decision Summary

This Allotment Management Plan follows the “Record of Decision for the Bar T Bar and Anderson Springs Allotment Management Plans” and “Final Environmental Impact Statement for the Bar T Bar and Anderson Springs Allotment Management Plans” signed on 2/3/05 which include the following:

- Issue 10-year grazing permit for the Anderson Springs Allotment.
- Manage livestock and wildlife to achieve site-specific forage utilization levels within a range of 35% -50% of annual forage production depending on the management objectives defined for the area. Management objectives refer to specific goals relative to resource area concerns. For example, forage utilization of woody vegetation in riparian areas will not exceed 20%.
- This permit will allow up to 7,042 permitted head months under a Deferred Rest Rotation and Time Controlled Grazing with two herds over 25 pastures with forage utilization levels between 35% - 50%, objective driven. Objective driven is defined as the use of plant recovery and timing of grazing and rest to achieve goals of forage utilization.

Wetland Exlosures

- Construction of one semi-permanent wetland exclosure, with fencing that meets wildlife specifications, at Perry Lake in the Perry pasture. The purpose of creating this semi-permanent wetland exclosure is to protect the wetland during the nesting season, May 1 – July 15.
- Construction of five seasonal wetland exclosures at Boot Lake (North Boot pasture), Tony’s Tank (West Mud Lake pasture), Pine/Camillo/ Lakes (West Mud Lake, East Mud Lake, West Kinnikinick pastures), Yeager Lake (North Yeager pasture), and Corner Lake (South East Pine Hill pasture). The purpose of creating these seasonal wetland exclosures is to protect wetlands during the nesting season, May 1 – July 15.
- Lanes will be constructed to allow cattle access to stock tanks at Boot Lake, Perry Lake, Tony’s Tank, Yeager Lake and Corner Lake. The remainder of these wetlands are within the year-round exclosures.
- Pine/Camillo Lakes wetland exclosure is not grazed May 1 – July 15, and is only used 1-5 days annually as a pass-through to move cattle through the allotment.

Replacement Water Developments

- Construct one new replacement water development. This replacement water development will be located in West Mud Lake pasture. The purpose of this new replacement water development is to provide better distribution of water within

pastures and to provide water to cattle that are now excluded from the wetland enclosure (Pine/Camillo Lakes enclosure).

Other Water Developments

- Construct three new upland stock tanks to improve livestock distribution in the Mud Lake West pasture and two in the Mud Lake East pastures.

Range Improvements

Approximately 10.6 miles of new barbed-wire fence will be constructed to create seasonal and semi-permanent wetland enclosures in the following pastures:

- West Mud Lake, East Mud Lake and West Kinnikinick pastures. This is the wetland enclosure at Pine/Camillo Lakes which splits the above pastures.
- North Yeager pasture. This is the wetland enclosure at Yeager Lake.
- South Pine Hill pasture. This is the wetland enclosure at Corner Lake.
- Perry pasture. This is the wetland enclosure at Perry Lake.
- North Boot pasture. This is the wetland enclosure at Boot Lake.

- Approximately 2.2 miles of two-wire electric fence that will be constructed.
- South Yeager pasture. This will split the South Yeager pasture to improve livestock distribution and overall management.

- Reconstruct approximately 9.4 miles of barbed-wire fence, removing bottom barbed wire and replacing with smooth wire to facilitate pronghorn movement and access to existing and proposed water developments.

- Replace 0.7 miles of two-wire electric fence with a barbed-wire fence at Corner Lake wetland enclosure.

- Remove approximately 1.5 miles of barbed-wire fence. These are fences that are no longer needed for management and will make the area more wildlife friendly.

- Install five cattleguards. These will be located at high traffic road crossings where a gate is not be practicable. There will be three cattleguards at Pine/Camillo Lake and two at Boot Lake.

Existing Improvements

- There will be continued management and maintenance on all real property as listed on the Deferred Maintenance Inventory and Certification for Range Improvements list.

