Thirteen Mile Rock
Allotment Management Plan (AMP)

Red Rock and Mogollon Rim Ranger Districts

Coconino National Forest

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Agreed to/Reviewed by: Walter C Richburg **Date** 2-19-08

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Record of Decision Summary

This Allotment Management Plan follows the "Environmental Assessment" and "Decision Notice and Finding of No Significant Impact" for the 13-Mile Rock Range Allotment signed on 9/23/2003. Information on the purpose and need of the project, alternatives considered, and effects of the alternatives can be found in the EA or the Decision Notice and FONSI.

Management Strategy

In general, manage livestock using an intensive rest rotation grazing strategy, with the graze ½, rest ½ pattern in the mid and high elevation pastures and annual use in the low elevation pastures. Specific livestock grazing management activities are listed in the Livestock Grazing Management section. Several new structural range improvements are to be constructed and existing Structural Range Improvements are to be maintained and/or reconstructed. Details of the Structural Range Improvements are contained in the Structural Range Improvements section.

Livestock Grazing Management

The following lists the specific details regarding the management of livestock on the allotment:

- Maximum permitted livestock numbers are 550 head of cattle (cow/calf), for yearlong grazing use, using a twenty-two (22) pasture rest rotation grazing system. These cattle numbers are based on past stocking rates and carrying capacity estimates.
- Permit grazing for up to a ten-year period. The exact length of the permit will depend on the permittees ability to properly manage the allotment.
- Do not graze livestock in the Bobs and Cactus pastures, except during emergency situations approved by the Forest Service.
- Graze the Winter pasture for 60 days during the dormant season until proposed pasture fence is installed, separating into East and West Winter pastures for 30 days of grazing each during the dormant season.
- Spring/early Summer use of Winter pasture will be limited to driving/trailing livestock through the pasture on existing livestock trails. Use period will be limited to 10 days and no livestock access will be allowed to West Clear Creek.
- Graze 3 of the 4 Wingfield Mesa pastures each year under a rest rotation strategy allowing for complete rest from livestock use for at least one pasture each year. Maximum grazing period for the three grazed pastures will be 100 days each spring.
- Graze periods in each pasture are approximately 20 days or less during the plant growing season and up to 60 days during the plant dormancy season per year.

- **Annual Operating Instructions:** Annual operating instructions 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 to livestock grazing management.

Forage Utilization

- Upland Areas: Manage livestock and wildlife to achieve maximum site-specific levels of 40% forage use. Key area monitoring points will be established within the allotment. Reduce cattle numbers or season of use to meet these use standards, if needed.
- Riparian Areas: If all three stages of woody vegetation are present withing this area, a maximum allowable utilization of 20% on woody species is permitted. If the early or mid-age classes were absent, the maximum allowable utilization level on woody species would be limited to 5%.

Structural Range Improvements

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. Specifics on the Structural Range Improvements for the allotment follow:

- The bottom wire of new fences will be smooth and be a minimum height of 18 inches to facilitate pronghorn passage. The wires above the bottom wire (2 if on an interior fence, 3 if on an exterior fence) will be barbed with the top wire at a height of 42 inches.
- Develop a schedule for replacing the bottom barbed wire of old fences with smooth wire and raising the height of the bottom wire.
- Along 2.5 miles of fence in antelope habitat areas, the bottom smooth wire should be 21" above ground. Leave gates open at waterlots when livestock leave each pasture.
- Maintain recently completed road closure and fence reconstruction in the Wingfield South pasture to restrict inappropriate recreation and livestock access to the Verde River.
- Construct approximately 3 miles of 3 strand, barbed wire fence (constructed to wildlife standard) to divide the Winter pasture into the Winter East and Winter West pastures. Locate the fence line from Black Mountain south to Runner and Parsons Tanks, and then to 13-Mile Butte. Construct waterlots around Runner and Parsons Tanks to allow access from each of the newly created pastures.

- Realign and construct approximately 0.7 miles of the fence between Heifer and Cactus pastures, when the existing fence needs to be replaced. This will allow livestock use of approximately 160 acres of what is now the southern-most end of the Cactus pasture (south of West Clear Creek) in the Heifer pasture. Do not provide or allow access to West Clear Creek in this area.
- Maintenance will be done on all new and existing structural improvements including barbed wire fences, trick tanks, stock tanks, pipelines, and drinkers, as needed by the permittee.

