

# NOTICE AND COMMENT DOCUMENT

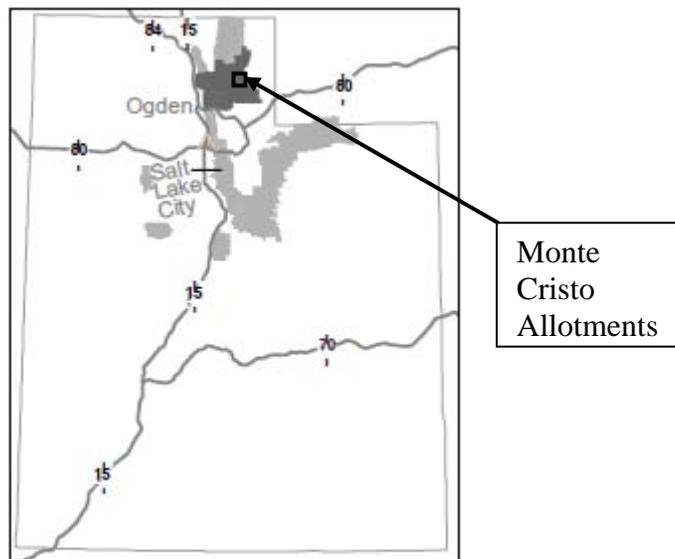
## Monte Cristo Area Sheep Allotments

### Chapter 1 – Purpose and Need

#### 1.1 Introduction

The Blake Hollow, Bountiful, Dry Bread, and Little Monte Allotments (referred to as the Monte Cristo Area Sheep Allotments) are located in Cache, Rich and Weber Counties approximately 30 miles northeast of Ogden, Utah (see Figure 1.1) in T8N, R4E, Sections 4-9 and 15-36 and in T7N, R4E, Sections 4-6, and 9 SLM. Lands within these allotments are managed by the Ogden Ranger District of the Uinta-Wasatch-Cache National Forest. The allotments include approximately 15,620 permitted acres.

**Figure 1.1** Monte Cristo Area Sheep Allotments Vicinity Map



The Ogden Ranger District of the USDA Forest Service has developed a proposed action for issuance of a term grazing permit for these allotments. Compliance with the National Environmental Policy Act (NEPA) is required when permits are issued (or re-issued). This document describes these allotments, and describes the proposed action and purpose and need for this action. The purpose of this document is to solicit public review and comment on the proposed action.

## 1.2 Background and History

The Ogden Ranger District has authorized livestock grazing on the Monte Cristo Area Sheep Allotments for several decades via term grazing permit(s). The four allotments have been managed as sheep allotments for several decades.

Term grazing permits are generally valid for 10 years from the date of issuance. Compliance with the National Environmental Policy Act (NEPA) is required when permits are issued (or re-issued). Section 504 (b) of Public Law 104-19 provides: *“Notwithstanding any other law, term grazing permits which expire or are waived before the NEPA analysis and decision pursuant to the schedule developed by individual Forest Service System units, shall be issued on the same terms and conditions and for the full term of the expired or waived permit. Upon completion of the scheduled NEPA analysis and decision for the allotment, the terms and conditions of existing grazing permits may be modified or re-issued, if necessary to conform to such NEPA analysis.”* Grazing on the Monte Cristo Area Sheep Allotments is being continued in accordance with this direction.

Grazing is currently authorized on these four sheep allotments under existing permits and is managed per their respective Allotment Management Plans (AMPs). Each year, specific direction is provided in the Annual Operating Instructions (AOIs) for each allotment. Reauthorization of livestock grazing would require reviewing and updating existing AMPs as necessary.

**Table 1. Summary of current grazing on each of the four allotments.**

Allotment	NFS Acres <sup>1</sup>	Livestock Number-Class	Period of Use <sup>2</sup>	Grazing System
Blake Hollow	3,990	1000 - ewe/lamb	7/1-9/30 (for 70 days)	Deferred rotation
Bountiful	5,610	800 - ewe/lamb	7/1-9/30 (for 80 days)	Rest rotation
Dry Bread	1,910	1150 - ewe/lamb	7/1-9/15 (for 65 days)	Deferred rotation
Little Monte	4,110	1000 - ewe/lamb	7/1-9/30 (for 70 days)	Deferred rotation

<sup>1</sup> From WCNF Revised Forest Plan. Acres are approximate and are not exact.