Pinyon Pine, Juniper and Ponderosa Pine Vegetation Treatments

- Approximately 16,785 acres of pinyon pine, juniper and ponderosa pine will be harvested and removed for grassland maintenance and restoration of which:

- Approximately 10,933 acres (grassland maintenance) of young pinyon-juniper woodland trees will be removed that have encroached into historic grasslands. No old-growth trees will be removed.
- Approximately 2,133 acres (grassland maintenance) of young pinyon-juniper woodland trees and young ponderosa pine trees will be removed in transition areas within the pinyon-juniper woodland and ponderosa pine habitat type. This will maintain or improve habitat for pronghorn and other grassland species and to improve watershed conditions and forage production.
- Approximately 3,623 acres (grassland restoration) of young pinyon-juniper woodland trees will be removed. This will remove approximately 80–90% of young trees to increase habitat for pronghorn and other grassland species, improve watershed conditions and forage production.
- Approximately 96 acres of young juniper trees will be removed for wildlife corridors to encourage movement of elk, deer and pronghorn between summer and winter range. No cutting of alligator juniper trees will be allowed. No old-growth trees will be removed.
- Lop and scatter slash over most of the above acreages.
- Prescribe burn on 16,785 of the above acres only when soil conditions are satisfactory.

Monitoring

- The monitoring section of this AMP is given near of end of this document.

Mitigation

- This decision adopts the mitigation measures disclosed in the FEIS, Chapter 2, Table 3 - Mitigation Measures. These mitigation measures incorporate Best Management Practices (BMP's), and constitute compliance with Arizona State and Federal Water Quality Standards. These measures are designed to protect resource values, uses, and maintenance of soil productivity, stability and water quality.
- These mitigation measures include actions to reduce potential impacts to soil and water, vegetation, range, human environment, visual quality, resource access, fire, fuels, smoke management, wildlife, fisheries, noxious weeds, rare plants and seeding.

Goals and Objectives of Management

Background

On July 24, 1985, an environmental assessment was completed, and a decision made by Neil R. Paulson, Forest Supervisor that would allow livestock grazing to occur on the Anderson Springs Allotment. At that time, a ten-year Term Grazing Permit was issued to the Flying M Ranch. The current ten-year Term Grazing Permit for livestock grazing on the Anderson Springs Allotment was signed on March 30, 1997. This permit supercedes the permit issued December 30, 1986.

A rest rotation and time-controlled grazing system is used on this allotment. The time-controlled grazing system describes pastures that are re-grazed within a 90-day time period. Livestock management generally consists of two main herds of cattle, a main cow herd and a heifer herd. The main cow herd uses 19 pastures through the grazing season. Pastures are used one to three times each year. The heifer herd mainly uses private land within the boundaries of the Anderson Springs Allotment known as the Ashurst Run Cell.

Ashurst Run Cell – The Anderson Springs Allotment is grazed in conjunction with the Ashurst Run Cell, the majority of which is on private land. This cell has 20 pastures. The heifer herd spends the bulk of the season grazing the Ashurst Run Cell, after quickly moving through the rest of the Allotment pastures. Each paddock is managed intensively to meet identified objectives. Pastures are used one to three times each year.

Purpose and Need

The purpose of this action is to authorize permitted livestock grazing on the Anderson Springs Allotment for a 10-year period.

Where consistent with other multiple-use goals and objectives there is Congressional intent to allow grazing on suitable lands (Multiple-Use Sustained-Yield Act of 1960, Forest and Rangeland Renewable Resources Planning Act of 1974, Federal Land Policy and Management Act of 1976, and National Forest Management Act of 1976).

This allotment contains lands identified as suitable for domestic livestock grazing in the Coconino National Forest Plan. Continued domestic livestock grazing is consistent with the goals, objectives, standards, and guidelines of the Forest Plan.

It is Forest Service policy to make forage available to qualified livestock operators from lands suitable for grazing consistent with forest plans (FSM 2203.1).

It is Forest Service policy to continue contributions to the economic and social well being of people by providing opportunities for economic diversity and by promoting stability for communities that depend on range resources for their livelihood (FSM 2202.1).

By regulation, forage-producing lands will be managed for livestock grazing where consistent with forest plans (36 CFR 222.2 (c)).

A 10-year period is allowed by law (FLPMA Sec. 402 (a) & (b) (3)). A permit may be issued for a shorter term under several circumstances, including when the best interest of sound land management is served.

