

# **Environmental Assessment Franklin Basin Allotment**

## **Chapter 1 – Purpose and Need**

### **1.1 Introduction**

This Environmental Assessment (EA) is intended to document the analysis of a proposal by the U.S. Forest Service to authorize grazing on the Franklin Basin Allotment located on the Logan Ranger District of the Uinta-Wasatch-Cache National Forest. The analysis was conducted under the procedures of the National Environmental Policy Act of 1969, as amended (NEPA). It has been prepared under agency policies and direction for implementing NEPA contained in Forest Service Handbook 1909.15 and Council on Environmental Quality Regulations (40 CFR 1500).

Chapter 1 outlines the environmental review process, introduces the proposed action and the purpose and need it addresses, specifies the decisions to be made regarding the proposal, describes the scoping process and issues, and lists permits which may be required to implement the proposal.

Subsequent chapters in the document describe the alternatives (Chapter 2), provide information on the current condition of potentially affected resources and identify environmental consequences of the alternatives (Chapter 3) and provide the literature cited. The appendices provide more detailed information to support the analyses presented in the EA.

### **1.2 Background and History**

The Franklin Basin Allotment was managed by the State of Utah until 1998 when it was transferred to the US Forest Service in a land exchange with the State. It was agreed at that time the allotment would continue to be grazed under State of Utah Grazing Guidelines for a 10-year term (1998-2008). Because the permit was about to expire in 2008, the Forest Service initiated an environmental analysis in 2006 to authorize continued grazing.

Based on the findings of that environmental analysis, Acting District Ranger Janet Valle signed a decision on September 27, 2007 to authorize grazing on the allotment for a two year temporary term. The two year term was made conditional, based on continued analysis of the allotment during subsequent grazing seasons.

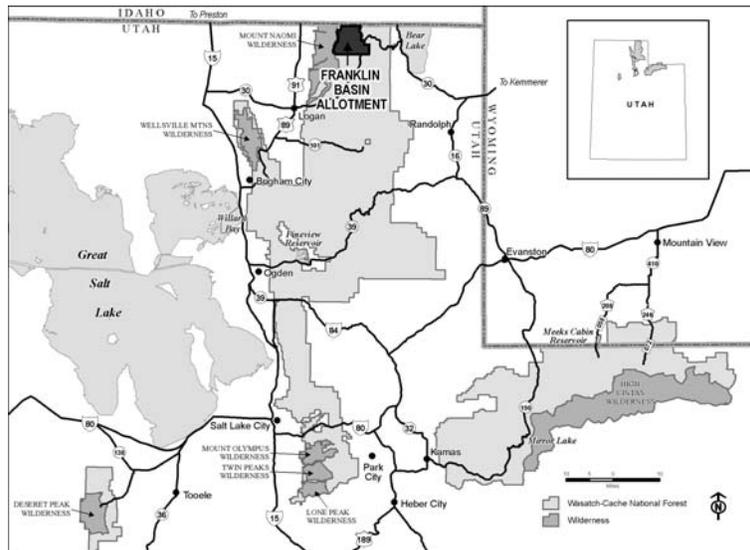
The September 2007 decision was made under authority granted by the Secretary of Agriculture for a categorical exclusion and a decision memo was issued under authority granted the Forest Service by the 2005 Consolidated Appropriations Act, Public Law

108-447, section 339. That Act provides that certain decisions to authorize allotment grazing “shall be categorically excluded from documentation in an environmental assessment or environmental impact statement” under the National Environmental Policy Act (NEPA) if: 1) the decision continues current grazing management; 2) monitoring indicates current grazing is meeting or moving towards Forest Plan objectives; and 3) the decision is consistent with agency policy on extraordinary circumstances. A review of existing data indicated the allotment met these criteria, and a decision to authorize grazing for a two-year term was made.

The decision to authorize a two-year term was made with the expectation to further analyze data, re-evaluate grazing management, collect additional information as needed to complete an allotment management plan, and to substantiate that the allotment is satisfactorily meeting or moving toward Forest Plan desired conditions. These expectations are being addressed in this current environmental analysis.

The Franklin Basin Allotment is located in northern Utah, approximately 25 miles east of Logan, Utah, in the northern portion of the Logan Ranger District (Figure 1.1).

