

**Environmental Assessment
for
Livestock Grazing Management
in the
North Laramie Mountain Analysis Area**

Douglas Ranger District
Medicine Bow/Routt National Forest and
Thunder Basin National Grassland
Converse, Albany, and Natrona Counties, Wyoming

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November 2003

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CHAPTER 1. PROPOSED ACTION

The Forest Service proposes to revise, update, or otherwise prepare and implement Allotment Management Plans (AMP's) consistent with current Forest Plan standards and guidelines on ten (10) of fourteen (14) livestock grazing allotments that are located in the North Laramie Mountain Analysis Area. These allotments include the Bates Creek C&H (Cattle and Horse) #603, Sagebrush C&H #641, Horse Creek C&H #624, Indian Flats C&H #627, Aunt Ag C&H #657, Boxelder C&H #607, Meadow Creek C&H #633, Pasture C&H #636, LaPrele C&H #629, Warbonnet C&H #650, Indian Creek C&H #626 and the Read Park C&H allotments. The Analysis Area (AA) is located in R. 74-78W, T.28- 31N, 6th PM., approximately 50 miles southwest of Douglas (or approximately 20 south of Glenrock), Wyoming, in Converse, Albany, and Natrona, counties, Wyoming. It contains approximately 130,657 total acres (52,667 NFS acres or 40%).

The LaPrele and Warbonnet allotments were analyzed on whether or not to include them as part of this process. Because both of these allotments contain Federal lands that are either a part of a proposed Land Exchange or are expected be proposed in near future, the decision was to forego inclusion in the NLMAA. The allotments will be analyzed as appropriate, at a future date.

The Harris Creek C&H #620 and Buck Peak C&H #608 allotments currently do not have any permitted grazing occurring on them. These allotments will be administratively incorporated into adjoining allotments without any increases in permitted livestock numbers.

The Read Park and Indian Creek Allotments are currently vacant. The AMP for Read Park was signed in 1987. The AMP for Indian Creek was signed in 1981. Management of the range resources on National Forest Service (NFS) lands within these allotments will be to maintain them in vacant status until a qualified applicant could be issued a Term Grazing Permit to utilize the available forage. The NFS lands may be grazed in conjunction with any grazing on private land and will follow livestock grazing Standards and Guidelines listed in the Plan. Anyone grazing the adjacent private lands will have to apply for the grazing on NFS lands. No new range improvement projects are currently planned. Numbers of livestock and season of use would be permitted, in order to keep actual use within estimated capacities for primary range on NFS lands (Read Park 10 AUM's and Indian Creek 116 AUM's). At a minimum, season of use would be restricted to between June 1 and October 30. This would reduce conflicts with wildlife that might be utilizing the area during the spring and winter months. Salting would generally occur on private lands, in order to encourage reduced use on NFS portions of the allotments.

The AMP's would reflect the modified deferred grazing rotations that have been implemented since the last AMP's were written, if needed.

The following Forest Plan S&G's or other livestock grazing requirements will be implemented by incorporation into the AMP as requirements of the permitted livestock.

1. Utilization of herbaceous vegetation shall be limited to no more than 55% by weight (Forest Plan III-38);
2. Residual stubble height on willow-sedge riparian sites will be maintained to a height of 4 to 6 inches.

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3. Salt locations must be at least 1/4 mile from riparian areas and water sources.
4. Livestock will be removed from the grazing unit when stream bank disturbance (trampling, exposed soil, etc.) from current year livestock grazing impacts 25% of the key area stream reaches.
5. Limit utilization of woody plants to no more than 20% of current annual growth;
6. Where background sedimentation levels are known, remove livestock from the grazing unit when stream bank disturbance is shown to result in erosion and subsequent sedimentation significantly (greater than 10%) higher than background levels (currently no background levels have been measured);

Monitoring Requirements (as per the 1985 Forest Plan- IV-6 through IV-10)

1. Determine forage utilization once every three to four years;
2. Evaluate condition and trend, for both riparian areas and uplands, once every five years;
3. Evaluate habitat condition for management indicator species, once every one to two years.
4. Long term monitoring of three sites, 48CO2401, 48CO2399, and 48CO2655 is recommended since there was some grazing impacts to ineligible sites and monitoring of these sites over time can help determine if National Register eligible historic properties are affected over time by grazing. On sites 48CO2401 and 2399 grazing was noted as an impact, but not one that threatened their eligibility. It must be said that erosion process currently affecting 48CO2655 are not caused by grazing but monitoring this site will help illustrate the difference in erosion type.

CHAPTER 2. PURPOSE AND NEED FOR THE ACTION

It is Forest Service practice and policy to make forage resources available to qualified livestock operators on National Forest System (NFS) lands that are capable of, and suitable for supporting such use. It is also agency policy, and an objective of public land management programs, to contribute to the economic and social well being of local people by providing opportunities for economic growth and diversity, and by promoting stability for communities that depend on the availability of rangeland resources for their livelihood (FSM 2202.1). Making such resources available must be consistent with forest and grassland land and resource management plans (FSM 2203.1). By Federal regulation, forage-producing lands will be managed for livestock grazing, when and where it is consistent with land management plans (36 CFR 222.2[c]).

The 1985 Medicine Bow National Forest and Thunder Basin Land and Resource Management Plan (Forest Plan) describes livestock grazing as an appropriate multiple-use, as long as it meets Forest Plan forest-wide and management area prescription Standard and Guidelines. Term grazing permits currently authorize livestock grazing on NFS lands in ten (10) of the fourteen (14) total allotments in the North Laramie Mountain Analysis Area (NLMAA). Allotment management plans (AMP's) exist for the following twelve allotments: Bates Creek 1985, Sagebrush 1985, Horse Creek 1990, Indian Flats 1981, Aunt Ag 1980, Boxelder 1986, Meadow Creek 1980, Pasture 1986, LaPrele 1986, Warbonnet 1994, Indian Creek 1981, and Read Park 1987. It is timely to examine these ten allotments (minus the LaPrele and Warbonnet allotments which will be analyzed at a future date) now to determine current resource conditions in each as regards domestic livestock grazing use, and to confirm whether or not such continued use would comply with Forest Plan Standards and Guidelines and goals and objectives for the management of the Federal lands in the GA/compliance, and to identify current management needs and/or opportunities that are not being achieved or accomplished.

The environmental effects analysis/assessment is needed now in order to determine what, if any, changes in the way the allotments are currently managed, and impact mitigation measures may be required, to protect forest and rangeland vegetation and sensitive and Threatened and Endangered species in each allotment.

The **Purpose** For this Action is:

- Provide direction as to how domestic livestock grazing, including cattle numbers (AUM's) and season(s) of use, can occur in the allotments in the AA in a way that meets Forest Plan forest-wide management direction and management area Standards and Guidelines (Medicine Bow Forest Plan pages III-2 to III-84 to III-218, respectively);
- Identify and implement any needed adverse impact(s) mitigation measure(s) to protect threatened, endangered and sensitive (TE&S) species and their habitats;
- Identify and implement effects monitoring activities for rangeland vegetation condition and TE&S habitat condition will be needed in the future, and plan for what areas will be monitored and when;
- Make a determination as to whether or not, and if so how, to permit the use of current vacant allotments in the analysis area.

- Comply with, and implement, Section 504, Public Law 104-19, which directs the Forest Service to complete NEPA analyses on existing grazing allotments. Public Law 104-19 was signed into law on July 27, 1995 following the passage of the 1995 Recession Act..

The project is ***needed*** to:

- Determine the best way to permit and manage livestock grazing use in the vacant Harris Creek, Buck Peak, Indian Creek and Read Park allotments. Provide direction as to how authorized livestock grazing should occur in order to meet Forest Plan Direction and Standards and Guidelines (Medicine Bow Forest Plan pages III-2 to III-84 and pages III-99 to III-218, respectively);
- Determine what effects monitoring activities for rangeland vegetation condition and TE&S habitat condition will be needed in the future, and plan for what areas will be monitored and when;
- Incorporate current Forest Plan forest-wide and management area Standards and Guidelines into the management of all allotments in the AA.
- Affirm or revise current estimated livestock grazing capacity (Animal Unit Months-AUM's).
 - Affirm or revise current established season(s) of use, as needed, and the kind and specific types and numbers of livestock that could be permitted.
 - Determine what effects monitoring activities for rangeland vegetation condition and TE&S habitat condition will be needed in the future, and plan for what areas will be monitored and when.
 - Identify mitigation measures, as needed, to reduce or eliminate potential resource problems.

Decisions to be Made

The Douglas District Ranger will determine whether or not, and if so how, and under what circumstances, the allotments in the NLMAA will be managed for domestic livestock grazing in the future, and what if any adverse impact mitigation measure(s) and effectiveness monitoring requirement(s) will be employed to protect and enhance habitats for threatened, endangered, and sensitive species, and other forest resources and uses that occur in the geographic area. If the responsible official decides that livestock grazing is an appropriate use in some or all of the allotments that are analyzed, the deciding officer will also decide what the permitted numbers of livestock will be, what grazing season(s) will be used, when mitigation measures will be employed, where, when, and by whom any effects monitoring activities will occur. The decision that will be made could result in permit modification(s), including grazing use increases or reductions that would be implemented by permit and discussed in the AMPs.

CHAPTER 3. THE ISSUES IDENTIFIED

Scoping and Public Involvement

Scoping is the initial and an integral part of the analysis process where the issues and concerns that individuals or groups may have about a proposed action can be surfaced and the relevance and/or significance of such concerns can be assessed. Relevant and/or significant issues are then included in further considerations as part of the analysis of a proposal, or an alternative action to that proposal (40 CFR 1501.7).

In April, 2003 a detailed, project scoping letter was mailed to seventy-seven (77) interested persons, organizations and agencies. This letter included site-specific information about the location and description of the planned actions, and requested comments about the proposed project. Nine (9) responses were received out of this targeted scoping effort.

In addition, a Forest Service interdisciplinary team of resource specialists in rangeland management, wildlife, heritage and paleontological resources, hydrology, soils, engineering, recreation, lands and minerals, fire, timber, visual resources, and NEPA process implementation completed an internal scoping effort.

Comments from both the public and the interdisciplinary team were used to identify issues, concerns and opportunities available, relative to the proposed action. The relative levels of concern expressed were used to help the team differentiate between significant issues of the proposed action and other issues and concerns. The significant issues are those issues that are likely to be highly controversial or that lead to the development of alternatives to the proposed action. No significant issues were identified during either the public or ID team scoping. Other concerns that were considered but eliminated from further consideration are identified in the section below.

Significant Issue

There are no significant issues that were identified out of the public scoping comments received about this proposed action.

Other Concerns Considered, but Eliminated from Detailed Study

The following concerns were considered but eliminated from detailed study:

1. Whether or not, if the Indian Creek allotment is going to be grazed in the future, the substantial amount of fence repairs that is needed to manage the forage resources properly would occur.
-When and if grazing would be permitted to occur in this allotment the permittee would be required to accomplish fence repair prior to entering the allotment.

2. Whether or not the use of the subject lands for livestock grazing adversely effects wildlife habitat, air, and water quality, soils, opportunities for quality non-motorized recreation experiences and plant and animal biodiversity.

