

# Chapter One: Purpose of and Need for Action

## DOCUMENT STRUCTURE & CONTENT

The Forest Service has prepared this Environmental Impact Statement (EIS) in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. This Environmental Impact Statement (EIS) discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives.

### DOCUMENT STRUCTURE

The document is organized into five (5) chapters, as well as appendices, references and bibliography, glossary, and maps:

- **Chapter 1: Purpose of and Need for Action**  
Includes information on the history of the project proposal, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. Chapter 1 also details how the Forest Service informed the public of the proposal, as well as how the public responded.
- **Chapter 2: Alternatives (Including the "Proposed Action")**  
Provides a more detailed description of the agency's proposed action as well as alternative methods for achieving the stated purpose. These alternatives were developed based on significant issues raised by the public and other agencies. This discussion also includes mitigation measures. Finally, this section provides a summary table of the environmental consequences associated with each alternative.
- **Chapter 3: Affected Environment**  
Describes the physical environment as it currently exists. This is organized by environmental component.
- **Chapter 4: Environmental Consequences**  
Describes the environmental effects of implementing the proposed action and other alternatives. This analysis is organized by significant issues as they relate to each environmental component.
- **Chapter 5: Consultation and Coordination**  
Provides a list of preparers and agencies consulted during the development of the environmental impact statement.
- **Appendices**  
Provide more detailed information to support the analyses presented in the environmental impact statement.
- **References & Bibliography**  
Identifies the references cited in the text as sources of information and data used to prepare this Final Environmental Impact Statement (EIS).
- **Glossary**  
Provides definitions for key terms.
- **Tables & Figures**  
Located throughout the main text and appendices to provide visual representation of key points and data.
- **List of Acronyms & Abbreviations**  
Located on the inside back cover to provide quick reference.
- **Maps**  
Located throughout the main text and appendices to provide physical orientation and visual representation of key points and data.

## DOCUMENT CONTENT

A comparison of the Draft EIS as issued in March 2004 and this Final EIS reveals a number of changes in the text of the document, including:

- Clarification of descriptions and concepts in response to public comments that were received.
- Resolution of typographical and computational discrepancies.
- Informational corrections and updates received from review by both resource specialists and the public.
- The addition of a fourth alternative as proposed by Resource Concepts, Inc. (RCI) of Carson City, Nevada. This alternative was analyzed through the EIS in a similar manner as the original three (3) alternatives that were presented in the Draft EIS.

Although the analysis in the Final EIS was extended to include the RCI proposal, the analysis presented in the Draft EIS remained essentially unaltered.

Additional documentation, including more detailed analyses of project-area resources and maps, may be found in the project planning record located at the Santa Rosa Ranger District office in Winnemucca, Nevada.

## MARTIN BASIN EIS PROCESS & TIMELINE

The Martin Basin Rangeland EIS has been developed following standard NEPA processes, with additional modifications to insure maximum public involvement and most inclusive final product. A brief timeline of the Martin Basin Rangeland EIS process follows:

### 2002

#### December 2002

- Forest Service Interdisciplinary Team (IDT) formed
- Notice of Intent (NOI) for Martin Basin Rangeland Project EIS published

### 2003

#### January 2003

- Scoping Letter for Martin Basin Rangeland Project EIS (MB-EIS) issued
- Legal Notices seeking public comment on NOI published
- Public comment received regarding Scoping Letter and NOI

#### February 2003

- County Commission contacts
- Public comment period ends

#### March 2003

- Public comments reviewed by IDT
- Issues identified and categorized by IDT
- Alternatives formulated by IDT
- Tribal Involvement

#### April 2003

- Specialists' reports on issues prepared

#### May 2003

- Specialists' reports on issues prepared

#### June 2003

- Specialists' reports on issues prepared

#### July 2003

- Specialists' reports on issues prepared
- Tribal Involvement

#### August 2003

- Specialists' reports on issues prepared

#### September 2003

- Specialists' reports on issues prepared

#### October 2003

- Assemble Martin Basin Draft EIS (MB-DEIS)

