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Revised Forest Plan Wasatch-Cache National Forest

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CHAPTER 1

Forest Plan Introduction

Introduction

In the 15 years since the original Wasatch-Cache Forest Plan was developed, we have learned much. Our experiences implementing that Plan along with significant advances in scientific thinking about land management have resulted in two types of need for change. First, actual management direction needed to change in some areas referred to as "topics" in Chapter 2 of this Plan. Second, the basic framework and organization of the Plan needed to change. This chapter is designed to highlight the framework, how it differs from the 1985 Plan, and why the new framework is necessary.

Forest General Description

The Wasatch-Cache National Forest is located in north and north-central Utah and southwest Wyoming. The net National Forest acres within the administrative unit are approximately 1,324,000 acres, of which 37,762 are in Wyoming. The National Forest lands are located in 12 counties: Box Elder, Cache, Davis, Duchesne, Morgan, Rich, Salt Lake, Summit, Tooele, Wasatch, and Weber in Utah, and Uinta in Wyoming.

The Forest Supervisor's Office is located in Salt Lake City. There are Ranger District offices in Kamas, Logan, Ogden, and Salt Lake City in Utah, and in Evanston and Mountain View in Wyoming.

The Wasatch-Cache National Forest workforce manages lands located in the Wasatch, Uinta, and Stansbury mountains. The Forest provides a wide range of resources and opportunities including: watershed, wildlife, wilderness, timber, range, and recreation (developed and undeveloped).

Purpose of the Forest Plan

This Forest Plan guides all natural resource management activities and sets management direction for the Wasatch-Cache National Forest. It was developed to implement **Alternative 7, the Preferred Alternative** in the accompanying Final Environmental Impact Statement (FEIS) and Record of Decision. This Plan describes what desired future conditions and goals for the Forest are, what

priorities for action have been identified (Objectives), what resource management practices may be employed and where, based on the availability and suitability of lands, and the projected levels of goods and services expected to result from resource management.

The National Forest Management Act (NFMA), implementing regulations, and many other documents guided the preparation of this Forest Plan. The NFMA requires us to develop management direction for each National Forest. This "direction" is to be expressed through goals, objectives, standards, guidelines, management prescriptions, desired future conditions, and monitoring and evaluation requirements for the forest. Projected activities, services, and rate of implementation are dependent on the annual appropriations and budgeting process.

This Forest Plan provides broad program-level direction for management of the land and its resources. Future projects carry out the direction in this Forest Plan. This Forest Plan does not contain commitments to implement specific projects. An environmental analysis is conducted for these projects as they are proposed. In addition to direction found in this Forest Plan, projects are also implemented through direction found in the Forest Service directive system (manuals and handbooks) and other guides.

Six Decisions Made in a Forest Plan

The six decisions made in a Forest Plan are:

1. Forest-wide goals and objectives
2. Forest-wide standards and guidelines
3. Management area delineations and associated prescriptions
4. Identification of lands not suited for timber production
5. Monitoring and evaluation techniques
6. Recommendation for official designation of Wilderness

Forest Service 2002 Strategic Plan

In 1993 Congress passed the Government Performance and Results Act (GPRA) which strives to increase the accountability of federal agencies by measuring progress toward and achievement of agency goals and objectives. This legislation, applicable to all federal agencies, requires the preparation of periodic strategic plans and annual performance plans, both of which are focused on outcomes and results.

To implement GPRA the Forest Service issued a strategic plan in 1997. It centered on three main goals: ensure sustainable ecosystems, provide multiple

benefits for people within the capabilities of the ecosystem, and ensure organizational effectiveness.

In 2000, the Forest Service (USFS 2000) issued an updated version of the 1997 Strategic Plan for the Forest Service. It contains four goals. Associated with each goal are objectives, strategies to achieve the objectives, and measures of progress. The following four goals serve as guiding principles in the revised forest plan:

Goal 1. Ecosystem Health – Promote ecosystem health and conservation using a collaborative approach to sustain the Nation's forests, grasslands, and watersheds.

Goal 2. Multiple Benefits to People – Provide a variety of uses, values, products, and services for present and future generations by managing within the capability of sustainable ecosystems.

Goal 3. Scientific and Technical Assistance – Develop and use the best scientific information available to deliver technical and community assistance and to support ecological, economic and social sustainability.

Goal 4. Effective Public Service - Ensure the acquisition and use of an appropriate corporate infrastructure to enable the efficient delivery of a variety of uses.

Ecosystem Management Framework and the Forest Plan Model

One of the primary forces affecting forest plan revisions as "needs for change" is the focus on ecosystem management and sustainability as the over-arching objective of National Forest stewardship. After a number of evolutionary steps beginning in the early 1990's, and culminating in 1999 with the Committee of Scientists Report (USDA Forest Service1999a) an emphasis is placed on sustainability. As noted in their report:

> ...for the past 100 years, we, as a nation, have been attempting to define what we mean by "sustainability," in part through our grand experiment in pubic forest ownership. In the process, we have broadened our focus from that of sustaining commodity outputs to that of sustaining ecological processes and a wide variety of goods, services, conditions, and values.

In the 1999, Summary of the Analysis of the Management Situation, we discussed the principles of ecosystem management and their relationship to multiple use (USFS Forest Service, 1999b).

How does Ecosystem Management Differ from Management in the Past?

The Forest Service has managed ecosystems for decades, so how is ecosystem management different? There are some sectors that fear that "ecosystem management" is just another buzz word to explain business as usual (Donnelly 1995) while others fear that it will result in the Forest Service abandoning its "multiple use" management of National Forest lands. While those are reasonable fears, neither is true. Ecosystem management is different than how we've conducted our business in the past in three important ways:

1. Rather than focusing only on the small, localized scale, we look at the appropriate scale depending on each resource and/or issue and we look more at those interactions with and integration of associated resources and/or issues;

2. We focus more on properly functioning ecosystems for sustainability over the long term (composition, structure, patterns, and functions) and less on maximizing production from ecosystems over the short term; and

3. Because ecosystem management requires that we look beyond administrative boundaries we must focus more on collaborating with other Federal, State and local governments in establishing goals and in creating a vision of desired future conditions.

While ecosystem management has important differences from how we have managed national forest lands in the past, we are still managing under the Multiple-Use, Sustained Yield Act as well as a number of other laws such as the Organic Administration Act, the National Environmental Policy Act, and the Endangered Species Act. We have now placed a greater emphasis on sustaining ecological processes *and* a wide variety of goods, services, conditions, and values, rather than focusing primarily on sustaining commodity outputs.