**Figure 1.1** Franklin Basin Allotment Vicinity Map



### 1.3 Proposed Action

The Logan District proposes to authorize grazing on the Franklin Basin Allotment at a level and in a manner consistent with the direction in the Revised Forest Plan and other applicable laws and regulations. The proposal includes grazing management designed to improve unacceptable resource conditions, where they exist on the allotment, and maintain or move vegetation and watershed conditions toward desired conditions.

The proposed action would employ an adaptive management strategy, initially implementing a grazing system that would include the following: a grazing season falling within the limits of June 25 to October 10; deferred grazing on the allotment for a period of time every two out of three years; intensity of grazing use (utilization) to the standards described in the WCNF Forest Plan; a stipulation that any specific range area on the allotment can only be grazed once annually; the use of riders and salting to control cattle drift (into adjacent allotments and into closed areas such as White Pine Lake area); and, focused project monitoring to indicate when adjustments in management are needed over time. Possible future courses of action would include longer deferral of grazing each season, additional riders, ear-tagging, and construction of short segments of fence (such as drift fences or riparian exclosures). More detailed information on the proposed action is provided in Chapter 2.

The allotment includes approximately 20,000 permitted acres. There are parcels of private land (a total of about 2,000 acres) located within the allotment boundary that is not included in the permitted acres (see Appendix A).

## **1.4 Purpose and Need**

Preliminary reviews of data available in 2007 indicated the majority of the allotment was in satisfactory condition and moving towards Revised Forest Plan desired conditions. However, some areas of resource concern remain within the allotment. The historic grazing of thousands of sheep in this area is still evident in some locations on the allotment as evidenced by deficient ground cover. A portion of the capable rangelands (approximately 500 acres) are unsatisfactory, lacking in desirable species composition, and complex plant community structure, indicating the need for some type of deferred use or rest from grazing.

Some riparian areas, such as Steep Hollow, show signs of heavy use of annual forage exceeding Forest Plan standards, which indicates the need for better livestock movement and distribution. Field observations in August 2007 and 2008 indicate portions of Steep Hollow have been utilized to the degree that unacceptable levels of compaction, soil erosion, and sedimentation are occurring. This has resulted in decreased plant vigor, decreased structural and species diversity, and high amounts of compaction, with a resulting loss of site productivity and quality habitat for wildlife, especially wetland-dependant species.

In response to these concerns, the Forest Service proposed action is intended to accomplish the following purpose:

- 1.** Improve conditions for range, riparian, wildlife, and watershed resources on the allotment and move them closer to desired conditions. Improvement will be gradual because of the complexity of factors involved, including, but not limited to, existing vegetation and soil

conditions, on-going drought, historic fire exclusion, and historic grazing levels.

2. Comply with Public Law 104-19, Section 504 (a): schedule and complete NEPA analyses on all allotments where needed to authorize permitted grazing activity.

## **1.5 Forest Service Guidance**

### **Forest Plan Direction**

The 2003 Revised Forest Plan sets forth management direction for managing the land and resources of the Wasatch-Cache National Forest, and among other things, 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 Forest Plan FEIS (USDA Forest Service 2003). The 2008 National Forest Management Act regulations at 36 CFR 219 became effective on April 21, 2008.

The Franklin Basin Allotment EA is a project-level analysis; its scope is confined to addressing the significant issues and possible environmental consequences of the project. Where appropriate, the Franklin Basin Allotment EA tiers to the Forest Plan FEIS, as encouraged by 40 CFR 1502.20.

Chapter 4 of the Revised Forest Plan contains Forest-wide as well as area-specific management direction (USDA Forest Service 2003). The pertinent Revised Forest Plan Standards and Guidelines are summarized in Appendix A.

The Forest Plan divides National Forest System lands into management areas based on resource needs and opportunities. The Franklin Basin Allotment is within the Cache Box Elder Management Area.

The management prescriptions within which the allotment is located include Management Prescriptions 2.6 (Undeveloped Areas), 3.2U (Terrestrial Habitat Emphasis – Undeveloped), 3.1A (Aquatic Habitat Emphasis), and 4.4 (Dispersed Motorized Emphasis). Within these management prescriptions, livestock grazing is allowed on open allotments to meet site-specifically defined desired conditions. In the 3.1A management prescription, grazing is allowed with the utilization standard for Riparian Class 1 (Revised Forest Plan pages 4-65 to 4-73). See Appendix B for more information on Forest Plan guidance.

