CHAPTER 1:
PURPOSE OF AND NEED FOR ACTION

Chapter 1 includes information on the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.

PROPOSED ACTION

Livestock grazing has occurred on lands now included in the Santa Rosa Ranger District since the late 1800s and prior to the establishment of the National Forest System. Since 1905, the Forest Service has been delegated the management responsibility for National Forest System lands, and livestock grazing has been allowed on some lands under a permit system. Current and prospective permittees desire to continue grazing on these lands.

In responding to a request for permission to conduct activities on National Forest System lands, the Forest Service must ask two basic questions:

- Is the activity sanctioned by Congress in the laws that govern the management of National Forest System lands?
- What conditions must we impose to govern this activity?

With respect to the first question, in the Multiple-Use Sustained-Yield Act, Congress identified livestock grazing as an appropriate use of National Forest System lands. Further, under the National Forest Management Act (NFMA), Congress has required the Forest Service to develop land and resource management plans that display our process for balancing the multiple uses of these lands and for displaying where uses such as livestock grazing are appropriate. Under these authorities, the Santa Rosa Ranger District of the Humboldt-Toiyabe National Forest (Forest Service) proposes to reauthorize continued livestock grazing in the project area.

With respect to the second question, the Forest Service also proposes to modify the terms and conditions included in grazing permits issued in the project area. These modifications are based on our assessments of the current ecological conditions within the allotments.

The Forest also proposes to include in our range management process a monitoring program that assesses characteristics that are indicative of the ecological health of the project area in the coming years. If ecological condition and trend data indicate that our management is not achieving desired results on one or more allotments, we will take corrective action. We have incorporated into the proposed action a specific set of modifications should this situation occur. Monitoring parameters are presented in Appendix A: *Matrices to Guide the Determination of Vegetative Condition* and discussed further in Chapter 2.

If the proposed action is selected, the most obvious activity the public would see is the continued presence of cattle on the Santa Rosa Ranger District at various times of the year. Likewise, under the proposed action the permittee would manage the cattle under a different set of proper use criteria than are currently in effect.

PURPOSE OF AND NEED FOR ACTION

As indicated in the Proposed Action section, current and prospective permittees desire to continue grazing and have invested substantially in base properties, livestock handling facilities, and range improvements. National Forest System lands provide an important source of their livestock forage during parts of the year.

For these permittees, ranching provides an economic value, and grazing on National Forest System lands contributes to this economic value. In addition, because the way people choose to work, to support their families, and to make their mark on the land becomes absorbed into their identities and into the cultural fabric of their communities, the opportunity to graze on National Forest System lands contributes to the cultural identity of rural Nevada. Indeed this identity as a rancher can be so powerful for some as to override a choice of more economically lucrative pursuits.

In considering this request for continued grazing, we, as land managers, understand that the ultimate driving force, the purpose, if you would, for the harvest of forage by livestock is a desire for economic value infused in many cases with a deeply held cultural identity. We also understand that these benefits accrue primarily to the individual permittees.

The second part of our proposed action involves the modification of the conditions attached to the permit to graze on National Forest System lands. Our scientific understanding of the impacts of grazing has evolved, and we need to incorporate this knowledge into our grazing management system. We are modifying these terms and conditions to incorporate the latest science on grazing management to maintain or lead to sustainable, functioning ecological conditions on our rangelands.

In summary, the proposed federal action is to authorize livestock grazing under a specific management regime designed to sustain and improve the overall ecological condition of the project area. The purpose and need for the proposed federal action is to contribute continued social and economic value to grazing permittees in a way that sustains the health of the land.

OTHER CONSIDERATIONS RELATIVE TO LIVESTOCK GRAZING ON NATIONAL FOREST SYSTEM LANDS

The statement of purpose and need underlying our proposal is relatively limited in scope. At times, other purposes and needs have been offered in support of grazing on federal lands. In order to clarify the limits of our proposal, we will briefly review our rationale for not including these as part of our proposal for the Santa Rosa Ranger District.