Steps Required to Implement Ecosystem Management

In a 1994 report titled *Ecosystem Management: Additional Actions Needed to Adequately Test a Promising Approach* (RCED 1994), four steps/actions were identified as practical and required in order to implement ecosystem management. They include: (1) delineating ecosystems; (2) understanding their ecologies; (3) making management choices; and (4) adapting management on the basis of new information. Figure 1, adapted from this report, shows the relationships between ecosystem management concepts and these practical steps and actions.

Delineating Ecosystems. The first practical step of ecosystem management involves the delineation of ecosystems at scales that are consistent with the

principle of 'context and scale'. In looking at the Wasatch-Cache National Forest, we recognize both biophysical and human (social, economic, and political) characteristics and relationships. The biophysical characteristics of the Forest include the land, water, vegetation and wildlife, etc. while the human characteristics include the people and the communities, counties, and states in which they live and how they relate to and affect the Forest. Any delineation of biophysical ecosystems is artificial because there are connections, interactions, and movements of wildlife, water, air, and vegetation, etc. that do not correspond to lines drawn on a map.

While it is somewhat difficult to delineate the biophysical ecosystems, the human ecosystem is even more difficult to draw lines around. We recognize that delineations of human population areas are even more artificial than biophysical boundaries, and can ultimately be redrawn depending on how one looks at those areas. These delineations, however, do serve a purpose. They provide a means to help us understand and communicate the many and varied relationships as well as historic responses of the land to management actions, and a means of predicting future impacts and responses.

All living things, including humans, respond to their environment at each of these different scales. Many bird species spend a portion of their life cycle in tropical environments, migrating north only as the seasons change from cold to warm. Other animals will move from low elevations off the forest to high elevations as winter turns to spring and summer. Still others spend their entire lives in a relatively small geographic area. Some species of plants occur on a wide variety of habitats from low elevation to the alpine. Others have more restricted requirements and may only occur on hot, dry sites or only in the alpine while others may be restricted to only one geologic formation with strict water or nutrient requirements in a restricted part of the Forest.

Not only do people and different species live and respond to environments at different scales, our management actions have different potential effects at different scales. Each “ecosystem” can be seen as “nested” within multiple larger ecosystems. For example if we decide to suppress fire in a particular watershed (resulting in continued older plant communities which favor certain wildlife and bird species) the net effect is dependent on the conditions in the adjacent watersheds across the entire landscape. If they all have older plant communities our decision may result in a “surplus” of this type of habitat and a “shortage” of younger plant communities and the habitat they provide. If the adjacent areas all have younger plant communities, maintenance of this watershed in an older condition may be critical to species depending on this area for the older habitat provided. So, to understand the implications of any action we plan, we must “zoom in” to look at the site involved and also “zoom out” to learn about the context of neighboring ecosystem conditions involved. This mufti-scaled consideration is a key part of ecosystem management.

Understanding to whatever degree possible how complex these ecosystems are helps the land manager to maintain the diversity and resiliency of the biological world at all scales - from the genetic and species level to the community and ecosystem level.

Understanding Ecosystems' Ecologies. Once the geographic and human ecosystems are delineated, we need to understand something about the ecology and human characteristics based on the best information available. This will help us understand more about the integrity of those ecosystems, how they are functioning, the human relationships to those ecosystems, and how they can be maintained or restored. For the biophysical world we need to learn about (1) ecosystems' composition, structure, patterns, and functions (how they work), (2) current conditions and trends, (3) minimum level of integrity and functioning needed to maintain or restore ecosystems to a healthy condition, and (4) the effects of human activities on ecosystems.

Making Management Choices. After we gain an understanding of an ecosystem's ecology, land managers must (1) identify the desired future ecological conditions, (2) the types, levels and mixes of activities than can be sustained while still achieving these conditions, and (3) how these activities will be distributed over time and over the landscape. This requires that we coordinate among other federal agencies, state, local and tribal governments, the public, and the Congress.

Adapting Management to New Information. Just as ecosystems are continually changing over time, our understanding of their ecology and, therefore, our management choices will change over time as well. Our scientific understanding of how different ecosystems work and how they are affected by human activities is incomplete and continues to increase with continued research. We must be able to modify our management on the basis on new information so we can better accommodate the needs of people while ensuring that desired ecological conditions are being achieved.

Why do we need an Ecosystem Management Framework for the Revised Plan?

The 1985 Forest Plan was not created with much of the scientific understanding and knowledge now available. It lacked the integrated, multi-scale focus on the principles of ecosystem management and lacked the critical focus on sustainability. An ecosystem management framework has helped set the stage for the way we look at the forest and will guide later decisions. It has established limits, to some degree, as to what we are and are not addressing because of appropriateness at the forest plan scale. The framework, along with all of the issues identified working with interested participants, has had a big influence on how we defined and described Desired Future Conditions.

