Decision Notice
and
Finding of No Significant Impact
for the
Fossil Creek Range Allotment
Coconino National Forest – Red Rock Ranger District

Background

This decision approves the reauthorization of grazing under a 10-year term grazing permit on the Fossil Creek Allotment. The Fossil Creek Allotment is located on the Red Rock Ranger District approximately five miles southeast of Camp Verde. The allotment is roughly bounded by Highway 260 on the north and Fossil Creek on the south and east.

Fossil Creek Allotment includes approximately 42,140 acres. The allotment is divided into 28 main grazing pastures and several smaller (each <100 acres) livestock management pastures and waterlots (see Appendix 1, Maps 1 and 2 in the EA). The current season of use is yearlong (3/1-2/28), and the current permit authorizes a maximum of 294 cattle and 6 horses year long. Elevations range from approximately 3,000 feet to 6,300 feet. Vegetation types range from desert scrub to pinyon-juniper transition zones and to stringers of ponderosa pine.

Actual use on the Fossil Creek Allotment over the past twelve years has varied, but has continued to follow decreasing stocking levels. Actual use averaged 93.5% of permitted numbers (between 5,796 and 6,372 AUMs) from 1995 to 2001 with reductions in stocking level primarily in response to operational requirements and dry years. In response to drought conditions, actual use was reduced substantially in 2002 to 2006. Livestock were completely removed from the allotment in response to drought conditions from June 20, 2002 to February 28, 2003 and from October 31, 2004 to October 31, 2006. Between 2006 and 2009, precipitation increased and livestock were grazed at levels ranging from approximately 1,600 AUMs to 3,600 AUMs.

In 2009 an Environmental Assessment was completed to reauthorize grazing on the Fossil Creek Allotment at a reduced level of 3,600 AUMs until monitoring illustrated marked improvements in vegetative ground cover (USDAFS 2009). This reduced the permitted number of livestock by approximately 38% from permitted levels that occurred prior to 2009. In the 2011 to 2012 grazing season, actual use measured 2,934 AUMs, which is 21% below the reduced permitted levels. Soil and vegetation monitoring during this time period has shown marked improvements to vegetative cover and soil condition.

This decision is based on the final Environmental Assessment released by the Red Rock Ranger District in May 2013. This 2013 Environmental Assessment replaces a 2009 Environmental Assessment completed to analyze the effects of proposed livestock management on the Fossil Creek Allotment. A decision on the 2009 EA was litigated in court and was invalidated under a court order (Center for Biological Diversity v. Provencio, 2011). This new Environmental Assessment and Decision Notice are meant to fulfill court orders to comply with the National Environmental Policy Act. The 2013 Environmental Assessment includes a similar proposed action as analyzed in 2009 and incorporates updated information from range, wildlife, and soil surveys that have occurred since 2009.

Purpose and Need

The purpose and need for this project is to reauthorize livestock grazing in a manner that would maintain current resource conditions where allotment conditions are satisfactory, and moves resource conditions towards meeting Forest Plan objectives and desired on-the-ground conditions where allotment conditions are unsatisfactory.

- There is a need to continue to improve and/or maintain grazed vegetation conditions, with allowances for drought, on the allotment. Based on past drought monitoring, trends could decline during drought with or without livestock grazing. There is a need to continue to manage livestock to reduce impacts during these drought periods and manage for long-term increases in vegetative cover.
- There is a need to improve unsatisfactory soil conditions and impaired soil conditions, which comprise about 1.5% and 62.6% of the allotment, respectively; towards satisfactory conditions to maintain and improve soil productivity.
- There is a need to improve watershed function towards Functioning Properly where it currently is Functioning at Risk or is in Impaired Function and to maintain watershed function where currently Functioning Properly.
- There is a need to improve about five miles of riparian streams toward proper functioning conditions, and to improve riparian conditions at springs in the allotment.
- There is a need to continue to protect Chiricahua leopard frog (endangered species) habitat at tanks. This would include both maintaining existing wedge fence where frogs already exist and building new wedge fence (if necessary) where new populations are found.
- There is a need to eliminate and continue to manage invasive species threats to Chiricahua leopard frogs, such as crayfish. One specific need already identified is to eliminate the suitable habitat for crayfish at Divide Tank (earthen stock tank), because Divide Tank is infested with crayfish and crayfish are a threat to downstream frog sites.
- There is a need to increase ground cover and reduce erosion in pastures where there is evidence that juniper encroachment has contributed to impaired and unsatisfactory soil conditions.
- There is a need for greater management flexibility to cope with fluctuations in environmental and social conditions, such as annual changes in weather and longer term climate change cycles; responding to different visitor-use patterns; responding to permittee requests for operational adjustments and range improvements; and, respond to unforeseen circumstances.
- There is a need to facilitate livestock management according to the forest plan and Forest Service policy to contribute to the economic and social well-being of people by providing opportunities for economic diversity and promoting stability for communities.

Decision

As the District Ranger and Responsible Official, it is my decision to implement the Proposed Action as described in Chapter 2 of the Environmental Assessment (EA). My decision is based on the analysis described in the EA that was prepared for this project. The EA is available for review at the Red Rock Ranger District of the Coconino National Forest and on the internet at http://tinyurl.com/cd7fq9t.

Based on my review of the 2013 Environmental Assessment and input from the public and allotment permittee I have decided to reauthorize grazing under a ten year term grazing permit as described under the proposed action alternative. My decision incorporates components analyzed in as part of the proposed action including resource protection measures identified in the Environmental Assessment.

Description of Approved Alternative

Under the proposed action, livestock grazing would continue on Fossil Creek Allotment under a deferred rotational grazing system, which includes conservative forage utilization guidelines. The proposed action is based on a grazing intensity that is light to moderate (0-50 percent) and a conservative utilization (30-40% forage utilization as measured after the end of the growing season). Pasture rotations would be planned in the spring and fall, and documented in the AOIs, but they could be modified later in the season to respond to environmental changes and/or monitoring results.