1. The opportunity to graze on National Forest System lands is needed to ensure community economic stability.

   Response: Although the proportion of total economic output provided by the ranching industry varies by community and county, its absolute contribution to local and regional economies is dwarfed by tourism, gaming, mining, and other sectors in Nevada. Loss of grazing privileges would be felt economically by the individual permittee, but effects would be transitory at the community or county level (USDA Forest Service 2007).

2. An objective of the national forest range management program should be to ensure the viability of permittee ranching operations.

Response: The Forest Service manages under a multiple-use mandate. Under such a philosophy, no single use predominates. Although Congress has indicated that economic benefit is a consideration in the management of National Forest System lands, the laws that govern our management also indicate there are situations in which economic values must yield to other resource concerns. In addition, there are macroeconomic factors and other influences well beyond Forest Service control that significantly affect the economic viability of individual ranching operations. Thus, although the livestock grazing program can contribute economic value, it cannot necessarily ensure economic viability of permittee operations.

3. Livestock grazing is necessary to improve the ecological condition of rangelands, to reduce fire risk, to combat invasive non-native plant species, etc.

Response: Under some intensively managed conditions, livestock grazing can be used as a tool to accomplish limited resource management objectives. For example, within confined areas sheep and goat herds can reduce the concentration of noxious weeds infestations (e.g., leafy spurge and knapweed) and allow desired plants to recover. However, over large landscapes our primary management philosophy must be precautionary. We must ensure livestock grazing of preferred plant species leaves sufficient growing biomass so plants can recover from grazing impacts as well as disturbances such as fire, noxious weed invasions, and insects and diseases. Our experience and a review of the scientific literature indicates that rangelands can recover from fire and other disturbances more successfully if our overriding management objective is the maintenance of healthy populations of desired plants prior to the disturbance. Likewise the impacts on wildfire behavior from a properly conducted grazing management system on the Santa Rosa District are likely to be small.

4. Livestock grazing represents the highest and best economic use of non-timbered rangelands in the Intermountain West that would otherwise receive little use.

Response: Under our multiple-use mandate, the optimization of economic value from national forests is not an objective. National forests and grasslands provide a variety of benefits including wildlife habitat, clean water, and recreation opportunities as well as commodities such as timber and forage. While numerous attempts have been made to compare the economic value of non-marketed opportunities such as recreation and ecological services such as clean water and air against the values of more traditional commodity outputs such as timber or livestock, such comparisons remain complex. If we as national forest managers are to optimize anything, it must be a model of stewardship that demonstrates how humans can manage large landscapes for the sustainable output of economic value and ecological values unimpaired for future generations.

FOREST PLAN DIRECTION

Projects conducted within National Forest System lands are guided by a forest land and resource management plan for the specific national forest. A forest plan embodies the provisions of NFMA, its implementing regulations, and other guiding documents. The Humboldt National Forest Land and Resource Management Plan, also known as the Forest Plan, sets forth the direction for managing the land and resources of the Forest (USDA Forest Service 1986). The Forest Plan sets goals, desired conditions, and standards relative to livestock grazing and the rangeland resources. After the Forest Plan was signed in 1986, it was amended several times.

This EIS tiers to the Humboldt National Forest Land and Resource Management Plan, as amended. Amendment 2 includes direction relative to livestock grazing that is pertinent to this project.

The proposed action would help move the project area towards the following desired conditions:

- Maintain rangelands that are currently in satisfactory ecological condition.
- Improve rangelands that are in less than satisfactory ecological condition.
- Strengthen the noxious weed control effort.
- Provide sustainable yield of forage for livestock production.