-The degree to which the proposal would affect these resources has been addressed in the relevant resources specialist's reports. See pages 11-16 in this EA for a summary of the resource specialist's determinations, conclusions, and findings regarding whether or not, and to what degree, each of these resources could or would be affected. The implementation of proven mitigation measures and the Annual Operating Instructions would serve to reduce possible adverse impact of domestic livestock grazing to a level that would not be significant.

3. Whether or not reduction in the amount of livestock grazing from current levels would result in an improvement of these conditions toward the desired conditions that are the goal of the Forest Plan.

-The resource specialist have documented their conclusions that existing/current conditions in each of the grazing allotments are, for all intents and purposes, also the desired conditions that are the goal of the Forest Plan, and decreasing the number of livestock grazing in these allotments would not likely result in any notable added increment of accomplishment toward achieving those Forest Plan desirable conditions.

4. Whether or not the grazing that would occur in the analysis area is important economically in the community, or of little more than "minor importance".

-This concern is addressed in the Socio-Economic analysis section of this EA. Generally, it is felt that at the level of the eastern Wyoming region, it is of relative minor importance. Having made such a general determination, it is also recognized that for the local community in southern Converse County, and for each of the livestock grazing permittees who could be affected, it may well be of some significant economic importance to the economic viability of their ranching operation(s) and the continuation of the rural, ranching lifestyle, as well as the continuation of the local, supporting businesses.

5. Whether or not the proposed grazing would adversely impact or detract from the roadless character in the analysis area

-Livestock grazing at the level proposed is a pre-existing use. Therefore, continuing that level of use would have no significant beneficial effect or adverse impact on the present character of the roadless areas in the AA.

-No new roads would be built as the result of implementing the proposed action, and no existing roads would be improved or reconstructed. Additionally, no new structural or non-structural rangeland improvements are proposed. There are currently relatively few roads in the AA that would be used.

-Continued livestock grazing use in roadless areas in the AA at the levels proposed would not significantly alter the roadless character of those roadless area.

6. Whether or not it would be legal and appropriate to cancel (withdraw) any grazing permit(s) for allotments that are not being used.

-A livestock grazing allotment cannot be withdrawn, closed and/or cancelled without Regional Forest approval. Any decision to cancel a livestock grazing permit can be appealed by the holder of that permit as provided for in 36 CFR 251 Subpart C (251.82[3]). There are specific procedures described in Federal law and agency regulations that must be followed. Neither the abolishment of an allotment nor the cancelling of any livestock grazing permit is proposed in this action. In the case of the proposed action, the Buck Peak and Harris Creek allotments would be absorbed into adjoining allotments.

7. Whether or not the allotment boundaries in the analysis area are environmentally or administratively appropriate or politically motivated.

-Combining, or for that matter, dividing existing allotments can be appropriate management action. Such action is purely administrative in nature, would be done at the discretion of the District Ranger, and is not subject to nor would it require NEPA process analysis, documentation or decision.

-Because of the current fragmented ownership pattern and local lack of public access to the Buck Peak and Harris Creek allotments, combining them into adjoining allotments would make them more efficient to administer. There is no anticipated reason or need for increasing the permitted number of livestock grazing in the near future. None of the grazing permittee's in the adjoining allotments is currently interested in an increase in permitted numbers.

8. Whether or not the proposed grazing will adversely impact riparian areas, semi-primitive non-motorized recreational uses, wildlife and wildlife habitat, and aspen sites.

-The Standards and Guidelines listed in the Forest Plan (pages III-37 through III-41) and the Term Grazing Permit for each grazing permittee establishes livestock grazing use that protects riparian areas, soil, and wildlife habitat. Livestock grazing has been permitted on Federal land in allotments in the NLM area for several decades and no significant adverse impacts on recreational uses in that AA have been documented. The specialist's reports for wildlife and fisheries address wildlife, riparian and recreational uses and issues.

9. Whether or not the livestock grazing management in the Warbonnet and LaPrele allotments will be analyzed as part of, and subject to change by the decisions that will be made for the North Laramie Mountains AMP's.

-The inclusion of the analysis of these allotments was considered early in the NEPA process, however because these allotments contain Federal lands that are either currently proposed for exchange or are expected to be proposed in the near future, the decision was made to analyze them, as appropriate.

10. Whether or not activating livestock grazing in the currently vacant Read Park and Indian Creek allotments, and also in the Harris Creek and Buck Peak allotments where there is not permitted grazing, would have an adverse effect on northern goshawk, wild turkey, and blue grouse, elk, deer or bighorn sheep, or other wildlife and their habitats.

-This concern is addressed in the Wildlife Specialist's report in the MIS section pages 20-24

11. Whether or not the proposal includes restrictions on salting in key habitat and other sensitive areas such as riparian areas.

-Salting would not be allowed within ¼ mile of riparian areas. This requirement/limitation would be made a part of the conditions and provisions contained in the AMP for each allotment.

12. Whether or not the environmental assessment will take a hard look and fully disclose all the direct, indirect, cumulative economic and environmental, and compounding effects and rippling repercussions on private, state, and other Federal lands, and upon agricultural producers and communities that occur adjacent to the study area if the proposal is implemented.

-This EA meets the intents, purposes, and requirements of the President's Council on Environmental Quality Regulations For Implementing The Procedural Provisions Of The NATIONAL ENVIRONMENTAL POLICY ACT of 1969, as amended (40CFR1500-1508) to identify, consider and disclose direct, indirect and past, present and reasonably foreseeable future cumulative effects, and all other applicable laws, regulations and policies.

13. Whether or not the analysis of the proposal considers the ability of proper agricultural management that can improve and enhance the condition of natural resources and ecosystems, preserve open space, the visual beauty of the land and the historic rural landscapes in the study area.

-Chapter 6, pages 25-37 describe the Specialists may in fact benefit the natural resources. And. the opportunities will be identified and implemented in the individual allotment management plans and annual operating instructions.

14. Whether or not there will be a loss of environmental, historical or social values of livestock grazing to residents, users or visitors to the Larmie Mountains.

-The proposal would not change the current/existing conditions in the AA. There would be no net "loss" of any of these conditions and values as they exist now if the proposal is implemented. The "No livestock grazing" alternative could have an adverse impact on some of these conditions or values.

15. Whether or not the environmental assessment process will involve all interested, and effected persons, groups, and communities in the scope of the study.

-The scoping document was sent to 77 individuals and organizations that have expressed interest in management of public land in the NLMAA. Each livestock grazing permittee who could be affected was contacted and has been involved in the analysis process.

-The environmental effects analysis process used to guide the analysis and preparation of this environmental document includes full compliance with the public involvement requirements contained in the President's Council on Environmental Quality Regulations For Implementing The Procedural Provisions Of The NATIONAL ENVIRONMENTAL POLICY ACT of 1969, as amended (40CFR1500-1508) to provide fo full and adequate public participation in the environmental analysis and decision making process, and all other applicable laws, regulations and policies.

16. Whether or not the analysis of the proposed action will include the determination and disclosure of all costs and values in the study area, including the cost of enforcement of the decided actions.
 - The results of a “Quick Silver” economic efficiency analysis is summarized in Chapter 6 of this EA (page 29, 30 and 35).

17. Whether or not the proposed action promotes and enhances the congressional mandate for multiple-use of natural resources, and use management and opportunities in the study area.
 - The proposed action has been determined to be fully consistent with the Forest Plan, and would not preclude multiple-use management of the natural resources that occur in the AA, or the public recreational or other use opportunities that may exist there.

18. Whether or not the analysis of the proposed action will use peer-reviewed science as the basis for findings and conclusions, and when making the decisions on how to proceed regarding domestic livestock grazing management in the study area.
 - All applicable Forest Plan forest-wide and management area S&G’s would be complied with. These management requirements were peer-reviewed as part of the forest planning and plan decision making process. The conclusions and findings made by ID team resource specialists and documented in their reports are based in part upon documented peer-reviewed science and research.

19. Whether or not it would be reasonable and appropriate to include the BLM’s Parson’s Creek (09040) and Cross Isolated Tract (09042) livestock grazing allotments that are located in the area of the proposed action, and that the BLM has scheduled for evaluation in 2005, in the analysis of the proposed action.
 - See the response to comment #9 above. The BLM allotments referred to above are contained in those areas proposed, or may well be proposed, for land exchange. Because the FS decided not to analyze the allotments in those areas as part of this proposal, the nearby BLM allotments could not be considered.
 - In any pasture in the above mentioned allotments that contains public lands administered by the USDA- Bureau of Land Management or the State of Wyoming, and is managed under a more restrictive schedule for “on/off” dates, those more restrictive schedules will take precedence in those pastures, except as agreed to in writing by the Forest Service and the other public land agency.

CHAPTER 4. ALTERNATIVES TO THE PROPOSAL THAT ARE BEING ANALYZED IN DETAIL

The National Environmental Policy Act (NEPA) regulations (40 CFR 1502.14) require rigorous exploration and objective evaluation of all reasonable alternatives including those not within the jurisdiction of the agency. According to NEPA, Federal agencies are also required to include and discuss appropriate measures to mitigate adverse environmental impacts that could result from implementing a proposed action.

This chapter examines two alternatives to the Proposed Action (a total of 3 alternatives), each having different environmental impacts. These alternatives were developed in response to significant issues and present a broad range of analysis options. The action alternatives contain mitigation measures designed to protect resource uses and values. These alternatives also contain monitoring requirements designed to determine whether or not mitigation measures work and that the Purpose and Need for the area is being achieved.

Development of Alternatives

The alternatives were formulated based on the purpose and need identified in Chapter one of this EA. The alternatives were developed with input from an interdisciplinary team of resource specialists who analyzed needs, impacts and recommended corrective actions.

The interdisciplinary team had evaluated a reasonable range of alternatives. The proposed action is the continuation of current management plus additional management. The alternatives considered by the interdisciplinary team in addition to the proposal, is to no longer authorize livestock grazing (no grazing) and continuation of grazing as it is currently, without Standards and Guidelines from the Forest Plan (no change). The proposal and two alternatives are described in detail. The "no action" alternative provides a baseline for the analysis. A brief comparison of the proposal and two alternatives is presented on page 15 in this chapter

Description of the Alternatives

Alternative A: Proposed Action

Under this alternative livestock grazing will continue to be authorized implementing all Forest Plan and management area standards and guidelines, as stated in the proposed action (See Chapter 1 pages 1-2 of this EA), for the Bates Creek #603, Sagebrush #641, Indian Flats #627, Horse Creek #624, Aunt Ag #657, Boxelder #607, Meadow Creek #636, Pasture #629, Indian Creek #626, and Read Park #638 C&H Allotments.

Alternative C: No Grazing

Under this alternative to the proposal, no livestock grazing would be authorized after the Term Grazing Permit expires on Forest Land, for the 14 allotments in the North Laramie Mountain Analysis Area. This alternative will serve as a baseline from which to analyze the Proposed Action, and the other action alternatives to it, and to determine whether or not those actions are

likely to be effective at achieving Forest Plan standards and guidelines for the management areas involved, and can move the AA toward desired future condition. Under this alternative no livestock grazing would be authorized, on NFS lands, after the Term Grazing Permit expires for the Bates Creek #603, Sagebrush #641, Harris Creek #620, Indian Flats #627, Aunt Ag #657, Boxelder #607, Buck Peak #608, Meadow Creek #636, Pasture #629, LaPrele #629, Warbonnet #650, Indian Creek #626, and Read Park #638 C&H Allotments. The Buck Peak and Harris Creek allotments would not be administratively combined with adjoining allotments, and not livestock grazing would be allowed.