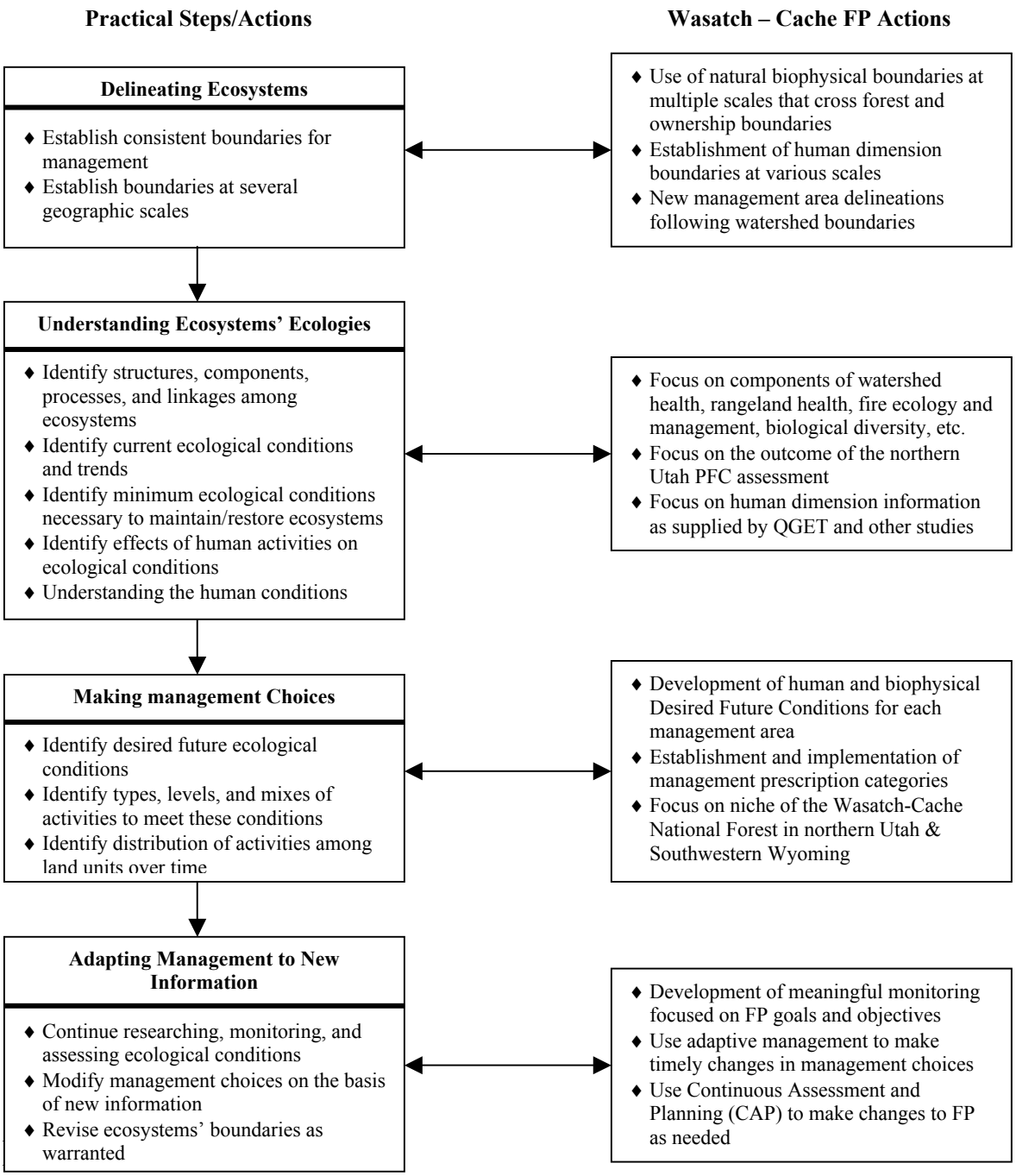

Figure 1 – Relationship between Ecosystem Management Concepts and the Wasatch-Cache Revised Forest Plan

How To Use This Plan

The Forest Plan consists of 5 chapters, a glossary, and numerous appendices.

If you want to know about why and how the Plan was revised, review
Chapter 1 which introduces the Forest Plan; explains its purpose, structure, and relationship to other documents; provides a general description of the Forest; outlines the Ecosystem Management Framework for Forest Plan development, and provides a checklist of what the Plan should do.

If you want to know what important needs for change drove revision of the Plan, review
Chapter 2 which provides a summary of the Analysis of the Management Situation, the starting point for developing a revised Plan. It describes each of the 10 revision topics that were examined in detail with public participation to arrive at a Revised Forest Plan.

If you want to know what the issues were and how the Plan responds, review
Chapter 3 which shows how the Selected Alternative and Revised Plan respond to each of the significant issues identified during the revision process.

If you want to know what the Plan Directs us to do or to allow and where, review
Chapter 4 and Maps which are the core of the Plan providing the "Management Direction" required by the National Forest Management Act. This direction guides all future activities on the Forest. It contains an introductory "How to Use" section followed by two major sections detailing Management Direction components for the Forest.

A. Forestwide Direction (which applies to all areas of the Forest) includes

- Forestwide Desired Future Conditions
- Forestwide Goals, Subgoals, and Objectives
- Forestwide Standards and Guidelines.
- Management Prescriptions (including specific standards and guidelines) and Maps
- Recreation Opportunities (Summer and Maps)
- Winter Recreation and Maps
- Scenery Management and Maps
- Monitoring and Evaluation Requirements.

B. Area Specific Direction

- Management Area Direction- Maps and Desired Future Conditions

If you want to know how specific activities will be implemented, the role of budgets, and how this Plan will be changed in the future, review
Chapter 5 which explains further planning for specific activities and how this Plan may change through revision and amendment requirements.

The **Glossary** defines terms used in the Plan and **References** provides the background information sources used in developing the Plan.

If you want to know more about details elaborating on the various aspects of management direction, review
Appendices I-XI which provide supplemental information related to the Forest Plan on the subjects of

- Species Conservation Guidance Sources
- Watershed Health Guidance Sources
- Noxious Weed Management Guidance
- Forest Vegetation Management
- Roads Analysis Reference Book
- Management Direction for Individual Wildernesses
- Ground Cover Potentials and Riparian Classification
- Protection Standards for Eligible Wild and Scenic River Segments
- Stipulations for Oil and Gas Leasing
- Implementation Guidance
- Botanical Resources

CHAPTER 2

Summary of the Analysis of the Management Situation

Introduction

A Preliminary Analysis of the Management Situation (PAMS) was published in April 1999. It identified eight topics where there was a need for change from 1985 forest plan direction. Each topic was organized using the headings: Background, Current Conditions, Current Direction and Implementation of Forest Plan Direction, Continuing Under Current Management Direction (No Action Alternative), and Needs for Change.

In September 1999, the Wasatch-Cache issued a detailed Proposed Action for the revision of the forest plan. At that time two additional Revision Topics, oil and gas leasing and research natural areas, were added. These two topics were added after new information was received that indicated these items needed attention. Finally, in fall of the year 2000, in response to the most severe wildfire season in the West in nearly 100 years, national legislation was passed that raised the visibility of issues associated with fire and fuels management. Recognizing the importance of those issues, a Revision Topic was added to the draft environmental impact statement addressing fire management. Because two Revision Topics, Wild and Scenic Rivers and Research Natural Areas, were collapsed into one topic titled Special Designations, a total of 10 Revision Topics are addressed.

For this summary chapter the reader is provided an overview of the general condition of the forest and current policy or regulation or resource condition that necessitated the revision topics being chosen. Since over three years has passed since the publication of the PAMS, we have updated information where it is appropriate.