Authorization

The RRRD of the Coconino National Forest proposes to continue to authorize livestock grazing for Fossil Creek Allotment under the following terms:

- The estimated livestock capacity based on full capacity acres would be 5,800 AUMs. This number was calculated using a full capability condition on the allotment that could be achieved if all the soils in impaired and unsatisfactory condition were improved to satisfactory condition if the desired soil and vegetative cover conditions are reached. However, current conditions cannot support 5,800 AUMs. The estimated livestock capacity on the allotment based on the current conditions (current capability) is 3,600 AUMs year-long.
- The Term Grazing Permit (TGP) would be issued for 3,600 AUMs or 300 AUs. This will not be increased to the estimated maximum livestock capacity of 5,800 AUMs unless monitoring data illustrates all of the soils in impaired and unsatisfactory condition are improved to satisfactory condition.
- Annual authorized livestock numbers would be based on existing conditions, available water and forage, and predicted forage production for the year. Adjustments to the annual authorized livestock numbers and AUMs (increase or decrease) may occur during the grazing year, based on conditions and/or range inspections.
- The permitted season of use would be yearlong.
- Grazing would occur through a rotational management system (deferred rotational grazing) which would allow for plant growth and recovery.
- Permittee is requested to leave any available water in earthen stock tanks for wildlife use after domestic livestock have been removed from the grazing unit. Important earthen stock tanks for wildlife include: Herbies, Hogback, Natural, Mail Trail Tank #2, Pine, Tanque Aloma, and any other earthen stock tanks identified as being occupied by Chiricahua leopard frogs. These would be identified in the AOIs based on most recent Chiricahua leopard frog monitoring, and updated annually.
- Stehr Lake Pasture would be utilized as a trail-through pasture only. Livestock use would be limited to a three day period when trailing through this pasture. The livestock would not be authorized access to the riparian area (Fossil Creek) to graze or water.

At the onset of a grazing period (3/1 to 2/28), livestock numbers would be based on water availability and range readiness. Within season adjustments may occur based off resource conditions that are evaluated through monitoring. Livestock numbers within the permitted amount have historically been and would continue to be adjusted to meet resource and other objectives based on changing conditions.

The Annual Operating Instructions (AOI) would state the planned graze period for each pasture for each grazing year. However, the actual grazing period within each pasture would depend on current growing conditions and the need to provide for plant recovery following grazing. The length of the grazing period within each pasture would also be dictated by the allotment-wide allowable use guidelines.

Drought Strategy

Following FSH 2209.13, the Grazing Permit Administration Handbook, the Standardized Precipitation Index (SPI), combined with site-specific information, would be used to assess moisture conditions. Using the SPI as a baseline and combining it with site-specific information, a determination for drought would be made, and adaptive management alternatives would be evaluated. Some of the indicators used for drought evaluation include leaf size and color, flower and seed production, and root mass. Site-specific information may include Arizona drought status guidelines as established by the Arizona Department of Water Resources. These guidelines break precipitation amounts into categories to assess stages of drought.

Region 3 and Coconino National Forest drought management policies recommend resting pastures from grazing as a method for mitigating grazing effects during drought. When a pasture would be rested and for how long it would be rested would depend on conditions. These decisions would be made by the Responsible Official after consulting the Range Specialist and the permittee.

Management

The grazing system would consist of a deferred rotation to facilitate soil and vegetative improvement. Pasture rotations would be planned at the onset of spring and fall season, but may be modified later in response to environmental changes, such as range readiness, drought, fire, or a wet season.

Grazing rotations would be prescribed to address early-spring growth, late-spring growth, and seed-shatter periods in different pastures. For example, if a pasture is grazed during the late-spring growth period one year, it would not be grazed during the late-spring growth period the next year.

Allotment-Wide Allowable Use Guidelines (Intensity/Utilization Guidelines)

Grazing intensity is defined as the amount of herbage removed through grazing or trampling during the growing period. Grazing intensity would be managed to allow for the physiological needs of plants. Utilization monitoring would occur at the end of the growing season within each of the main grazing pastures. Utilization is defined as the proportion or degree of current year's forage production that is consumed or destroyed by animals (including insects). 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.

Utilization measurements would be taken in key areas which reflect grazing effects within an entire pasture. A minimum of one key area would be established within each main grazing pasture, at existing

long-term monitoring sites if possible, to represent overall pasture utilization. Utilization guidelines are not intended as inflexible limits. Utilization measurements can indicate the need for management changes prior to this need being identified through long-term monitoring. Utilization data would not be used alone, but would be used along with actual-use, climate and condition/trend data, to determine stocking levels and pasture rotations for future years.

If monitoring shows that the utilization guideline was exceeded in a pasture, the grazing schedule and/or cattle numbers would be adjusted for the following year. If utilization is exceeded after these adjustments are made, then changes would be made to the grazing management system.

Grazing Intensity (excluding riparian areas)
Management guidelines of:

- Light levels (0-30%) during the late-spring growth period of plants when the potential for plant recovery is limited due to moisture potential and life cycle stage.
- Moderate levels (40-50%) in the early-spring period and early-summer period when sufficient opportunity exists for plant recovery.
- Conservative levels (30-40%) during mid/late summer to the dormant period when the potential for plant recovery is limited.

Forage Utilization (excluding riparian areas)
Forage utilization would follow a management guideline of conservative utilization, which is 30-40 percent. This utilization level would be used to:

- Maintain the satisfactory soils
- Improve the impaired and unsatisfactory soils
- Maintain or Improve rangeland vegetative ground cover and long term soil productivity

The intensity and utilization levels would be used to move towards the desired condition.

Utilization and Intensity Criteria for Riparian Areas (Excluding Boulder Water Gap[1])

- Utilization would not exceed 20 percent on the key woody vegetation (trees and shrubs such as cottonwood and willow).
    - This number (20%) does take into account the cumulative browsing effects of wildlife and livestock.
- To protect the riparian vegetation, maintain a minimal stubble height of four inches of herbaceous vegetation. The stubble height requirement may be adjusted as appropriate for each site-specific location as additional data is collected.