## **1.6 Desired Conditions**

The project interdisciplinary team (ID Team) refined the following Forest Plan desired conditions for the resources within the Franklin Basin allotment.

- **Fish Habitat**

Aquatic 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. Instream flows and cover, in the form of deep pools and structures such as boulders and logs, will be maintained and their value recognized. Natural reproduction of fish will be aided through minimizing sediment input from roads and trails.

- **Amphibians and Invertebrates Habitat**

Marshy edges of ponds, lakes, and springs will be protected to allow for the development of in-water and riparian vegetation. Soil around water bodies will not be compacted and will allow for burrowing and over wintering of amphibians.

- **Recreation**

Summer backcountry recreation uses focus on non-motorized recreation in harmony with the natural setting. Camping areas are managed to be sustainable within the limits of the watershed health and resource protection minimizing affects on water quality and riparian resources. High value camping areas, such as White Pine Lake and the MPC 4.4 corridor along the existing Franklin Basin Road are free from cattle and their impacts, but cattle may be seen in the distance away from popular campsites and trails. Visitors experience a natural appearing landscape, with little development except what is needed for resource protection or safety. Visitors are satisfied with their experiences which meet or exceed their expectations.

- **Rangeland Management**

Livestock grazing is a permitted use within active allotments. 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. These systems will help improve and maintain plant vigor and composition, aquatic health and terrestrial habitat. Conflicts with other uses will be minimized consistent with management direction for the area. Riparian and upland vegetation will be at or moving toward desired composition that meets multiple resource goals and is described under watershed and biodiversity/viability desired future conditions. Management tools including such things as fire use, mechanical treatments, herbicide treatments, and short duration/high intensity grazing, will be employed to improve range health and conditions. Springs and seeps will be protected from compaction. Structural improvements such as fences and water developments will be 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 using appropriate range management standards and guidelines as a tool. Ongoing ecosystem monitoring will be used to refine standards where objectives are not being met. 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 association permits instead of individual ones. The importance of permitted grazing on the national forest to local agricultural communities, maintenance of open space, and the western ranching lifestyle will be recognized.

- **Rangeland Vegetation**

As part of the Record of Decision for the Rangeland Health EIS (USDA Forest Service 1996), a desired future condition for four rangeland vegetation types was established. The RHEIS established a minimum effective ground cover percent at 85% of the potential as a standard for each cover type. The Revised Forest Plan (USDA Forest Service 2003) adopted this and other standards outlined in the RHEIS. Below are the desired conditions for rangeland vegetation types found within the Franklin Basin allotment.

Aspen - Potential ground cover in all aspen communities approaches 100%. Thus, in applying the Revised Forest Plan ground cover standard, a minimum ground cover of 85% is desired for all aspen stands. The understory would have at least 10% cover of tall forb species, including such species as horse-nettle, aster, western larkspur, showy stickseed, cow parsnip, bluebells, western sweet-cicely, groundsel, and western valerian, and others.

Sagebrush - The majority of this type is composed of mountain big sagebrush communities. Desired conditions for this type include a wide variety of sagebrush canopy closures with a maximum of approximately 30-35%. The desired associated grass species would include bluebunch wheatgrass and/or slender wheatgrass as the dominant grasses, and scattered communities with sheep (Idaho) fescue as a component of the undergrowth. Desired forbs would include such species as lupine, beardtongue, glandular cinquefoil, slender cinquefoil, and sticky geranium. The range of potential ground cover for the mountain big sagebrush cover type is 81 to 96%. As reported in the North Rich Allotment FEIS, potential ground cover for mountain big sagebrush communities was 86%. It is estimated the potential for sagebrush communities on the Franklin Basin would be similar; thus, the minimal allowable ground cover would be 73% (86% x 0.85).

Mountain Brush - A minor component of the allotment this vegetation type has a desired ground cover of approximately 78% based on a potential ground cover measurement of 92% for the snowberry vegetation type in the Forest Plan. Species composition would

include a variety of shrubs including such species as snowberry, serviceberry, chokecherry, and elderberry.