<sup>2</sup> The period of use is specified in the grazing permit as a number of consecutive days within the grazing season for that allotment (i.e. for Blake Hollow, the permitted season is any consecutive 70 days between 7/1 and 9/30 each year).

## 1.3 Purpose and Need

The purpose is to authorize livestock (sheep) grazing in a manner that would meet or move towards the desired conditions defined in the Forest Plan, Wasatch-Cache National Forest (see Section 1.5). This analysis would comply with Section 504 of Public Law 104-19 to schedule and complete NEPA analyses on allotments where needed to authorize permitted grazing activity.

Grazing is a sustainable use of National Forest System (NFS) lands and is permissible through the Multiple Use Sustained Yield Act of 1960, as amended. The Monte Cristo Area Sheep Allotments lie within the Bear, Cache-Box Elder, and North Wasatch-Ogden Valley Management Areas and contain lands considered capable and suited for domestic livestock grazing. (FEIS for the Forest Plan, pg. B9-2; Forest Plan, pg. 4-126, 4-137, and 4-149) Continued domestic livestock grazing is consistent with the goals, objectives and guidelines of the Forest Plan.

It is Forest Service policy to make forage available to qualified livestock operators from lands suitable for grazing consistent with land management plans (FSM 2203.1; 36 CFR 222.2(c)).

It is Forest Service policy to continue contributions to the economic and social well being of people by providing opportunities for economic diversity and by promoting stability for communities that depend on the range resource for their livelihood. (FSM 2202.1)

The Forest Plan, which directs the management of lands encompassing the project area, has as one of its desired conditions to permit livestock grazing use within active allotments and to recognize the importance of permitted grazing on the national forest to local agricultural communities, maintenance of open space, and the western ranching lifestyle (pg. 4-126).

## **1.4 Proposed Action**

The Forest Service proposes to authorize continued grazing of sheep on the Monte Cristo Area Sheep Allotments at a level and in a manner consistent with the direction in the Forest Plan (see Section 1.5), and other applicable laws and regulations. The proposed action recognizes the need for forage production from Forest Service administered lands as identified in the Forest Plan.

Field data suggests current grazing management is meeting or moving towards desired conditions (see Section 1.6) as stated in the Forest Plan on the majority of rangelands within each of the allotments. Current management would continue in the four Monte Cristo sheep allotments (Table 1). A few isolated areas of concern (i.e., upland areas associated with sheep bed grounds) will be addressed through permit administration.

The proposed action would employ an adaptive management strategy (Section 2.4.2), which allows for adjusting the timing, intensity, frequency and management of grazing as needed to meet Forest Plan standards and guidelines. Monitoring would determine the need and frequency for administrative adjustments in the timing, intensity, frequency, and/or management of grazing.

Preliminary soils reports indicate ground cover is meeting or exceeding Forest Plan standards of 85% of potential on the majority of all of these allotments. A review of the hydrologic and aquatic features during the summer of 2008 indicates that current livestock grazing has had little impact on the water resources within the allotment. No long-term adverse effects to streambanks, water quality, or aquatic habitats were noted

during the reviews. A review of range monitoring indicates the apparent rangeland conditions on the majority of each of the allotments are satisfactory as indicated by adequate ground cover and variety in species composition across the allotments.

## **1.5 Forest Plan Direction**

The Forest Plan sets forth direction for managing the land and resources of the Wasatch-Cache National Forest, and describes management goals and objectives, resource protection methods, and desired resource conditions. The Forest Plan is the result of programmatic analysis, which is addressed in the FEIS for the Revised Forest Plan (USFS 2003) The 2008 National Forest Management Act regulations at 36 CFR 219 became effective on April 21, 2008.

The Monte Cristo Area Sheep Allotments environmental analysis is a project-level analysis; its scope is confined to addressing the significant issues and possible environmental consequences of the project. Where appropriate, this analysis will tier to the Forest Plan FEIS, as encouraged by 40 CFR 1502.20.

This analysis identifies site-specific desired conditions for the project area and compares them against the existing conditions. Identification of resource management needs is then the comparison of desired conditions with existing conditions to determine the extent and rate at which current management is meeting or moving toward those desired conditions. Where a particular existing condition and desired condition are the same, there is no need for change. Conversely, where an existing condition and a desired condition are not the same, there is a need for change.