Following the major Revision Topics is a series of lesser topics where some need to improve management direction was recognized. These are Heritage Resources, Landownership Changes, Recreation and Non-Recreation Special Use Permits, and Scenery Management System.

Revision topics

Revision Topic 1 – Watershed Health

Background

A watershed is a land area that is drained by a single network of streams. Watersheds can refer to various scales depending upon the amount of detail needed. For example, the Logan Canyon watershed is also part of the much larger Bear River watershed. A healthy watershed has a steady flow of water that sustains all of its water-related or water-dependent species without degrading the quality of its soil despite periodic disturbances such as fires and floods. Watershed health has three requirements:

- Maintaining the integrity of water systems and soil quality,
- Meeting the needs of thriving terrestrial and aquatic ecosystems, and
- Supplying values for people, such as drinking water, recreation, and commodity uses that do not compromise watershed health.

The WCNF is located within 27 major watersheds. The quantity and quality of water in these drainages are of major importance to people in the area. Water from the Forest is used for drinking water, irrigation, livestock watering, hydroelectric power, recreation, and aesthetics.

The WCNF contains over 1161 miles of perennial streams and numerous natural springs and seeps. Small natural lakes and reservoirs are scattered along the higher elevations, which supply water for wildlife, grazing animals, recreation sports fisheries, and irrigation. Many of the natural lakes in the system have been dammed and converted to reservoirs.

There are several key municipal watersheds whose source is partially or almost entirely draining from National Forest System lands. Almost 60 percent of the watersheds draining the WCNF provide water for public drinking water needs. These watersheds are located in important population areas such as Salt Lake City, Ogden, and Logan that are currently experiencing a steady increase in population growth. Currently within the Jordan River Basin (primarily Salt Lake County), only 26 percent of presently developed water supply for municipal, industrial, irrigation, domestic and stock-watering purposes is from ground water sources (Utah, State of 1997). The remaining 74 percent is from surface water sources of which most originate from the mountains draining into the Jordan River Basin.

Current Condition

Effects on Watershed Health - Various factors have effects on the health of watersheds including: drought and floods; fire, insects, and disease; roads;

livestock grazing; mining; and water diversions and dams. Each of these is discussed in more detail below.

Drought & Flood - Periods of drought and flooding are a part of the natural disturbance regimes of the WCNF. The ruggedness of the Wasatch Range combined with severe weather conditions produces steep mountain streams that are prone to flash floods and naturally high erosion rates. In sensitive areas, soil stability is dependent to a large degree on vegetation to slow runoff and hold the soil in place while in other areas, hydrology and landform play the dominant role.

Drought is a regular part of the climatic cycle on the WCNF. Periods of drought affect insect and disease susceptibility of existing vegetation. Periods of drought affect the quantity and length of time of surface water discharge and quantity of forage. Water and forage uses such as livestock grazing are affected by droughts.

Debris flows periodically discharge from canyon bottoms into the valleys. These have occurred in the past as normal disturbances along the Wasatch Front as indicated by the large alluvial fans located at the mouths of the canyons. Rain-on-snow events and prolonged spring snowmelt have caused major flooding as seen during the 1983-85 period.

Fire, Insects and Disease - Fire has been a major influence on the structure, patterns, and function of ecosystems of the WCNF. Many fire regimes for vegetation in this area prior to European settlement were characterized by short interval, low to moderate severity fires. Fire maintains energy, water, and nutrient cycles; forest and rangeland vegetation; vegetative structure; species composition; and, landscape scale habitat patterns.

Exclusion of fire has caused forest and shrub densities greater than they were historically. The past several years of drought has had a compounding effect on the WCNF in which fire had been suppressed for years. Increased density and weakened resiliency of the forest stands has led to a large increase in Douglas-fir beetle, western balsam bark beetle and fir engraver populations.

Fire suppression, insect and disease, and drought conditions have generally resulted in less frequent, but substantially more severe and damaging fires; the effects of these factors vary tremendously by ecosystem. The undesirable effects of severe fires on watersheds are higher erosion and sedimentation rates and higher potential for landslide events. These effects have a high risk in drainages along the Wasatch Front, which are municipal watersheds with high density urban communities located along the foothills of the WCNF.

Roads/Trails - Roads on the watershed take land out of production for other uses and cause erosion and sedimentation, primarily on poorly-maintained or designed roads. Many roads of varying conditions are located on the WCNF. The larger, higher standard roads have erosion control features in their design. Most

unclassified roads (smaller, back-country roads that are user-created) are not maintained by the Forest Service.

During the past 15 years, some roads have been closed and re-vegetated on the WCNF, reducing sedimentation to streams. Most of the problems associated with roads are due to location such as close proximity to streams or wet areas and due to soils that are highly erodible or conducive to rutting when wet. Use of all terrain vehicles (ATV) has increased tremendously on the forest and many user-created trails are located along the foothills and mountain ridges of the Wasatch Front. Such trails also contribute to erosion and sedimentation.

Livestock Grazing - The main effect of grazing is loss of vegetative cover due to consumption or trampling and stream bank erosion. From the 1880's to the 1920's, overgrazing of rangeland occurred over the WCNF that resulted in decreased soil productivity. From the 1920's to the present, grazing numbers have been reduced and management of grazing has been improved. The effect of this has been the maintenance of condition of the soil and improvements in ground cover conditions. However, improvement of soils productivity is slow and there are many areas where weeds dominate the plant communities because of reduced capability and poor soil conditions.

Mining - Mining activity has occurred in several areas on the Forest. The main areas affected by mining are at the headwaters of Big and Little Cottonwood Canyon near Salt Lake City, and at the head of South Willow Canyon on the East side of the Stansbury mountains. For example, in the Big Cottonwood Mining District, mining activities were flourishing between the 1860's and 1920's and affected the watersheds by clearing vegetation, disturbing soils, and exposing ore deposits to water and air resulting in release of toxic metals. Mining declined after the 1920's and essentially stopped by the 1960's when recreation and watershed values became the principal focus (James 1979). Little Cottonwood Creek is currently being studied for the effects of metals from mining activities and natural sources.

Water Diversions, Dams - Diversion of water and the building of reservoirs to store water has been an integral part of Utah's agricultural development. The effects of these structures are profound and the extent and impact largely depend on the size and purpose of the dam or diversion. These structures can change the timing and amount of discharge, alter stream corridor morphology, plant and animal communities and habitat, and alter water quality. The WCNF has many irrigation diversions, several hydropower facilities, dams and reservoirs. Each of these facilities have caused effects on the stream corridor downstream from either depleted flows or augmented flows during part of the year.