Comparison of existing conditions on the allotment and the desired conditions in the Forest Plan indicate a need to address the following:

- To develop a comprehensive plan that would address more than domestic livestock grazing. Through the collaborative process used by the Diablo Trust, it has become apparent that there is a need for development of a comprehensive plan that would address more than domestic livestock grazing. This plan would coordinate livestock management with other resource needs on the allotment.
- To address concerns with increased canopy densities in pinyon-juniper and ponderosa pine vegetation types. Resource conditions on the Anderson Springs Allotment are generally satisfactory, but increased canopy densities in pinyon-juniper and ponderosa pine vegetation types are inhibiting understory plant growth and depleting soil conditions in some areas. As canopy densities and fuel loadings continue to increase in these areas, the potential for high intensity wildfires also increases.
- To address concerns with competition for forage, in particular cool season plant species, between domestic livestock and wild ungulates. Competition for forage between domestic livestock and wild ungulates is common on the allotment. Heavy grazing use on cool season grasses, forbs, and shrubs is occurring in many areas, resulting in decreased species diversity and poor plant vigor.
- To address concerns with decreasing pronghorn antelope populations and habitat quality on summer and winter range. Pronghorn antelope populations are decreasing throughout most of Arizona. There is a need to improve habitat conditions for antelope that summer on Anderson Mesa and winter on adjacent Arizona State Trust Lands and private lands, where possible.
- To address concerns with livestock grazing and waterfowl nesting on wetlands that produce emergent vegetation. The actions proposed will bring the grazing of wetlands on the analysis area in compliance with standards and guidelines set forth in the Coconino National Forest Plan to protect nesting and breeding habitat for waterfowl.

Management Strategy

- This permit will allow up to 7,042 permitted head months under a Deferred Rest Rotation and Time Controlled Grazing with two herds over 25 pastures with forage utilization levels between 35% - 50%, objective driven. Objective driven is defined as the use of plant recovery and timing of grazing and rest to achieve goals of forage utilization.
- Manage livestock and wildlife to achieve site-specific forage utilization levels within a range of 35% -50% of annual forage production depending on the management objectives defined for the area. Management objectives refer to specific goals relative to resource area concerns. For example, forage utilization of woody vegetation in riparian areas will not exceed 20%.

Wetland Enclosures

- Construction of one semi-permanent wetland enclosure, through fencing that meets wildlife specifications, at Perry Lake in the Perry pasture. The purpose of creating this semi-permanent wetland enclosure is to protect wetlands during the nesting season, May 1 – July 15. This enclosure will be built when money is available, likely by 2010.
- Construction of five seasonal wetland enclosures with 10.6 miles of fence at Boot Lake (North Boot pasture), Tony's Tank (West Mud Lake pasture), Pine/Camillo/Lakes (West Mud Lake, East Mud Lake, West Kinnikinick pastures), Yeager Lake (North Yeager pasture), and Corner Lake (South East Pine Hill pasture). The purpose of creating these seasonal wetland enclosures is to protect wetlands during the nesting season, May 1 – July 15. Install three cattleguards at Pine/Camillo Lake and two at Boot Lake enclosures. These enclosure will be built when money is available, likely by 2010.
- Lanes will be constructed to allow access to stock tanks at Boot Lake, Perry Lake, Tony's Tank, Yeager Lake and Corner Lake. The remainder of these wetlands are within the year-round enclosures.
- Pine/Camillo Lakes wetland enclosure is not grazed May 1 – July 15, and is only used 1-5 days annually as a pass-through to move cattle through the allotment.
- To assist in maintenance of these wetlands enclosures, the Forest Service and Diablo Trust will look for volunteers to perform this task.

Replacement Water Developments

- Construct one new replacement water development. This replacement water development will be located in West Mud Lake pasture. The purpose of this new replacement water development is to provide better distribution of water within pastures and to provide water to cattle that are now excluded from the wetland

enclosure (Pine/Camillo Lakes enclosure). This stock tank will be built by the Forest Service in 2006.

Other Water Developments

- Construct three new upland stock tanks to improve livestock distribution at Mud Lake West and two at Mud Lake East pastures. These stock tanks will be built by 2010, when money is available through grants.