- **Soil and Water**

Watersheds will be properly functioning with adequate ground cover to prevent soil erosion, and provide infiltration and moisture holding for storage and release of water to streams and aquifers. Spring sources and associated bogs and wetlands will be protected from excessive use and have been restored to proper functioning. Riparian areas will be properly functioning with adequate deep-rooted vegetation or armoring along banks to allow for sediment filtering and erosion prevention. Riparian areas will be protected from overuse and trampling from livestock grazing and recreation uses.

- **Wildlife**

The desired future condition for the Cache Box Elder Management Area associated with wildlife habitat states that “Restoration and maintenance of a healthy and sustainable, broad scale, north-south wildlife corridor within this management area will be a priority in all management decision.”

### **Incorporation by Reference**

Some material in this document tiers to or incorporates by reference related information in order to reduce the size and degree of redundancy in this document. Material incorporated by reference includes the following:

- Material specifically cited or otherwise used in preparation of this document is hereby incorporated by reference.
- Information in this document tiers to the direction in the WCNF Revised Forest Plan and its Record of Decision. Information in the Revised Forest Plan FEIS is hereby incorporated by reference.
- The entirety of the supporting project record is hereby incorporated without further reference.

### **Science**

The techniques and methodologies used in this analysis consider current and accurate science. The analysis includes a summary of the credible scientific evidence which is relevant to evaluating reasonably foreseeable impacts. The analysis also identifies methods used and references scientific sources relied on. When appropriate, the conclusions are based on the scientific analysis that shows a thorough review of relevant scientific information, a consideration of responsible opposing views, and the acknowledgment of incomplete or unavailable information. Literature reviewed and considered by specialists in the analyses is referenced in Chapter 6 and in the respective technical reports (in the project record).

## **1.7 Decision to be Made**

The decision to be made is whether or not to authorize grazing on the Franklin Basin Allotment. The decision will be made by the Logan District Ranger and will be documented in a Decision Notice, subject to public review and appeal.

## **1.8 Public Involvement**

An important aspect of the environmental analysis process is the participation of the public and other agencies in identifying issues and concerns regarding the potential impacts of a proposal. The issues and concerns are then considered in developing alternative ways of meeting the purpose and need.

### **1.8.1 Scoping**

Regulations of the Council on Environmental Quality require that Federal agencies involved in NEPA analyses include “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action” (40 CFR 1501.7). This “scoping” is intended to focus the analysis on the important issues associated with implementing a proposal and to set aside concerns that are unrelated or not central to the pending action.

The Logan District Ranger mailed a scoping letter on June 4, 2008 to 154 individuals and organizations on the District mailing list. The scoping letter was posted on the Wasatch-Cache National Forest website. In addition, the project was listed in the quarterly Schedule of Proposed Actions (SOPA). A brief article was included in the June 20, 2008 edition of the Logan Herald Journal.

The District received 7 responses to the scoping letter. The letters, e-mails, and comments were reviewed and individual comments were placed in general issue categories. A complete listing of the individual comments and categories is available in the project record.

### **1.8.2 Issues**

The ID Team identified relevant issues to be addressed in the EA based on input from the public, other agencies, and internal comments. These issues guided the formulation of alternatives and provided a framework for the effects analysis documented in this EA.

#### **1.8.2.1 Aquatic Resources**

- How would aquatic resources be affected by cattle grazing if authorized on the Franklin Basin Allotment?

**Indicator** used to compare alternatives:

- A qualitative description of the effects of livestock grazing on aquatic species and habitats within the Franklin Basin allotment

#### **1.8.2.2 Rangeland Resources**

- How would rangeland resources be affected by cattle grazing if authorized on the Franklin Basin Allotment?

**Indicator** used to compare alternatives:

- A qualitative description of the effects of livestock grazing on rangeland vegetation and range management within the Franklin Basin allotment

#### **1.8.2.3 Recreation**

- How would recreation experiences be affected by cattle grazing if authorized on the Franklin Basin Allotment?

**Indicators** used to compare alternatives:

- A qualitative analysis of areas where cattle and dispersed camping coincide
- A qualitative assessment of public perception of cattle induced resource impacts

#### **1.8.2.4 Soil**

- How would soil be affected by cattle grazing if authorized on the Franklin Basin Allotment?