Soil Objectives
Manage soils classified as Unsatisfactory soil condition (terrestrial ecosystem units 401, 402[2] and 420)

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[1] Boulder Water Gap would not be subject to riparian standards because the purpose of the water gap is to allow cattle access to a 40-foot section along Fossil Creek while excluding livestock access to the rest of the stream bank in the Boulder Pasture. Water gaps have been illustrated to be an effective method for limiting stream and riparian impacts in grazed areas (Clawson 1993, Nader et al. 1998, Miller et al. 2010, Sewards and Valett 2006).

[2] Portions of TES map unit 402 have been surveyed and re-classified as impaired soils. These areas re-classified as impaired soils would not be subject to this part of the proposed action. See the Affected Environment portion of the soils analysis for more detail on this subject.

toward natural vegetative ground cover levels with a minimum cover equal to or greater than tolerable vegetative ground cover levels (15% , 15% and 20% respectively) within 10 years.

Pasture Grazing Period
The scheduled grazing period per pasture would typically be 5-35 days, but depends on factors including: pasture size (AUMs), grazing capacity, weather/climate conditions, current forage production, the opportunity for plant recovery following grazing, number of head, and allowable intensity and utilization guidelines. Other factors that may occasionally affect the grazing period include drought and wildfires.
All pastures would be grazed once per grazing period unless authorized by the Responsible Official when conditions warrant. Any need to re-use pastures would be considered, such as in the case of variable drought conditions or wildfire.

Second entries into above-mentioned pastures or extensions to the migration time would be allowed only if the following criteria are met:

- Grazing intensity in the pasture was not exceeded already that year
- The end of the year utilization for the pasture was not exceeded the year prior

Invasive Species
Where high priority invasive plants are present, restrictions on livestock numbers or timing may be used in conjunction with treatments. Treatments would be performed in accordance with procedures and BMPs identified in the EIS for invasive weed treatments.

Structural Range Improvements
The following structural improvement would decrease impacts to wildlife and help to maintain/improve desired condition.

Divide Tank is infested with crayfish and the crayfish are a threat to the endangered Chiricahua leopard frog. Methods for addressing this situation would include either:

- Replacing Divide Tank with a water collection, storage, pipeline, and trough system that does not provide suitable habitat for crayfish
- Replacing Divide Tank with fabricated troughs and having the permittee haul water to the troughs as needed.

Further coordination between agencies (USFS, AGFD, USFWS) and the permittee is necessary to determine which of the above methods would be used.

Livestock exclosure fencing would be installed in earthen stock tanks occupied by Chiricahua leopard frog and/or riparian areas in the allotment if monitoring determines that livestock grazing is resulting in direct impacts, which were not addressed through other adaptive management methods (changes in grazing period, utilization, and rotation).

All Range Improvements would follow the Construction Guidelines provided by the USFS.

Vegetation Treatments
Vegetation treatments on up to 1,200 acres within the 42,140 acre allotment are included as part of the proposed action to help improve soil and overall watershed conditions. These treatments will be

conducted only in pastures with 70 percent or more impaired soils

These treatments would be accomplished using only crews with chainsaws hand cutting and lopping and scattering. Where necessary, mitigation measures including the use of wattles, one rock check dams and other standard practices to reduce erosion and promote restoration would be used.

Twelve pastures on the Fossil Creek allotment were found to have soils with 70 percent or more in impaired condition. The twelve pastures were identified within the allotment with more than 70 percent impaired soil conditions (see Environmental Assessment, Proposed Action). Under the proposed action approximately 100 acres in each of these pastures would be treated with a total of 1,200 potential acres for vegetative treatment that could occur anywhere within the pasture. Treatment areas would be prioritized according to where on the ground observations have shown canopy cover to be impeding herbaceous understory growth (generally >10 percent canopy), where erosion issues upstream from earthen stock tanks occupied by Chiricahua leopard frog have been identified as an issue, and where treatment efforts have the highest potential for success.

Monitoring and Adaptive Management

The proposed action includes adaptive management; a strategy that considers numerous management actions that could be employed to modify the grazing system due to information obtained from monitoring that indicates the grazing strategy is not meeting desired conditions.
At the onset of a grazing period (3/1 to 2/28), livestock numbers would be based on water availability and range readiness. Within season adjustments may occur based off resource conditions that are evaluated through monitoring. Livestock numbers within the permitted amount have historically been and would continue to be adjusted to meet resource and other objectives based on changing conditions.

Implementation monitoring would occur at the end of the growing season within each of the main grazing pastures by measuring grazing utilization or through the assessment of range improvements. Utilization is defined as the proportion or degree of current year's forage production that is consumed or destroyed by animals (including insects). 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.

Utilization measurements would be taken in key areas which reflect grazing effects within an entire pasture. A minimum of one key area would be established within each main grazing pasture, at existing long-term monitoring sites if possible, to represent overall pasture utilization. Utilization guidelines are not intended as inflexible limits. Utilization measurements can indicate the need for management changes prior to this need being identified through long-term monitoring. Key areas would be monitored to determine when cattle should be moved to prevent over use. A planned grazing system is designed to promote flexibility in the grazing program and to buffer the adverse effects of drought (FSH 2509.22). Utilization data would not be used alone, but would be used along with actual-use, climate and condition/trend data, to determine stocking levels and pasture rotations for future years.

If monitoring shows that the utilization guideline was exceeded in a pasture, the grazing schedule and/or cattle numbers would be adjusted for the following year. If utilization is exceeded after these adjustments are made, then changes would be made to the grazing management system.

Effectiveness Monitoring is used to assess long term condition and trend in achieving desired objectives.

