

Chapter 2 – The Alternatives

2.1 Introduction

This chapter describes the formulation of the proposed action and alternatives and discusses alternatives considered but not analyzed in detail. It also summarizes the environmental impacts of the alternatives and associated mitigation measures.

2.2 Formulation of Alternatives

Subsection 1502.14 of the NEPA regulations require that agencies should “vigorously explore and objectively evaluate all reasonable alternatives” to the proposed action. The alternatives should achieve the same or similar purpose as the proposed action and should address issues raised and include appropriate mitigation measures not already included in the proposed action. Alternatives that would not be reasonable, either because they do not meet the purpose and need or because of other considerations, may be eliminated from detailed study. A brief discussion of the reasons for their having been eliminated is given.

The Forest Service ID team evaluated the proposed action in consideration of the relevant issues. Alternatives to the proposed action addressing the relevant issues were developed. If alternatives were identified which were not reasonable, they were recorded but not analyzed in detail (see Section 2.3 below).

The resulting range of alternatives is consistent with the purpose and need for action and with the issues raised. Any of the elements included in the proposed action or any of the action alternatives could be implemented independently of each other, and therefore the Forest Service decision maker may ultimately choose and combine elements from any of the alternatives. This analysis fully discloses the effects of all activities considered, regardless of the alternative in which they are included.

2.3 Alternatives Considered and Eliminated from Detailed Analysis

- Rest rotation grazing system with fenced pastures

An alternative that would use fencing to divide the allotment into two pastures was considered but eliminated from detailed study at this time. Because of the geography and terrain of the allotment, and relatively small percent of the allotment that is capable (due primarily to steep slopes and limited water availability) fencing would be very expensive and difficult to implement without considerable resource impact. If this option were considered in the future, it would require additional nepa analysis.

- Grazing practices that are within the Forest Service budget

This alternative, suggested by a scoping respondent, would rely on grazing practices “that can function with almost no Forest Service staff time”. As stated in the comment letter,

“in the past, the preferred alternative called for range projects, maintenance, monitoring, and analysis that was not fiscally possible”. This alternative calls “for grazing management that is within the Forest Service budget resources to be modeled over conditions that are expected during drought periods”.

This alternative as presented by a scoping respondent was not considered in depth because fiscal feasibility is already incorporated into all of the alternatives. The management activities in the proposed action and alternatives are expected to be implemented within anticipated Forest Service budgets. This consideration is already given in the development of the proposed action and alternatives to it, so an additional alternative specifying fiscal responsibility is redundant.

- Ecologically based grazing alternative

This alternative calls for utilization levels no more than 25% in habitat, including riparian areas, with periods of use for no more than 14 days in an area. This alternative calls for grazing practices that have a score of a positive 1 or better using the grazing response index score.

This alternative, as presented by a scoping respondent, was dismissed from detailed study because it is not in line with Forest Plan standards by which grazing is managed on the Wasatch-Cache National Forest. The Forest Plan standard for grazing in Riparian Class 1 areas within the green line is “no less than 5 inches of stubble height at the end of the grazing season.” The Forest Plan also directs that “as a tool to achieve rehabilitation of upland, aspen, and riparian areas in unsatisfactory condition, maximum utilization will be 30 to 40%.” Research and information substantiating this direction is found in the WCNF Forest Plan and FEIS (USDA Forest Service 2003).

- Grazing as is permitted and reported in grazing permit payments.

This alternative was also suggested by a scoping respondent, recommending that “the analysis should reflect the impacts that would occur should grazing at this higher level occur”. Annually, for each allotment, “authorized use” (including stocking rate and season of use) is determined and specified in the Annual Operating Instructions (AOI). This determination is based on a number of things including such things as resource and climatic conditions. Permits holders are billed annually based on their “authorized use”. The current management alternative discloses the effects of grazing at the authorized use of 607 head of cattle for a season of 108 days, under a season-long grazing system, using Forest Plan standards and guidelines to determine when utilization is met. This alternative serves as the benchmark. There is no need to consider in detail an alternative that would authorize a greater number of livestock.

2.4 Alternatives Considered in Detail

The interdisciplinary team recommended and the District Ranger approved the following alternatives in addition to the required no action alternative. Each alternative has specific impacts associated with how it achieves the purpose and need for the project. The

impacts are discussed in Chapter 3. Management requirements and mitigation included in all of the alternatives are shown in Section 2.5.

2.4.1 Alternative 1 – Proposed Action

The proposed action includes an adaptive management strategy and incorporates deferred grazing into the management system. The proposed action responds to issues dealing with unsatisfactory range conditions on some upland sites, unsatisfactory conditions in some riparian areas, and uncontrolled cattle drift into high recreation areas closed to grazing (White Pine Lake).