### **1.5.1 Management Prescriptions**

Management Prescriptions Categories provide a general sense of the management or treatment of the land intended to result in a particular condition being achieved or set of values being restored or maintained. These categories are just one part of the total management direction that includes goals, objectives, desired future conditions, standards and guidelines, and monitoring requirements. The Forest Plan management prescription allocations within which the allotment is located include Management Prescriptions 1.5 (Recommended Wilderness), 3.1W (Watershed Emphasis), 3.2D (Terrestrial Habitat Emphasis-Development allowed), 3.2U (Terrestrial Habitat Emphasis-Undeveloped), and 4.4 (Dispersed Motorized Emphasis). Within these management prescriptions, livestock grazing is allowed on open allotments to meet site-specifically defined desired conditions.

### **1.5.2 Management Areas**

The Monte Cristo Area Sheep Allotments are within the Bear, Cache-Box Elder, and North Wasatch-Ogden Valley Management Areas as defined in the Forest Plan.

### **1.5.3 Desired Future Conditions**

Desired future conditions (DFC) are described at both the Forest level (pages 4-5 through 4-15) and for each management area. Desired conditions for the management areas applicable to the Monte Cristo Sheep allotments are found in the Forest Plan as follows: Bear Management Area (pages 4-199 through 4-127), Cache-Box Elder Management Area (pages 4-128 through 4-138), and North Wasatch-Ogden Valley (pages 4-140 through 4-150). In accordance with direction in the Forest Plan (page Appendix X-5), the interdisciplinary team (ID Team) has reviewed and in some cases refined or supplemented the Forest Plan prescribed DFC to be more specific to the project area and the proposed action. The refinements/supplements are consistent with the Forest Plan prescribed DFCs, and are outlined in the Table 2.4.2.1. In order to be meeting or moving toward desired future conditions, a majority of the key areas must be meeting or exceeding the requirement listed.

### **1.5.2 Standards and Guidelines**

The Forest Plan (pages 4-36 thru 4-56, and pages 4-58 thru 4-78) contains standards and guidelines (see RFP, p. 3-36 for definition of these 2 terms) including some applicable to livestock grazing. Those pertinent to these allotments and this environmental analysis are summarized in Section 2.5 of this environmental analysis.

## **1.6 Decision to be Made**

The Ogden District Ranger, as the Responsible Official, will decide whether or not to authorize grazing on the Monte Cristo Area Sheep Allotments and if so, under what conditions (design features, mitigation, monitoring). If continued grazing is authorized, the AMP will be revised to incorporate and implement the decision. The AMP will be completed and approved as soon as practical after the NEPA process is completed.

## **1.7 Public Involvement**

In March 2009, a Forest interdisciplinary team met to develop proposed actions and to identify preliminary issues, concerns and measures to carry forward into the analysis. The proposal was provided to the public and other agencies for comment during scoping in March, 2009. The project was included in the Spring 2009 Schedule of Proposed Actions (SOPA). Three comment letters were received during scoping. Using comments received during scoping the Forest refined the list of issues and concerns to address.

## **1.8 Preliminary Issues**

The ID Team identified the following preliminary issues to be addressed in the environmental analysis. These issues will be used to guide the formulation of alternatives and provide a framework for the effects analysis to be documented in the environmental assessment.

- Sheep grazing and bedding in uplands can cause ineffective ground cover resulting in accelerated soil erosion and degradation of soil quality.

- Sheep grazing can cause changes in plant composition and plant community structure, including potentially affecting threatened, endangered, or Forest Service sensitive species.
- Sheep grazing can decrease cover and forage used by a variety of wildlife species. Potentially affected species include USFWS-listed Threatened, Endangered, Proposed and Candidate species; Forest Service Sensitive species; Wasatch-Cache National Forest Management Indicator Species (MIS), migratory birds, and general species of local concern.
- Sheep grazing may negatively affect the dispersed recreation experience (such as camping and hiking) in the popular Dry Bread recreation area.

## **Chapter 2 – 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**

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).

### **2.3 Alternatives Considered and Eliminated from Detailed Analysis**

#### *Using Sheep to Control Dyer’s Woad*

Reduce the occurrence of the invasive weed Dyer’s Woad (*Isatis tinctoria* L.) within the allotments by using sheep as a principal component of an integrated weed control program. Sheep grazing on the plant in early summer prior to seed set and in the fall foraging on the basal rosette can be an effective control. It would require earlier access to

pasture in the spring. This alternative was raised by a scoping comment for consideration by the ID team and dismissed. Because this strategy could be incorporated into adaptive management it was not considered as an alternative to consider in detail.