The proposed action responds to these Forest Plan elements by reducing the maximum allowable utilization on allotments within the project area from 65 to 50 percent for upland areas and from 70 to 45 percent for riparian areas. Maintaining ranges in stable condition has been recommended as one of the best management strategies for keeping ranges in good or excellent (functioning) condition (Holechek et al. 1998). This alternative would limit maximum forage utilization to a moderate rate. Moderate grazing has been defined as "a degree of herbage utilization that allows the palatable species to maintain themselves but usually does not permit them to improve in herbage producing ability" (Holecheck et al. 1998, Holechek 2004) and would allow a range in good or excellent condition to maintain or slightly improve. Moderate grazing is generally up to 45 to 50 percent use of forage (Holecheck et al. 2004, Platts 1985). Vavra et al. (1999) summarizes that conservative livestock grazing appears to be sustainable over the long term.

Rangeland Suitability and Capability

As part of the process of evaluating the Purpose and Need for this project, rangeland capability at the Forest and project level was reviewed. The Forest level review looked at information in the Forest Plan, the Final Environmental Impact Statement (FEIS) for the Forest Plan, and the Analysis of the Management Situation. The Forest level review also involved modeling rangeland capability using current information and definitions[1]. The Forest level modeling reflects that all of the allotments in the project area have rangelands capable of producing forage for domestic grazing.

The project level review evaluated rangeland capability and suitability for the project area on a more site-specific basis. The project level review validated the Forest level review's determination that all allotments in the project area contain rangelands capable of providing forage for domestic grazing[2].

DECISION FRAMEWORK

Given the purpose and need, the deciding official will review the proposed action, the other alternatives, and the environmental consequences in order to make the following decisions:

- Whether to continue grazing on the allotments within the Martin Basin Rangeland Project Area.
- If the decision is to continue grazing, then under what terms and conditions will livestock grazing be managed.

[1] For additional detail on the Forest level review, refer to the following documents in the project record: (1) *Summary of Capability/Suitability for Livestock Grazing and MIS Analysis Associated with 36 CFR 219.20 during Humboldt Forest Planning Effort* (2008), and (2) *Management Indicator Species (MIS) and Range Suitability/Capability Analysis-Humboldt National Forest Updated MIS Monitoring Report* (2008).

[2] For additional detail on the project level review, refer to the *Martin Basin Rangeland Management Project Management Indicator Species and Rangeland Capability Report* (2008) in the project record.

PUBLIC INVOLVEMENT

Various efforts have been made to involve the public and solicit input during the analysis process as follows.

2005 Martin Basin Rangeland Project EIS

Notice of Intent (NOI)

- Notice of Intent published in the Federal Register on December 30, 2002.

Notice of Availability (NOA)

- Notice of Availability of the Draft Environmental Impact Statement (DEIS) published in the Federal Register on April 2, 2004.
- Notice of Availability to extend the comment period on DEIS published in the Federal Register on May 21, 2004.
- Notice of Availability of the FEIS published in the Federal Register on July 15, 2005.

Legal Notices

- Notice of Intent published in the Humboldt Sun on January 14, 2003.
- Notice of Intent published in the Reno Gazette-Journal on January 15, 2003.
- Notice and comment on the DEIS published in the Reno Gazette-Journal on April 7, 2004, and April 14, 2004.
- Notice and comment on the DEIS published in the Humboldt Sun on April 9, 2004, and April 16, 2004.
- Notice and comment on the FEIS published in the Elko Daily Free Press on July 20, 2005.
- Notice and comment on the FEIS published in the Humboldt Sun on July 22, 2005.
- Notice and comment on the FEIS published in the Reno Gazette-Journal on July 20, 2005.
- Notice of Decision published in the Elko Daily Free Press on June 9, 2006.
- Notice of Decision published in the Reno Gazette-Journal on June 8, 2006.
- Notice of Decision published in the Humboldt Sun on June 9, 2006.

Public Mailings

- Public scoping letters sent on January 9, 2003.
- DEIS mailed to all interested parties for public comment on March 24, 2004.
- Letter extending comment period on the DEIS mailed on May 4, 2004.
- Second letter extending comment period on the DEIS mailed on June 25, 2004.
- FEIS mailed to all interested parties for public comment on July 5, 2005.
- Letter regarding response to comments on the DEIS mailed on July 14, 2005.
- Record of Decision mailed to interested parties on June 6, 2006.
- Letter and public response card regarding FEIS mailed on April 6, 2005.