The proposed action sets the following adaptive management principles and limits to allow for improved range conditions on both upland and riparian sites.

1) **Grazing Season:** determination of specific *grazing season* would be variable from year to year, but would fall within the limits of June 25 to October 10. Annual adjustments would be planned to account for needed variability in time and timing of grazing. Turn-out would not occur before June 25, to account for the average period of range readiness throughout the allotment. Cattle would be removed from the allotment, at the very latest, by October 10, prior to the main rifle hunting seasons.

2) **Timing:** alternating the *timing* of grazing on an annual basis, to allow for deferment of grazing (primarily on perennial grass species) is the basis of the proposed action. The timing of grazing would be scheduled in annual operating instructions (AOIs) to allow key range sites throughout the allotment to be *deferred* from grazing pressure on an annual basis. AOIs would incorporate one of the following 3 types on the allotment each year to allow alternating the “timing” of grazing.

- a) **Grazing timing 1:** turnout on the allotment would be when range readiness is reached (as is traditionally done) around June 25 or later.
- b) **Grazing timing 2:** turnout on the allotment would be deferred until the “fast growth” period for grasses is complete. The fast growth period can generally be recognized when the leaves have completed growth and the seed head is well established and full. Native grass species (not introduced species such as smooth brome or intermediate wheatgrass) would be monitored for the fast growth period. The purpose of deferring grazing until after the key species have completed their fast growth is to minimize grazing impacts on growing plants when their carbohydrate root reserves are at their lowest levels.
- c) **Grazing timing 3:** defer grazing on the allotment for a period of two weeks after the fast growth period is complete. The purpose of deferring the timing of grazing for about two weeks following completion of the fast growth period is to allow plants to begin restoring carbohydrates into their root systems and to allow for accumulation of plant biomass.

3) **Intensity:** the intensity of grazing use (utilization) would be according to grazing utilization standards as described in the WCNF Revised Forest Plan (pages 4-51 and 4-52). The applicable standards for grazing use would be as follows (the same as under current management).

The applicable Standards for grazing are:

Type	Condition (Standard/Guideline)	Maximum Allowed Use
Uplands and aspen	Satisfactory Condition (S24)	50% use
Uplands and aspen	Unsatisfactory Condition (G71)	30-40% use
Riparian (away from greenline)	Riparian Class 1 Riparian Class 2/3 (S25)	50% use 60% use
Riparian stubble height	Satisfactory Condition (S25)	No less than 5"
Woody species	All (S26)	50% current growth

The proposed action identifies the following key areas (at a minimum) to be monitored for annual utilization:

- 1) Logan River riparian area north of the Beaver Springs fenced area
- 2) An upland sagebrush area to the west of Beaver Springs
- 3) Steep Hollow riparian area

4) **Frequency:** the frequency of cattle grazing on any given range site within the allotment would be limited to one time each season. When utilization is reached on any key area, the cattle would be moved to another area and not allowed to return to the first area again in the season. This means that cattle would be managed to ensure that grazing of re-growth of native perennial grass species during the same grazing season does not occur. This applies to both riparian and upland sites.

5) **Cattle Control:** the primary objectives of cattle control (through such means as riding and salting) would be to keep cattle within the Franklin Basin allotment (allowing no drift to the Logan Canyon allotment) and to keep cattle out of closed areas such as White Pine Lake. Monitoring of cattle drift into these closed areas would be the basis for adapting management to gain better control of cattle. If cattle are repeatedly found in closed areas, additional riders or other strategies would be required.

Future adaptive management strategies:

Implementation of the proposed action would require a more intensive level of herding than is currently practiced. Some riparian areas in the allotment show

signs of use in excess of Forest Plan standards (such as in Steep Hollow, shown in Figure 1.3) indicating a need for better cattle control. Implementation of the proposed action would require cattle to be moved out of the riparian area before the 5-inch maximum utilization is exceeded.

Monitoring is a critical element of the proposed action. The following monitoring activities would be conducted to indicate when a change in management is necessary.

1. If after 3 years of vegetation monitoring, the data indicates that upland sites are not moving toward desired conditions (as indicated by such things as an increase in species diversity), the length of the deferment on an annual basis will be increased, allowing more time for native perennial grasses to store carbohydrates and establish stronger roots systems.
2. If after the third year of implementation, monitoring of riparian systems, using the Multiple Indicator Monitoring System (MIMS), indicates that riparian areas have not improved in condition (using indicators such as increased riparian vegetation diversity and structure and stream bank stability) then consideration would be given to alternative management such as fencing key riparian areas. Maintenance of the new riparian fences, if constructed, would be the responsibility of the permittees.
3. If by the third year of implementation, riding and salting is not effective in controlling cattle drift between allotments (i.e. between Logan Canyon and Franklin Basin allotments) or into closed areas (such as White Pine Lake), additional management strategies would be employed. Consideration would be given to actions such as ear-tagging and/or construction of short segments of fence in strategic geographic locations to control cattle drift.