Range Improvements

Two-wire electric fence construction

- South Yeager pasture. This will split South Yeager pasture to improve livestock distribution and overall management. This will be done by 2012, when funds become available through grants.
- Reconstruct approximately 9.4 miles of barbed-wire fence, removing bottom barbed wire and replacing with smooth wire to facilitate pronghorn movement and access to existing and proposed water developments. This will be done by the Forest Service, permittee and volunteers has funds become available by 2014.

Existing Improvements

- There will be continued management and maintenance on all real property as listed on the Deferred Maintenance Inventory and Certification for Range Improvements list attached to this document. The permittee is responsible for maintenance of all their assigned improvements. A list of structural improvement is attached to this document, along with a map of these improvements.

Non-structural Improvements

Approximately 16,785 acres of pinyon pine, juniper and ponderosa pine will be harvested and removed for grassland maintenance and restoration of which:

- Approximately 10,933 acres (grassland maintenance) of young pinyon-juniper woodland trees will be removed that have encroached into historic grasslands. No old-growth trees will be removed.
- Approximately 2,133 acres (grassland maintenance) of young pinyon-juniper woodland trees and young ponderosa pine trees will be removed in transition areas within the pinyon-juniper woodland and ponderosa pine habitat type. This will maintain or improve habitat for pronghorn and other grassland species and to improve watershed conditions and forage production.
- Approximately 3,623 acres (grassland restoration) of young pinyon-juniper woodland trees will be removed. This will remove approximately 80–90% of young trees to increase habitat for pronghorn and other grassland species, improve watershed conditions and forage production.

- Approximately 96 acres of young juniper trees will be removed for wildlife corridors to encourage movement of elk, deer and pronghorn between summer and winter range. No cutting of alligator juniper trees will be allowed. No old-growth trees will be removed.
- Prescribe burn on the above 16,785 acres only when soil conditions are satisfactory.

All these treatments will likely be completed by 2014 depending on grant funding.

Additional Management Items

Annual Operating Instructions: Annual operating plans make adjustments to cattle numbers, and time and duration of pasture use based on current climatic and range conditions. Making these plans each year and adjusting throughout the season as conditions change adds needed flexibility for this alternative.

Roads and Cattle Guards: There is a need to keep forest users from leaving gates open. Where roads are maintained as open, cattle guards will be put in place. Where roads are identified for closure, in past and future road decisions, no cattle guard is necessary.

Cattle Guard Maintenance: Cattle guard maintenance is shared between the Forest Service and the permittee for level 3 roads (main surfaced roads). Cattle guard maintenance on level 2 roads (secondary smaller roads) is the responsibility of the permittee.

Implementation of Structural Improvements: There is a need for cultural, wildlife and recreation coordination when implementing the grazing system. Structural improvements such as fencing, stock tanks and cattle guards will be used to implement the grazing plan. During the life of the permit, there may be additional or fewer improvements needed based on adapting to changes and meeting the goals of the new system. The following parameters need to be followed when implementing structural improvements.

- **Cultural Resource Coordination:** A programmatic cultural report has been completed and approved by the State Historic Preservation Office (SHPO). Using the parameters described in the programmatic report, conduct survey and obtain clearance prior to any ground disturbing activities related to structural improvements.
- **Threatened, Endangered and Sensitive Species Coordination:** Additional very site specific biological assessments and evaluations will be written for chosen actions. Refer to and follow any mitigation measures or implementation parameters described in the biological assessments and evaluations written this action. Location of improvements may be altered somewhat in response to species considerations. Involve a wildlife biologist prior to final planning of any new improvements.
- **Fencing:** All new fencing will contain a smooth bottom wire and appropriate bottom wire height for wildlife. Conduct cultural resources and threatened, endangered and sensitive species coordination as described above. Where possible, locate fences within tree lines to limit impact to visual quality. Elk jumps may be constructed along new fences and along existing fences as appropriate.

Other Management Items: Salting occurs throughout the allotment, but is not used in northern goshawk PFAs, meadows, burn areas or locations closer than 1/4 mile to water. Grazing systems are alternately rested and grazed in a planned sequence. The permittee will rotate livestock in a planned grazing system that alternates rest and graze period throughout a given year and from year to year.