#### November 2003

- Assemble MB-DEIS

#### December 2003

- Assemble MB\_DEIS

**2004****January 2004**

- Assemble MB-DEIS

**February 2004**

- Assemble MB-DEIS

**March 2004**

- Print MB-DEIS document

**April 2004**

- Notice of Availability (NOA) for MB-DEIS published in *Federal Register*

**May 2004**

- Initial Public Comment Period on MB-DEIS

**June 2004**

- Extended Public Comment Period on MB-DEIS

**July 2004**

- Extended Public Comment Period on MB-DEIS

**August 2004**

- Extended Public Comment Period on MB-DEIS

**September 2004**

- Review public comments on MB-DEIS

**October 2004**

- Review public comments on MB-DEIS

**November 2004**

- Review public comments on MB-DEIS

**December 2004**

- Incorporate comments, revisions, and/or clarifications to MB-EIS

**2005****January 2005**

- Incorporate comments, revisions, and/or clarifications to MB-EIS

**February 2005**

- Incorporate comments, revisions, and/or clarifications to MB-EIS

**March 2005**

- Prepare Martin Basin Final EIS (MB-FEIS)

**April 2005**

- Prepare MB-FEIS
- Send Public Mailing Response Card re: FEIS format

**May 2005**

- Prepare MB-FEIS
- Prepare Response to Comments

**June 2005**

- Print MB-FEIS and Response to Comments
- Pre-ROD Public Comment Period

**July 2005**

- Pre-ROD Public Comment Period

**August 2005**

- Pre-ROD Public Comment Period

**Summer/Fall 2005**

- Review Public Comments

**Future**

- Prepare Record of Decision (ROD)

Of particular note are features unique to the Martin Basin Rangeland EIS process, such as the extended comment period following publication of the Draft EIS, and the "pre-ROD" public comment period offered following publication of the Final EIS and preceding issuance of the Record of Decision (ROD). While the FEIS document will not be altered based on the responses received, those public comments will inform the development of the Record of Decision that will be signed by the Forest Supervisor.

## BACKGROUND

The Martin Basin Rangeland Project encompasses approximately 191,000 acres and includes eight cattle and horse allotments on the Santa Rosa Ranger District. The allotments are Martin Basin, Indian, West Side Flat Creek, Buffalo, Bradshaw, Buttermilk, Granite Peak and Rebel Creek Allotments. The allotments currently have permitted grazing use with the exception of Rebel Creek and Bradshaw Allotments, which are vacant.

The Project Area is located in portions of Townships 41 through 47 North and Ranges 38 through 41 East, Mount Diablo Meridian. The Forest Service began management of this area in 1911 largely as a result of local rancher petitions. These petitions sought to reduce the level of grazing, particularly by sheep, on the Santa Rosa Mountain Range.

Prior to the establishment of the Santa Rosa National Forest in 1911, now the Santa Rosa Ranger District, there were approximately 16,000 head of cattle, 1,500 horses and 150,000 sheep grazing on the Santa Rosa Mountain Range.

Permitted livestock grazing was authorized on the Santa Rosa Ranger District in 1912, at which time permits were issued for approximately 14,600 head of cattle, 1,000 horses and 71,600 sheep.

There are currently seventeen (17) permittees with permits to graze 10,087 head of cattle and 25 horses on the Santa Rosa Ranger District. Of these, twelve (12) have permits to graze 5,654 head of cattle and 25 horses within the Project Area. There are no permits to graze sheep on the Santa Rosa Ranger District. The grazing season is generally from May 21 through September 30 of each year.

In 1995 Congress passed Public Law 104-19, commonly known as the Rescissions Act. This directed the Forest Service to develop and implement a schedule for completing NEPA on all grazing allotments.

The Project Area ranges in elevation from 5,000 feet to 9,700 feet and contains numerous sub-watersheds flowing down from both sides of the north-south oriented Santa Rosa Mountain Range. The east part of the Project Area flows into the North Fork Little Humboldt River and the west part of the Project Area flows into the Quinn River.

The Project Area contains two distinct landscapes. The southern half is characterized by steep terrain incised by canyons along both the east and west side of a backbone type mountain range. The north half is more of a broad basin interspersed by numerous streams.

Vegetation is varied within the Project Area. Around the perimeter of the Project Area, at elevations below 6,000 feet, the predominant vegetation community is Wyoming big sagebrush. As the elevation increases, the vegetation changes to mountain big sagebrush and mountain brush communities. Interspersed among these communities are numerous large stands of aspen. Pockets of curlleaf mountain mahogany and some isolated stands of limber pine are also present.