County Commission Contacts

- Meeting with Humboldt County Commissioners on February 18, 2003.
- Meeting with Humboldt County Commissioners on April 5, 2004.
- Meeting with Humboldt County Commissioners on July 25, 2005.
- Meeting with Humboldt County Commissioners on July 10, 2006.

Other Contacts/Presentations

- Testimony before the Legislative Committee on Public Lands in 2003.
- Humboldt Sun newspaper article on April 30, 2004.
- Elko Daily Free Press newspaper article on May 6, 2004.

- Meeting with National Riparian Team and others on June 8, 2005.
- Testimony before the Legislative Committee on Public Lands on April 28, 2006.
- Field trip within Martin Basin Rangeland Project area on July 18-19, 2006.

2008 Martin Basin Rangeland Project EIS

Notice of Intent

- Notice of Intent published in the Federal Register on February 26, 2007.
- Corrected Notice of Intent published in the Federal Register in October 2008.

Legal Notices

- Notice of Intent published in the Elko Daily Free Press on February 15, 2007.

Public Mailings

- Public scoping letters mailed on February 9, 2007.

County Commission Contacts

- Meeting with Humboldt County Commissioners on March 19, 2007.

Other Contacts/Presentations

- Field trip within Martin Basin Rangeland Project area on September 27, 2007.
- Newspaper article in the Humboldt Sun Newspaper on November 6, 2007.
- Testimony before the Legislative Committee on Public Lands on April 4, 2008.

TRIBAL INVOLVEMENT

Tribal governments have a special and unique legal and political relationship with the United States government as reflected in the United States Constitution, treaties, statutes, court decisions, executive orders, and memoranda. This relationship imparts a duty on all federal agencies to consult, coordinate, and communicate with American Indian Tribes on a government-to-government basis. Because Indian Tribes can be affected by the policies and actions of the Forest Service in managing the lands and resources under its jurisdiction, the Forest Service has a duty to consult with them on matters affecting their interests.

Because of this government-to-government relationship, efforts were made to involve local tribal governments and to solicit their input regarding the proposed action. Letters were mailed to the local tribal governments on January 14, 2003. Follow-up meetings and additional communication efforts with various representatives of tribal governments included:

2005 Martin Basin Rangeland Project EIS

- Meeting with Summit Lake Paiute Tribe on March 11, 2003.
- Meeting with Fort McDermitt Paiute-Shoshone Tribe on March 11, 2003.
- Field tour of sites within the project area with Fort McDermitt Tribal Spiritual leaders on July 12, 2003.
- DEIS mailed to six tribal governments on March 24, 2004.
- Letter extending comment period on the DEIS mailed on May 4, 2004.
- Second letter extending comment period on the DEIS mailed on June 25, 2004.
- FEIS mailed to six tribal governments on July 5, 2005.
- Letter regarding response to comments on the DEIS mailed on July 14, 2005.
- Record of Decision mailed to six tribal governments on June 6, 2006.

- Letter and public response card regarding FEIS format mailed on April 6, 2005.

2008 Martin Basin Rangeland Project EIS

- Letters mailed to tribal governments on February 9, 2007.
- Communication with Fort McDermitt Tribal Chairperson and several council members in April 2008.

ISSUES

The interdisciplinary team (IDT) identified issues through comments received during public and internal scoping, as well as comments received on the previous DEIS for this project. This process was used to determine which issues should be analyzed in detail, and to identify all other issues and concerns that should be meaningfully addressed in the analysis. Comments were received from individuals, organizations, state agencies, local American Indian Tribes, and other federal agencies. Each comment received during scoping and the comment period for the 2004 DEIS was considered a potential issue, and was evaluated to determine in which of the following ways the comment was resolved or addressed.

- Resolved by Forest Plan land use designations.
- Addressed through implementation of Forest Plan Standards and Guidelines and best management practices.
- Addressed through implementation of project-specific mitigation measures.
- Addressed during processes or analysis routinely conducted by the IDT.
- Addressed through spacial location of activities during alternative design.
- Used to drive or partially drive an alternative.
- Beyond the scope of the project.