Monitoring

Required Annual Monitoring

Compliance Monitoring: Throughout each grazing season, compliance monitoring will be done by Forest Service personnel to determine accomplishment of the terms and conditions of the term grazing permit, Allotment Management Plan, and Annual Operating Instructions.

Allotment Inspections: Allotment inspections are a written summary completed each fall by Forest Service personnel to document compliance monitoring and to provide an overall history of that year's grazing. This monitoring is completed with the permittee. This document may include weather history, the year's success, problems, improvement suggestions for the future, and a monitoring summary.

Range Readiness: Each spring before cattle are turned out on the allotment, range readiness will be assessed by Forest Service personnel to determine if vegetative conditions are ready for cattle grazing. The range is generally ready for grazing when cool season grasses are leafed out, forbs are in bloom, and brush and aspen are leafed out. These characteristics indicate the growing season has progressed far enough for plants to replenish root reserves so that grazing will not seriously impact the forage plants.

Forage Utilization: Utilization is measured at the end of the growing season when the total annual production can be accounted for and the effects of grazing in the whole management unit can be assessed. This assessment, along with climate and condition/trend data, is used to set stocking levels and pasture rotation for future years. Utilization is not intended to be the only way to determine when livestock are moved from one pasture to another or as a nonflexible limit of use within any given year.

For this allotment, pasture moves would be determined by a seasonal utilization, which is the use of any given pasture measured before the end of the grazing season. This guideline takes into account any additional growth which might occur that year. Seasonal utilization data can be used as a guideline for moving livestock within the allotment and considers season of use, elk use, weather conditions, availability of forage, and water in pastures. If elk use exceeds this guideline in a pasture, cattle would skip this pasture and move to the next pasture in the rotation.

Utilization monitoring is an estimate of the available forage by weight consumed or trampled through grazing and is expressed as a percent of the current year's biomass removed. Utilization monitoring is designed to assess key forage utilization levels by cattle and elk during the year and from year to year. Key forage species for this allotment include western wheatgrass, blue grama, squirreltail, and Arizona fescue. Utilization monitoring will be conducted by the permittee and spot checked by Forest Service personnel throughout the year in every grazed pasture. This monitoring will calculate an overall seasonal utilization and utilization values for a pasture 1) before cattle go into a

pasture, 2) within five days after cattle leave a pasture, and 3) at the end of the growing season in the fall.

Identify key ungulate utilization monitoring areas. These key areas will normally be $\frac{1}{4}$ to 1 mile from water, located on productive soils on level to intermediate slopes, and be readily accessible for grazing. The size of the key forage monitoring areas could be 20 to 500 acres. In some situations such as high mountain meadows with perennial streams, key areas may be closer the $\frac{1}{4}$ mile from water and less than 20 acres. Within key forage monitoring areas, select appropriate key species to monitor average allowable use.

Study plots

Antelope and wetland study plots will be monitored annually for the first two years after establishment. Establishment of additional antelope and wetland monitoring plots after year two will be done as funding becomes available.

Monitoring Study Plots - Pronghorn Study Plots: Quantification of impacts to pronghorn antelope habitat resulting from elk and cattle use on Anderson Mesa is unknown. To assist with our understanding of this, one study area at Reed Lake on the Anderson Springs Allotment has been established by the Sisk Laboratory at Northern Arizona University (NAU) using the frequency transect monitoring method. NAU has also established a monitoring area north of the Anderson Springs Allotment on the Picket/Padre Allotment to compare rest rotation and time controlled grazing systems.

Two other frequency monitoring plots have been established by the US Forest Service in the Kinnickinick Lake exclosure area and in North Boot pasture. Specific location for the construction of these sites will be tied to pronghorn antelope radio collar monitoring data of high use areas. Monitoring of these plots would not only be aimed at comparing grazing effects by ungulates, but would provide information valuable in determining differences in plant species composition and cover in relation to pronghorn habitat requirements.

Monitoring Study Plots - Wetland Study Plots: Two 10 foot by 40 foot elk exclosures have been constructed in 2002 at Corner Lake and Yeager Lake on the Anderson Springs Allotment to monitor the effects of exclusion of wildlife and livestock on seasonal wetlands. Data collected at these paired exclosures would include plant canopy cover, frequency data, and photo point data.