## PURPOSE OF AND NEED FOR ACTION

The purpose of this project is to determine the management direction for livestock grazing that is needed to move existing resource conditions within the Project Area towards desired conditions. There is a need to maintain or improve the condition of riparian resources and maintain or improve the overall health of the rangeland in the Martin Basin Rangeland Project area.

Historical livestock grazing has resulted in the functioning level of some meadows and streams to become less than desired. Improvement has occurred since the *Forest Plan* was implemented, however some riparian areas and meadows are continuing to decline. The Forest Service believes that some of the decline in the moist-to-dry meadows, can be attributed to allowable use rates that are too high for areas that are functioning in less than the desired condition.

## FOREST PLAN DIRECTION

Projects conducted within National Forest System lands are guided by Forest Plans for the specific National Forest. A *Forest Land and Resource Management Plan* (FLRMP) embodies the provisions of the *National Forest Management Act* (NFMA), its implementing regulations, and other guiding documents. The *Humboldt National Forest Land and Resource Management Plan*, also known simply as the *Forest Plan* (USFS 1986), as amended sets forth the direction for managing the land and resources of the Forest. 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. Amendment 2 includes additional direction relative to livestock grazing that is pertinent to this project.

### GOALS

Multiple-use goals in the Forest Plan that apply to livestock grazing and rangeland resources are:

- Goal #10  
“Identify and protect, interpret and manage significant cultural resources.”
- Goal #14  
Improve the current productive level of wildlife habitat with emphasis on maintaining or improving limiting factors such as big game winter ranges (measured in acres), in cooperation with Nevada Department of Wildlife
- Goal #15  
Manage classified species, such as bald eagle (E), peregrine falcon (E), Lahontan cutthroat trout (T), Bonneville cutthroat trout (S) habitat, to maintain or enhance their status through coordination with other land use programs, agency cooperation, and direct habitat improvements.  
(Note: E = endangered, T = threatened, S = Sensitive)
- Goal # 16  
Specifies that all allotments are managed “...to maintain suitable range presently in satisfactory ecological condition, and improve suitable range in less than satisfactory condition.”
- Goal # 17  
Is that the rangeland should be managed to “...produce a sustained yield of forage on all lands available and suitable for livestock grazing while maintaining or enhancing the productivity of the land.”
- Goal # 18  
Provides direction to “manage livestock to recognize the special needs relating to wet meadows and riparian areas, and fisheries habitat.”
- Goal # 19  
To “reduce conflicts between livestock and wildlife for forage on key winter ranges.”
- Goal # 21  
To “maintain sensitive plant species.”
- Goal #24  
Emphasize the control of Priority 1 noxious weeds.
- Goal #29  
Provide water and soil input to other resource activities to protect or improve water quality and soil productivity.
- Goal #32  
Design and implement practices on-the-ground that would re-establish acceptable soil, hydrologic, and vegetative conditions that are sufficient to secure and maintain favorable water flow.

## AMENDMENT 2: RIPARIAN MANAGEMENT CATEGORIES

Amendment 2 to the *Forest Plan* describes a desired or acceptable condition for riparian areas in five (5) management categories, stating that the conditions shown below are general in nature and represented the current "state of the art" at that time. The categories are designed based on a hierarchy of combined resource values including fisheries, wildlife, and recreation and are meant to maintain or improve these areas to the following level:

- **Category 1**  
Potential key species (herbaceous and woody) are present, reproducing, and have high vigor. Cover of key species is 90% or greater of estimated potential. Soil productivity has not been significantly reduced as evidenced by no more than 10% reduction in macro-pore space from estimated potential. Streambank stability is at least 90% of estimated potential. Fish production is estimated to be near potential.
- **Category 2**  
Potential key herbaceous and woody species are present, reproducing, and have good vigor. Composition of key species is 70 to 89% of estimated potential. Soil productivity has not been substantially reduced as evidenced by not more than a 10% reduction in macro-pore space from estimated potential. Streambank stability is 80 to 89% of estimated potential. Fish production is good in relation to estimated potential.
- **Category 3-4**  
Potential key woody species are present, but intermingled with and being replaced by secondary woody species. Potential key herbaceous are present and reproducing. Herbaceous cover may be high, but that of key specie is 45 to 69% of estimated potential. Soil productivity has been reduced as evidenced by an 11-19% reduction in macro-pore space from estimated potential. Stream bank stability may fall below 80 percent, but is determined sufficient to protect associated resource values. Fish production is 45-69% of estimated potential.
- **Category 5**  
Riparian areas would be managed in a manner consistent with management for adjacent uplands.