Mitigation measures: None for the NFS lands. Fencing may be needed to keep livestock off the NFS lands.

Monitoring that would be conducted, as required by the Forest Plan:

1. Evaluate condition and trend, for both riparian areas and uplands every five years;
2. Evaluate habitat condition for management indicator species every 1 to 2 years.

Alternatives Considered But Eliminated From Further Study

Alternative B: No Action

Under this alternative livestock grazing would be continued as authorized in the Bates Creek #603, Sagebrush #641, Harris Creek #620, Indian Flats #627, Aunt Ag #657, Boxelder #607, Buck Peak #608, Meadow Creek #636, Pasture #629, Indian Creek #626, and Read Park #638 C&H Allotments. This alternative would not be in compliance with the 1985 Forest Plan because the plan Standards and Guidelines would not be met.

Forest Plan Consistency/Compliance

The environmental analysis documented in this EA is tiered to the Final Environmental Impact Statement for the Medicine Bow National Forest and Thunder Basin National Grassland Land and Resource Management Plan, and the Record of Decision signed November 20, 1985. The Medicine Bow Land and Resource Management Plan (Forest Plan) guides natural resource management activities on the Medicine Bow National Forest and Thunder Basin National Grassland. The projects proposed by this action are consistent with the goals and objectives, management area direction, and standards and guidelines contained in Chapter III of the Forest Plan.

Table 1. Management Areas and Percentages within Analysis Area.

| Management Prescription | Percent of Analysis Area | Description of Management Emphasis |
|-------------------------|--------------------------|---------------------------------------------------|
| 2A | 54 | Semi-primitive motorized recreation opportunities |
| 4D | 1 | Aspen management |
| 5 | 5 | Big game winter range |
| 6 | 36 | Management emphasis is on livestock grazing |
| 9A | 4 | Riparian area management |

- **2A Management Prescription:** Management Emphasis is for semi-primitive motorized recreation. The management goal is to provide recreation opportunities such as snowmobiling, four-wheel driving, and motorcycling both on and off roads and trails (page III-98 of Forest Plan).
 - ◆ Range Resource Management; 1. Direction is to manage livestock distribution and stocking rates to be compatible with recreation use (pg. III-101 of the Forest Plan).
- **4D Management Prescription:** Management emphasis is on maintaining or improving aspen sites. Other tree species, if present, are de-emphasized (page III-137 of the Forest Plan).
- **5 Management Area:** Management emphasis is for providing winter range for deer, elk, pronghorns and bighorn sheep. Management areas 5A and 5B are included. Both management areas provide for treatments to increase forage production.
- **5A Management Prescription:** General Direction
 - ◆ Range Resource Management, 1. Direction is to manage grazing to favor big game and to achieve the wildlife populations identified in state wide comprehensive wildlife plans. The S&G is to maintain vegetation in fair or better range condition (pg. III-147).
 - ◆ Range Resource Management, 1. Exclude grazing from areas identified as essential wildlife habitat, where deterioration of the watershed or vegetative resource is occurring, or where conflicts are identified at specific lakes or trails.
 - ◆ Range Resource Management, 3. Manage for sustained yield of livestock with the intent to upgrade range conditions for wildlife and livestock while using the available forage (pg. III-147).
- **5B Management Prescription:** General Direction-
 - ◆ Range Resource Management, 1.a. Direction is to manage grazing to favor big game and to achieve the wildlife populations identified in state wide comprehensive wildlife plans. The S&G is to maintain vegetation is fair or better range condition (pg. III-155).
 - ◆ Range Resource Management, 1.b. The S&G is to limit livestock use of browse and herbaceous plant production to that not needed by big game (pg. III-155)
 - ◆ Range Resource Management, 2. Emphasize intensive management of grazing through use of rotation grazing systems (pg. III-155).
- **6 Management Prescription:** Management emphasis is on livestock grazing. The management goal is to maintain range condition at or above the satisfactory level.

- **6A Management Prescription:** General Direction-
 - ◆ Range Resource Management, 1. Use only intensive grazing systems or remove livestock when recovery of range condition cannot be accomplished by an intensive management system (pg. III-163).
 - ◆ Range Resource Management, 2.a.: Direction is to improve range condition to fair or better or forage value rating to moderately high or better. The S&G is to base range condition on the standards in the Range Analysis Handbook (FSH 2209.21) (pg. III-163).
- **6 B Management Prescription,** Direction and Standard and Guide
 - ◆ Range Resource Management, 1. Use only intensive grazing systems or remove livestock when recovery or range condition cannot be accomplished by an intensive grazing system (pg. III-170).
 - ◆ Range Resource Management, 2.a. Direction is to improve range condition to fair or better or forage value rating to moderately high or better. The S&G is to base range condition on the standards in the Range Analysis Handbook (FSH 2209.21) (pg. III-170).
- **9 Management Prescription:** Management emphasis is on all component ecosystems of riparian areas.
- **9A Management Prescription:** Emphasis is on the management of all the component ecosystem of riparian areas. This management area is located along riparian areas within all the above management prescription areas. The management goals include providing healthy, self perpetuating plant communities, meeting water quality standards, providing habitats for wildlife and fish, and providing stable stream channels. Put simply, the goal is to manage for healthy riparian ecosystems.
 - ◆ Wildlife Habitat Improvement and Maintenance, 3.a. Maintain all riparian ecosystems in at least an upper mid-seral successional stage based upon the R2 Riparian Ecosystem Rating System (pg. III-208).
 - ◆ Range Resource Management, 3. Direction is to permit livestock use in riparian ecosystems only when compatible with maintenance of the ecosystem and achievement of riparian objectives
 - ◆ Range Resource Management, 3.b. Do not allow salting in riparian areas or in upland areas immediately adjacent to riparian areas (pg. III-210).
 - ◆ Water Uses Management, 3. Direction is to prevent stream channel instability, loss of channel cross-sectional areas, and loss of water quality resulting from activities that alter vegetative cover (pg. III-213).

Both the proposed action and the action alternative include Forest Plan standards and guidelines as integral parts of allotment management. They also include monitoring requirements intended to ensure compliance with Forest Plan Goals and Objectives. The no grazing alternative is also in compliance with Forest Plan standards but does not comply with Range Resource Management General Direction 1, which states; “Provide forage to sustain local dependent livestock industry as well as wildlife populations agreed to in Statewide Comprehensive Wildlife Management Plans for National Forest System Lands.”

The "No action" alternative will not be in compliance with the Forest Plan, as the S&G’s will not be a part of the AMP’s.

Comparison of the Proposed Action and the No Grazing Alternative

Table 2. Planned Actions Compared by Alternative

| Planned Actions | Proposed Action | Alternative C |
|-----------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|
| Livestock grazing permitted and season of use | Grazing | No Grazing- this column shows non-Fed. lands numbers |
| Bates Creek #603 | 1500 e/l 7/01 to 8/31 | 915 e/l 7/01 to 8/31 |
| Sagebrush #641 | 347 c/c 7/10 to 10/05 | 330 c/c 7/10 to 10/05 |
| Horse Creek #624 | 80 c/c 5 bulls 7/06 to 9/10 | 22 c/c 1 bull 7/06 to 9/10 |
| Aunt Ag #657 | 16 c/c 7/10 to 9/08 | 7 c/c 7/10 to 9/08 |
| Indian Flat #627 | 590 e/l 7/1- 8/31 130 c/c 7/1- 8/13 5 bulls 7/1- 8/13 | 354 e/l 7/1- 8/31 78 c/c 7/1- 8/13 4 bulls 7/1- 8/13 |
| Boxelder #607 (Sno-shoe) | 120 c/c 6/1- 10/30 74 c/c 6/16- 11/15 68 c/c 7/1- 8/31 | 94 c/c 6/1- 10/30 57 c/c 6/16- 11/15 64 c/c 7/1- 8/31 |
| (Turtle Rock) | 90 c/c 6/1- 10/30 105 c/c 6/16- 11/15 70 c/c 7/1- 8/30 | 70 c/c 6/1- 10/30 82 c/c 6/16- 11/15 66 c/c 7/1- 8/30 |
| Pasture #636 | 135 c/c 6/16- 9/30 | 123 c/c 6/16- 9/30 |
| Meadow Creek #633 | 160 c/c 6/25- 9/18 | 125 c/c 6/25- 9/18 |
| Indian Creek #626 | 50 c/c 6/01- 10/30 | 39 c/c 6/01- 10/30 |
| Read Park #638 | 54 c/c 6/01- 10/30 | 52 c/c 6/01- 10/30 |

Environmental Justice

Executive Order 12898, signed by President Bill Clinton on February 11, 1994, and titled “Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations”, provides that Federal agencies will make environmental justice part of their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of Federal programs on these populations. The Order requires the Forest Service to ensure effective public notification and access to information about the proposed action, to work to gain public participation in the analysis and decision processes, and to mitigate such effects if they could occur.

The racial and economic status and composition of the community and persons living in and near the proposed project area in Converse, Albany, and Natrona Counties, Wyoming was considered during a review of what effect the proposed North Laramie Mountain Analysis Area project could have on socio-economic conditions in the analysis area. This review considered whether or not minorities, low-income populations or American Indian tribes are present in the area that could or would be affected by the project.

Public scoping for and about the site-specific proposed action included contacts with American Indian tribes known or presumed to have an interest in livestock grazing project occurring on the Laramie Peak unit of the Medicine Bow National Forest. Local landowners, Converse County, Albany County and Natrona County Commissioners, the potentially affected grazing operators and the general public, were contacted directly or otherwise made aware of the proposal. Local landowner, county, tribal and general public representation participation was sought in a manner consistent with Forest, agency and departmental regulations and policy, and with government-to-government relationships between the United States and tribal governments.

After examining the possible environmental and human impacts of the decision that will be made about the project, the ID team and District Ranger determined that there are no disproportionately high and adverse human health or environmental effects that would occur to minority or low income groups, or American Indian tribes, and that the public involvement efforts undertaken by the ID team were adequate to have identified such groups if they exist or had an interest in the project. The District Ranger’s determination is that there would be no disproportional social or economic adverse impacts to these groups as a result of the implementation of the proposed Allotment Management Plans.

The District Ranger also has determined that equal access opportunity for minorities and people with disabilities would be maintained at a level at or above that which is presently found to exist in the project analysis area. It is highly unlikely that a reduction in the public use of the Federal lands in that area by such persons or groups as a result of the implementation of the proposed project would occur.

CHAPTER 5. AFFECTED ENVIRONMENT

Introduction

This chapter describes the existing and desired conditions of resources in the AA and the consequences or environmental impacts of implementing each alternative.

There are fourteen (14) livestock grazing allotments in the Analysis Area. The proposal is for the analysis of and management (AMP) for ten of these allotments including Bates Creek, Sagebrush, Horse Creek, Indian Flats, Aunt Ag, Boxelder, Meadow Creek, Pasture, Indian Creek and Read Park. The Bates Creek and Harris Creek allotments will be administratively absorbed into adjoining allotments. The Warbonnet and LaPrele allotments will be analyzed at a future date.