## **2.4 Alternatives Considered in Detail**

This section describes two alternatives considered in detail. The alternatives analyzed include the required “No Action”, which analyzes a no grazing alternative, and the “Proposed Action”, which represents the current management including an adaptive management component.

### **2.4.1 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 Monte Cristo Area Sheep Allotments. If this alternative were selected, grazing would not be authorized after a two-year notification to the permittee from the date the decision is made. Non-permitted recreational horse use would still occur.

### **2.4.2 Proposed Action (Current Management):**

Under this alternative, no substantial changes would be made to the current grazing management on the Monte Cristo Area Sheep Allotments. The allotments would continue to be managed in accordance the direction of the Forest Plan standards and guidelines described in Section 2.5 of this document. The applicable standards for grazing use are the same as under the proposed action.

Additionally, the proposed action would employ an adaptive management strategy and incorporate the following parameters designed to maintain or improve range conditions on both upland and riparian sites.

#### **2.4.2.1 Details of the Proposed Action**

As described in section 2.4.2 of this environmental analysis, the proposed action employs an adaptive management strategy, which adjusts the timing, intensity, frequency and management of grazing on the allotment as needed to meet Forest Plan standards and guidelines, and that would continue to meet or satisfactorily move forest resources toward desired conditions and meet Forest Plan objectives. Monitoring would determine the need and frequency for administrative adjustments in the timing, intensity, frequency, and/or management of grazing. The following sections of this document outline site-specific management principles, limits and direction for the proposed action.

#### ***Site-Specific Desired Future Conditions***

Desired conditions for the management areas applicable to the Monte Cristo Sheep allotments are found in the Forest Plan as follows: Bear Management Area (pages 4-199 through 4-127), Cache-Box Elder Management Area (pages 4-128 through 4-138), and North Wasatch-Ogden Valley (pages 4-140 through 4-150). In accordance with direction in the Forest Plan (see Forest Plan Appendix X-5), the interdisciplinary team (ID Team) has reviewed and in some cases refined or supplemented the Forest Plan prescribed DFC to be more specific to the project area and the proposed action. The refinements/supplements are consistent with the Forest Plan prescribed DFCs, and are outlined in the following table:

**Table 2.4.2.1: Additional Site-Specific Desired Conditions**

<b>Resource Ecosystem Community Type</b>	<b>Applicable Component of the Forest Plan Prescribed Desired Future Condition</b>	<b>Additional Site-Specific Desired Condition</b>
Soil productivity	<p>Most soils have at least minimal protective ground cover. Soils have adequate physical properties for vegetative growth and soil-hydrologic function. Degradation of soil quality and loss of soil productivity is prevented. Soil productivity, quality, and function are restored where adversely impaired and contributing to an overall decline in watershed condition.</p>	<p>Minimal protective ground cover is defined by Forest Plan standard S7 as at least 85% of potential. In tall forb communities minimum ground cover is defined by Guideline G14 as at least 90% of potential. (see S7 and G14 in Section 2.5 of this EA).</p> <p>The Forest Plan (p. VII-1) identifies the following minimum ground covers (85% of potential) for some of the vegetative types in the project area:</p> <ul style="list-style-type: none"> <li>• 76-82% silver sagebrush</li> <li>• 69-82% in few-flowered-sagebrush</li> <li>• 59% in low sagebrush</li> <li>• 78% in snowberry</li> <li>• 60-70% in curleaf mountain mahogany</li> <li>• 77-83% in aspen</li> </ul> <p>Applying the direction above, the ID team determined that for this allotment the desired condition is to maintain at least the following average ground covers (% of potential) in vegetation communities impacted by livestock grazing:</p> <ul style="list-style-type: none"> <li>• 78% in aspen, silver sagebrush and mountain brush communities.</li> <li>• 69% in few-flowered sagebrush</li> <li>• 60% in low sagebrush and curleaf mountain mahogany</li> <li>• 73% in mountain big sagebrush (potential is 81 to 96%; as reported in the North Rich Allotment FEIS potential there was 86%. The potential for these communities on these allotments is similar).</li> <li>• 85% in mesic riparian vegetation types.</li> </ul>
Riparian areas	Riparian areas have a range of vegetative structural stages that	Class I riparian areas within the project area listed in the Forest Plan are: Wheeler,