Similar issues were combined into one statement where appropriate. The following five issues were determined by the responsible official to be within the scope of the project decision. The IDT developed alternatives to the Proposed Action to address these issues; Chapter 2 of this DEIS discusses and compares the alternatives. Additional concerns were considered but did not form the basis for an alternative; they are discussed separately below.

Issue 1: Water Quality

Livestock grazing can lead to increases in erosion, sedimentation, temperature, and pollutants in adjacent surface waters. This would likely affect native fisheries and other aquatic life as well as downstream beneficial uses. These impacts can be minimized by grazing during different times of the season, reducing the amount of grazing in riparian areas, and/or ensuring grazing and trampling is not excessive in adjacent uplands.

Measurement Indicators for water quality[3]:

- Bacteria (fecal coliform).
- Sediment/turbidity.
- Water temperature.
- Dissolved oxygen.
- Nutrients (nitrate and phosphate).

[3] These measurement indicators would be compared to the Nevada water quality criteria found in NAC 445A.120..

Issue 2: Soil Quality

Livestock grazing may negatively affect soil quality and vegetative productivity through compaction, trampling, and redistribution of soil nutrients. Water and wind erosion may increase with excessive livestock grazing. Erosion changes the capacity of the soil to function and limits its ability to sustain future uses. The ability of a plant community to recover after topsoil is lost is restricted.

Measurement Indicators for soil quality:

- Ground cover.
- Compaction.
- Erosion.

Issue 3: Fisheries and Wildlife

Fisheries (including Lahontan cutthroat trout)

Livestock grazing has the potential to impact fisheries habitat, including the federally-listed Lahontan cutthroat trout.

Lahontan cutthroat trout and other trout species are identified as a Management Indicator Species (MIS) in the Forest Plan. Lahontan cutthroat trout, German brown trout, Eastern brook trout, and rainbow trout are known to inhabit streams throughout the project area. All native trout waters on the District, regardless of the presence of introduced trout species, are currently being managed with the intent of native trout reestablishment.

The only trout species that is an MIS for capable/suitable trout habitat on the Santa Rosa Ranger District is the Lahontan cutthroat trout. The entire Santa Rosa Ranger District is within the historic capable habitat range of the Lahontan cutthroat trout. The project area is a recovery area for Lahontan cutthroat trout (US Fish and Wildlife Service 1995). Impacts to fisheries and stream habitats associated with improperly grazed livestock have been well documented in scientific literature and by state and federal agencies. Impacts from livestock to streams and fisheries habitat include, but are not limited to increased water temperatures, change in channel morphology, loss of riparian vegetation, increased sediment, and lowering of water tables.

Measurement Indicators for fisheries:

- Bank stability.
- Fisheries populations.

Wildlife

Livestock grazing has the potential to create unsatisfactory habitat conditions for MIS species, or impede successful restoration of habitat capable of becoming satisfactory habitat to support MIS species, such as sage grouse, northern goshawk, and mule deer.

Sage grouse, identified as a MIS in the Forest Plan, inhabit the majority of the project area. Livestock grazing has the potential to affect sage grouse habitat, including leks and nesting areas. Lek and nesting areas are a critical component of sage grouse habitat. The nesting areas generally occur within 2 miles of the leks. Disturbance to the nests could result in reduced hatches.

Livestock grazing may alter the vegetation composition of an area or reduce the availability of hiding cover. This may result in impacts to the quality of forage available or result in sage grouse being more vulnerable to predators. Livestock may also trample nests.

Measurement Indicators for sage grouse habitat quality:

- Nesting habitat: 15-30 percent of sagebrush canopy and herbaceous plant cover.

- Brood rearing habitat: diverse forb plant composition, water availability, and 15-25 percent sagebrush cover.