The North Laramie Mountain Analysis Area is located in southern Converse County, northern Albany County and eastern Natrona County on the Medicine Bow National Forest (R.74-78W., T28-31N., See attached map). The Analysis Area includes approximately 130,657 total acres, which includes approximately 52,667 acres of Forest Service land and approximately 77,990 acres of private, State of Wyoming, and BLM land. The acreage and percentage of the total acreage by land ownership in each allotment and pasture is shown in the table in Appendix B

The Analysis Area includes approximately 28,428 acres designated by the Forest Service as Management Prescription 2A emphasizing managing for semi-primitive motorized recreation opportunities. Approximately 777 acres are in Management Area 4D which emphasizes managing or improving aspen sites. Approximately 2,548 acres are in Management Area 5 which emphasizes wildlife winter range. Approximately 19,025 acres are in Management Area 6 which emphasizes livestock grazing. The remaining approximately 1,889 acres are in Management Area 9A which emphasizes riparian management.

Topography of the NLMAA varies from high topographic relief, such as Gunnysack at 9,061 feet and Buffalo Peak at 9,387 feet, to less steep and more rolling hills, such as the area around Beaver Creek and Soldier Creek.

Desired conditions for upland range sites, particularly the primary range sites, are to be composed of grass, forbs, and shrub species that are naturally suited to the site. The vegetation species composition is not influenced beyond the range of natural variation by livestock grazing pressures and trampling effects. Plant species that normally increase under poor range management practices are limited in the species composition. Plant production varies on an annual basis but is within 90% of potential for the soils. Soils have ground cover near potential for each site and plants show no sign of pedestalling due to current erosion processes tied to the livestock grazing activity. Livestock effects on forage vegetation may be visible but do not detract from the ability of the area to provide for other uses such as wildlife habitat and recreation uses. In addition, the Forest Plan describes the desired condition as maintaining all rangelands in satisfactory or better condition; for the 6B management areas this is further described as maintaining rangelands in fair or better condition. The Range condition (livestock forage condition) is estimated as mostly good.

The upland sites are currently in the desired condition. The desired condition has been achieved and/or maintained under the current management strategy which has been implemented in the NLMAA. The Proposed Action is expected to continue to maintain the desired condition.

Livestock Use

Grazing is currently authorized for the NFS land in the AA by seven term grazing permits. Total numbers are included in the table in **Appendix C** (page 44) to better show current authorized livestock use. Individual allotment folders contain the history of each allotment, including the number of livestock, dates of grazing, and individual operators.

*Note- The capacity on FS lands is shown as Head Months. A Head Month is one month's use by the permitted livestock. An example is 100 head for 4 months is 400 HM's.

Upland Vegetation

The most recent utilization inspections were completed in 1995 and again in 2002. These inspections show that allowable use guides have been complied with. Generally if allowable use is not exceeded in the riparian areas, the uplands will also be grazed at the proper levels.

The NLMAA includes timber stands of lodgepole pine and Douglas fir, mountain meadows dominated by grasses and forbs, dry meadows dominated by big sagebrush and Idaho fescue, and riparian plant community types. The majority of the area is in upland sites; the riparian sites comprise a small percentage of the area. Upland vegetation is dominated by Idaho fescue (*Festuca idahoensis*), Kentucky bluegrass (*Poa pratensis*), and big sagebrush (*Artemisia tridentata*) with less densities of prairie junegrass (*Koeleria pyramidata*), mountain brome (*Bromus marginatus*), green needlegrass (*Stipa viridula*), needle-and-thread grass (*Stipa comata*), one-spike oatgrass (*Danthonia unispicata*), bluebunch wheatgrass (*Agropyron spicatum*), western wheatgrass (*Pasacopyrum smithii*), sedges (*Carex spp.*), various forbs, flowers, annuals, and brush.

Riparian Areas, Hydrology, and Fisheries

Riparian vegetation is dominated by an overstory of quaking aspen (*Populus tremuloides*), yellow willow (*Salix lutea*), coyote willow (*Salix exigua*), Rocky Mountain maple (*Acer glabrum*), current (*Ribes spp.*), snowberry (*Symphoricarpos albus*), and wild rose (*Rosa woodsii*). Riparian under story vegetation is dominated by beaked sedge (*Carex rostrata*), Nebraska sedge (*Carex nebrascensis*), water sedge (*Carex aquatilis*), horsetail (*Equisetum arvense*), cow parsnip (*Heracleum lanatum*), bedstraw (*Galium triflorum*), and wild Lily-of-the-valley (*Smilacina stellata*).

Impacts from livestock grazing can cause increased sediment input and deposition in stream channels and aquatic habitats. Areas where livestock trails parallel streams where livestock watering is concentrated are particularly prone to these impacts, because hoof shear and trampling can displace soil into streams and wetlands, and prevent stabilization through revegetation. Most allotment areas surveyed displayed stable bed and banks with normal sediment deposition, and were rated using the Proper Functioning Condition (PFC) method, were in proper functioning condition.

Table 3. Riparian Area Ratings

| Riparian Area | Seral Stage | Reason for Riparian Rating |
|----------------------|-------------|-------------------------------------------|
| Deer Creek | PFC | Desirable vegetation, good bank stability |
| W. Fk. Soldier Creek | PFC | Desirable vegetation, good bank stability |

Summer water temperatures in this area tend to be cold, with relatively high dissolved oxygen concentration, so high water temperatures are not a substantial concern.

Perennial streams within the project area provide habitat for native non-game and desired non-native trout species, including rainbow and brook trout, both of which are “common trout” management indicator species under the Forest Plan. Intermittent streams provide seasonal habitat for spawning and rearing in lower gradient reaches near the mainstem of Deer Creek and other mainstem perennial streams. There are no unusually high quality habitats of regional or national significance in or closely downstream of the project area. Intermittent and perennial streams and the associated wetlands also provide habitat for native amphibians, including northern leopard frog (known), tiger salamander (suspected), and western boreal toad (potential). See MIS and TES descriptions from Harris Park Fuels Project report for general species information for “common trout” management indicators and sensitive amphibian species (USFS 2001b).

Habitat conditions for fish and amphibians are typical for this landscape. Where perennial flow occurs, most areas are stable with adequate channel and vegetation characteristics to support modest populations of non-native resident trout (See USFS 1995b). Brook trout were observed more recently during field reviews in West Fork Soldier Creek, and Box Elder Creek (USFS 2001a and 2002b). Bank trampling, trailing damage or forage utilization have reduced habitat in limited, specific locations, but overall riparian condition is “functional” according to the PFC method (USFS 2001a and 2002b) and is supporting populations of aquatic management indicator species.

There are no known local habitats or populations of aquatic or riparian-dependent species that depend on large undisturbed areas of land in this AA. There are no known local habitats or populations of aquatic threatened, endangered or proposed species in or adjacent to the AA, based on field review (USFS 2001a and 2002b) and review of the WNDD (2002) and WGFD (2002) databases. There are a limited number of evaporative depletions noted from small water developments that were included in the consultation package for minor water depletions impacts on Platte River mainstem ecosystem species (USFS 1995c and 1995d)

Several Forest Service sensitive amphibian species have known or potential habitat with the AA. Tiger salamander (*Ambystoma tigrinum*) are ubiquitous in small, low to mid elevation ponds and wetlands in Wyoming (Livo 1998), so they may occur in those habitats in the AA, although none were sighted during field reviews in 2001 or 2002 or were otherwise documented (WNDD 2002). There is one western boreal toad (*Bufo boreas boreas*) sighting in the southern Laramie Mountains (Fletcher Park area, WNDD 2002) that indicates there may be potential habitat, but no toads were observed during field reviews. Northern leopard frogs (*Rana pipiens*) are somewhat more common in the Laramie Mountains, and were observed in the Deer Creek watershed during August 2001, and documented elsewhere in the Deer Creek watershed (WNDD

2002). Leopard frogs are the most likely amphibian to occur in narrow, isolated wetlands common in this AA, and have the potential to occur in any of suitable wetland and riparian habitats in this general area.

The National Wetlands Inventory has mapped wetlands in the area through aerial photograph interpretation. Information for the NLMAA is available at quadrangle scale (1:24,000) on the Ice Cave Mountain, Banner Peak, Reno Hill, Squaw Spring, Protsman Know, Buck Peak, Rock Creek, and Buffalo Peak quadrangles (USDI Fish and Wildlife Service, various dates).

Wetlands are numerous in the AA, but most are very small (less than one acre), isolated wetland associated with springs or beaver pond development. Palustrine wetlands with emergent vegetation supported by temporary, saturated or seasonal flooding are the most common isolated wetland types (PEMA, PEMB, and PEMC). Upper perennial or intermittent riverine and perennial streams in the AA (R3USA, R2USC and R3UBF types). In nearly all cases, streams only have riparian vegetation in narrow strips a few meters wide along the channel and around beaver ponds or spring seeps. Box Elder Creek is one of the only streams that have numerous slightly larger (one to five acres) palustrine, shrub/shrub wetland complexes (PSSA type). Riparian and wetland condition was rated functional for most sites surveyed during 2001 and 2002 (PFC method), with localized areas of damage noted at stream crossings, trail areas and livestock concentration areas. In localized areas, bank trampling and trailing have increased compaction, reduced vegetation and potentially increased sediment into wetlands and associated aquatic habitats.

Floodplains of local significance are located along Deer Creek and other perennial streams in the AA. Floodplains and wetlands range from just a few meters wide to over 30 meters wide along these streams, depending upon gradient, valley bottom width and beaver activity. Most are narrow because of the steep canyons that confine many of the streams in the AA.

Because grazing pressure is not increased and would be the focus of more targeted administration the proposed action is expected to continue to maintain the desired condition and improve the conditions where they may be less than desired.

Soils

The North Laramie Mountain range consists of ancient granitic rock thrust through overlying sandstones and limestones. The soils in this area contain large percent of coarse fragments in the profile. The nature of the geology and landforms of the AA has produced a large percentage of rock outcrop and non-suitable rangeland. The majority of reasons that sites are non-suitable for livestock grazing are due to the large rock outcrops which support no vegetation and steep slopes. Some of the soil mapping units may not be too steep for grazing but there is such a large percentage of rock outcrop in the unit that it prohibits proper distribution of grazing.

There are areas in the Bates Creek and Boxelder allotments where there are high amounts of soil erosion coming off the roads. This is a function of two main things, building roads on steeper than normal slopes due to landforms and road location and erosion control structures not functioning as they should.

There are about 10,800 acres of highly erodible lands in the AA. Soil mapping unit 701A and 535A are the units that contain this highly erodible material. The combination of soil material (very fine sand, silt, and clay) and the soil permeability combine to make this soil type highly erodible. This soil mapping unit is a riparian area on valley plains, along primary stream banks. The major limitation is wetness and/or seasonal flooding on this mapping unit. On a positive side, this mapping unit is not on steep slopes where it would be more subject to greater erosion rates. Existing Forest plan S&G's should protect this highly erodible soil. In the 9A Management Prescription, under Water Uses Management, 4c.(Forest Plan page III-214) the following standard is listed: Maintain at least 80 percent of potential ground cover within 100 feet from the edges of all perennial streams, lakes, and other waterbodies, or to the outer margin of the riparian ecosystem, where wider than 100 feet. Monitoring the use of the riparian area and maintaining the plant community that is desirable will produce the necessary ground cover to keep riparian area with this S&G will keep soil erosion rates acceptable on this site. Generally if allowable use is not exceeded in riparian areas, the uplands will also be grazed at the proper levels.