Monte Cristo Area Sheep Allotments Grazing Authorization  
Environmental Analysis

<b>Resource Ecosystem Community Type</b>	<b>Applicable Component of the Forest Plan Prescribed Desired Future Condition</b>	<b>Additional Site-Specific Desired Condition</b>
	<p>are at or moving toward properly functioning condition, provide a transitional zone between upland terrestrial habitats and aquatic habitats, and have the features necessary to promote stable stream channels and diverse habitat conditions. Desirable riparian vegetation occupies the historical floodplain. Riparian areas provide for fish, wildlife, and water quality requirements.</p>	<p>and Wheatgrass. (USFS 2003, LRMP p. VII-7)</p> <p>In addition to the riparian areas identified in the Forest Plan and listed above, in accordance with Forest Plan direction (p. VII-3) the ID Team has identified the following Class I riparian areas: Big Spring Creek</p> <p>No Class II riparian areas within the project area are identified in the Forest Plan (USFS 2003, p. VII-7).</p> <p>In accordance with Forest Plan direction (p. VII-3), the ID Team has identified the following Class II riparian areas: Intermittant reaches in streams Sugar Pine, Dip Hollow, Peggy Hollow, Silvia Hollow, Big Spring, Sleepy Gulch and Frost Canyon.</p> <p>All riparian areas not identified above as Class I or II are Class III riparian areas.</p>
Springs and wetlands	<p>Spring sources and associated wetlands in the Cache Box Elder Management Area will be protected from excessive use and will be restored to proper functioning. Riparian areas will be protected from overuse and trampling from livestock grazing and recreation uses. Spring sources will be fenced and provide water for livestock.</p>	<p>Existing livestock spring/wetland protection fences will be maintained in order to protect vegetation, water quality and habitat associated with these areas.</p> <p>Riparian areas will have adequate deep-rooted vegetation or armoring along banks to allow for sediment filtering and erosion prevention.</p> <p>Proper function of wetlands and riparian areas associated with springs will be maintained to meet or exceed conditions outlined in Forest Plan standards and guidelines S24, S25, S26, G4 and G7 (see Section 2.5 below).</p>
Aquatic Habitats	<p>Habitats will be managed to maintain cool, clear water and well-vegetated stream banks for cover and bank stability. Cool water temperatures will be preserved through well-vegetated banks.</p>	<p>Undisturbed stream banks exist on at least 80% of Class I riparian areas.</p> <p>Pool-riffle ratios are approximately 1:1 in fish-bearing streams.</p> <p>Summer water temperatures in fish-bearing streams average 13°C ± 4°C.</p>

Monte Cristo Area Sheep Allotments Grazing Authorization  
Environmental Analysis

Resource Ecosystem Community Type	Applicable Component of the Forest Plan Prescribed Desired Future Condition	Additional Site-Specific Desired Condition
Aspen	Associated herbaceous and woody vegetation in aspen communities is highly variable and is dominated by desired perennial grasses and forbs with a range of shrub cover.	At least 10% of the understory cover in aspen communities is comprised of desired tall forb species <sup>1</sup> .
Upland vegetation and big game winter range	Maintain upland (sagebrush, mountain brush, grassland) plant communities dominated by desired perennial grasses, forbs, and a range of shrub cover. Associated herbaceous and woody vegetation provides for plant communities that are diverse in seral status and structure and provide food and habitat for wildlife, forage for livestock, and a variety of recreational opportunities and aesthetic values.	<ul style="list-style-type: none"> <li>• A wide variety of sagebrush cover closures exist, with a maximum closure of 35%.</li> <li>Most (greater than 50%) vegetation cover in sagebrush stands are desired grass and forb species<sup>Error! Bookmark not defined.</sup></li> <li>• A variety of shrubs such as snowberry, serviceberry, chokecherry, and elderberry are present in mountain brush communities.</li> </ul>
Riparian vegetation	<p>Riparian areas have a mix of seral and climax vegetation that is at or approaching PFC. Trees, willows, dogwood, birch, alder, sedges, rushes and hydric grasses, depending on stream substrate, gradient, and elevation, dominate riparian areas. These areas provide healthy self-perpetuating plant communities.</p> <p>Riparian plant habitats and rare riparian species will be protected from trampling and overuse by livestock grazing and recreational uses.</p>	<p>Adequate vegetative cover (as defined by the heights prescribed in Forest Plan standards S24 and S25) provide filtering of runoff, protection of the soil, and habitat for wildlife in riparian areas.</p> <p>Riparian shrub and trees are perpetuated by retaining at least 50% of annual growth of these plants (i.e., as provided for in Forest Plan standard S26 [see Section 2.5 of this EA]).</p>
Rangeland/Livestock Grazing	Livestock grazing is a permitted use. Grazing levels will be adjusted and managed with up-to-date Allotment Management Plans (AMPs). AMPs prescribing rest and deferred rotation grazing systems and riparian pastures will be in place. Structural improvements such as fences and water developments will be	Grazing levels will be adjusted and managed with an up-to-date Allotment Management Plan (AMP) that prescribes grazing systems and establishes management that ensure the time and timing of grazing is altered annually. When and/or if needed, structural improvements such as fences and water developments will be constructed or reconstructed and maintained, to improve animal distribution and control.