## DESIRED FUTURE CONDITIONS

Within the framework of the *Forest Plan* as amended it is the desired future condition of the Forest and the District to:

- Have allotment management plans that incorporate objectives and guidelines to improve coordination with other resources;
- Improve the amount of range in satisfactory ecological condition;
- Strengthen the noxious weed control effort; and
- Provide forage for livestock production.

The proposed action also helps move the Project Area towards the following desired conditions described in the *Forest Plan*.

- **Wildlife**  
Current habitat of threatened and endangered species would be maintained, and no conflicts with other uses would be allowed. Big game winter range capacity would increase, predominantly through direct habitat improvements and coordination with the fuelwood program and livestock grazing. Big game and upland game summer ranges would be improved through coordination with the livestock and recreation activities.
- **Fisheries**  
Standards and guidelines in the *Forest Plan* state that first priority is to coordinate other resource activities with Lahontan cutthroat trout habitat management (Page IV-29). Amendment #2 of the *Forest Plan* classifies all streams into management categories and assigns livestock utilization standards based on management category. Riparian areas along streams that contain Lahontan cutthroat trout are considered to be Category 1. Desired condition for Category 1 streams include maintaining streambank stability at 90% of estimated potential and maintaining fish production near each stream's potential (Page IV-29 and Amendment #2, page 7).  
  
Fisheries habitat in poor condition would be improved through coordinated management with other resources and limited habitat improvement projects designed to improve streambank cover, pool areas and

streambank stability. Existing riparian habitat would be maintained in at least satisfactory ecological condition.

The *Forest Plan* also directs that habitat for all Management Indicator Species (MIS) should be maintained at levels that exceed requirements for minimum viable populations. Lahontan cutthroat trout and other desirable trout species are considered to be MIS (Table II-5, page II-10 and Amendment #2).

- **Range**

The *Forest Plan* estimated the Humboldt National Forest would produce 316,621 animal unit months (AUMs) by the end of the planning horizon. The *Forest Plan* also estimated range conditions would continue to improve from the present 69% in satisfactory ecological condition to at least 80%. Allotment management plans would incorporate objectives and guidelines to improve coordination with other resources. The program for noxious weed control would be strengthened with control efforts on Priority I and II noxious weeds. Sensitive plant species would be maintained.

- **Soil and Water**

The *Forest Plan* (p IV-119, 1986) provides management prescription for the Santa Rosa Ranger District. Prescription under the heading of water and soil states, "Maintain water quality and soil productivity. Management activities of all resources must maintain or enhance soil and water resources and comply with applicable laws and regulations. Soil and water projects would emphasize protection, disturbed area reclamation, emergency burn rehabilitation, and increasing water yield and soil productivity."

Water quality would improve at a moderate level, while soil productivity and quality would improve at a high level. Watershed improvement would occur at a moderate rate, yet current needs for watershed improvement would not be satisfied by the end of the planning period. Reductions in soil erosion would increase with watershed protection, proceeding at a moderate level through implementation of soil and water conservation measures. Soil and water resource inventory would continue as would present coordination with city, county and state agencies.

- **Recreation**

Allotment planning and environmental analysis would use an interdisciplinary approach. Locate where feasible, all range improvements away from travel corridors, especially trails and popular fisheries and other watercourses. Incorporate design and landscape management principles to mitigate the visual impacts. Require resource activities impacting trails to mitigate impacts.

## SUITABILITY AND CAPABILITY

The six (6) allotments listed in the Martin Basin Rangeland Final Environmental Impact Statement (FEIS) dated May 2005 are all presently grazed by cattle under term grazing permits. An additional two (2) allotments are vacant, for a total of eight (8). Capable and suitable acres for livestock grazing are determined first on the very broad scale at the Forest Plan level, and are reevaluated on a more site-specific basis through project level assessments.

Using Region 4 standards for determining capability (slope, distance to water, vegetative production and soil characteristics), a GIS exercise was completed to identify capable acres. The following acres have been identified as capable and non-capable by allotment. Areas determined to be unsuitable in the Forest Plan, such as Lye Creek Campground, were not included. Specific information and maps for these eight (8) allotments are included in the Project Record.

The capable acres were reviewed and assessed for any changes in the suitability of these acres for livestock grazing that may have occurred since the Forest Plan was signed or amended. Based on this review all of the allotments have been determined to be capable and suitable of supporting livestock grazing.