Wildlife/ Management Indicator Species

A wide variety of wildlife species are found in the NLMAA. Some of these are identified in the Forest Plan as management indicator species (MIS). The MIS species are monitored and used to predict and/or indicate effects of management activities. A complete listing of species and the habitats represented are located in the 1985 Forest Plan Final Environmental Impact Statement (FEIS, pg. III-40 and 41). Management indicator species which occur in the Analysis Area (AA) include:

| | | |
|-------------------|----------------------------------------|---------------------------------|
| Game Animals | elk mule deer bighorn sheep | blue grouse wild turkey |
| Small Mammals | redbacked vole longtailed vole | western jumping mouse beaver |
| Raptors | northern goshawk peregrine falcon | golden eagle bald eagle |
| Neotropical Birds | cedar waxwing Lewis' woodpecker | yellow bellied sapsucker |
| Migratory Birds | yellow warbler ruby crowned kinglet | white crowned sparrow |
| Other Birds | hairy woodpecker | |
| amphibians | Boreal toad | |

The Wyoming Game and Fish Department has classified the habitat within the NLMAA as spring/summer/fall/winter range for mule deer, and as spring/summer/fall range for elk. There has been no critical range for either mule deer or elk identified within the AA. Bighorn sheep occur as small, localized groups. Isolated areas to the east of the NLMAA have been identified as bighorn sheep range.

There is limited habitat for blue grouse within the AA. Wild turkeys are sparsely distributed around the NLMAA. Due to the lack of habitat and sparse distribution of these birds within the area, habitat management is focused on more common Management Indicator Species.

The neotropical migratory bird species listed are all known to occur and have suitable habitat within the NLMAA. The hairy woodpecker is the only non-neotropical migratory bird MIS known to occur within the analysis area. Neotropical migratory birds are those species of which some portion of the population breed and summer in temperate North America and some portion of the population winter in tropical Central and South America. Non-neotropical migratory birds spend their life cycle north of the Mexican border in the U.S. and Canada. They tend to breed and summer in the northern portions of their range and winter in the southern U.S.

Threatened, Endangered, and Sensitive Species

The bald eagle and Prebles meadow jumping mouse are the only animal species designated by the US Fish and Wildlife Service under the Endangered Species Act as threatened or endangered that have the potential to occur in the NLMAA. The bird species migrate over the area, but there are no known nest sites, or roost sites within the area. The Prebles meadow jumping mouse is known to occur in the area. Currently, there are no known threatened or endangered plants in the Laramie Range portion of the Douglas Ranger District, which includes the AA.

Several sensitive wildlife species may occur in the NLRAA, including the following:

| | | |
|-----------------------|------------------------|------------------------------|
| northern goshawk | boreal toad | Prebles meadow jumping mouse |
| pygmy nuthatch | northern leopard frog | Townsend big-eared bat |
| three-toed woodpecker | Pale milk snake | fringed-tailed myotis |
| purple martin | tiger salamander | dwarf shrew |
| flammulated owl | Lewis' woodpecker | golden-crowned kinglet |
| merlin | Olive-sided flycatcher | Black-backed woodpecker |
| loggerhead shrike | Fox sparrow | |

Heritage Resources

The North Laramie Mountain project area is located on the northern portion of the Laramie Mountains in east central Wyoming. The Laramie Mountains are the eastern most extension of the Rocky Mountains stretching north out of Colorado. The core of the Laramie Mountains is coarse-grained Precambrian granite. The project area geology consists of broad anticlines eroded down to crystalline basement rock. Igneous rocks, represented by the granite and felsite groups, dominated the geology. Metamorphic rock types are found too, and are represented primarily by quartzite and schist. Minerals such as gold, silver, copper, iron, mica, and chromite are found in the local geology.

The geology of the area is important because it directly relates to the historic mining activities that were carried out in the vicinity of the current project area. Mineral deposits are found in the

igneous quartzite and basement rocks. Prehistorically, the raw materials suitable for lithic tool production were not abundant in the mountains- the quartzite was metamorphosed beyond flakeability. The closest source for abundant lithic material is found on the plains adjacent to the mountains.

Known historic properties in this area range from prehistoric sites up to several thousand of years old through turn-of-the-century ranching and mineral extraction. Prehistoric sites that may be eligible would most likely be on ridge tops where soil had accumulated or along stream courses where intact layers of cultural deposition may occur.

Prehistoric land use is expected along the drainages as well as flats that overlook the Shirley Basin (at the extreme edge of the project). Previous surveys in the general vicinity (to the north and northwest of this project area) have produced a much larger than expected density of archaeological sites. This portion of the North Laramie Range with numerous stream origins appears to be very high in prehistoric land use and a subsequent high number of archaeological sites.

Historic land use was expected in this area, but at a very low site density with most use involving mineral exploration as well as cattle and sheep grazing, with no recorded homesteads on public lands in the project area. There are a few roads in the project area with none of them showing in early maps and USGS surveys.

The survey for the North Laramie Mountain AMP AA show 45 prehistoric and historic sites and isolate finds in areas with potential for grazing impacts. Of these sites six prehistoric sites are eligible for the National Register of Historic Places. Three sites are recommended for monitoring to see if grazing is affecting the data that makes them eligible.

Chapter III, page 3 of the Forest Plan sets a goal related to Heritage Resource Management: "Locate historical and archaeological sites; evaluate them for significance; and preserve protect, and/or interpret for public information a representative sample of sites associated with and typifying the economic and social history of Wyoming." In meeting NHPA Section 106 requirements by conducting survey prior to project implementation, and monitoring of three sites (see page 2 of this EA) the DFC will be met, although with changes in rangeland management there may be need for further fieldwork and monitoring.

At the current level of grazing, no properties eligible for the National Register for Historic Places (NRHP) are being adversely affected. It should be noted at most of the sites recorded for this project grazing was noticeable but impacts to the sites were negligible, that is cow paths, droppings and hoof prints were visible. Two sites not eligible for the NHRP showed some effects from cattle grazing, thus there is the potential for grazing effects to eligibly historic properties.

In the area surveyed specifically for this project, 19 historic properties were recorded for this AMP effort. One of which has been determined eligible for the NRHP. One of which has been determined eligible for the NPHR. There were 17 previously recorded sites of which 14 were not eligible for the NRHP. Of these 36 sites, 30 have been determined not eligible for the NRHP. Six sites are determined eligible for the NRHP. Grazing is mentioned as an impact agent on two sites and general erosion is being noticed on a third site. The grazing use has not been determined to affect the integrity of eligibility of the sites. Of the six historic properties, the Forest Service intends to monitor three sites.

Timber

The primary tree species in the central portion of the analysis area is lodgepole pine (*Pinus contorta*) intermixed with Engelmann spruce (*Picea engelmannii*) and subalpine fir (*Abies lasiocarpa*). In the more arid sites in the western portion of the analysis area, species such as ponderosa pine (*Pinus ponderosa*) and limber pine (*Pinus flexilis*) are found. The far eastern portion of the analysis area is composed mainly of ponderosa pine.

Aspen (*Populus tremuloides*) is found in relatively small stands growing throughout the analysis area in the wetter areas.

Recreation

Primary recreation opportunities are big game hunting, camping, and fishing. High quality fishing opportunities are constrained by limited access. Campbell Creek Campground is the only developed campground in the area. Dispersed camping is concentrated along drainages and along National Forest System (NFS) roads with public access. LaPrele Guard Station offers a public cabin rental opportunity. There are several motorized and non-motorized trails in the AA.

Recreation use in the Warbonnet area is very low because there is no legal public access into the area. Most use occurs during the big game hunting season by adjacent private landowners and people who have access through the private lands. This area is important to the public for quality elk hunting despite the limited access. Some dispersed recreation occurs in conjunction with hunting. There are no developed sites or system trails in the area.

Visual Resources

There are several distinctive landscapes shatteringly located throughout this AA. Such areas as Davis Peak, Squaw Mountain, and Gunnysack provide outstanding scenic quality. The landscape has been altered by livestock grazing, roads, trails, fires, mountain pine beetle infestation, timber thinning, and small mining. Some of these landscape changes can be observed from several improved and unimproved roads and trails located within the AA.

Visual resources is based on the existing visual condition (EVC) which is a baseline inventory describing the present state of visual alteration which is measured in degrees of deviation from the characteristic landscape. Out of the six types of EVC, three types are identified in the AA.

Type I areas appear to be untouched by human activities. Type II areas have changes that are not visually evident to the average person. Type III are areas in which changes in the landscape are noticed by the average forest visitor, but do not attract attention. The natural appearance of the landscape still remains dominant. They appear to be minor disturbances. Livestock grazing with associated unimproved jeep roads, water development, windmills, corrals and fences are examples.

CHAPTER 6. ENVIRONMENTAL CONSEQUENCES

This chapter describes the direct, indirect and cumulative environmental effects of implementing the proposed action (Alternative A) and the No Grazing alternative (Alternative C). The proposed action and one (1) alternative that would take different approaches to vegetation and livestock grazing management in the AA were described in response to the purpose and need for the project, and to address issues described in Chapter 1 that were raised by the public during external public scoping. The No Action (Alternative B-No Change) alternative was eliminated from further study because it was found to be inconsistent, and not in compliance with the 1985 Forest Plan, as amended. The area of analysis for effects can differ for each issue and for each alternative analyzed in detail.

The environmental effects analysis identified, and discloses below, the effects of the actions considered in detail, as required by law, including those possible impacts on threatened and endangered plant and animal species, sensitive species, management indicator species, public health and safety, soil and water resources, scenic (visual) quality and recreation uses, compliance with the Forest Plan, and applicable laws, and regulations. The effects disclosures may not all be tied to a specific issue raised by public during project external scoping.

The ID team considered the direct, indirect, and cumulative effects of implementing the alternatives studied in detail; the relationship between short-term uses and long-term productivity; any probable or possible irreversible or irretrievable commitment of resources; and any possible unavoidable adverse environmental consequences that could occur out of these actions. These different kinds (categories) of effects are generally understood to include the following:

Direct Effects are caused directly by the action undertaken and usually occur at the same time and in or near the same place. Such effects can be beneficial or adverse.

Indirect Effects are caused by the action, but often occur at a later time and farther removed in distance from the project area. Such effects can be beneficial or adverse.

Cumulative Effects are effects on the environment that result incrementally out of the action, regardless of what agency (Federal or non-Federal) or person undertakes such actions, and when added to other past, present, and reasonably foreseeable future actions can result in a significant effect, on impact to resources and the environment. Such effects can be beneficial or adverse.

All documents cited by reference are contained in the project record and are available for public review.

Effects of Implementing the Proposed Action:

Upland Vegetation Resources-

Direct and Indirect effects- The current livestock grazing levels would not change from historic numbers so there will be no direct effects. The S&G's were applied to the grazing permittee's Term Grazing Permits when they were issued so the on-the-ground management will not

change with this proposal therefore no direct or indirect significant beneficial effects or adverse impacts would occur.