Recreation Facilities - The WCNF has many picnic and campground facilities on the forest that are located along stream corridors and riparian areas. The primary effects of these facilities are decreased water quality and loss of vegetation

through increased erosion, sedimentation from recreation trails and bank trampling. The large urban population near the forest exerts a heavy stress on forest recreation facilities.

Recent Actions to Improve Watershed Health - Since the current WCNF Forest Plan was developed, many activities have occurred on the WCNF that have improved watershed conditions on the Forest. Several high lakes dams have been stabilized and rehabilitation efforts have been completed in High Lakes area of the Uinta Mountains as part of Central Utah Project mitigation. Planning efforts, such as the Rangeland Health EIS, Little Cottonwood Abandoned Mine Lands Initiative planning effort, Wasatch Front Canyons planning efforts, travel planning on the Ranger Districts, Mill Creek Canyon restoration project, South Fork Ogden River campground improvements, and Federal Energy Regulatory Commission relicensing projects review and mitigation, and instream flow requirements for ski area snowmaking water withdrawals have all included direction that will result in improved watershed conditions.

Under the Inland West Watershed Initiative, a course filter assessment at the watershed scale was conducted on the sixth-code watersheds of the WCNF to identify the probable condition of watersheds, identify locations of critical water-dependent resource values at risk needing priority protection, and to identify locations of damaged soil, riparian, and aquatic resource values needing to be restored. The assessment was qualitative and relied on the knowledge of resource specialists and on-the-ground personnel.

The assessment was used to classify the watersheds according to condition classes (FSM 2521). Briefly, Class I watersheds are described as providing a robust basis for sustained production of goods and services with no long-term changes occurring even when major storms occur. Class II watersheds are those not attaining the requirements for Class I but not requiring capital investments to restore watershed conditions. These watersheds can be restored through integrated, ecological approach to management. Class III watersheds require technological and economically feasible capital investment to restore watershed conditions to a level consistent with management goals. Of the 119 watersheds reviewed, the assessment shows four Class I watersheds, 91 Class II watersheds, and 24 Class III watersheds.

Revision Topic 2 – Biodiversity and Viability

Background

Biological diversity is the variety and abundance of life and its processes. It includes all living organisms, the genetic differences among them, and the communities and ecosystems in which they occur. Biological diversity also refers to the compositions, structures, and functions of species and habitats and their interactions. The interactions of biological and physical components operate at multiple scales, from micro-sites to regional landscapes. The goal of conserving

biological diversity is to support sustainable development by protecting and using biological resources. The variety of habitats and species on federal and adjacent lands puts land management agencies in a key role for managing and protecting biological diversity. This is especially true for rare and unique ecosystems, and species that are highly valued or are considered to be on the brink of extinction (Salwasser 1989). Consequently, current management direction (ESA, CFR 219.26 and 219.27, FSM 2070 and Forest Plans) for biological diversity concentrates on numbers of species and diversity of habitats.

In general, prior to human-caused disturbances, major changes in native biodiversity were a result of substantial shifts in climate or geology; or natural occurrences such as volcanoes, or earthquakes etc. However, human influences have substantially affected ecological processes and biodiversity, and will likely continue to do so. As the human population continues to grow, there will be an ever-increasing pressure on the remaining open space and the quality and diversity of habitat.

Current Condition

Although the 1985 Forest Plan addresses many of the key indicators of biological diversity, these indicators are largely described and analyzed as separate functional entities. There is little information as to how these indicators interact with one another and with natural processes, particularly at the broad, Forest-level scale.

In order to maintain healthy ecosystems and the multiple values they hold, we must first address the following questions:

- What is out there? (composition, structure, diversity, relative abundance)
- Where is it? (distribution, patterns, connectivity)
- Where did it come from? (processes and disturbances, geoclimatic capability, historic range of variability)

Composition/Structure/Pattern/Function. Maintenance of compositional, structural, and functional diversity and the patterns in which they exist is essential to the continued provision of ecological processes, such as regulation of hydrologic cycles, carbon and nutrient cycling, and soil processes.

An assessment of Properly Functioning Condition (PFC) of vegetation cover types in National Forests in northern Utah (Ashley, Uinta and Wasatch-Cache National Forests) was completed in 1998 (USDA Forest Service 1998). Historic reference conditions for this area, including the Wasatch-Cache National Forest, were based on fire history studies, historical records, and documentation of historic uses of these lands both prior to and after the establishment of the National Forest System. A summary of the PFC assessment shows some obvious areas where plant communities have substantially changed from what they were historically, therefore considered not to be properly functioning. Some of the

most notable communities at risk are the seral aspen (over 65 percent of the seral aspen communities on the Wasatch-Cache National Forest have been, or are rapidly being, replaced by conifer tree-dominated communities), seral aspen-lodgepole, Engelmann spruce, interior Douglas-fir, tall forb, riparian, and aquatic ecosystems. In addition, sagebrush communities were noted as having moderate to high variation from historic conditions.

The 1985 Forest Plan lacks adequate definitions and direction for desired structural stages, from openings to mature and old growth forests. An understanding of where these stages are on the landscape and how they are connected is critical for species and habitat management. It also does not address the potential effects that revegetation with non-native species may have on overall biodiversity.

Noxious Weeds. Populations of noxious weeds have increased significantly since 1985. They can outcompete native species and have a serious effect on biodiversity. The Overthrust Mountains (Bear River Range and Wasatch Range) have the greatest variety and concentration of noxious weeds on the Forest. The most common noxious weed in this area is dyers woad. Leafy spurge has been found in both the Bear River and Wellsville Ranges and has been noted elsewhere on the forest as well. Musk thistle has been found in the Bear River Range. Canada thistle occurs primarily along streams throughout the area, while hemlock has been noted in only a few locations in this portion of the forest. Dalmatian toadflax has been noted in the Bear River Range and is abundant along the foothills of the Wasatch Range. The Russian and spotted knapweeds are located in only a few areas in the Bear River Range and the Wasatch Range, but are considered to be the highest priority for treatment because of their expansive nature in other places they occur. Medusahead and whitetop have been found in the Bear River Range and white top also has been noted in the Wasatch Range as well.