This monitoring may include, but is not limited to measurements to track upland vegetative conditions and soil condition towards achievement of the objectives. Example methods for effectiveness monitoring may include, but are not limited to dry weight rank, pace transects, pace quadrat frequency, Parker 3-step, and ground cover. Effectiveness monitoring should occur within key areas on permanent transects at an interval of 5 to 10 years to evaluate the success of management in achieving the desired objectives.

Monitoring frequency of vegetation and soil condition and trend would be accomplished collaboratively by Forest Service personnel, permittee, and cooperating agencies as funding, personnel, and time are available. Typically trend data is collected within a five to ten year period to reflect the greatest amount of change/trend. Both qualitative and quantitative monitoring methods would be used in accordance with the Interagency Technical References, Region 3 Rangeland Analysis and Management Training Guide, and the Region 3 Allotment Analysis Handbook.
Monitoring of soil conditions is another monitoring strategy to provide information about the effectiveness of grazing management as well as juniper treatments.

- Monitor vegetative ground cover in vegetation treatment areas before and within one year after treatment and monitor trend as funding, personnel, and time are available.
- Baseline monitoring in 2009 and 2010 occurred in pastures with high amounts of unsatisfactory soil conditions establishing a baseline current vegetative ground cover. Monitoring would be repeated to inform vegetative ground cover trend. If monitoring indicates that soil conditions are not improving towards Satisfactory conditions and ground covers are not adequate to maintain soil productivity, then current livestock grazing strategy would be adjusted using adaptive management. These adaptive management practices are not limited to but may include:
    - A given pasture may either be rested, grazed at lighter intensity, or the use period could be shortened.
    - The season of use or timing of grazing the next year may be changed.
    - The permittee would be required to distribute use better (Ex. riding and herding, salting, etc.).

If monitoring indicates conditions are not meeting soil desired conditions and the soil condition objective and improving towards Satisfactory, current livestock grazing strategy would be adjusted per the adaptive management strategy. Implementation and effectiveness monitoring would provide the basis for modifying management. Management would be modified in coordination with the permittee. Elements of the grazing system that might be modified include: timing, intensity, frequency, and grazing period. These modifications are evaluated in this EA; if needed, they would be implemented through the AOIs.

Adaptive management would also allow for the construction of fencing or exclosures in riparian areas, if they are determined through monitoring as necessary to move the allotment toward desired conditions. Monitoring of riparian vegetation would focus in those areas where previous assessments have identified that riparian vegetation is not in proper functioning condition and there is evidence of livestock access. The six springs on the allotment that have not yet been assessed would also be assessed for proper functioning condition, but would be of a lower priority since these springs generally support very little riparian vegetation or are located in very rough or steep terrain.

Table 3 in the Environmental Assessment identifies several management evaluation points and management options to describe scenarios when adaptive management will be used under the implementation of the 10-year term grazing permit.

Scoping and Public Involvement

The proposal was listed in the quarterly published and online versions of the Schedule of Proposed Actions in early 2007 to 2009 and again starting in late 2012. The proposal was provided to the public and other agencies for comment during scoping on March 21, 2007 to 50 individuals and organizations. In addition, as part of the public involvement process, a 30-day comment period on the proposed action and preliminary assessment of effects was initiated on December 12, 2012, with a legal notice published in the Red Rock News.

The permittee was kept informed of the project through annual spring meetings, annual inspection summaries and specific meetings related to this analysis. Permittee input was used to develop several elements of the proposed action alternative.

Using the comments from the public, other agencies, tribes and the permittee (see *Issues* section), the interdisciplinary team developed a list of issues to address. During the 30-day comment period, comments were received from two entities, the permittee and the Center for Biological Diversity (CBD). The permittee suggested an additional action alternative, which was evaluated and is described in section 2.3. The permittee also made some comments that led us to make some clarifications in this EA. Many of CBDs comments were focused on their disagreements with Congress allowing grazing as a permitted use of national forest lands and the fees associated with that grazing. Both of these topics are outside the authority of the Responsible Official and the scope of this project. CBD also provided comments on the 2009 EA and comments on other comments submitted during the comment period for the 2009 EA, and not the current EA. While it was not relevant to discuss comments that focused on the 2009 EA, this document was modified to address comments where possible and include clarifications in response to CBDs comments.

Rationale for My Decision

I am selecting the proposed action alternative because it meets the project purpose and need, it addresses important resource issues identified from public comment, and it represents the best balance of social, economic, and environmental interests identified through laws and regulations for livestock management and resource protection.

This decision meets all elements of the purpose and need. The decision authorizes livestock grazing at levels 38% less than authorized under permits prior to 2009. If monitoring shows there has been improvement in vegetative cover and soil condition to support grazing at previous levels, grazing levels can be increased to previous levels. Furthermore, the approved grazing strategy is designed to maintain or improve forage conditions on the allotment to facilitate a sustainable grazing program through the term of the permit, with allowances for drought. This decision would also improve impaired and unsatisfactory soil conditions over the term of the permit through grazing at conservative levels and soil objectives to support increased vegetative cover. This approval also addresses long-term soil and vegetative trends by authorizing hand thinning of up to 1,200 acres of juniper to address juniper encroachment in pastures with more than 70 percent of combined unsatisfactory and impaired soils. The combination of conservative grazing in addition to these focused vegetation treatments is expected to support or improve watershed function more than the No Action Alternative in Fossil Creek, the Verde River, and in springs located on the allotment.

Inappropriate management of livestock grazing can result in substantial resource impacts to soil, water quality, and rare or sensitive species. Historic livestock grazing in addition to climate change and fire

suppression has contributed to long-term vegetation changes in the allotment, including an increase in woody vegetation and an increase in soils with impaired or unsatisfactory conditions. My decision, however, is based on research focused on southwestern rangelands which identifies conservative grazing levels and deferred rotational grazing strategies to be effective strategies for maintaining productive rangelands with good range condition over the long-term (Holocheck and Galt 2000, Smith et al. 2007). Monitoring since 2009 has illustrated this method to be effective toward improving vegetative conditions on the allotment even during episodes of drought. Monitoring of Chiricahua leopard frog populations have shown huge growth by the metapopulation since 2006, which clearly indicates that this species can both survive and strive with active livestock management on the allotment.