Cumulative effects- The cumulative effects of livestock grazing and other activities on NFS lands and private lands have contributed to existing conditions. Continued livestock grazing would not change existing conditions significantly, so characteristics related to potential to provide vegetative resources would not be substantially changed. Livestock grazing at the level proposed will have no significant beneficial or adverse cumulative impact on vegetative resources.

Forest Plan compliance- The project is consistent, and in compliance with the 1985 Forest Plan, as amended.

Riparian, hydrology, and fisheries

Direct and indirect effects –The current level of livestock grazing which has existed for more than a decade has resulted in habitat conditions for fish and aquatic wildlife that are typical across the landscape. Riparian habitats are stable with adequate channel and vegetation characteristics to support trout and amphibians. Effects on vegetation and soils from trampling and trailing are limited/localized and overall riparian areas are “functional” and support aquatic management indicator species. Since the proposal will maintain this established level of grazing activity, these habitats and resources would mostly likely remain in desirable condition in the future, and no significant beneficial or adverse impacts are expected. No new livestock watering facilities are proposed, so there would be no additional changes in water yield or flow regime in the AA. And there would be no changes in flow timing or conditions as a result of this project that would influence downstream populations or habitat in the Platte River mainstem ecosystem. Because there would be no changes in timing or conditions of flow, and existing effects have been considered, the project would have **no effect** on threatened, endangered or proposed aquatic and riparian-dependent species locally. No additional consultation with USFWS is required for aquatic species.

There is potential for direct and indirect effects on amphibian habitats along mainstem and tributary streams and in wetlands. Cattle movement could directly affect the integrity of egg masses or cause mortality of juveniles or adults, although this risk is very low. Indirect increases in sediment deposition could reduce shallow streamside areas used for egg-laying or by juvenile development of tadpoles and juvenile frogs. In areas of heavy riparian grazing, where shrub cover has been reduced, water temperature may be elevated compared to lightly grazed areas. Slightly elevated water temperatures may provide more rapid incubation and hatching of amphibians. Overall, impacts on amphibian habitat are expected to be minor. The project **may adversely impact individuals, but is not likely to result in a loss of viability on the planning area, nor cause a trend to federal listing or a loss of species viability on the planning area, nor cause a trend to federal listing or a loss of species viability rangewide** for populations or habitat of northern leopard frogs and tiger salamanders, including those in the affected roadless areas. Because they are not known to be present and potential for occurrence is very low, the project would have **no impact** on habitat or populations of western boreal toads, including any in the subject roadless areas.

Cumulative effect- No significant cumulative beneficial effects or adverse impacts are expected in the AA or in adjacent watersheds. In the NLMAA, few riparian areas have heavy grazing impacts and so bacteria levels are likely to be within State water quality standards, although no

monitoring has been conducted. Water quality downstream from the AA would remain at current acceptable levels. The proposal would have **no effect** on Threatened, Endangered or proposed aquatic and riparian-dependent species in downstream Platte River mainstem habitats.

Forest Plan compliance –As discussed above, the riparian areas are in proper functioning condition with healthy plant communities and stable streams. Riparian condition is consistent, and in compliance with the intent of the 1985 Forest Plan, as amended, for riparian area conditions.

Soils

Direct and indirect effects – The direct effects of continuing grazing would be that the potential for soil erosion and compaction would continue. The use of Forest Plan S&G's should result in better livestock distribution and utilization. This would protect the soil resource. The suitable rangeland soils in the AA have thin A horizons which is very important to the soil health/watershed stability function. Streambank stability, soil water infiltration capacity, riparian vegetation health and rangeland vegetation cover will be maintained, thus maintaining the soils health, long-term productivity and nutrient cycling and watershed stability

Cumulative effects-The effects of livestock grazing and other activities on NFS lands and private lands have contributed to existing conditions. Continued livestock grazing would not change existing conditions significantly. Soil characteristics relating to the potential for high quality soil resources would not be changed significantly. Livestock grazing at the level proposed will have no significant cumulative beneficial effects or adverse impacts on soil resources would be expected to occur.

Forest Plan compliance- The project is consistent, and in compliance with the 1985 Forest Plan, as amended.

Wildlife- Management Indicator Species

Direct and indirect effects- There would be minimal impacts to MIS. This decision is also based upon the recommendation that this project will follow S&G's identified and outlined in the Forest Plan.

Cummulative effect- This alternative does not appear to have significant cumulative beneficial effects or adverse impacts on MIS. These actions should maintain the habitat capability at a level of 80% or more.

Forest Plan consistency/compliance- This project is consistent will forest-wide and management area prescription, and S&G's for the management of wildlife in management prescription areas 2A, 4D, 5, 6, and 9A.

Wildlife- Threatened and Endangered Species (T&E)

Direct and Indirect effects- No direct or indirect significant beneficial effects or adverse impacts to the Prebles Meadow Jumping Mouse (PMJM or Prebles mouse) or bald eagle would be expected from this project. This is a continuation of current conditions and where these species occur they are affectively existing in concert with other existing activities. There will be **no effect** to either of these two species.

Cumulative effects- The current proposal is to not change any existing conditions and cumulatively with other activities in the area will have **no effect** on any Threatened or Endangered species. (See monitoring measures addressed in Chapter 1). No significant cumulative beneficial effects or adverse impacts to the resource would be expected to occur.

Forest Plan consistency/compliance- The project is consistent with all Forest wide and management area prescription direction, and S&G's for the management of wildlife in management prescription areas 2A, 4D, 5, 6, and 9A, if wildlife resource specialist recommended measures would be implemented.

Sensitive Species

Direct and Indirect effects- The current proposal is to not change any existing condition and therefore the **project may adversely impact individuals, but is not likely to result in a loss of viability on the planning area, nor cause a trend to federal listing or a loss of species viability on the planning area, nor cause a trend to federal listing or a loss of species viability rangewide.**

Cumulative effects- The current proposal is to not change any existing condition and this in conjunction with other **projects may adversely impact individuals, but is not likely to result in a loss of viability on the planning area, nor cause a trend to federal listing or a loss of species viability on the planning area, nor cause a trend to federal listing or a loss of species viability rangewide.**

Forest Plan consistency/compliance- The project is consistent and in compliance with the 1985 Forest Plan, as amended.

Heritage Resources

Direct and indirect effects- No direct or indirect significant beneficial effects or adverse impacts to cultural resources would be expected to occur if each of the heritage resource specialists recommended impact measures would be implemented. There are three heritage sites that we will monitor annually to determine if mitigation measures are necessary.

Cumulative effects –No significant cumulative beneficial effects or adverse impacts to heritage resources would be expected to occur elsewhere on NFS lands in the AA, or on other any other ownership in or outside of the AA.

Forest Plan consistency/compliance- The project is consistent and in compliance with the 1985 Forest Plan, as amended.

Paleontological Resources

Direct and Indirect Effects- No direct or indirect significant beneficial effects or adverse impacts to fossil resources would be expected to occur.

Cumulative Effects- No significant cumulative beneficial effects or adverse impacts to paleontological resources would be expected to occur elsewhere on NFS lands in the AA, or on other land ownership in or outside the AA.

Forest Plan consistency/compliance- The project is consistent and in compliance with the 1985

Forest Plan, as amended.

Timber, Wildfire, and Fuels Resources

Direct and indirect effects – Proper grazing reduces the fine fuel load in the surface layer thus directly reducing the risk that fires of moderate to high intensity would occur. Because grazing has occurred in the past and the proposal is for a similar level of grazing activity, level(s) of fuel loading and fire occurrence and intensity are likely to be at the historic level.

Cumulative effects – No specific cumulative beneficial effects or adverse impacts would be expected to occur.

Forest Plan compliance- This proposal is consistent and in compliance with the 1985 Forest Plan, as amended.

Recreation

Direct and indirect effects – No direct or indirect significant beneficial effects or adverse impacts would be expected to occur.

Cumulative effects – No significant cumulative beneficial effects or adverse impacts on NFS land, or on other ownerships in, near, or outside of the AA would be expected to occur.

Forest Plan compliance/consistency – This proposal is consistent and in compliance with the 1985 Forest Plan, as amended.

Visual Resources

Direct and indirect effects – A direct visual effect would occur if improper livestock grazing occurred. No effects if Forest Plan S&G's are met. Proper grazing could enhance the visual appearance of the natural landscape and riparian areas. Indirect visual effects could occur when visiting recreationists and hunters drive off established roads and cause resource damage.

Cumulative effects – No significant cumulative beneficial effects or adverse impacts on NFS lands, or on other ownerships in, near, or outside of the AA would occur.

Forest Plan compliance/consistency- This proposal is consistent and in compliance with the 1985 Forest Plan, as amended.

Socio-Economics

Direct and indirect effects- The action alternative may appear to be minor in scope, as there is no significant change, and may be expected to have a small, non-measurable effect on local economies. The permitted livestock numbers are negligible in relation to the overall economic outputs for Albany, Converse, and Natrona counties. However, it is recognized that the permitted use is important to the individual permittees overall livestock operations. Although the permitted use is relatively small, it contributes to larger livestock operations, based on private lands, for these permittees.

A Quick Silver Investment Analysis was performed. The analysis looked at 2 partners, 1) the Forest Service and 2) the grazing permittees, and it considered two alternatives analyzed in detail. The start year was 2004, the discount rate used was 4%, and the inflation rate was 0%.

The Present Net Value (PNV) of all of the costs and revenues that would accrue under the proposed action to all partners is +\$47,143.00. The Benefit/Cost Ratio (B/CR) is 1.31 that is for every dollar spent by all partners they would receive a benefit equal to \$1.31. The PNV for the grazing permittees is a +\$123,878 and the B/CR for these permittees is a +\$3.30, or for every dollar spent by the grazing permittees they would receive a benefit equal to \$3.30.

The Quick Silver Investment Analysis Reports, including the Transactions List and the Economic Returns Report that document the results of the economic efficiency analysis are contained in the project written record.

Cumulative effects- There are no significant beneficial or adverse cumulative effects expected if this alternative is implemented.

Forest Plan compliance/consistency- This proposal is consistent and in compliance with the 1985 Forest Plan, as amended.

Effects of Implementing Alternative C (No Grazing)

Upland Vegetation Resources-

Direct and indirect effects- One would initially expect grass and forb species to increase. The woody species would be expected to increase on the rangeland on an accelerated rate. Lack of disturbance will cause your native grasses to build up such a litter layer that the seeds produced would be unable to reach the soil to reseed the area. The plants would also be expected to eventually reduce the number of seeds produced because of decreased vigor. Decreased vigor of the desired plants would allow for the invasion of non-native such as cheatgrass. With the increase of litter a cooler moisture micro sites may be advantageous to the encroachment of some woody species and or conifers.

An indirect effect that may be expected is an increase in the number of other large, grazing ungulates, such as elk that may be pushed off private land due to the increased livestock numbers on adjacent private land and possible lack of livestock movement off the hay fields into the higher country. Livestock grazing is easier managed than wildlife grazing and wildlife is actually managed along with the livestock by moving the wildlife out of areas when checking livestock and rotating them. If there are no livestock to be moved by humans, the wildlife would be expected to stay in their key areas until something or someone scared them and they move. The private hay meadows provide a large portion of wildlife's winter habitat. If the ranchers are forced to graze their hay fields harder and longer the wildlife will have decreased available forage in the winter.