Vegetation Management

Listed below are the vegetation treatments outlined in the Environmental Assessment that will potentially be completed as the budget allows.

Soil and Vegetation Improvements

- Maverick Basin South and Tin Can South pastures

  Use livestock to scarify soils when soils are dry, and plant an appropriate mix of cool and warm season perennial native grass and forb species to increase ground cover and plant diversity on approximately 300 acres in selected areas of bare and/or light to moderately compacted soil in the Maverick Basin South and Tin Can South pastures, as follows:

  Year 1-5: 150 acres
  Year 6-10: 150 acres

  Treat one pasture at a time, and at least one pasture within the first 5 years of this 10-year planning period. The second pasture can be treated within the first 5 years only if the treatment and required rest from grazing can be coordinated with thinning and burning projects approved for the Good Enough-Tule 20K area. Scarification and seeding would occur when soils are dry (year 1), allowing for full rest from livestock grazing the following year (year 2, as per the graze ½ - rest ½ grazing strategy). The next year (year 3), the treated pasture may be grazed, depending on the vegetative response to treatment and the plant phenologic stage, soil condition and precipitation.

- Winter, Heifer, and Wingfield Mesa pastures

  Seed cool season native grasses and forbs on productive soil units in the Winter, Heifer and Wingfield Mesa pastures to increase plant diversity for livestock and wildlife. Scatter seed and use livestock to scarify the soil and plant the seed during normal grazing operations each year.

Pinyon/Juniper Grassland Maintenance

- Cut, lop and scatter immature juniper trees on approximately 2,600 acres of pinyon-juniper grasslands (Winter, Maverick Basin, Tin Can and Tanque Aloma units) over the next 5 years to maintain the savannah-like grasslands. Allow pinyon/juniper and shrubs to fill in on rocky areas; keep all Gambel oak, pinyon, and large alligator juniper trees.
- Use Christmas tree cutting to control encroachment by juniper trees on an additional 400 acres of pinyon-juniper grassland within the southeast corner of the Winter pasture and the southern 1/3 of the Tanque Aloma pasture within the next 5 years.

Browse Species Maintenance/Improvement

- Prescribe burn approximately 1,000 acres of decadent browse plants within 5 years in the Winter pasture to improve forage for wildlife. Coordinate burning with affected agencies, Tribes and private individuals. Develop site-specific burn plans to manage impacts to airsheds, soils, water quality, wildlife, cultural resources, visual quality and vegetation.

Riparian Vegetation at Cottonwood Spring

- Monitor recovery of the woody riparian vegetation within the Cottonwood Spring livestock exclosure for 3 years. If recovery of these species is slow or not occurring, plant pole-sized woody riparian vegetation.

Implementation of Structural Improvements and Vegetation Treatments:

Common to all alternatives is the need for cultural, wildlife and recreation coordination when implementing the structural range improvements and vegetation treatments. The following parameters will be followed when implementing structural range improvements and vegetative treatments.

- **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:** Refer to and follow any mitigation measures or implementation parameters described in the biological assessment and evaluation. Location of improvements may be altered somewhat in response to species considerations. Involve a wildlife biologist prior to final planning of any new improvements.
- **Recreation and Special Use Guidelines:** Coordinate with recreation specialists and special use permit holders prior to the construction of new range improvement structures or vegetative treatments.

- **Fencing:** All new fencing will contain a smooth bottom wire and 18 inch minimum 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.
- **Forest Plan Compliance:** Implementation of all structural Range Improvements and Vegetation Treatments will be in compliance with the standards and guides specified in the Coconino National Forest Land Management Plan.

Monitoring

Monitor riparian, soil and vegetative conditions; vegetative ground cover; forage utilization; Best Management Practices (BMPs); impacts to TE&S wildlife, fish and plant species and cultural resources; and permittee compliance. ADEQ monitors water quality; AG&FD monitors and manages general wildlife populations.