Most importantly, this decision meets three important elements of the purpose and need, which would not occur under the No Action Alternative.

- This alternative would address decreasing soil conditions that are unlikely to change without a decrease in overstory woody vegetation.
    - Removal of juniper in areas with increased woody vegetation on 1,200 acres that would result in an immediate increase in vegetative cover and the long-term improvement of impaired and unsatisfactory soils on the allotment. This would impact almost 10 percent of impaired and unsatisfactory soils in pastures with the highest concentration of impaired and unsatisfactory soils.
- This alternative would facilitate changes to the Divide Tank, which would address invasive crayfish at the site and make the location suitable habitat for colonization by the Chiricahua leopard frog, which were last observed at the location in 1983 (USFWS 2013).
    - Changes to the Divide Tank would be implemented and maintained by the permittee and would not occur under the No Action Alternative. This action would support an increase in suitable habitat for the Chiricahua leopard frog, which are heavily reliant on stock tanks for maintaining a viable meta-population in the Fossil Creek Allotment.
- This alternative would meet guidance in law, regulation, and Forest Plan direction to manage for active livestock grazing where appropriate to contribute to the economic and social well-being of people by providing opportunities for economic diversity and promoting stability for communities
    - The No Action Alternative would prevent grazing and likely lead to the end of cattle operations on the 7 Lazy T Ranch. This would impact up to $162,000 in labor income in the local economy and could result in larger land use changes should the ranch land be sold.

My decision is based on consideration of the best available science. The record contains a thorough review of relevant scientific information and responsible opposing views, and where appropriate, acknowledges incomplete information or scientific uncertainty. Specifically, the extensive literature cited in the Environmetnal Assessment, specialist report, and response-to-comments document shows that relevant literature has been reviewed and considered in preparing the EA.

Alternatives Considered But Eliminated From Detailed Study

The National Environmental Policy Act requires Federal agencies to rigorously explore and objectively evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR §1502.14). Public comments received in response to the proposed action provided suggestions for alternative methods for achieving the purpose and need. Therefore, we considered a number of alternatives but eliminated some from detailed study for reasons summarized below.

A. Continue Current Management

This would continue livestock grazing under the grazing management regime that was in place prior to the 2009 decision to approve a new TGP. This alternative was not carried forward for analysis for the following reasons:

- Although the 2009 decision does include some adaptive management strategies, it does not include the specific adaptive management scenarios that are presented in this proposed action. Without the specific adaptive management scenarios in this proposed action, with the specific evaluation points, our purpose would not be met and our identified needs need would not be met.
  Under the 2009 EA, Stehr pasture was identified as a grazing pasture with water gaps. With more site specific analysis, these water gaps as identified in the 2009 EA pose adverse conflicts including potential impacts to cultural resources and recreational access.
- The need to address pinyon-juniper encroachment and its impact on vegetation ground cover would not be met under current management.

B. Temporary Reduction in AUMs

This alternative suggested temporarily reducing the AUMs on the allotment to 2,400 and then reducing the grazing utilization and grazing intensity until soil and vegetative conditions improve. This alternative was eliminated from detailed study for the following reasons:

- This alternative was based on comments from the Arizona Game and Fish Department in 2007 when the allotment was still suffering from conditions of a long-term drought. At this time, there was uncertainty as to whether vegetative ground cover and Chiricahua leopard frog populations could recover at proposed livestock grazing levels. Since that time, drought conditions have subsided and soil and vegetation conditions have markedly improved with ongoing grazing under the management of the TGP. In addition, the population of Chiricahua leopard frogs has increased since 2007, and Fossil Creek and the Verde River are in full attainment of state water quality standards.
- The proposed action specifically states that we would operate under a reduced AUM scenario of 3,600 AUMs until conditions improve based on vegetative and soil monitoring results. Therefore, this alternative presented options that are redundant with options under the proposed action.

C. Water Gap Alternative

This alternative was suggested by the permittee during the 30-day comment period. This alternative is essentially the same as the proposed action with one difference. Under this alternative, the permittee would be able to graze Stehr Pasture while limiting livestock access to Fossil Creek. In order to manage grazing in Stehr pasture, the permittee proposed constructing a fence to protect Fossil Creek. The permittee proposed two water gaps in the fence to allow cattle to water at specific points on the creek. The permittee provided the GPS coordinates of the proposed fence line and water gaps to the Forest Service for evaluation. Two water gap locations were identified, one at Old Corral and one at Sally May Wash.

Resource specialists evaluated this proposal. Due to unavoidable impacts, this alternative was dropped from detailed analysis by the Responsible Official. Some of the primary reasons were:

- Due to the density of cultural resources in Stehr pasture, the construction of the fence and water gaps would have resulted in substantial adverse impacts to cultural resources. The Hopi Tribe was against construction of such a fence.
- A water gap at Old Corral would have required a fence to be placed across Fossil Creek. If there was not a fence across Fossil Creek, livestock would be able to cross the shallow pool present at

the proposed water gap location and go up and downstream and graze more riparian vegetation than the water gap was meant to restrict the livestock access to. Due to Fossil Creek being a navigable waterway, such an action would restrict navigation especially recreational boating and would require approval by the US Army Corps of Engineers. This fence would also impact recreational values on the river, which have been identified through the congressional designation of the river as a Wild and Scenic River with a recreational segment. The fence would also present an un-mitigatable safety risk to kayakers and boaters.

- The proposed fence would block recreational access to known popular dispersed recreation sites. Based on our past experience with fences in popular recreation areas, we believe with a reasonable degree of certainty that recreationists would cut the fence to access Fossil Creek, resulting in a constant need for fence maintenance and repair.
- Construction of the fence would have resulted in the loss and fragmentation of protected species including Bell's vireo habitat and yellow-billed cuckoo habitat.
- The fence line as proposed had gaps with no fencing under the assumption that topography would restrict livestock access to Fossil Creek. Field review by Forest Service range managers showed that these areas assumed to provide topographical restrictions are unlikely to restrict cattle access to Fossil Creek, creating more social trails and riparian access.