<sup>1</sup> Plant species listed as moderate or high value rating for erosion control/watershed protection in the Region 4 Forest Service Handbook 2209.21 – Range Management Resource Value Ratings Guide.

Resource Ecosystem Community Type	Applicable Component of the Forest Plan Prescribed Desired Future Condition	Additional Site-Specific Desired Condition
	<p>constructed or reconstructed and maintained to improve animal distribution and control. Structural improvements that are not needed will be removed from the forest. Grazing permit holders will move livestock as needed to meet management objectives for the ground. Ongoing ecosystem monitoring will be used to refine standards. Permit holders will share responsibility with the Forest Service for monitoring use, and will hold full responsibility for movement and control of livestock. Excess and unauthorized livestock use will be minimal. The number of term grazing permits will be reduced by the formation of grazing associations and the issuance of grazing agreements instead of individual permits.</p>	

**Grazing Season**

The specific grazing season would vary from year to year, but would generally occur between July 1<sup>st</sup> and September 30<sup>th</sup>. Turn out would not occur before *range readiness*—that point in the plant growth cycle at which grazing may begin without permanent damage to vegetation or soil (Heady and Child, 1994). The grazing season would generally end before the start of the rifle deer and elk hunting season. Annual adjustments would normally be authorized by the District Ranger in the Annual Operating Instructions (AOI’s).

**Grazing Strategy**

Livestock grazing would incorporate a grazing management system, such as deferred grazing and/or other adaptive management strategies (see section on the following page) that ensures the time and timing of grazing use is altered on an annual basis. Grazing on about two-thirds of the allotment would be deferred annually until after seed ripe.

**Intensity**

The intensity of grazing (utilization) would be according to grazing utilization standards and guidelines described in the Forest Plan. The applicable standards for grazing use under the proposed action would be as described in Section 1.5.

Annual forage utilization is measured by averaging the use of key species in key areas based on the measurement of typically 50 to 100 individual plants. Key areas are defined as “a relatively small portion of rangeland which because of its location, grazing or browsing value and/or use, serves as a monitoring and evaluation site” (FSH 2209.21). Key areas will be established in Grass/Shrubland, Aspen, and in Riparian areas. No key areas will be established in Conifer, Juniper, or Oak/Maple vegetation types because they are not grazed and are a minor component of the allotment. The proposed action identifies the following “key areas” (at a minimum) to be monitored for annual utilization and long-term trend:

- 1) Big Spring Fork (Riparian)
- 2) Dry Bread (Aspen)
- 3) Hatch Springs (Sagebrush/Mountain Brush)
- 4) Little Monte (Tall Forb/Grassland)
- 5) Harriet Springs (Sagebrush)

### **Frequency**

The frequency of grazing any certain area will be one time per season. Sheep would not be allowed to re-graze either upland or riparian sites where utilization had already been met. This means that sheep would be managed to ensure that grazing of re-growth of native species during the same grazing season does not occur.

### **Adaptive Management**

Adaptive management involves identification of future management options that may be needed to accelerate or adjust management decisions to meet desired conditions and/or project standards and objectives, as the need is determined through monitoring. Building adaptive management flexibility into management allows for decisions that are responsive to needed adjustments in permitted actions (FSH 2209.13 Section 92.23b).