In the Stansbury Mountains, whitetop has been noted along many drainages. Other species are likely to occur, but have not been inventoried.

Dyers woad is beginning to expand into the Uinta Mountains. While it has only been noted at one location along Beaver Creek east of Kamas, it is on several sites south of Evanston. White top has been noted as well. Canada and musk thistle are common throughout the Uinta Mountains, spotted knapweed has been found near the forest boundary south of Mountain View.

Disturbance processes. Disturbance processes (fires, droughts, floods, insects, disease) are common in nature, and the character of ecosystems is heavily influenced by these agents of change and their interactions. The 1985 Forest Plan has little recognition of the importance of the desirability of disturbance processes. The Plan does not consider or recognize the frequency, size, intensity, and severity of disturbance processes in determining vegetative conditions and

how management practices have altered them. For example, with the exclusion of fire, stand and shrub densities are often much greater than they were historically, and species composition has changed, increasing the susceptibility of some vegetative communities to large-scale infestations of insects, disease, and highly damaging fires.

In 2001 the six National Forests of Utah developed a statewide fire amendment to Forest Plans in which the role of prescribed fire and wildland fire use (naturally ignited fires which are allowed to burn under specific management prescriptions to achieve a desired condition) are designated as appropriate tools for attaining desired future conditions on the Forests.

Stand components for all forest and non-forest cover types and structural stages need to be designed to meet management goals and objectives that also take into account expected disturbance regimes. Conifer plantations and the stands that surround them need to be managed to minimize the risk of loss due to wildfire, insects and disease.

Soils Functions and Processes. The physical, chemical, and biological properties of soils regulate biological productivity, hydrologic response, site stability, and ecosystem resiliency. Management direction for soils in the 1985 Forest Plan is based only on a prevention and mitigation strategy. Scientific information on soils processes and functions and how they relate to vegetation patterns, and ultimately, to biological diversity is not reflected in the 1985 Forest Plan.

The 1985 Forest Plan does not consider or recognize that the sustainability of soil ecosystem function and process (erosion, long-term soil productivity) is at risk in areas where redistribution of nutrients has resulted from changes in ground cover (combination of organic material plus plants), composition, pattern, removal of the larger size component of wood, and uncharacteristic fire.

Snags and Coarse Woody Debris. Snags (dead standing trees) and coarse woody debris (downed trees) are critical elements of ecosystems. They help maintain soil productivity, provide terrestrial and aquatic habitat, and promote forest regeneration by providing micro climates conducive to tree spouting and early growth. Snag management is covered in the 1985 Forest Plan under Forest-wide standards and guidelines. Presently there is no guidance in the Forest Plan pertaining to coarse woody debris.

Old Growth. Old Growth is included in the present Forest Plan under Forest-wide standards and guidelines. Old Growth is defined as a forested stand which is past maturity and is in the last stage of forest succession. There is a standard to have 10% of forested acreage designated as Old Growth distributed proportionally by elevation and vegetative types within each Road Management Unit on the forest. The Guideline is to have 2/3 of designated Old Growth possessing Old

Growth characteristics, with the remaining 1/3 being managed to develop these characteristics.

Some stands currently designated as old growth are not necessarily capable of becoming old growth or they are not desirable as old growth stands. A reevaluation of old growth needs to be done.

Rare and Unique Species or Ecosystems. There are currently some rare and unique species or ecosystems on the Forest that require some level of management emphasis to maintain viable populations. Many of these are identified on the U.S. Fish and Wildlife Services list of candidate species and the State sensitive species list. There is little or no management direction in the 1985 Forest Plan concerning rare and unique species or ecosystems.

Threatened and Endangered Species. Federally listed threatened (T) and endangered (E) wildlife species on the Forest include the black-footed ferret (E), Canada lynx (T), bald eagle (T), and the yellow-billed cuckoo (C). Listed fish species include the June Sucker (E); listed plant species include Maguire's primrose (T). The US Fish and Wildlife Service is presently completing a detailed study on Hooker's shooting star with the possibility of its being Federally listed in the near future. The 1985 Forest Plan management direction for these species is essentially to follow recovery plans developed by the appropriate regulatory agencies, with the ultimate objective of removing the species from Federal listing once stable viable populations are established and maintained.

Sensitive Species. Species are designated ``sensitive" by the Regional Forester because their populations or habitats are trending downward, or because little information is available on their population or habitat trends. The primary purpose of the sensitive species program is to conserve or improve habitat conditions for these species to prevent them from becoming federally listed. Currently, there are 3 mammals, 7 birds, 1 amphibian, 2 fish, and 13 plants designated sensitive which have some probability of occurring on the Forest. Current management direction is to follow conservation assessments and plans developed at the Regional or Forest level. Biological Evaluations are written for all proposed projects on the Forest to disclose the effects of the project on sensitive species and that information is used in the decision making process. However, because the 1985 Forest Plan was developed before the sensitive species program was initiated, there is almost no direction on sensitive species in it.

In 1999 the six National Forests of Utah in conjunction with other land management and wildlife resource managers published a goshawk habitat assessment and recommendations for Utah (Graham et al, 1999), and an accompanying goshawk strategy and agreement (Utah National Forests, 1998). The Forest Service incorporated that strategy into formal management direction

by approving a state-wide Forest Plan amendment that applies to plans for all six Utah national forests.

Management Indicator Species (MIS). NFMA regulations direct National Forests to identify MIS, which are, "...selected because their population changes are believed to indicate the effects of management activities" (CFR 219.19 (a) (1). By monitoring and assessing habitat conditions of indicator species, managers can estimate effects on other species with similar habitat needs. MIS in the 1985 Forest Plan were selected because their habitat requirements encompass a diverse range of conditions. However, monitoring and management experience with MIS since the Plan was developed have indicated that some species may not be the best indicators for the habitats they are supposed to represent, or that the chosen techniques were so complex that monitoring was not done adequately with present Forest budgets.

Revision Topic 3 – Road Management/Trail/Access Management

Background

Road Management is an ongoing, often controversial aspect of Forest management on the Wasatch-Cache National Forest, in the Intermountain Region, and around the nation. Truly, few marks we leave on the land are as lasting as the roads that are built, yet roads are needed for access to the goods and services that Americans expect from their National Forests (USDA Forest Service 1998b).