## MANAGEMENT AREA PRESCRIPTIONS

The Santa Rosa Management area encompasses the entire Santa Rosa Ranger District. The following Management Area Prescription elements are pertinent to the Martin Basin Rangeland Project proposed action:

- **Wildlife and Fish**

Habitat would be maintained with emphasis on improvement of key habitat such as winter range, and fawning and brooding areas. The management indicator species identified in the Forest Plan would be used to monitor habitat conditions and trend. Big game summer ranges would be considered when planning for other resources. Sensitive, threatened and endangered species habitats would be managed so as to stabilize or increase populations to a level that would lead to de-listing.

- **Range**

Range improvements would be maintained, constructed, and/or reconstructed as provided for in the individual allotment management plans. Livestock grazing would continue on the 12 allotments currently under management. Noxious weed control would continue.

- **Water and Soil**

Maintain water quality and soil productivity. Management activities of all resources must maintain or enhance soil and water resources and comply with applicable laws and regulations. Soil and water projects would emphasize protection, disturbed area reclamation, emergency burn rehabilitation, and increasing water yield and soil productivity. Such projects would be multi-financed; that is, costs may be shared among several functional areas within the agency. Water rights filings would be made as required by state law.

Amendment #2, Humboldt National Forest Land Resource Management Plan describes a desired/acceptable resource condition for the following five management categories. The Amendment states the conditions shown below are general in nature and represent the current "state of the art." As the Riparian Vegetation Classification and Potential Natural Community guides are completed they may be updated. The various categories of riparian would be managed to maintain or improve conditions to the following:

- **Category 1 Riparian Areas**

Potential key species (herbaceous and woody) are present, reproducing, and have high vigor. Cover of key species is 90% or greater of estimated potential. Soil productivity has not been significantly reduced as evidenced by no more than 10% reduction in macro-pore space from estimated potential. Streambank stability is at least 90% of estimated potential. Fish production is estimated to be near potential.

- **Category 2 Riparian Areas**

Potential key herbaceous and woody species are present, reproducing, and have good vigor. Composition of key species is 70 to 89% of estimated potential. Soil productivity has not been substantially reduced as evidenced by not more than a 10% reduction in macro-pore space from estimated potential. Streambank stability is 80 to 89% of estimated potential. Fish production is good in relation to estimated potential.

- **Category 3-4 Riparian Areas**

Potential key woody species are present, but intermingled with and being replaced by secondary woody species. Potential key herbaceous are present and reproducing. Herbaceous cover may be high, but that of key species is 45 to 69% of estimated potential. Soil productivity has been reduced as evidenced by a 11-19% reduction in macro-pore space from estimated potential. Stream bank stability may fall below 80 percent, but is determined sufficient to protect associated resource values. Fish production is 45-69% of estimated potential.

- **Category 5 Riparian Areas**

Riparian areas would be managed in a manner consistent with management for adjacent uplands.

## PROPOSED ACTION

The action proposed by the Forest Service to meet the purpose and need is to authorize continued livestock grazing in the Martin Basin Rangeland Project area under updated grazing management direction. This updated direction is designed to move existing rangeland resource conditions within the Project Area toward desired conditions. An adaptive management strategy, which would allow for flexibility during the implementation of the grazing strategy, would allow permittees to respond to changing conditions and unexpected results. Permitted numbers and seasons would be modified as necessary to meet standards.

An assessment would be completed on each allotment. This assessment would determine the functioning level of representative sites within the vegetative communities. These vegetative communities are aspen, cottonwood, wet meadows, riparian areas along streams, moist to dry meadows, Wyoming big sagebrush, mountain big sagebrush, and mountain brush.

In addition to general management standards, specific practices and mitigation measures are prescribed as related to the needs of sage grouse, which is a *Forest Plan* MIS, and Lahontan cutthroat trout, which is both a federally-listed "threatened species" as well as a *Forest Plan* MIS.

Components of the "Proposed Action" include:

- **Cabin Creek Riparian Pasture**

A riparian pasture would be created in the Cabin Creek Unit of Martin Basin Allotment and may involve construction and/or re-construction of fences. These fences will be approved under a future NEPA process.

- **Rebel Creek Riparian Pasture**

Approximately a half-mile of new fence may be constructed in the upper portion of Rebel Creek. No livestock use would be authorized in this riparian pasture during this planning period. This fence will be approved under a future NEPA process.