2.4.2 Alternative 2 – No Action (No Grazing)

The “no action” alternative is included to meet requirements of the National Environmental Policy Act [40 CFR 1502.14 (d)] and the Grazing Permit Administration Handbook, FSH 2209.13, Chapter 90, Section 92.31 which stipulates that “in addition to the proposed action, the no action alternative shall always be fully developed and analyzed in detail.” “No action” is synonymous with “no grazing” and means that livestock grazing would not be authorized within the project area.

Under this alternative, livestock would no longer be permitted to graze on the Franklin Basin allotment. This pertains to sheep and cattle. Non-permitted recreational horse use would still occur.

2.4.3 Alternative 3 – Current Management

This alternative would allow for the current level of permitted grazing and the current management of the allotment to continue. The permitted number of livestock and grazing

season would be as has been authorized for the past few years (under Forest Service administration):

Livestock: 607 cow/calf pairs Grazing Season: June 25 – October 10

The allotment is currently managed under a season-long grazing prescription with no deferment or rest incorporated into any specific area or pasture within the allotment. There are no interior fences to provide control of cattle within the allotment.

The southern boundary of the allotment is unfenced between the Logan Canyon cattle allotment to the south and the Franklin Basin allotment. This has led to some unaccountable cattle drift between the two allotments and into the mountain lakes recreation areas (such as White Pine Lake). The same permittees have grazing permits on both the Logan Canyon and Franklin Basin Cattle allotments.

Cattle are managed during the grazing season primarily through riding and herding. The season-long system allows for some areas to be delayed from grazing by the nature of the seasonal progression as cattle are herded through the allotment by riders.

Under the current system, grazing use is subject to grazing standards described in the WCNF Revised Forest Plan (pages 4-51 and 4-52). The applicable standards for grazing use would be the same as under the proposed action (see Section 2.41).

2.5 Mitigation, Monitoring, and Management Requirements

Mitigation measures, Best Management Practices (BMPs), forest-wide standards and guidelines, and monitoring included in all action alternatives are listed below. Research and information substantiating these requirements are found in the Revised Forest Plan and FEIS (USDA Forest Service 2003).

Wasatch-Cache NF Standards (S) that apply to this project.

(S2) Apply runoff controls during project implementation to prevent pollutants including fuels, sediment, oils, from reaching surface and groundwater.
(S3) Unclassified roads and trails will be administratively closed and rehabilitated
(S4) Place new sources of chemical and pathogenic pollutants where such pollutants will not reach surface or ground water.
(S7) Allow management activities to result in no less than 85% of potential ground cover for each vegetation cover type. (RFP, p. 4-37). (See RFP, Appendix VII for potential ground cover values by cover type).
(S24) As a tool to achieve desired conditions of the land, maximum forage utilization standards for vegetation types in satisfactory condition using traditional grazing systems (rest rotation, deferred rotation, season long) are shown in table S24 of the revised Forest Plan.
(S25) As a tool to achieve desired conditions of riparian areas, maximum forage utilization standards (stubble height) for low to mid elevation greenline species apply. (RFP, p. 4-51).

Wasatch-Cache NF Guidelines (G) that apply to this project.