No other reasonable alternatives were suggested during scoping or during the course of the analysis. The Proposed Action addresses the issues identified from management direction and public comment. Therefore, the Proposed Action and the No Action Alternative represent a range of reasonable alternatives for this EA.

Findings Required by Law and Regulation

Approval of livestock grazing on the Coconino National Forest must adhere to management direction on many levels including statutes, regulations, laws, forest plan direction, and agency directives. The EA has been prepared in accordance with the following laws and regulations:

Clean Air Act of 1970

The Clean Air Act of 1970 and its amendments provide for protecting and enhancing the nation's air resources. The Federal and State ambient air quality standards are not expected to be exceeded as a result of implementing this decision. This action is consistent with the Clean Air Act.

Clean Water Act

The Clean Water Act, as amended, regulates dredging and filling freshwater and coastal wetlands. Section 404 (33 USC 1344) of the Clean Water Act prohibits discharging dredged or fill material into waters (including wetlands) of the United States without first obtaining a permit from the U.S. Army Corps of Engineers. Wetlands are regulated in accordance with federal Non-Tidal Wetlands Regulations (Sections 401 and 404). No dredging or filling is part of this action and no permits are required. In addition, my decision will maintain and improve riparian vegetation on the allotment and maintain excellent water quality conditions in nearby Fossil Creek and theVerde River (Final EA, Chapter 3, Water and Soil sections). This project is consistent with the Clean Water Act.

Endangered Species Act of 1973

The Endangered Species Act (ESA) (16 USC 1531 et seq.) requires that any action authorized by a Federal agency does not jeopardize the continued existence of a threatened or endangered species, or result in the destruction or adverse modification of the critical habitat of such species. The agency

submitted a Biological Assessment to the Fish and Wildlife Service for formal consultation under the Endangered Species Act on March 4, 2013. The Forest Service determined that the proposed action may affect the threatened Chiricahua leopard frog (*Lithobates {=Rana} chiricahuensis*) and its designated critical habitat no adverse effects were identified for any other threatened or endangered species.

The Fish and Wildlife Service responded by issuing a Biological Opinion (BO) on May 7, 2013. The Biological Opinion includes an analysis of the proposed action alternative on the Chiricahua leopard frog population, recovery, and critical habitat. Findings of the Biological Opinion are that there is likely to be some incidental take from the proposed activities, but the proposed action would not put the existence of the species in jeopardy and would support the long-term survival of the Chiricahua leopard frog population in the Fossil Creek Allotment (Buckskin Hills Conservation Management Area). The BO also includes an incidental take statement, identifies a trigger for when re-consultation is necessary, and identifies terms and conditions for the continued management of the allotment. Detailed information can be found in the Biological Opinion in the project files or project website.

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

National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires Federal agencies to complete detailed analyses of proposed actions that significantly affect the quality of the human environment. The Act's requirement to prepare an environmental analysis is designed to provide decision-makers with a detailed accounting of the likely environmental effects of a proposed action and alternatives prior to adoption and to inform the public of (and encourage comments on) such effects. The Final EA analyzes the alternatives and displays the environmental effects in conformance with NEPA standards. The procedural requirements of the NEPA have been followed.

National Forest Management Act

The National Forest Management Act (NFMA) amends the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA) and sets forth the requirements for Land and Resource Management Plans (Forest Plans) for the National Forest System. This project is in full conformance with the overall management direction for grazing and other resources, and implements management area-specific management direction. The EA listed the Coconino Forest Plan management area prescriptions and desired goals and objectives. The Interdisciplinary Team (IDT) of resource specialists reviewed the selected alternative for consistency with the current Forest Plan management direction and multiple use of the forest (16 U.S.C. 1604 (g)(3)(F)(ii)).

National Historic Preservation Act of 1966

Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to consider the potential effects of a preferred alternative on historic, architectural, or archaeological resources that are eligible for inclusion on the National Register of Historic Places (NRHP) and to afford the President's Advisory Council on Historic Preservation an opportunity to comment. Potential impacts to archaeological and historic resources have been evaluated in compliance with Section 106 of the

NHPA.

The Arizona State Historic Preservation Officer (SHPO) has been consulted and concurred with my decision of no adverse effect on April 15, 2013. Future exclosure fencing that may occur under adaptive management to protect riparian areas near springs or at stock tanks with Chiricahua leopard frogs would require additional survey and potential consultation with SHPO.

Range Rescission Act (1995) – Required national forests to develop a schedule by which they would complete NEPA analyses on allotments. This is also known as the Burns Amendment. Completing NEPA analysis for the reauthorization of the ten year grazing permit on the Fossil Creek Allotment ensure compliances with the Burns Amendment.

Finding of No Significant Impact (FONSI)

My review of the analysis of the environmental consequences displayed in the environmental assessment for the Fossil Rangeland Management Analysis (EA, Chapter 3: Affected Environment and Environmental Consequences); my understanding of the level of anticipated effects which were disclosed; and my experience and familiarity with projects similar in nature, indicates to me this is not a major federal action as defined in 40 CFR 1508.18.

I have determined that no significant effects on the quality of the human, biological, or physical environment (as defined at 40 CFR 1508.27) are anticipated within either the context or the intensity of the selected alternative. Therefore, an Environmental Impact Statement is not required for this proposal. Livestock grazing is a routine activity that has been occurring on national forests and in the project area for over 100 years; the effects of grazing are well known.

As required by NEPA, I evaluated the proposed action, in both its context and intensity. I have determined that this proposed action is limited in context; it will impact approximately 42,140 acres of a single allotment on the Coconino National Forest. The effects from this project will primarily be localized to the allotment and areas directly downstream of the allotment.