**Indicator** used to compare alternatives:

- A quantitative and qualitative description of the effects of livestock grazing on soils within the Franklin Basin allotment

#### **1.8.2.5 Water**

- How would water resources be affected by cattle grazing if authorized on the Franklin Basin Allotment?

**Indicator** used to compare alternatives:

- A quantitative and qualitative description of the effects of livestock grazing on water resources within the Franklin Basin allotment

### **1.8.2.6 Wildlife**

- How would wildlife species and their habitats be affected by cattle grazing if authorized on the Franklin Basin Allotment? Potentially affected species include USFWS-listed Threatened, Endangered, Proposed and Candidate species, Forest Service Sensitive species, WCNF Management Indicator Species (MIS), migratory birds, and general species of local concern.

**Indicator** used to compare alternatives:

- The degree to which threatened, endangered, or sensitive wildlife species and their habitats are affected by the proposed action and alternatives to it.

### **1.8.3 Other Disclosures**

Initial evaluation of the project indicated there would be little to no effect on the following resources, and effects on them would not vary between alternatives. Therefore, the following resources are not covered in detail, but are discussed briefly below to add to the overall understanding of the project.

#### **1.8.3.1 Private Lands**

There is some private land located adjacent to the Franklin Basin allotment, along Highway 89 in Logan Canyon. A few cabins and recreational homes have been constructed on the lots, but there are no permanent homes located there.

There is a private in-holding within the national Forest on which the Franklin Basin allotment is located. A total of 160 acres, with four separate land owners, is located in lower Steam Mill Canyon. There is no motorized access to this in-holding.

At the north end of the allotment a private landowner (and previous grazing permittee) owns 720 acres. This landowner no longer grazes cattle on the National Forest and his land is not within the permitted area of the Franklin Basin allotment.

A concern was raised by a few of the landowners adjacent to Highway 89 that the cows were repeatedly coming on to their private land for watering. One landowner had constructed a fence to allow access to the water, but yet keep the cattle off the rest of his land. However, the cattle repeatedly got on to the private land. The land owners would prefer not to have cattle graze throughout their private land, but they are drawn there because that is the only available source of water.

A field reconnaissance in July 2008 confirmed that there is no water on National Forest land within the Brush Canyon and Rigby Hollow area on the east side of Highway 89. The primary water sources in this area are located on private land and no private land grazing permit is in place. Therefore, the area is determined to be “not capable” because of lack of water, and “not suitable” because of the other values and uses of this parcel of land. Because the area is mapped as not capable, there should be no cattle grazing east of Highway 89 in this vicinity.

The private in-holding in lower Steam Mill Canyon is an in-holding within the boundary of the Franklin Basin allotment and is not under a grazing permit. An in-holding such as this requires that the private land owner to be responsible for keeping the cattle off their property if they do not want grazing to take place on their land. It is the responsibility of the private land owner, not the Forest Service or the permittees, to fence the private property in-holdings.

### **1.8.3.2 Heritage Resources**

In addition to review under NEPA, consideration of effects on heritage resources is mandated under Section 106 of the National Historic Preservation Act (NHPA) as implemented by 36 CFR Part 800. Requirements include the need to identify significant properties that may be affected by the proposed action or alternatives. Historic properties are defined as archeological sites, standing structures, or other historic resources listed in or determined eligible for listing in the National Register of Historic Places.

For purposes of analysis of effects on heritage resources, the Area of Potential Effect (APE) for this project is the Franklin Basin allotment.

#### **Field inventory, methodology, and Results**

A cultural resources investigation was conducted for this project during August 2007 and 3 sites were identified. The Forest Service made the determination that the proposed authorization of grazing will result in No Historic Properties Affected [36CFR 800.4(d) (1)] because grazing does not appear to be having an adverse effect on the previously recorded sites within this APE.

The Utah State Historic Preservation Office concurred with this determination in a letter dated October 2, 2007 and recommended no further action. Therefore, regardless of the alternative selected, there would be no effect on heritage resources in the area.

Since there are no direct or indirect effects to heritage resources, consequently, there will be no cumulative effects resulting from the proposed action or any of the alternatives. The Heritage Resources Report is available in the project file.