Required Long-term Monitoring

Forage Production: Forage production surveys for the allotment will be done every nine to 13 years. Methods used for these surveys will be done by the best available methods at that time. These values will be used as tool to manage this allotment, but will not be the sole measure to set carrying capacity.

Condition and Trend: Watershed and vegetative condition and trend monitoring will help determine the effectiveness of the Allotment Management Plan and long-term range and

watershed trend once every 10 years. In the past, Parker 3-step and paced transects have been used to determine condition and trend. Other monitoring techniques include canopy cover and frequency ground cover plots.

Parker 3-step and paced transect monitoring points were established throughout the allotment in the 1950-60's. These transects are one of the best historic records of range condition and trend. The photo points and vegetative ground cover data show how the site has changed over time. The new plots and techniques will be placed over the Parker 3-step transects in most locations to take over this historic data. The original photo points will be retaken.

Ocular plant canopy cover 0.10 acre plots will be used to compare existing conditions with potential and desired vegetative community conditions. Over time, these plots will show us how canopy cover changes. Canopy cover will provide an indication of how plants are growing, assuming that if they are getting bigger and occupying more space, then they are doing well and that can be a relative gauge of vigor.

Frequency and ground cover data will be collected using the protocols established in, "Some Methods for Monitoring Rangelands and Other Natural Area Vegetation," Edited by G.B. Ruyle, Extension Report 9043, 1997. These plots will monitor trends in plant species abundance, plant species distribution and ground cover. All this information will be statistically valid. This will provide information on plant composition and additional information on regeneration. These transects will be read at least every 10 years by Forest Service personnel. These plots will be used to help determine the effectiveness of the Allotment Management Plan.

Soil Condition and Water Quality

Monitoring to determine whether Best Management Practices identified as Mitigation Measures in Table 3 are being followed would be done. This would include the following.

- BMP #1 (SW3) - Monitor ground conditions before and during construction activities to avoid wet ground conditions that can adversely affect soil condition and water quality.
- BMP #2 (SW4) - Monitor effective ground cover before and after vegetation treatments using Daubenmire plots.
- BMP #3 (SW5) - Monitor through inspections on-site during and after vegetation treatments are completed.
- BMP #4 (SW6) - Monitoring would be done throughout the project layout.
- BMP #5 (SW7) - Monitor through inspections on-site during and after vegetation treatments are completed.
- BMP #6 (SW8) - Monitor through inspections on-site during and after vegetation treatments are completed.
- BMP #7 (SW10) - Monitor stock tanks in identified wetlands for maintenance activities.

Air Quality

All burning will be coordinated daily with the Arizona Department of Environmental Quality (ADEQ) to ensure that smoke management objectives are met (PR# 127]. Coordination with ADEQ would take place through the Coconino National Forest Zone Dispatch Center and the Prescribed Burning Boss.

Wildlife, Fish, and Plants of Concern

Mexican Spotted Owl: Continue to monitor "key areas" annually in restricted habitat and meadows in owl habitat to ensure that appropriate utilization guidelines are followed, as established through NEPA.

Northern Goshawk: Monitor "key areas" annually in northern goshawk habitat to ensure that appropriate utilization guidelines are followed, as established through NEPA.

Game Species: Measure effective ground cover and diversity of shrubs, forbs, and grasses on ten plots in treated grasslands and woodlands.

Cultural Resources

The project administrator must ensure that all ground-disturbing activities receive archaeological surveys and clearances prior to implementation. Avoidance of archaeological resources is required and will be monitored during project implementation.

Example Grazing Schedules

The following three grazing schedules are examples that may be followed for this Allotment Management Plan. However, they are only examples and are not intended to be exact. Many things could change these schedules including but not limited to: forage production, climate, livestock management goals, prescribed burning, land treatments, insects, and water availability.