### **Adaptive management strategies**

Implementation of the proposed action would include an adaptive management strategy. If monitoring indicates changes are needed, other adaptive management strategies to achieve the objectives of the proposed action would include:

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#### **Livestock Grazing Management Actions<sup>1</sup>**

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Use of salt or supplement to draw livestock toward or away from specific areas.

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Change season of use.

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Change animal numbers.

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Change animal class.

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Change number of days of livestock utilization.

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Rest from livestock grazing for one or more seasons.

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Construct fence<sup>2</sup> to create riparian unit and allow livestock grazing under riparian grazing guidelines.

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**Livestock Grazing Management Actions<sup>1</sup>**

Construct fence<sup>2</sup> to exclude livestock from areas of concern (riparian, streams, springs, wetlands, mesic meadows, etc.).

Construct temporary electric fence or permanent fence<sup>2</sup> to control livestock distribution patterns.

Construct livestock water development<sup>2</sup> (pipeline, tanks, windmill, sediment traps, well, stock dam, submersible pumps, solar).

Remove existing water development (pipeline, tanks, windmill, well, stock dam).

Remove existing fence line (electric, standard, permanent or temporary).

Implement multi-pasture, deferred livestock grazing system.

Implement a high-intensity/short duration livestock grazing system (by riding, herding, temporary fence, etc.).

Implement rest-rotation livestock grazing system.

<sup>1</sup> The potential management actions are designed to be used either alone or in combination to best meet, or at least, move toward the desired resource condition within a timeframe of ten years.

<sup>2</sup> Other than those listed in the design criteria, permanent fences and stock tank installations would not be constructed without additional NEPA analysis.

**2.5 Mitigation and Management Requirements**

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

**2.5.1 Management Requirements**

The Forest Plan (USFS 2003, p. 4-36 thru 4-56 and 4-58 thru 4-78) contains standards and guidelines (see LRMP, p. 3-36 for definition of these 2 terms) including some applicable to livestock grazing. Those pertinent to the project area and this environmental analysis are summarized in the following tables:

**Table 2.5a: Forest Plan (LRMP) Standards (S) that apply to this project.**

(S4) Place new sources of chemical and pathogenic pollutants where such pollutants will not reach surface or ground water. (LRMP, p. 4-36)		
(S7) Allow management activities to result in no less than 85% of potential ground cover for each vegetation cover type. (LRMP, p. 4-37). (See LRMP, 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 as follows:		
<b>Table S24: Percent utilization of key grass or grass like vegetation, by vegetation type, for rangelands in satisfactory condition.</b>		
Vegetation Type	Condition	Percent Utilization of Key Grasses or Grass-Like
Upland and Aspen	Satisfactory	50%

Crested Wheatgrass	Satisfactory	60%
Riparian* Class I	Satisfactory	50%
Riparian* Class II & III	Satisfactory	60%

\* Riparian, away from greenline

(S25) As a tool to achieve desired conditions of riparian areas, maximum forage utilization standards (stubble height) for low to mid elevation *greenline* species in Class I, II, and III riparian areas (see Appendix VII) in satisfactory condition are as follows: (Key species being grazed include water sedge, Nebraska sedge, and and/or wooly sedge.)

**Table S25: Greenline stubble height at the end of the growing season, by riparian class, for rangeland satisfactory condition.**

Vegetation Type	Condition	Greenline Stubble Height at End of Growing Season
Riparian Class I	Satisfactory	No less than 5"
Riparian Class II	Satisfactory	No less than 4"
Riparian Class III	Satisfactory	No less than 3"

(S26) For all rangelands, including big game winter range and riparian areas, permit no more than 50% of the current year's growth on woody vegetation to be browsed during one growth cycle (i.e., when use has reached 50% allow no additional livestock use). (LRMP, p. 4-52)