Rangeland Management and Understory Vegetation

Annual Monitoring

Compliance: Throughout each grazing season, Forest Service personnel will monitor to determine permittee compliance with the terms and conditions of the term grazing permit, the Allotment Management Plan, and the 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 document may include weather history, the year's success, problems, improvement suggestions for the future, and monitoring summary.

Range Readiness: Each spring, Forest Service personnel will determine range readiness by assessing vegetative conditions. 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 to replenish root reserves so that grazing will not seriously impact these 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.

Key areas will normally be 1/4 to one mile from water, located on productive soils on level to intermediate slopes and be readily accessible for grazing. 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 then 1/4 mile from water and less than 20 acres (Coconino National Forest Plan 1987, as amended).

Precipitation: Precipitation is currently recorded near this allotment at the Verde Ranger Station of the Prescott National Forest and at two Yavapai County Flood Control District Precipitation Gauges (Calloway Butte and Cedar Flat gauges). Additional rain gauges may be established at the Thirteen Mile Rock Range Allotment summer headquarters or other convenient location on the allotment for a more accurate record of local summer precipitation.

Long Term Monitoring

Forage Production: Forage production surveys for the allotment will be done approximately every 10 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 should be collected 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.

Ecological condition and trend monitoring will help determine the effectiveness of the Allotment Management Plan and long-term trend. The Parker Three Step Clusters, frequency and canopy cover plots were done at existing Parker Three-Step Clusters sites in December 1999.

The Region 3 Terrestrial Ecosystem Survey (TES) has mapped and described the potential vegetation and soils for this allotment. TES presents a benchmark against which we can measure our current condition, and assess the impacts of our proposed management. This enables us to quantify the benefits or trade-offs of different alternatives, helping us to determine which plant community(s) maximize our management objectives.

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.

Noxious Weeds

The Ranch Manager will monitor for noxious weed occurrence during normal grazing operations each year, and will remove plants as prescribed by the Forest Service. All occurrences will be noted on a map and reported to the Forest Service. In addition, areas disturbed during prescribed burning, scarifying, and seeding, or lop and scattering projects will be monitored after project implementation (as per mitigation requirements) for the occurrence of noxious weeds.

Soil Condition And Water Quality

Monitor soil condition to assess changes in physical properties related to soil function. Soil condition monitoring would concentrate on such items as soil compaction, nutrient cycling, and soil erosion.

Wildlife

Monitoring for specific T&E species would continue to be conducted by the Forest Service and AG&FD throughout the 10-year planning period.

Cultural Resources

Four prehistoric sites, representing multi-roomed pueblos, ephemeral Yavapai and or Apache sites and caveates, will be periodically monitored to detect any changes in impacts by livestock. The archaeologists for the Beaver Creek and Long Valley Ranger Districts will establish sample plots on these selected sites, and will collect baseline information including mapping, photographing the sites and recording detailed information on an Archaeological Site Condition Evaluation Form (Thorne et al. 1987), or equivalent. The Forest will then assess the long-term effectiveness of the approved grazing strategy on maintaining the status quo for cultural resource. In addition, any sites within intensively grazed pastures will be periodically monitored by the District Archaeologist throughout the life of the grazing permit to document individual site condition.

MITIGATION MEASURES

Mitigation for Noxious Weeds

- Controls for livestock grazing. The Ranch and the Forest Service would continue to monitor the allotment, and particularly areas around tanks, roads and holding areas for noxious weeds. Where these occur now or become established in the future, the Ranch and/or the Forest Service would remove or control the plants using the best available methods and knowledge for that species.
- Controls for lop and scatter treatments. Make crews aware of which noxious weeds may be present so they can look for these while they are doing the work. Clean vehicles and equipment prior to the project, if they were previous exposed to noxious

weeds or would be used off of any established roads. Cleaning should be done in an area where wash water can be contained. Remove residue or survey the area during range inspections to ensure no noxious weeds were introduced.

- Controls for prescribed burns. Survey the project area just prior to the burn; record any noxious weeds and compare the information with a post-burn survey. Clean vehicles and equipment that had any exposure to noxious weeds in an area where any dirt, plant matter, or water can be contained. Remove residue or survey the cleaning area during the post-burn survey to ensure no noxious weeds were introduced or became established.
- Controls for scarify and seed. Survey the area for existing noxious weeds just prior to implementation; remove any noxious weeds found before the scarifying takes place. Survey the area again within the following 2 years during permit operations and range inspections to insure that no noxious weeds were introduced during the scarification or seeding process.