### 1.8.3.3 Rare Plants

Initially, the project area's potential for rare plants habitat was determined with the use of aerial photos, topographic maps and local knowledge. Habitat descriptions for rare plants species were derived from information found in A Utah Flora, The Intermountain Flora, Flora of North America, USDA Plants data base, Bear River Range Endemics (USDA Forest Service GTR), Utah Natural Heritage Program and personal knowledge.

The initial assessment indicated potential habitat for the following plants:

Sensitive	Recommended Sensitive	Threatened	Watch List
<i>Draba maguirei</i>	<i>Arabis glabra</i> var.furcatipilis	<i>Primula maguirei</i>	<i>Arabis lasiocarpa</i>
<i>Erigeron cronquistii</i>			
<i>Eriogonum brevicaule</i> var. <i>loganum</i>			
<i>Penstemon compactus</i>			
<i>Cypripedium fasciculatum</i>			
<i>Viola frank-smithii</i>			

The following is a summary of the habitat conditions for these plants:

- *Primula maguirei* is restricted to cool, moss-covered shallow soils on dolomite cliffs and boulders of the Laketown and Fish Haven Dolomite formations. Populations of Maguire primrose are restricted to an elevation range of 4,600 to 5,900 feet along the lower canyon walls of Logan Canyon. Plants are often found in cracks or crevices or amidst well-developed mats of moss and are most often found in areas of cool, moist microclimates.
- *Draba maguirei* occurs on open slopes under conifers, talus slopes and rocky outcrops between 8,500 and 9,600 feet in elevation.
- *Erigeron cronquistii* occurs in rock crevices in cliffs and talus, and in canyons in aspen-spruce-fir communities on limestone and dolomite, between the elevations of 5,800 and 9,900 feet.
- *Eriogonum brevicaule* var. *loganum* occurs on clay bluffs, hills, limestone outcrops, and dry benchlands in mountain brush-grassland communities, at elevations between 4,800 and 4,950 feet, typically off forest land.
- *Penstemon compactus* occurs on limestone and dolomite outcrops, growing with Monardella, clematis, columbine, penstemon, and under conifer trees.
- *Cypripedium fasciculatum* occurs in duff of moderately dense lodgepole pine forests with most trees 3-8 inch dbh where understory species are sparse and mostly limited to scattered plants of this species and a few others.
- *Arabis glabra* var.furcatipilis occurs in sagebrush, pinyon-juniper, mountain brush, white fir, aspen and spruce-fir communities between 5,000 and 9,600 feet.
- *Arabis lasiocarpa* occurs in sagebrush, aspen and spruce-fir communities at elevations between 6,000 and 9,512 feet.

- *Viola frank-smithii* occurs in cracks, crevices, and holes in outcrops of limestone and dolomite in humid shady places, between 5,314 – 5,871 feet.

Of the above mentioned species, only 3 have recorded occurrences within the capable rangeland acres on the Franklin Basin allotment: *Eriogonum brevicaule* var. *loganum*, *Penstemon compactus* and *Cypripedium fasciculatum*. Due to inaccurate and sketchy information in the Utah Natural Heritage Database these occurrences were not relocated during field surveys in 2006-2008. Collections were made in the 1930's to the 1980's and in some cases location descriptions differ from recorded spatial information (GIS location).

The preferred habitat for rare plants within capable acres in Franklin Basin is not conducive to livestock grazing. *Eriogonum brevicaule* var. *loganum* and *Penstemon compactus* grow in cracks and crevices in limestone and dolomite outcrops and areas otherwise sparsely vegetated where livestock do not typically graze.

An analysis of the vegetation was conducted during the 2006 field season, consisting of a rapid assessment that included a 1/10<sup>th</sup> acre ocular macro-plot and a 100-point step toe ground cover plot. The analysis of the data and supplemental work are included in the Range assessment. Further field surveys were conducted during the field season 2007 and no rare plants (individuals or populations) were found.

Given the small overlap of cattle grazing and the occurrences of rare plants in the Franklin Basin allotment, it is not likely the authorization of cattle grazing will have any effect on rare plants in this vicinity.

Close study of maps, aerial photography and field surveys in 2006 and 2007 have identified no potential habitat for the primrose within suitable habitat for grazing. Therefore the proposed action will have No Effect on Maguire's Primrose

The Botany technical report is available in the project file.