- **Range Developments**

Future range developments such as fences that may be needed to implement the riparian pastures would be approved under a site-specific NEPA analysis.

- **Vacant Allotments**

Bradshaw Allotment would be combined with either the Martin Basin or Buttermilk Allotment. The portions of Rebel Creek Allotment where grazing is authorized may be combined with other allotments.

## DECISION FRAMEWORK

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

Whether or not to continue grazing on the allotments within the Martin Basin Rangeland Project area and if the decision is to continue grazing then with what standards, mitigation measures and monitoring requirements.

## PUBLIC INVOLVEMENT

Various efforts were made to involve the public and solicit input on the proposed action. These efforts involved the following:

### NOTICE OF INTENT (NOI)

The Notice of Intent (NOI) for this project was published in the Federal Register on December 30, 2002 (Volume 67, Number 250). The NOI asked for public comment on the proposal on or before February 28, 2003.

### NOTICE OF AVAILABILITY (NOA)

The Notice of Availability (NOA) for the release of the Draft Environmental Impact Statement (DEIS) was published in the Federal Register on April 2, 2004. The comment period was extended twice, resulting in a total comment period of 135 days.

### LEGAL NOTICES

Legal notices were published in the Humboldt Sun on January 14, 2003, and in the Reno Gazette Journal on January 15, 2003. Legal notice regarding the Martin Basin Draft EIS were published as a Notices of Availability (see above).

### PUBLIC MAILINGS

A "scoping" letter was mailed to over 100 interested and/or affected parties on January 9, 2003. Thirty (30) individuals or groups responded to this mailing. These responses were used to refine the issues and are archived in the Martin Basin project file. Bound and/or electronic copies of the Martin Basin Draft EIS were transmitted to interested and/or affected parties in April 2004.

## PUBLIC RESPONSE CARD

A response card was sent to over 100 interested and/or affected parties on April 6, 2005, to ask what type of deliverable document they prefer: bound copy, Adobe® .pdf format on compact disk (CD), or both. Parties can also choose to download the document from the Internet themselves.

## COUNTY COMMISSION CONTACTS

The District Ranger and District Staff met with the Humboldt County Commission during public sessions on February 18, 2003, to discuss and present information pertaining to the preparation of the Martin Basin EIS.

## 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 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 Indian Tribes on matters affecting their interests (*USDA Forest Service Policy Consultation With American Indian and Alaska Native Tribes, 2001-Working Draft*).

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 were held with various representatives of tribal governments, including:

- March 11, 2003 - Summit Lake Paiute Tribe
- March 11, 2003 - Fort McDermitt Paiute-Shoshone Tribe
- July 12, 2003 - A field tour of sites within the Project Area was taken with Fort McDermitt Tribal Spiritual leaders.

## ISSUES

Using the comments from the public, other agencies, Forest Service specialists, and others including local Tribes, the Interdisciplinary Team developed a list of issues to address.

The Forest Service separated the issues into two groups: significant and non-significant issues. Significant issues were defined as those directly or indirectly caused by implementing the proposed action. Non-significant issues were defined as those that are: 1) outside the scope of the proposed action; 2) already decided by law, regulation, *Forest Plan*, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council on Environmental Quality (CEQ) NEPA regulations explain this delineation in Sec. 1501.7, "...identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)...."

### SIGNIFICANT ISSUES

Following is the list of significant issues and the measurement indicators. Measurement indicators are properties that change in response to management, climate, or both and reflect the current functional status:

#### Water Quality

Livestock grazing can lead to increases in sedimentation, temperature, and pollutants in adjacent surface waters. This would likely affect native fisheries and other aquatic life as well as affect 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 insuring grazing and trampling is not excessive in adjacent uplands.

Measurement indicators are fecal coliform, dissolved oxygen, sediment, and water temperature. These would be compared to Nevada water quality criteria.

### 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 are compaction, trampling, and erosion by wind and water.

### 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 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. The Project Area is also identified as a recovery area for Lahontan cutthroat trout (U.S 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 water tables.

Measurement indicators include bank stability (indicative of changes in channel morphology), fisheries populations, embeddedness, and water temperature in stream.

### Wildlife

Livestock grazing has the potential to affect sage grouse habitat, including leks and nesting areas. 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.