<p>(G3) Proposed actions analyzed under NEPA should adhere to the State Nonpoint Source Management Plan to best achieve consistency with both Sections 313 and 319 of the Federal Water Pollution Control Act. (RFP, p. 4-37).</p>
<p>(G4) At the end of an activity, allow no more than 15% of an activity area to have detrimental soil displacement, puddling, compaction and/or to be severely burned. (RFP, p. 4-37).</p>
<p>(G9) Avoid soil disturbing activities (those that remove surface organic matter exposing mineral soil) on steep, erosive, and unstable slopes, and in riparian, wetlands, floodplains, wet meadows, and alpine areas. (RFP, p. 4-38).</p>
<p>(G11) Use Best Management Practices and Soil and Water Conservation Practices during project level assessment and implementation to ensure maintenance of soil productivity, minimization of sediment discharge into streams, lakes and wetlands to protect of designated beneficial uses. (RFP, p. 4-38).</p>
<p>(G12) Locate new actions (such as incident bases, fire suppression camps, staging areas, livestock handling facilities, recreation facilities, roads and improvements including trails) outside of Riparian Habitat Conservation Areas. If the only suitable location for such actions is within Riparian Habitat Conservation Areas, sites will be located to minimize resource impacts. (RFP, p. 4-38).</p>
<p>(G14) Manage vegetation for properly functioning condition at the landscape scale. Desired structure and pattern for cover types of the Wasatch-Cache National Forest (from USDA Forest Service 1996) are listed in the Revised Forest Plan on page 4-39 to 4-40 except in the Wildland Urban Interface, where vegetation structure and pattern should be managed to reduce threat of severe fire to property and human safety. (RFP, p. 4-39).</p>
<p>(G15) In goshawk habitat, design all management activities to maintain, restore, or protect desired goshawk and goshawk prey habitats including foraging, nesting, and movement. (RFP, p. 4-42).</p>
<p>(G71) As a tool to achieve rehabilitation of upland, aspen, and riparian communities away from the greenline that are not meeting or moving toward objectives, maximum allowed forage utilization will be 30-40%. (RFP, p. 4-52).</p>
<p>(G72) Modify grazing practices that prevent attainment of desired future conditions for vegetation and/or aquatic resources. (RFP, p. 4-52).</p>
<p>(G75) Annual operating instructions (and/or Allotment Management Plans) should be evaluated and additional site-specific objectives defined if needed for any or all of the following five parameters:</p> <ul style="list-style-type: none"> - Stubble height on selected key species on the greenline - Stubble height on selected key species and/or the amount of bare ground within the riparian zone but away from the greenline - Riparian woody browse utilization - Stream bank trampling on key reaches - Stubble height and/or incidence of use on key species in the uplands (RFP, p. 4-52).

2.6 Monitoring Activities Common to All Alternatives

The following monitoring activities would be conducted by the Forest Service under each alternative to evaluate range conditions and to ensure compliance with the grazing permit and management requirements listed above.

1. Livestock management inspections

What: Monitor livestock distribution to ensure cattle are in areas designated for grazing.

Why: To protect non-use areas (such as the Beaver Springs fenced riparian area and White Pine Lake recreation use area) from cattle grazing to help achieve desired conditions.

How often: Throughout the grazing season (or until grazing is eliminated under Alternative 2).

How the results will be used: Information would be documented and shared with the permittees to ensure cattle are in the proper locations. If cattle are found in a non-use area, such as the White Pine Lake area or the Beaver Springs fenced riparian area, it would be considered non-compliance and appropriate administrative action would be taken according to Forest Service Handbook direction (FSH 2209.13, Chapter 10, section 16).

2. Annual Upland and Riparian Utilization and Use Monitoring

What: Annual monitoring will include collecting and recording the following information:

- a. Utilization on upland and riparian key areas; and
- b. Mapping of cattle distribution and use each season

Why: To maintain proper cattle distribution and ensure utilization standards and guidelines are not exceeded in order to maintain satisfactory conditions and help move toward desired conditions.

How often: Throughout the grazing season (or until grazing is eliminated under Alternative 2).

How the results will be used: The information will be used to determine when livestock must be moved from one area to another or off the allotment after all areas have been grazed, and to make adjustments to numbers if necessary. If cattle are found on the allotment before or after permittees have been instructed to move them, appropriate administrative action would be taken according to Forest Service Handbook direction (FSH 2209.13, Chapter 10, section 16).

3. Upland/Watershed/Riparian Condition and Trend

What: Long term trend monitoring will include the following methods on previously established sites and additional sites determined through field assessment. The methods for uplands include nested frequency, line intercept, ground cover measurements, and photo points as described in the Revised Forest Plan (USDA Forest Service 2003) and RHEIS (USDA Forest Service 1996).

Why: To evaluate vegetation conditions and identify whether or not these areas are at or moving toward desired conditions in riparian and upland areas.

How often: Every 5 years.

How the results will be used: Information will be used to determine if the area is meeting or moving toward desired conditions, and if necessary, to adjust livestock numbers and/or season of use.

4. Water quality monitoring

What: Monitoring methods will include Pfankuch stream stability rating (Pfankuch 1975) and photo points inside and outside of fenced riparian areas.

Why: To ensure that wet environments are protected from trampling and vegetation loss.

How often: Once every 5 years.

How the results will be used: The information will be used to evaluate movement toward desired conditions in riparian areas and under

5. Wildlife Monitoring

What: Management Indicator Species (goshawk, beaver, snowshoe hare, and Bonneville cutthroat trout) and neo-tropical migratory birds.

Why: To assess the effects of management activities on a range of species.

How Often: As directed within the Revised Forest Plan, Chapter 4, Monitoring and Evaluation, pages 4-104 through 4-117 (USDA Forest Service 2003).

How the results will be used: To make adjustments or changes in management activities if monitoring discloses substantial downward trends due to actions related to management activities.