#### 1.8.3.4 Noxious Weeds

Table 1.1 lists the noxious weeds and acres that are known in the Franklin Basin allotment on capable rangeland acres. These numbers were derived from the FY06 Weed Inventory completed in partnership with Utah State University (USU). That mapping effort focused on concentrated use and known dispersed recreation areas.

**Table 1.1** List of noxious weeds known to occur in Franklin Basin

Species	Acres
Burdock ( <i>Arctium minus</i> )	0.018
White top ( <i>Cardaria draba</i> )	6.27
Canada thistle	34.65

<i>(Cirsium arvense)</i>	
Bull thistle <i>(Cirsium vulgare)</i>	20.44
Poison hemlock <i>(Conium maculatum)</i>	0.052
Houndstongue <i>(Cynoglossum officinale)</i>	24.95
Dyers woad <i>(Isatis tinctoris)</i>	0.171
<b>Total</b>	<b>86.57</b>

Noxious weed establishment is dependent on two main factors, weed seed dispersal and potential habitat. The literature lists numerous vectors for weed seed dispersal. Humans, animals both wild and domestic, wind and water have all been identified as having the ability to transport weed seed. Potential habitat is dependent on the type of weed and its life history. The weeds that are documented on the Logan Ranger District are considered “rangeland weeds” that can establish and thrive in several vegetation types. The rate of spread and magnitude of the impacts is also variable and depends on several site specific conditions. The characteristics of the establishing weed, health of the ecosystem, micro-climate all combine to affect the outcome

The above mentioned weeds are classified as typical rangeland weeds; barring full shade and saturated soils they can establish and expand in any habitat. Infestations have been recorded in all parts of Cache and Rich counties in both agricultural and wild land settings. Potential spread of noxious weeds is possible if cattle migrate through infested areas.

Utah State University, working in partnership with the WCNF is currently weed-mapping roads and trails on the Logan Ranger District. In 1999, crews mapped the Franklin Basin drainage. During the 2006 field season, USU crews inventoried weeds around concentrated use areas across the forest. Dewey (USU) noted that it appears there are no new infestations and that the previously mapped infestations have not expanded much in eight years (pers. comm. 2007).

In the case of bull thistle, it appears that infestations may have even decreased. It is unclear at this time as to whether the decrease (and lack of expansion in the other infestations) is due to effective weed treatment, to the micro-climate in Franklin Basin, or that the weeds are not as aggressive as once believed.

A Utah Flora, The Intermountain Flora, Flora of North America, USDA Plants data base, Weeds of the West, Utahweed.org, are all sources that have been consulted and drawn from in order to identify noxious weeds. Wasatch Cache Integrated Weed Management Strategy outlines procedures for weed identification, mapping, and treatment.

The Botany technical report is available in the project file.

## 1.9 Permits and Authorizations

**Table 1.2** Permits, approvals, authorizations, and consultations that may be required for implementation of the decisions made for the depending on the specific activities associated with each alternative.

Agency	Type of Action	Description of Permit/Action
Forest Service	Forest Service Decision  Preparation of a Biological Assessment (BA)  Preparation of a Biological Evaluation (BE)	The decision to authorize grazing is made in compliance with the National Environmental Policy Act (NEPA). In accordance with the Endangered Species Act, the Forest Service must complete a BA assessing the impact of the proposed action on federally listed threatened or endangered species. In compliance with agency policy, a BE must be prepared assessing the potential impacts to Regional Forester-listed sensitive plant and animal species.
Fish and Wildlife Service (FWS)	Endangered Species Act, Section 7 Consultation	If impacts to federally listed threatened or endangered species are possible, the FS will consult with the FWS.
State of Utah Department of Natural Resources, Division of Wildlife Resources (DWR)	Review and comment	The DWR is responsible for the management and protection of wildlife and fish resources.
State Historic Preservation Office (SHPO)	Consultation on National Historic Preservation Act, Section 106 (review and compliance process)	SHPO is responsible for the protection of all heritage resources in the state; concurrence was received 08/22/07.
Northwest Band of the Shoshone Nation	Consultation on sacred sites	The scoping letter was mailed on June 4, 2008. The NW Band of the Shoshone Nation had no comment on this project.