Cumulative effects- Initially the vegetation will respond positively to no livestock grazing. However, the plants are adapted to grazing and it is expected the plants will eventually start to decline in condition to a point they become decadent. As the desirable plants start to decline one would expect a shift in species toward a later seral stage of woody species and/or invasive species such as cheatgrass or other more aggressive species.

Forest Plan consistency/compliance- This alternative would initially be in compliance for vegetation, but eventually become not consistent/not in compliance due to the expected increase

in non-native species and a reduction in vegetative condition. This alternative is not in compliance with Forest Plan page III-37, that directs the Forest Service to provide forage to sustain local dependent livestock industry.

Riparian, hydrology, and fisheries

Direct and indirect effects – This alternative may benefit riparian vegetation condition and aquatic biota/habitat. However, the removal of cattle from the federal lands in the allotments would not result in reduction in the number of animals that would continue to graze in the AA as a whole. It would mean that those animals would be moved onto private land which would be likely to result in an increase in adverse effects and impacts to those lands. Riparian vegetation along streams on these private lands would likely decline. Localized soil erosion would be expected to increase with the result of some decrease from current levels of quality water production and its related adverse impact locally on fish and fisheries.

Cumulative effects- If livestock are removed from federal lands in the area and concentrated on private land and fewer acres the result of this action in conjunction with other land uses occurring in the AA and in adjacent watersheds would likely result in a measurable, if not significant, decline in the condition of riparian condition, fisheries resources and water quality in Box Elder Creek, LaPrele Creek, and Deer Creek. Because all these streams are tributaries to the North Platte River, habitat conditions in the local North Platte mainstem may be affected. However, because sediment and water quality impacts have not been determined to be limiting factors to Platte River mainstem species in Nebraska, removal of livestock would have **no effect** on aquatic and riparian-dependent species downstream in Platte River mainstem habitats.

Forest Plan consistency/compliance – This action is in compliance with the 1985 Forest Plan, as amended.

Soil Resources

Direct and indirect effects – Direct effects of removal of livestock grazing would be an immediate reduction of soil erosion that was caused by livestock grazing. Soils at existing high use areas would no longer be compacted due to livestock trampling. Soil type 701A and 535A are susceptible to soil compaction and no grazing would reduce the impacts. Since this soil type (701A) is also a riparian unit, elimination of grazing would also reduce impacts to riparian areas.

Cumulative effects -The removal of livestock from the federal lands may be expected to result in some reduction of soil erosion occurring in the AA and that now combines with eroded soil originating from adjacent watersheds, however this reduction at the level of the AA and adjacent watersheds is not expected to be significant.

Forest Plan consistency/compliance – The action is in compliance with the 1985 Forest Plan, as amended.

Wildlife- Management Indicator Species

Direct effects- This alternative would increase the habitat and carrying capacity for those wildlife species in direct competition with livestock. This alternative would also allow an increased trend toward the upper seral stages of all habitat types. Although there would be impacts by wildlife within these areas, there would not be a combined effect of livestock

and wildlife to the recovering vegetation. An increase in wildlife use could be anticipated with the suspension of livestock grazing in the riparian areas.

Indirect effects- If private landowners chose to use fencing to prevent livestock trespass on Federal lands this would have an indirect adverse affect on big game movements and habitat effectiveness. To exclude livestock would increase the amount of fencing significantly in this area. While fencing can be designed to minimize impacts to big game movement all fencing still limits some movement and habitat use.

Cumulative effect- This alternative does not meet the objectives established for managing wildlife habitat on these lands. The cumulative effect of not grazing livestock on Forest land within this AA would improve wildlife habitat along the Laramie Mountain range. However, private lands used as winter range could see increased utilization by domestic livestock, thus reducing the overall effectiveness of the habitat on a landscape scale.

Forest Plan consistency/compliance- This alternative is not consistent with all wildlife directions, and standards and guidelines for management prescriptions 2A, 3A, 4B, 5B, and 9A as set forth in the Forest Plan.

Wildlife- Threatened, Endangered, and Sensitive Species (T&E)

Direct and indirect effects- It is determined in the BA/BE that this alternative **may adversely effect** the Prebles mouse or its habitat. These affects may include adverse modification of mouse habitat due to the lack of grazing and a potential adverse impact to the vegetative components thus reducing the habitat effectiveness particularly as it relates to seed production. In addition a change in grazing has been untested in its affects toward Preble's Meadow Jumping Mouse at this site. No grazing will have **no effect** on bald eagles. Any incidental habitat in this area is not grazing dependent and therefore modifications in grazing will not impact bald eagles.

Cumulative effects- Cumulatively this proposal may have additional **adverse effects** to the Prebles mouse by increasing grazing in mouse habitat that may occur on private lands due to a reduction of forage availability on Federal lands. No grazing will have **no effect** on bald eagles.

Sensitive Species

Direct and Indirect effects- The “No grazing proposal” would change existing conditions and in some cases improve habitats and in other situations could reduce habitats, therefore **the project may adversely impact individuals, but is not likely to result in a loss of viability on the planning area, nor cause a trend to federal listing or a loss of species viability on the planning area, nor cause a trend to federal listing or a loss of species viability rangewide.**

Cumulative effects- - The “No grazing proposal” would change existing conditions and in some cases improve habitats and in other situations could reduce habitats. This in conjunction with increased activities associated with private lands could reduce habitat availability and effectiveness throughout the landscape. **The project may adversely impact individuals, but is not likely to result in a loss of viability on the planning area, nor cause a trend to federal listing or a loss of species viability on the planning area, nor cause a trend to federal listing or a loss of species viability rangewide.**

Heritage Resources

Direct and indirect effects – No direct or indirect significant beneficial effects or adverse impacts to Heritage resources would be expected if mitigation and monitoring measures are implemented. The recommended monitoring can further ensure that the grazing has no direct or indirect effects from grazing by allowing administrative controls to protect archaeological properties.

Cumulative effects – No significant cumulative beneficial effects or adverse impacts would be expected if mitigation and monitoring measures are implemented.

Forest Plan compliance/consistency- In compliance with 1985 Forest Plan, as amended.

Paleontological Resources

Direct and indirect effects – No direct or indirect significant beneficial effects or adverse impacts would occur.

Cumulative effects –No significant beneficial effects or adverse impacts on NFS land or on other ownerships in, near, or outside of the AA would occur.

Forest Plan compliance – This proposal is consistent and in compliance with the 1985 Forest Plan, as amended.

Timber, Wildfire, and Fuels Resources

Direct and indirect effects –In the summer, fall, and again in early spring, fine fuels are the principle carrier of fire in the forest environment. Without grazing, the fine fuel load in the surface layer would increase with a corresponding increase in the number of fire starts that would develop into fires of moderate to high intensity, and that could become damaging. With a significant increase in the amount of fine fuels, and all other factors being equal, the rate of fire spread and resulting fire size could be significantly greater than if the proposed action is implemented. With an increased amount of fine fuels in the forest understory, the risk of fire moving into tree crowns and killing those trees is elevated. The elimination of

grazing on the NFS land could result in an increase in grazing on adjacent private and State land with a corresponding reduction in the amount of fine fuels on those lands, when compared with historic levels. The effect of this could be that risks, etc. increase on NFS land but remain the same or decrease on other ownerships. There would likely be increased annual Forest Service costs for protection, prevention, readiness, and suppression if this alternative is implemented. Overall, less grazing is likely to result in some increased potential for larger fires and increased risk for more damaging fires in the AA.

Cumulative effects – Adjacent land owners in the AA and elsewhere in the Laramie Peak Unit are involved in a program to treat areas of high fuel loading and risk of damaging wildfire near structures and communities in wildland/urban interface areas. This program is being funded under the National Fire Plan in cooperation with Wyoming State Forestry. The implementation of the no grazing alternative could necessitate the expenditure of additional funds on private land in the AA to achieve the reduced risk and protection goals associated with this program. The cumulative effects of eliminating livestock grazing on the NFS lands in the AA, in conjunction with what would likely occur on adjacent ownerships in and near this area, is that the level of fire risk, size, intensity, rate of spread and potential for damage to forest resources and man's improvements would increase to a level that could be significantly locally.

Recreation

Direct and indirect effects – No direct or indirect significant beneficial effects or adverse impacts would occur.

Cumulative effects – No significant beneficial effects or adverse impacts on NFS land, or on other ownerships in, near, or outside of the AA would occur.

Forest Plan compliance – This proposal is consistent and in compliance with the 1985 Forest Plan, as amended.

Visual Resources

Direct and indirect effects – There will be no direct or indirect visual effects as there will be no changes of landscape by livestock grazing. The landscape would only be affected by the forces of nature.

Cumulative effects – Livestock grazing with structural with structural improvements have minimal visual impacts due to the Laramie Mountains natural landscape's ability to absorb them. For most visitors, herds of cattle, and structures such as fences, corrals, windmills, remains of old homesteads, and working ranches offer visual variety in a landscape and convey information about the lifestyle of the West. Many of the existing structures compliment the characteristic landscape. No significant beneficial effect or adverse impacts on NFS lands would be expected. There may be some visual impact on the private land if the landowners fence to keep livestock off NFS lands.

Forest Plan compliance/consistency – This proposal is consistent and in compliance with the 1985 plan, as amended.

Socio-Economics

Direct and indirect effects- The action alternative may appear to be minor in scope and would be expected to have a small, non-measurable effect on local economies. The permitted livestock numbers may appear negligible in relation to the overall economic outputs for Albany, Converse, and Natrona counties. However, it is recognized that the permitted use is important to the individual permittees overall livestock operations. Although the permitted use on FS lands may seem relatively small, it contributes to the larger livestock operations, based on private lands, for these permittees.

If the economic viability of the livestock operations would be such that these operators would significantly reduce or cease their livestock raising operations it would be expected to result in pressure on the economic viability of supporting local businesses in Douglas, Glenrock, Torrington, Casper, Wheatland, and Lingle, Wyoming. Examples of a few supporting businesses are: banks, implement dealers/repairs, automobile dealers/repairs, veterinarians, feed/fencing material stores, livestock sale barns, fuel/oil companies, packing plants, the livestock trucking industry, yearling operators, and grocery stores. It would be expected that for every dollar spent it will turn over in a community 6 times.

Removal of livestock from federal land may also have an indirect affect on smaller, younger and yearling livestock producers as the livestock from the federal land will have to go somewhere else to be grazed. As they look for private land to fill in for the lost federal land this will put additional pressure on the available private land that may currently be leased by smaller operators or young operators trying to enter the livestock operating business. Generally, the established operator has a numerical advantage over smaller operators or younger operators and may be able to justify a larger cash outlay for pasture. But, their costs would significantly increase and their income decrease.

This would also affect the yearling operators in the respect the private land available to them to run yearlings on would also be diminished. There is a large number of calves raised on Federal land that eventually will be run as yearlings and will need somewhere to go.

A Quick Silver Investment Analysis was performed. The analysis looked at 2 partners, 1) the Forest Service and 2) the grazing permittees, and it considered two alternatives analyzed in detail. The start year was 2004, the discount rate used was 4%, and the inflation rate was 0%.