The "Transportation Network" on the Wasatch-Cache National Forest is composed of private, municipal, county, state, federal, and Forest Service roads that either cross or provide access to National Forest System lands. Those roads that are: (a) under the jurisdiction of the Forest Service, (b) are needed to access National Forest System lands or adjoining private lands, and/or (c) are needed to provide mobility for management are considered "Forest Transportation System Facilities."

National Forest System Roads are not public roads in the same sense as roads that are under the jurisdiction of public road agencies, such as Utah Department of Transportation (UDOT) or the counties. National Forest System Roads are not intended to meet the transportation needs of the public at large. Instead, they are authorized only for the administration and utilization of National Forest System lands. Although generally open and available for use, that use is at the discretion of the Secretary of Agriculture. Through authorities delegated by the Secretary, the Forest Service may restrict or control use to meet specific management direction. Permittees, commercial users, or contractors also may be required to share in the cost of developing, improving, and maintaining National Forest System Roads.

The Forest Transportation Atlas contains "classified" National Forest System Roads, and "unclassified" roads. Unclassified roads are roads that have come into

existence as they were developed through use or in some cases through construction, but were never authorized to be part of nor are they a necessary component of the transportation system. In the past, these unclassified roads were termed "temporary," "pioneer," "ghost," and/or "two-track" roads. In 1993 we added these roads to our inventory primarily to assist in road management and so that their future decommissioning (eliminating) could be carried out in a planned manner.

Early in 1998 the Chief of the Forest Service proposed a major overhaul of the forest road policy and to develop a science-based forest transportation system that meets the needs of the public yet minimizes or reverses the environmental impacts often caused by roads. The final rule implementing a new policy was published in January 2001 (USDA, Forest Service, 2001c). Roads represent a long-term financial commitment because they must be maintained year after year. A new policy is aimed at providing managers tools to make better more informed decisions about where, when and if new roads should be constructed; to close or "decommission" old, unneeded roads as well as unauthorized ghost roads; to upgrade forest roads, as appropriate, to meet changing uses, local communities' access needs and growing recreation demands and to identify sustainable funding sources for maintaining the forest roads system.

Current Condition

Currently, the inventory contains about 1,500 miles of road, including both National Forest System Roads and unclassified roads. With road maintenance budgets not keeping pace with inflation and road deterioration and traffic volumes on the Forest road system dramatically increasing, many roads have not been maintained to the levels established in road management objectives. Since FY 2000, the Forest Service has received approximately 30% of the estimated funding needed to maintain the existing road infrastructure. Annual accomplishment reporting indicates that the Wasatch-Cache National Forest's road maintenance program achieved maintenance on approximately 23% of the transportation system.

To address the declining ability of the Forest to provide adequate maintenance and restoration work, physical closures to motor vehicles and road obliteration have been employed to an increasing degree. A number of these roads are user created roads. Since 1991 an average of 20 miles of road per year have been obliterated. This includes 90 miles of classified Forest Service Roads and 128 miles of unclassified roads on the Forest.

Since 1986 there have been 48 miles of road constructed and 214 miles of road reconstructed. These roads were necessary to address resource and access needs.

To begin implementing the new roads policy, a forest scale roads analysis was completed in 2002. It reviewed the benefits and environmental costs of the forest's higher standard roads. No road segments were initially identified for

potential decommissioning. Further analysis of forest roads of a lower standard needs to be completed.

Revision Topic 4 – Recreation Niche

> "the doctrine of the greatest good to the greatest number does not mean that this laudable relationship has to take place on every acre,"... "If it did, we would be forced to change our metropolitan art galleries into metropolitan bowling alleys... [I]t is preposterous to hold that the objective of outdoor recreation planning should be to enable the maximum number of people to enjoy every beautiful bit of the outdoors." Bob Marshall, 1937

Background

The Wasatch-Cache National Forest is an urban proximate forest located adjacent to the Wasatch Front. The Wasatch Front stretches approximately from Draper to Brigham City and includes the capital city of Salt Lake. The WCNF is one of six national forests in Utah. Additionally, there are over thirty national parks, monuments, recreation areas, Bureau of Land Management areas, and historic sites within the state that provide opportunities for outdoor recreation. The state of Utah manages another 25 parks as well as numerous historic sites. Fourteen ski resorts, located primarily along the Wasatch Front, provide numerous opportunities for winter recreation. County and city parks provide opportunities for outdoor recreation as well. Salt Lake County alone is responsible for managing 40 parks, two outdoor sports complexes, 13 recreation centers, ten swimming pools, and five golf courses.

The recreation resource is an inherent emphasis of the Wasatch-Cache National Forest. The Wasatch-Cache National Forest is unique in several aspects related to recreation. First, a portion of the Forest is literally the back yard for the Wasatch Front. People can drive 15 to 30 minutes and be at a trailhead, ski area, or developed recreation facility. This portion of the forest is heavily used, year round. It is most often used for short durations of time by residents of the urban centers (Salt Lake City and neighboring cities). Roads and trails provide relatively easy access to most portions of the forest along the Wasatch Front. Opportunities for outdoor recreation and scenery enjoyment are an important part of the quality of life here.

Secondly, the Forest provides the setting for a wide spectrum of recreation opportunities (from urban to primitive on the Recreation Opportunity Spectrum - ROS) within a hour or so drive of most population centers. Each of the Districts provides a different mix of settings depending on their biophysical and social context. Four of the ski resorts on the WCNF are a 20 minute drive up either Big or Little Cottonwood Canyon offering opportunities for skiing and winter sports where you can expect to see a lot of other people participating in the same activity. On the other end of the spectrum one can drive up the Mirror Lake

Scenic Byway and in about 90 minutes from Salt Lake City arrive at a trailhead that leads into the backcountry or designated Wilderness.

Finally, the Forest has some of the best snow and terrain available to offer world class winter sports opportunities (such as downhill and backcountry skiing, snowboarding, snowmobiling). Not only is the skiing great, but also there are numerous places along the Wasatch Mountains that provide skiing opportunities within a short distance of the urban areas. An international airport provides quick and easy access to Forest recreation opportunities.

Current Condition

Recreation use on the Wasatch-Cache National Forest (WCNF) has increased significantly over the past decade. Forest Service Recreation Information Management (RIM) was collected from the 1960s until 1996. An RVD is equal to one person participating in a recreational activity for 12 hours. Generally data collection was not done in a uniform rigorous way. Consequently, numbers of RVDs reported are suspect. As the Forest implements the new nationwide visitor use monitoring protocol, improved recreation use information will be available. While intrinsic numbers are not accurate, trend information generally may be correct.