Mitigation for Wildlife

The following are mitigation measures for implementing any of the alternatives that allow for livestock grazing use on the 13-Mile Rock Range Allotment for the next 10 years.

Mexican spotted owl and peregrine falcon:

Meet the intent of the grazing guidelines listed in the Mexican Spotted Owl Recovery Plan by continuing to:

- Monitor grazing use by livestock and wildlife in "key grazing" areas (riparian areas (MA 12) and pine/oak types (MA 3) (Appendix B, Table B-7). If cattle show an increasing utilization trend, then change the management strategy to reverse the trend. If wild ungulates show an increasing utilization trend, the Forest Service would work with the AG&FD to reverse this trend.

- Implement and enforce grazing utilization standards to attain good to excellent range conditions in "key areas" over time.

- Restore degraded riparian communities to good conditions by maintaining or promoting three age classes in woody vegetation. If the mid-age class is absent, 5% utilization or less is required to promote three structural stages. If all three classes are present, utilization of 20% or less on woody vegetation is acceptable.

- Reduce animal concentrations and trampling of vegetation which may impact prey species forage and cover.

- Specific livestock salting techniques to avoid livestock concentrations within or immediately adjacent to Mexican spotted owl protected activity centers are:

Pasture Name	Salting Technique
Meadow Canyon South	Salt south of Section 5 Tank only.
Wilber South	No salt will be placed within 0.2 miles of Wilbur Canyon or Wilbur Canyon tributaries.
Toms	Salt only at Pothole, Idas, Back, and Dead Tanks.
Wilber North	Salt only at Wilber and Bueno Tanks.
Tule North	Salt only within 0.25 miles of Forest Road #142B.
Meadow Canyon North	No salt.

- No salt will be placed in mountain meadows or riparian areas or within 0.25 miles of riparian areas or mountain meadows. Salt will not be placed in non-riparian drainages in the ponderosa pine (MA3) areas, unless it is being used for a watershed restoration project.
- Eliminate potentially disturbing activities, such as branding, gathering or construction activities, in Mexican spotted owl habitat or near peregrine nesting areas during their breeding season (between March 1 and August 31).

Mitigation for aquatic habitats

- If livestock are found grazing riparian/aquatic habitats outside of established graze periods and/or fenced boundaries, immediate corrective actions need to occur (permittee compliance monitoring). The permittee or Ranch Manager needs to spend a disproportionately higher amount of time tending to livestock when they graze adjacent to riparian areas than any other pasture on the allotment. If the Ranch cannot allocate the time needed to safe guard the riparian and aquatic ecosystems found in or adjacent the allotment, then the respective pasture(s) (Heifer, Winter, Wingfield Northwest, Wingfield West and Wingfield South) should not be grazed by livestock.
- If, through the creation of a West Winter Pasture, cattle use of West Clear Creek causes an unacceptable amount of trampling or breakage on the riparian vegetation, or fouling of the water, management of the Winter Pasture would need to be reassessed (key area utilization monitoring).
- Maintenance of stock ponds on the allotment should be done during the fall, winter, or early spring seasons to avoid impacts to Chiricahua leopard frog adults, tadpoles and eggs (terms and conditions of the grazing permit).

Mitigation Measures for Cultural Resources

- To insure the status quo is continued, management practices that tend to concentrate livestock (and most likely wild ungulates) such as salting, haying, construction of waters, etc., would be located away from known cultural resource sites. This mitigation requirement would be included in each year's Annual Operating Plan and would be a topic of discussion at the annual meeting with the permittee.
- Ground disturbing activities, such as construction of range improvements, haying and seeding, lop and scatter of junipers, Christmas tree cutting and burning, require a separate archaeological survey and clearance report prior to implementation. These activities would be managed for no effect to cultural resources.

General

Coordinate grazing on the 13-Mile Rock Range Allotment with the Buckhorn Range Allotment and other allotments to the north, so that all allotments are grazing northern pastures during the same year, or southern pastures during the same year.