The Present Net Value (PNV) of all of the costs and revenues that would accrue under the proposed action to all partners is -\$555,935. The Benefit Cost Ratio (BCR) is 0.13 that is for every dollar invested by all partners the return would be 0.13. The PNV for the grazing permittees is a -\$484,009 and the BCR for these permittees is a 0.13, or for every dollar spent a benefit of only \$.13 would be received.

The Quick Silver Investment Analysis Reports, including the Transactions List and the Economic Returns Report that document the results of the economic efficiency analysis are contained in the project written record.

Cumulative effects- There are significant adverse cumulative effects expected if this alternative is implemented. The affect to local, supporting communities would be reduced income entering their businesses, possibly after an influx of paying off bills/loans from the sale of livestock, but reduced potential in the future.

The school systems of Glenrock and Douglas may even be affected if families leave the area. A socio-impact may also be to childrens organizations such as 4-H, FFA, and extracurricular activities. Lots of ranchers support 4-H and FFA by donations of livestock, raising livestock for sale to these kids, and they may even buy the end product. Local ranchers donate time to coach children's extracurricular activities and at least their kids/grandkids participate in these activities.

Forest Plan consistancy/compliance- This alternative would not be in compliance with the Forest Plan (page III-37) to provide forage to sustain local dependent livestock industry as well as wildlife populations agreed to in State wide comprehensive wildlife plan for NFS lands, since the forage meets S&G's in the AA.

Water Quality Effects Considered For All Alternatives

None of the streams within the NLRAA have been designated in the State of Wyoming 305 B report as water quality impaired, and there are no known existing water quality problems. All alternatives are in compliance with the Clean Water Act.

Direct and indirect effects – No direct or indirect significant beneficial effects or adverse impacts would be expected if mitigation and monitoring measures are implemented. The recommended monitoring can further ensure that the grazing has no direct or indirect effects from grazing by allowing administrative controls to protect archaeological properties.

Cumulative effects – No effects are expected if mitigation and monitoring measures are implemented. Water quality monitoring below any areas of cattle concentration is recommended to determine whether continued grazing is affecting water quality for downstream uses.

Forest Plan compliance/consistency- In compliance with 1985 Forest Plan, as amended.

Other Effects Considered For All Alternatives

Human Health and Safety: None of the alternatives will have an adverse direct, or indirect, or cumulative impact on human health and safety.

Unavoidable Adverse Impacts

A description of these impacts is discussed in Chapter IV of the Forest Plan EIS (pages 187-189). No additional site-specific adverse impacts which cannot be mitigated and/or avoided were identified during analysis, or are known to exist.

Short-Term Uses vs. Long-Term Productivity

For this project, implementation of the standards and guidelines as outlined in the FEIS for the Forest Plan will provide for continued long-term site productivity by maintaining stable and productive ("healthy") soils.

Maintenance of stable and productive soils, in terms of organic matter content and soil structure, is a key prerequisite to maintaining healthy ecosystems. Long-term productivity depends on maintaining all of the most basic ecosystem resources, and their function.

Irreversible and/or Irretrievable Commitment of Resources

The implementation of the NLMAA EA now will not adversely impact or limit the long-term productivity of the non-Federal and Federal lands in the AA or more generally on the Laramie Peak unit of the Medicine Bow National Forest, nor will it, in and of itself, affect such uses or productivity on any NFS or other non-Federal lands nearby that will remain in current uses. (The concepts of short-term uses and long-term productivity are described and discuss in Chapter IV of the Medicine Bow Forest and Thunder Basin National Grassland Plan, 1985, as amended.)

CHAPTER 7. INTERDISCIPLINARY TEAM AND INDIVIDUALS AND AGENCIES CONSULTED

Interdisciplinary Team

| <u>Member</u> | <u>Area of Responsibility</u> |
|----------------------|---------------------------------|
| Charlie Bradshaw | Rangeland Management Specialist |
| Cristi Lockman | Wildlife Biologist |
| Tim Byer | Wildlife Biologist |
| Bill Steenson | NEPA Specialist |
| Marcia Rose | Recreation Specialist |
| Ian Ritchie | Heritage Resources Specialist |
| Clay Westbrook | Fuels Management Specialist |
| Ralph Cockrell | Fire Management Specialist |
| Paula Guenther-Gloss | Aquatic Resources |
| Tommy John | Soil Scientist |

Agencies Consulted

| | |
|---------------------------------------------------|-----------------------------------------------|
| Governor Dave Freudenthal- Office of the Governor | Bureau of Land Management- Rawlings |
| Representative Barbara Cubin | Office of Federal Land Policy |
| Senator Craig Thomas | Senator Michael Enzi |
| WY State Historic Preservation Office | WY Dept. of Agriculture |
| WY Game & Fish Dept.- Laramie | Ecological Service US Fish & Wildlife Service |

Individuals and Organizations Consulted:

Lester U. Grant- Turtle Rock Ranch

Powderhorn Ranch

Wesley Stewart

Earl Shatto Jr.

Miles LLC- Jim and Peggy Price

Rod Lebert

John Grant

Wendell Funk

Dennis Taylor

Bill Mills

True Ranch Co.- David and Jean True

Martin Hicks

CHAPTER 8. DOCUMENTS INCORPORATED BY REFERENCE

USFS. 1985. *Medicine Bow National Forest, Thunder Basin National Grassland Land and Resource Management Plan*. USDA Forest Service, Rock Mountain Region (R-2), Lakewood, Colorado. Also included by reference is the Final Environmental Impact Statement (EIS).

Livo, L.J. 1998 *Identification guide to montane amphibians of the southern Rocky Mountains*. Colorado Division of Wildlife. 25 pages.

USFS. 1995a. *Range Issuance Analysis for North Laramie Mountain Geographic Area (Hydrology and Riparian)*. Prepared by Marc Wilcox, Forest Hydrologist. 9 pages.

USDA 1995b. *Fisheries Specialist Report for North Laramie Mountain Geographical Area*. Prepared by Gregory S. Eaglin, North Zone Fisheries Biologist. 13 pages.

USFS. 1995c. *Programmatic Biological Assessment for Minor Water Depletions Associated with Routine Forest Decisions in the Platte River Basin for 12 Threatened or Endangered Species*. Rocky Mountain Region Forest Service, Lakewood, CO., September 24, 1995. 35 pages plus attachments and appendices.

USFS. 1995d. *Supplement to Programmatic Biological Assessment for Minor Water Depletions Associated with Routine Forest Decisions in the Platte River Basin*. Rocky Mountain Region Forest Service, Lakewood, CO. 11 pages plus attachments.

USFS. 2001a and 2002b. Proper Functioning Condition checklists for streams in the North Laramie Mountain Analysis Area: Boulder Creek, Box Elder Creek, Deer Creek, Elkhorn Creek, Manse Creek, Sheep Creek, and West Fork Soldier Creek. 7 sheets.

USFS. 2001b. *Fisheries and Aquatic Specialist Report including Biological Assessment and Biological Evaluation (excerpt of MIS and TES species information)*. Paula Guenther-Gloss, August 17, 2001. 40 pages plus maps.

USFS. 2002a. *Medicine Bow National Forest Watershed Condition Assessment*. Prepared by Dave Gloss, Greg Eaglin, Paula Guenther-Gloss, and Todd Allison, August 11, 2002. 7 pages.

USFS. 2003. *Biological Assessment, Biological Evaluation and Specialist Report for North Laramie Mountain Analysis Area*. Cristi Lockman and Tim Byer. 32 pages.

WGFD. 2002. *Fish Data Database*. Various queries for fish occurrence and abundance of streams in the NLMAA. Wyoming Game and Fish Department, Cheyenne, WY.

WNDD. 2001/2002. *Known Occurrences of Threatened, Endangered, Forest Sensitive and WYNN- designated Plant and Animal Species of Concern and Community Occurrences*. University of Wyoming, Laramie.

State Historic Preservation Office . 2003. Concurrence letter.

US Forest Service. 2003. Quicksilver Economic Efficiency Analysis. Douglas, WY.

Appendix A- Map of the Analysis Area

Appendix B- Analysis Area Acreage

| Allotment/Pasture | NFS LAND | OTHER LAND | TOTAL |
|---------------------|----------------------|-----------------------|----------------|
| | Acres % | Acres And % | Total Acres |
| Bates Creek | 5519 65% | 2913 34% | 8536 |
| Sagebrush | 265 4% | 6688 96% | 6953 |
| Horse Creek | 4926 88% | 663 12% | 5589 |
| Aunt Ag | 937 41% | 1332 59% | 2269 |
| Indian Flat | 1529 40% | 2300 60% | 3829 |
| Boxelder | 11606 37% | 20116 63% | 31,722 |
| Pasture | 2096 51% | 2016 49% | 4112 |
| Meadow Creek | 6714 66% | 3458 34% | 10,172 |
| Indian Creek | 1913 | 2300 | 3829 |
| Read Park | 130 21% | 494 79% | 624 |
| Total | 50754 40% | 76,198 60% | 127,056 |

Appendix C- Current Term Grazing Permit Provisions

| Allotment Name and Number | General Season of Use | Total livestock number | Total livestock number on NFS lands | Grazing capacity on FS lands in the Allotment | Head Months on FS lands in the Allotment. |
|-------------------------------------------------------|-----------------------|------------------------|-------------------------------------|-----------------------------------------------|-------------------------------------------|
| Bates Creek # 603 | 7/01-8/31 | 1500 ewe/lamb | 585 e/l | 39% | 1170 (sheep months) |
| Sagebrush C&H # 641 | 7/10-10/5 | 347 cow/calf | 17 c/c | 5% | 49 |
| Horse Creek C&H # 624 | 7/6-9/10 | 80 c/c 5 bulls | 58 c/c 4 bulls | 72% | 128 9 |
| Aunt Ag C&H # 657 | 7/10-9/8 | 16c/c | 9 c/c | 45% | 18 |
| Indian Flat C&H # 627 | 7/1-8/31 | 590 e/l | 236 e/l | 40% | 472 |
| | 7/1-8/13 | 130 c/c | 52 c/c | | 78 |
| | 7/1-8/13 | 5 bulls | 2 bulls | | 3 |
| Boxelder C&H # 607 (Sno-Shoe) (Turtle Rock) | 6/1-10/30 | 120 c/c | 26 c/c | 22% | 130 |
| | 6/16-11/15 | 74 c/c | 17 c/c | 22% | 87 |
| | 7/1-8/31 | 68 c/c | 4 c/c | 5% | 8 |
| | 6/1-10/30 | 90 c/c | 20 c/c | 22% | 100 |
| | 6/16-11/15 | 105 c/c | 23 c/c | 22% | 117 |
| | 7/1-8/30 | 70 c/c | 4 c/c | 5% | 8 |
| | Pasture C&H # 636 | 6/16-9/30 | 135 c/c | 12 c/c | 9% |
| Meadow Creek C&H # 633 | 6/25-9/18 | 160 c/c | 35 c/c | 22% | 102 |
| Indian Creek C&H # 626 | 6/01-10/30 | 50 c/c | 11 c/c | 22% | 55 |
| Read Park #638 | 6/01-10/30 | 54 c/c | 2 c/c | 4% | 10 |