The following is my rationale for reaching a FONSI determination after considering the factors required for significance of intensity determinations under 40 CFR 1508.27:

1. ***Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.***

The effects are typical of livestock grazing actions, and the project itself is routine in nature. The purpose of this project is to re-authorize livestock grazing on the allotment, with approval toremove overstory juniper on 1,200 acres, approval to create potential Chiricahua leopard frog habitat at one stock tank, and expanded use of the principles of adaptive management. The intensity of effects are expected to be of small magnitude and limited to the soils, wildlife, vegetation, and recreational use on the allotment. Previous grazing on the allotment has not resulted in a loss of excellent water quality in adjacent perennial streams and the decision is expected to continue to reduce sediment compared to current management to the adjacent Fossil Creek and Verde River.

Although there are some potential adverse effects to resources described in the EA, I have determined that the overall effects of this decision are generally positive and are highly unlikely to affect the quality of human, biological, or the physical environment at a significant level.

2. The degree to which the proposed action affects public health or safety.

The proposed action is not expected to affect public health and safety either positively or negatively. No broad public health or safety issues were raised during the scoping or analysis processes, and no unusual actions are proposed that might lead to issues in these areas.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

The proposed action will not cause any loss or destruction of: historic resources, cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

The Fossil Creek corridor is rich in cultural resources. The decision would result in no adverse impacts to cultural or historic resources identified on the allotment. The State Historic Preservation Office concurred with this determination.

The Fossil Creek Allotment includes parts of the Fossil Creek and Mazatzal Wilderness Areas. Grazing is a compatible use in wilderness areas, is not expected to adversely affect wilderness character, and no conflicts have been identified.

Fossil Creek and the Verde River are both Wild and Scenic Rivers. The Verde River is inaccessible by cattle as a result of topography and existing fencing. Cattle would have access to Fossil Creek at only one point, the Boulder Water Gap, which is about 40 feet wide. Each year, the livestock would be using the water gap for only a few weeks. The use of the water gap does not pose a concern related to water quality do to it's very limited size compared to the strambank length along Fossil Creek. Therefore, there would be no effect to the values of the wild and scenic river.

Fossil Creek Allotment has been used for livestock grazing for over 100 years. This decision does not fundamentally change livestock management on the allotment, but provides for a strategic program for livestock grazing to assure maintenance and improvement of soil, water, forage, and wildlife resources over the term of the permit. As a result, unique characteristics of the area including Wilderness designations, Wild and Scenic River designations, riparian areas, and springs and seeps in the area will not be fundamentally altered.

4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.

The effects of implementing this proposal on the quality of the human environment are not likely to be highly controversial. Expected environmental effects were analyzed and disclosed in

Chapter 3 of the EA. This analysis represents the judgment and expertise of natural resource management professionals.

Though some members of the public are opposed to livestock grazing on public lands, and others view the U.S. Forest Service's management of that use as too restrictive, this action is not highly controversial within the scientific context of the National Environmental Policy Act. Furthermore, there is little controversy on this specific proposal as to the effects on the quality of the human environment.

Research regarding grazing in the southwest and on the Coconino National Forest has repeatedly shown that livestock grazing using appropriate management practices can minimize or avoid impacts to other resources including water quality, wildlife, soils, cultural resources, and other resources.

5. ***The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.***

The effects of the proposed action on the human environment are not highly uncertain, nor do they involve unique or unknown risks. The effects of livestock grazing are well known and livestock grazing has occurred on this allotment for the last 100 years. Furthermore, current levels of livestock grazing are now lower than ever before in the previous century and thus the effects of this are expected to be well within the range of impacts observed in the past.

The effects described in the EA represent the judgment of experienced natural resource management professionals using the best available scientific and commercial information.

6. ***The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.***

The proposed action is not precedent-setting. Livestock grazing is a routine activity and the effects are well known. Livestock grazing has occurred on this allotment for the last 100 years and does not represent a precedent for land use. Furthermore, current levels of livestock grazing are now lower than ever before in the previous century and thus the effects of this are expected to be well within the range of impacts observed in the past.

Incorporation of the principles of adaptive management is not new; but this decision provides for a more clear, scenario-based management program for addressing climate variability and other potential resource conditions on the allotment.

This decision does not represent a decision in principle about a future consideration. Any future actions not authorized by this decision will be evaluated through the NEPA process with opportunities for public comment and administrative review.

7. ***Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.***

Cumulative effects were discussed with each resource in Chapter 3 of the EA, and a summary of all actions considered in the cumulative effects analyses was provided in Appendix 3 of the EA.

The depth of analysis on cumulative effects was commensurate with the scope of the proposed action. While the proposed action alternative was identified as causing cumulative impacts to several resources these impacts were often expected to contribute to an overall improvement in resource conditions over the 10-year term of the livestock grazing permit. The proposed action will not have a significant effect on the quality of the human environment; either as an individual action or as a contributor to the cumulative effects of other past, present, and planned actions within this area.

The cumulative effect contribution from this proposed action was determined to be beneficial to most resources considered, an exception being the control of invasive plants. Livestock on the allotment provide one more vector for the transportation of invasive plants. However, the Forest Service has a weed control program and the permittees have been helpful in the identification of areas that need treatment and is expected to limit the cumulative impact of invasive species on the allotmetn and surrounding areas. Therefore, I do not see livestock as a potential contributor towards the spread of invasive plants as a significant cumulative effect.

8. ***The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.***

A cultural resource investigation of the effects of the actions described in this proposal was performed. The results of that survey were documented in the EA. The proposed action will not cause loss or destruction of significant scientific, cultural or historic resources.

The Fossil Creek corridor is rich in cultural resources and a threat to cultural resources in Stehr Lake Pasture was identified as an issue. Partly in response to that issue, the proposed action included converting Stehr Lake Pasture from a regular gazing pasture to a trail through only pasture where trailing would be limited to approximately 3 days. This will prevent previous approval of fenced water lanes in Stehr Pasture that would have resulted in impacts to cultural resources and/or cultural traditions in the area.