Grazing Schedule Year A		
Pasture	Dates	# of days
Middle	5/25-6/5	11
Wallace	7/23-8/4	12
Perry	8/4-8/19	15
South Burro 1	5/10-5/15	5
South Burro 5	5/15-5/19	4
South Burro 7	5/19-5/24	5
South Burro 9	5/24-5/30	5
Yeager 2 E	5/30-6/7	8
Yeager 2 W	6/7-6/15	8
Kinn 2 S	6/15-6/22	5
Pine Hill 1 N	6/22-6/30	8
Pine Hill 2 N	6/30-7/7	8
South Boot	7/7-7/15	8
North Boot	7/15-7/18	3
Yaeger 1	7/18-7/28	10
Kinn 2 N	7/28-8/3	6
Kinn 1	8/3-8/11	8
Kinn West	8/11-8/21	10
Mud Lake 2	8/21-8/31	10
Mud Lake 1	8/31-9/12	12
Pine Hill 1 S	9/12-9/15	3
Pine Hill 1 N	9/15-9/23	8
Pine Hill 2 S	9/23-9/29	6
Boot South	9/29-10/5	6
Kinn 2 N	10/5-10/18	12
Mud Lake 2	10/18-10/25	8
Kinn 1	10/25-11/6	12
Mud Lake 2	10/5-10/10	5
Pine Hill 2 N&S	10/10-10/28	18
Kinn 2 S	11/16-11/21	5

Grazing Schedule Year B		
Pasture	Dates	# of days
Middle	5/29-6/9	11
Perry	8/26-9/16	20
Wallace	9/17-9/27	10
North Burro	5/10-5/18	8
South Boot	5/18-5/26	8
Pine Hill 2 N	5/26-6/7	9
Pine Hill 1 N	6/7-6/14	8
Pine Hill 1 S	6/14-6/19	5
Yaeger 2	6/19-7/5	16
Kinn 2 S	7/5-7/15	7
Yaeger 1	7/15-7/22	9
Kinn 1	7/22-7/30	8
Kinn 2 N	7/30-8/5	5
South Boot	8/5-8/10	5
Pine Hill 2 S	8/10-8/19	9
Pine Hill 2 N	8/19-8/24	5
Pine Hill 1 N	8/24-8/27	3
Pine Hill 1 S	8/27-8/30	3
Mud Lake 1	8/30-9/13	13
Kinn 1	9/13-9/25	12
Mud Lake 2	9/25-10/11	16
Kinn 2 N	10/11-10/18	7
Kinn 2 S	10/18-10/24	6
South Boot	10/11-10/16	5
Pine Hill 2 S	10/16-10/24	8
South Burro 1	10/24-10/31	8
South Burro 5	10/31-11/5	5
South Burro 7	10/31-11/5	5
South Burro 9	yearlong rest	
South Burro (Grapevine)	11/5-11/20	7

Grazing Schedule Year C		
Pasture	Dates	# of days
Middle	7/24-8/6	12
Perry	8/7-8/29	22
Wallace	7/15-7/24	9
Wallace	9/21-10/1	10
Middle	9/11-9/21	10
South Burro 1	5/10-5/15	4
South Burro 5	5/15-5/18	3
South Burro 7	5/18-5/23	4
South Burro 9	5/23-5/28	5
Yaeger 2 E	5/28-6/6	8
Yaeger 2 W	6/6-6/14	8
Pine Hill 1 S	6/15-6/22	7
Kinn 2 S	6/22-6/30	8
Yeager 2	6/30-7/15	15
Yaeger 1	7/15-8/1	4
Boot South	8/1-8/6	5
Boot North	8/6-8/11	5
Pine Hill 2 N	8/11-8/15	4
Pine Hill 1 N	8/15-8/20	5
Mud Lake 1	8/20-8/30	10
Mud Lake 2	8/30-9/4	5
Kinn 2 N	9/4-9/11	7
Kinn 2 S	9/11-9/16	5
Yaeger 1	9/16-9/21	5
South Boot	9/21-9/27	6
North Boot	9/27-10/1	4
Pine Hill 2 N	10/1-10/5	4
Pine Hill 1 S	10/5-10/8	3
Mud Lake 1	10/8-10/28	20
Mud Lake 2	10/5-10/10	5
Pine Hill 2 S	10/15-10/20	10
Mud Lake 2	10/20-10/25	5
Kinn 1	10/25-11/5	3
Kinn 2 N	11/5-11/10	5
North Burro	11/10-11/15	5