Issue 4: Vegetation

Livestock grazing has the potential to affect the composition, structure, and health of the various vegetative communities in the project area. These vegetative communities include riparian areas, aspen, upland vegetation. Vegetation grazing also has the potential to introduce and/or expand noxious weed infestations within these vegetative communities.

Measurement Indicators for Vegetation:

Riparian Areas
- Riparian health.
- Percent of bare ground.

Health of Aspen Stands
- Aspen regeneration.

Health of the Upland Communities
- Vegetative composition.
- Percentage of bare ground.

Noxious Weeds
- Trend in number of acres affected.

Issue 5: Socio-economic Values

Livestock grazing within the Martin Basin Rangeland Project area provides an economic value to grazing permittees, which in turn contributes to the social and economic stability of the surrounding community. Agriculture, including the ranching industry, has been a part of the community economic and social fabric since the establishment of Humboldt County. Changes in use on the allotments in the project area could affect the value ranching operations generate through grazing livestock on National Forest System lands, which could affect the local community.

Measurement Indicator for social and economic values:

- Permitted Animal Unit Months (AUMs) gain or loss.

OTHER RESOURCE CONCERNS

The following concerns were considered, they but did not require the development of another alternative (40 CFR 1501.7). These concerns are addressed through project design, alternative development, and mitigations. Resource effects related to these concerns are discussed in Chapter 3.

Cultural Resources

Livestock grazing has the potential to affect cultural resources in the project area. These resources include known and unknown historic, architectural, and archeological sites, as well as traditional lifeway values and places of traditional cultural use.

Dispersed Recreation and Trails

Livestock grazing has the potential to affect dispersed recreation and trails within the project area. The project area contains numerous dispersed or undeveloped recreation sites. These sites are

traditional areas where people like to picnic or camp. These sites do not have facilities, such as potable water, cooking grills, or restrooms. Many of these sites are near streams and aspen stands. These areas also tend to be areas where livestock congregate and may show elevated evidence of cattle. This may detract from the recreation experience.

A brief list of the remaining resource concerns that were identified and their disposition follows:

Predators

Predator control is outside of the scope of this analysis. Predator control activities are planned and performed by the USDA Animal and Plant Health Inspection Service (APHIS). APHIS analyzed the impacts associated with predator damage management in Nevada in an Environmental Assessment prepared in 1999 and amended in 2004. That analysis is incorporated by this reference.

Infrastructure and Range Developments

Infrastructure and range developments are outside the scope of this analysis and would be approved or disapproved under a separate NEPA analysis if necessary. The potential effects of these developments were considered within the cumulative effects sections of this document.

Off-Highway Vehicle Use Associated with Livestock Management Activities

Off-highway vehicle (OHV) use off designated routes would be allowed under the grazing permits authorized based on this analysis. The cross-country OHV use would rarely involve more than one pass over any particular route per year. For the most part, the impacts of such light and dispersed use would not be measurable in regard to most of the resources involved in this analysis and are not essential to a reasoned decision. However, even very limited use of OHVs can be a vector for the spread of noxious weeds. These potential impacts are discussed in Chapter 3 in the Vegetation section.

Climate Change

The Resources Planning Act April 2007 update (Interim Update of the 2000 Renewable Resources Planning Act Assessment, Publication #FS-874) acknowledges and addresses climate change. It also indicates that climate variability makes predictions about drought, rainfall, and temperature extremes highly uncertain. Based on the best available science, it would be too remote and speculative to factor any specific ecological trends or substantial changes in climate into the analysis of environmental impacts of this project. Research about long-range shifts in species range, etc. is ongoing, and a number of groups are discussing the implications of climate change on forest and range management. Although there is a solid consensus that global warming is occurring, there is still much uncertainty about subsequent ecological interactions and trends at the local or site-specific scale. Given the stochastic nature of climate-related events such as droughts, wildfire, and floods, it would be highly remote and speculative to make management decisions based on such predictions. The best available science concerning climate change is not yet adequate to support reliable predictions about ecological interactions and trends at the local (site-specific) scale. Project-scale effects will not make individual contributions to greenhouse gas emissions that are significant enough to measure.