The Arizona State Historic Preservation Office concurred with the Forest Service's assessment that the proposed action will not adversely affect districts, sites, highways, structures, or objects listed in, or eligible for listing in the National Register of Historic Places. This concurrence is documented in the project record.

9. ***The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.***

Wildlife and fish biologists investigated the potential effects of the proposed action to endangered and threatened species and documented these in a Biological Assessment. These effects were also summarized in the Final Environmental Assessment. The agency submitted a Biological Assessment to the Fish and Wildlife Service for formal consultation under the Endangered Species Act on March 4,

2013. The Forest Service determined that the proposed action may affect the threatened Chiricahua leopard frog (*Lithobates {=Rana} chiricahuensis*) and its designated critical habitat. No adverse effects were identified for any other threatened or endangered species.

The Fish and Wildlife Service responded by issuing a Biological Opinion on May 7, 2013. The Biological Opinion includes an analysis of the proposed action alternative on the Chiricahua leopard frog population, recovery, and critical habitat. Findings of the Biological Opinion are that there is likely to be some incidental take from the proposed activities in the form of harm or harassment from stock tank maintenance, trampling from cattle, and indirect effects of sedimentation as a result of upland livestock grazing.

While implementation of the decision may result in incidental take, the Biological Opinion explains it will result in long-term benefits to the Chiricahua leopard frog and its habitat. This is supported by recent monitoring that has shown the population has grown to 13 stock tanks and one spring from zero in 2005 during active livestock grazing and even during episodic drought conditions. The proposed action is expected to add even more suitable habitat for the frog by modifying Divide Tank, which hasn't been occupied by the Chiricahua leopard frog since 1983. Overall this is expected to support a more robust metapopulation of Chiricahua leopard frog for greater resilience during periods of drought, wildfire, or other disturbance events.

Based on this information, and information in the Biological Opinion, this decision is not expected to result in a significant effect to Chiricahua leopard frog populations on the Fossil Creek Allotment. This decision is not expected to result in adverse impacts for any other threatened or endangered species with habitat on the allotment.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

This action complies with all other relevant federal, state, and local laws and requirements imposed for the protection of the environment. More information on relevant laws and regulations are discussed in the Decision Notice under "Findings Required by Law and Regulation."

Implementation Date

Following the publication of a Legal Notice for this decision in the Sedona Red Rock News, the newspaper of record, there is a 45 calendar day appeal period.

If no appeal is received during that period, this project may be implemented 5 business days after the close of the appeal period (36 CFR 215.9). If an appeal is filed, implementation will not occur sooner than 15 calendar days following the final decision on the appeal. Implementation means the issuance of a new permit or initiating ground-disturbing actions.

Administrative Review or Appeal Opportunities

This decision is subject to appeal under two separate regulations.

36 CFR 215 – Administrative Review Process

This decision is subject to appeal pursuant to Forest Service regulation 36 CFR 215.7. The appeal must be filed (regular mail, fax, email, hand-delivery, express delivery, or messenger service) with the

appropriate Appeal Deciding Officer. Submit appeals to:

Earl Stewart, Forest Supervisor
Coconino National Forest
1824 S. Thompson St.
Flagstaff, AZ 86001

If hand delivered, the appeal must be received at the above address during business hours (Monday - Friday 8:00 am to 4:30 pm), excluding holidays. Electronic appeals may be submitted to: appeals-southwestern-coconino@fs.fed.us with .doc, .docx, .rtf, .pdf, or .txt formats only. The appeal must have an identifiable name attached or verification of identity will be required. Names and addresses of appellants will become part of the public record. A scanned signature may serve as verification on electronic appeals. Upon receipt of an electronically-mailed appeal, the sender should normally receive an automated electronic acknowledgement from the agency as confirmation of receipt. If the sender does not receive an automated electronic acknowledgement, it is the sender's responsibility to ensure timely receipt by other means.

Appeals, including attachments, must be in writing, fully consistent with 36 CFR 215.14, and filed (postmarked) within 45 days from the day after notice of this decision is published in the Sedona Red Rock News. The publication date is the exclusive means for calculating the time to file an appeal. Those wishing to appeal this decision should not rely upon dates or timeframes provided by any other source.

36 CFR 251, Subpart C - Permittee Appeals

This decision is also subject to appeal, pursuant to Forest Service regulation 36 CFR 251, Subpart C. Appeals must be filed (regular mail, fax, email, hand-delivery, express delivery, or messenger service) with the Appeals Deciding Officer, Earl Stewart, Forest Supervisor, within 45 days from the day after notice of this decision is published in the Sedona Red Rock News. Electronic appeals may be submitted to: appeals-southwestern-coconino@fs.fed.us with .doc, .docx, .rtf, .pdf, or .txt formats only.

Under 36 CFR 251.88, Appellants must also send or e-mail a copy of the Notice of Appeal to the Deciding Officer, Heather Provencio, District Ranger, Red Rock District Ranger, PO Box 20429, Sedona, AZ 86341 or at comments-southwestern-coconino-redrock@fs.fed.us. Appeals must meet content requirements of 36 CFR 251.90.

It is an appellant's responsibility to provide sufficient activity-specific evidence and rationale, focusing on the decision, to show why the Deciding Officer's decision should be reversed (§251.90). The Deciding Officer is willing to meet with applicants and holders to hear and discuss any concerns or issues related to the decision (§251.93).

An appellant may also include in the notice of appeal a request for oral presentation (§251.97) or a request for stay of implementation of the decision pending decision on the appeal (§251.91).

The Permittee may appeal under either regulation, but not both.

Contact Person(s)

For additional information concerning this decision or the environmental analysis, contact Eric G. La Price, District NEPA Planner at the Red Rock Ranger District (928) 203-2914.

Responsible Official's Decision

Through my signature, I am making the decision to implement the proposed action, as described in the EA and summarized in this Decision Notice.

Heather C. Provencio
District Ranger, Red Rock Ranger District

May 17, 2013
Date

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