Sage grouse inhabit a majority of the Project Area and are identified as an MIS in the *Forest Plan*. Lek and nesting areas are a critical component of sage grouse habitat. The nesting areas generally occur within two miles of the leks. Disturbance to the nests could result in reduced hatches. Sage grouse typically complete nesting around the first of June.

Measurement indicators for sage grouse habitat quality include:

- Nesting habitat - 15-30 % of sagebrush canopy and herbaceous plant cover.
- Brood rearing habitat - diverse forb plant composition, water availability and 15-25% sagebrush cover.
- Lek habitat - open space surrounded by sagebrush cover that is close in proximity to suitable nesting habitat.

### Riparian Habitat

Livestock grazing has the potential to affect the composition, structure and health of the various riparian habitats in the Project Area.

Several riparian plant communities are found within the Project Area. These riparian areas include streams, seeps, springs, cottonwood and meadows. Though limited in size, these areas are dispersed throughout the Project Area and provide important habitat for many wildlife species. These communities have received and continue to receive impacts from flooding, recreation, and grazing.

Measurement indicators would riparian health and bare ground.

### Aspen

Livestock grazing has the potential to affect the composition, structure and health of aspen stands in the Project Area.

Aspen stands are found throughout the Project Area. These stands provide important habitat for many wildlife species and have the potential to be impacted by livestock grazing the young aspen.

The measurement indicator for the health of aspen stands would be aspen regeneration.

## Upland Vegetation

Livestock grazing has the potential to affect the composition, structure and health of upland habitats in the Project Area.

Grazing may alter the composition and structure by reducing some species and allowing others to increase.

The Project Area contains several upland plant communities such as sage brush/grasslands and mountain shrub communities. These communities make up a majority of the land base within the Project Area.

Wyoming big sagebrush communities around the periphery of the Project Area, have declined and converted to cheatgrass primarily as a result of wildland fires.

Measurement indicators of the health of the upland communities would be vegetative composition and percentage of bare ground.

## Noxious Weeds

Noxious weeds occur throughout the Project Area. The principal weeds within or adjacent to the Project Area are, Scotch thistle, leafy spurge, Russian knapweed, musk thistle, Canada thistle, medusahead, and perennial pepperweed. Noxious weeds tend to increase in areas where ground disturbance has or is occurring. The disturbance tends to be from livestock, recreation and fire.

The measurement indicator for noxious weeds would be the trend in number of acres affected.

## Socio-Economic Factors

Grazing on National Forests is a part of multiple uses on public land. Ranching communities such as Paradise Valley retain open spaces and maintain a lifestyle on which the American West was founded. The Project Area encompasses part of six (6) active grazing allotments and two (2) vacant allotments. The permittees using these allotments are dependant on varying degrees on the National Forest System lands for summer grazing. Reductions in livestock numbers or season can be offset by private land leasing however, added costs may have an effect on the economic viability of their ranching operations.

Measurement indicators would be the economic and social impact to the individual ranches and adjacent communities within Humboldt County.

## Heritage Resources

Livestock grazing has the potential to impact heritage resources through dispersal of artifacts vertically and horizontally within the soil horizon. Livestock grazing also has the potential to damage or destroy artifacts and features.

There are a number of heritage resource sites on the Santa Rosa Ranger District. These include archaeological sites and Native American sacred sites. Section 106 of the *National Historic Preservation Act* (NHPA) requires that effects to heritage resources be considered prior to any proposed ground disturbing activities on Federal lands.

Measurement indicators would be the percentage and depth of disturbed ground within a site's boundary that adversely affects the National Register eligibility of that site.

## 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. They don't 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.

Livestock and recreationists share the same trails within the project area. In some instances, cattle trailing damages the trail tread and trailing during the summer can create dusty conditions. However, livestock trailing can also keep trails clear of vegetation that would otherwise obscure the trail.

Measurement indicators included recreational experience as represented by complaints and trail damage.

## **NON-SIGNIFICANT ISSUES**

A detailed list of non-significant issues and reasons regarding their categorization as non-significant is located in the Project Record. Although NEPA does not require the analysis of non-significant issues, several were included in larger issue discussions contained in Chapter 3: Affected Environment and/or the analysis in Chapter 4: Environmental Consequences within the EIS.

A brief list of the non-significant issues and their disposition follows:

### Predators and Disease

Due to a lack of information indicating any related problems in the Project Area, predators and disease are considered to be a non-significant issue in this analysis.

### 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.

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