**Table 2.5b: Wasatch-Cache NF Guidelines (G) that apply to this project.**

(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. (LRMP, p. 4-37)
(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. (LRMP, p. 4-37)
(G7) Manage Class 1 Riparian Area Greenlines for 70% or more late-seral vegetation communities as described in Intermountain Region Integrated Riparian Evaluation Guide (USFS, 1992). Manage Class 2 Riparian Area Greenlines for 60% or more late-seral vegetation communities. Manage Class 3 Riparian Area Greenlines for 40% or more late-seral vegetation communities. (LRMP, p. 4-37)
(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. (LRMP, p. 4-38)
(G11) Use Best Management Practices & Soil & Water Conservation Practices during project assessment/ implementation to ensure maintenance of soil productivity, minimization of sediment discharge into streams, lakes and wetlands to protect designated beneficial uses (LRMP 4-38)
(G12) Locate new actions (such as incident bases, fire suppression camps, staging areas, livestock handling facilities, recreation facilities, roads and improvements) 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 (LRMP, p. 4-38)
(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 USFS 1996) ... are as follows ... (USFS 2003, LRMP p. 4-39 thru 4-42)

**Table G14. Desired Structure and Pattern for Cover Types**

Cover Type	Landscape Structure	Landscape Patterns
Aspen	<u>Balanced Range:</u> Grass/Forb and Seedling/Sapling = 40 %	Patterns are within historical ranges. Pattern sizes, shapes and corridors are maintaining

	Young, Mid Aged and Mature forests = 30% Old Forests = 30%  Stand Density Index > 300 and Basal Area < 140.	processes. The role of fire is to influence distribution of structural classes and patterns across landscapes.
Pinyon-Juniper	<u>Guideline direction for this cover type is not shown here as this cover type is not applicable in this project area.</u>	
Mountain Mahogany	<u>Guideline direction for this cover type is not shown here as this cover type is not applicable in this project area.</u>	
Tall Shrub (Mountain Brush)	Multiple vegetation layers with alternating vertical dominance.	Acres and dispersion within historical ranges.
Sagebrush(Big)/Grassland	Balanced range of structural stages. 40% of area with 15% or more crown cover (as measured by line intercept method).	Patterns are within the historical range.
Riparian	Amount and type of vegetation types present that maintain riparian-dependent resources and provide a high rate of recovery following disturbance.	Plant community type compositions and accompanying riparian ecosystem functions maintain proper ground water recharge, storage, delivery, water tables, channel morphology and bank stability.

## 2.6 Monitoring Activities

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

### (1) Livestock management

**What:** Monitor livestock distribution to ensure livestock are in areas authorized for grazing.

**Why:** To protect unauthorized areas from livestock grazing to help achieve desired conditions.

**How often:** Throughout the grazing season

**How the results will be used:** Information would be documented and shared with the permittees to ensure livestock are in the proper locations. If livestock are found in an unauthorized 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**

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

- a. Utilization on upland and riparian key areas, including:
  - 1) Big Spring Fork (Riparian)
  - 2) Dry Bread (Aspen)
  - 3) Hatch Springs (Sagebrush/Mountain Brush)
  - 4) Little Monte (Tall Forb/Grassland)
  - 5) Harriet Springs (Sagebrush)

**Why:** To maintain proper livestock distribution and ensure utilization standards are not exceeded, in order to maintain satisfactory conditions, improve unsatisfactory conditions, and help move toward desired conditions.

**How often:** Utilization and livestock distribution during and at the end of the grazing season.

**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 any necessary adjustments to numbers and/or season of use.

**(3) Long-term upland condition and trend**

**What:** Long-term trend monitoring will be conducted on some of the previously established long-term study sites. Additional sites may be determined through field assessment.

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

**How often:** About every 10 years.

**How the results will be used:** Information will be used to determine if the area is meeting or moving toward desired conditions. Long-term trend data will be used to evaluate timing, intensity, frequency and management of grazing. As necessary, annual triggers affecting the timing, intensity, frequency and management of grazing would be adjusted to meet long-term desired resource conditions.

**(4) Riparian area/water/aquatic habitats**

***What:*** Multiple Indicators Monitoring System (MIMS)

***Why:*** To ensure that riparian environments are protected from trampling and vegetation loss and that water quality and aquatic habitats are maintained.

***How often:*** About every 5-10 years.

***How the results will be used:*** The information will be used to evaluate movement toward desired conditions in riparian areas. If monitoring indicates that degraded riparian areas are developing and/or existing degraded riparian areas have not improved in condition (using indicators such as increased riparian vegetation diversity and structure, streambank disturbance, and channel width ) then an alternative management strategy such as fencing key riparian areas would be implemented. Fencing would require further NEPA analysis on the site-specific environmental effects of the fencing.