According to the Recreation Information Management report (RIM) on the Salt Lake Ranger District alone, recreation use was estimated to have increased by approximately a million recreation visitor days (RVD's) from 1985 to 1997 (RIM 1985, 1997). RIM data reflected no RVDs reported for mountain biking use on the Forest in 1984 but over 95,000 RVDs in 1997.

The population of Utah is expected to grow by an additional 65% within the next 20 years, with most of the growth projected to occur in urban areas. As the population continues to grow, we anticipate the demand for outdoor recreation opportunities will increase at a similar or greater rate (USDA Forest Service 1995). As demand increases on the Wasatch-Cache National Forest, we expect the value placed on the type of recreation opportunities (skiing, hiking, camping) and the "quality" of experiences (enjoying nature, short lines on the ski lift, feeling safe, able to accommodate a large family picnic) will become ever more important. While "quality" is difficult to define and measure, it is very important to address because it is a key element in the difference between a satisfactory or unsatisfactory outdoor recreation experience. A "quality" recreation experience may be different for different people. Providing a diverse range of recreation opportunities is one means to maximize the ability for many different people to obtain a quality experience.

A portion of the recreation direction within the 1985 forest plan has been implemented to date. The 5-Year Monitoring Report (USDA Forest Service 1992) reviewed how well the plan objectives were being met and how closely standards and guidelines had been applied in plan implementation. This report

found "substantial discrepancy" in plan direction and the current condition at that time.

One of the primary discrepancies found in the report is that maintenance and operations standards at developed sites were not being met at plan direction of Condition Class I. Condition Class 1, means a satisfactory rating. It is the highest rating available and is defined as safe and sanitary facility with annual maintenance not exceeding 10% of the replacement cost (Forest Service Handbook, 2309.11). Additionally, plan objectives of increasing capacity levels by 30% (either by developing new facilities or renovating existing facilities to add additional sites or areas that accommodate more people) at developed sites by the year 2020 were not on track. The main reason for not reaching these objectives is that priority setting, through budget allocations, have not been adequate to meet forest plan direction. Since the time of the monitoring report many things have changed. One of the biggest changes is the use of concessionaires. Concessionaires are private businesses that operate and maintain developed recreation facilities for the Forest Service under special use permit. Approximately 98%, of the developed sites on the Forest, are now operated by concessionaires.

Additional trends that have been observed since the 1985 plan was approved include:

- Increased visitation with peak use periods during which demand cannot be met (e.g, campgrounds are full and we have to turn people away).
- Increases in "undeveloped" recreation where concentrated human use without adequate resource protection has resulted in vegetation loss, litter, human waste, etc.
- Increased emphasis on developing accessible recreation sites and opportunities that meet the needs of people with varying abilities.
- Trends and evolving technology in recreational equipment such as mountain bikes, OHV's, RV's, and personal watercraft).
- Changes in demographics and increased cultural diversity of our recreation users, especially along the urban Wasatch-Front.

Additional direction and policy have also come into effect since the 1985 forest plan was published. The Endangered Species Act has already made a difference in how we manage recreation in the Forest. In recent years, we have seen conflicts between people and the needs of threatened or endangered species. Special management has been initiated in Logan Canyon so that rock climbers do not impact the Maguire's Primrose, a threatened plant species. The Canada lynx has recently been listed as a threatened species. The winter habitat needs of lynx requires management of activities such as showshoeing, cross-country skiing, and snowmobiling. We also have gained a better understanding from new scientific research about the sensitivity of the natural environment. The ecosystem

management principle of humans as ecosystem components entails tailoring recreation uses to be compatible with other values and sustainable over time.

The land has a limited potential to provide recreation opportunities, within a desired experience and social setting. That potential varies, in actual numbers of people, depending on how those people interact with each other and with the environment.

Revision Topic 5 – Special Designations

Wild and Scenic Rivers

Background

The Wild and Scenic Rivers (WSR) Act of 1968 (P.L. 90-542) establishes objectives, goals, and procedures for Wild, Scenic, and Recreational River designation.

Agency policy related to the WSR Act in land management planning requires that rivers identified as potential WSRs be evaluated as to their **eligibility**, with the findings documented in the Forest Plan. An eligible river must be free-flowing and possess at least one feature that is judged to be outstandingly remarkable. Additionally, it is recommended, but not required, to complete the WSR **suitability** studies during the Forest Plan revision process. To be found suitable, the benefits of designating the river should outweigh the disadvantages. If a recommendation is deferred on those rivers identified as eligible where the Forest Service has primary responsibility, the Forest Plan must also provide interim management direction for protection of the outstanding features. Based on the surrounding features and current management, rivers are classified to be wild, scenic or recreational and managed accordingly. The final step, after the suitability study, is a recommendation to Congress for designation of suitable streams or stream segments as Wild, Scenic or Recreational.

Recognition of the distinction between eligibility and suitability is very important. "...eligibility is to be determined solely by hydrologic integrity and resource significance. Management is not a consideration in determining eligibility, but rather is to be considered during suitability analysis." (Parkin 1999).

Current Conditions

In 1993, the *Inventory of Rivers on the Wasatch-Cache National Forest Eligible for Inclusion in the National Wild and Scenic river System* found a 5.6 mile segment of the lower Stillwater Fork of the Bear River (the portion below the High Uintas Wilderness Boundary) eligible for the National Wild and Scenic Rivers system.

After the 1993 inventory, criteria changed and the Forest conducted a new inventory. A new draft *Inventory of Rivers on the Wasatch-Cache National*

Forest Eligible for Inclusion in the National Wild and Scenic Rivers System was issued for public comment in January 1999. The inventory included 82 rivers segmented into 96 sections (or segments) for analysis. All segments were subjected to a screening of values, then further scrutinized, for their free-flowing status. In August of 1999, 33 segments were found to possess at least one outstandingly remarkable value and to be free-flowing and were considered eligible for the National Wild and Scenic Rivers System. Rivers were then classified as wild, scenic or recreational.

The Forest determined suitability would be addressed in the future through the continuous analysis process. Until then, the free-flowing character and identified outstandingly remarkable values, eligible rivers will be protected.

Research Natural Areas

Background

The research natural areas (RNA's) on National Forests are protected for the purposes of maintaining biological diversity, conducting non-manipulative research and monitoring, and fostering education. RNA's help preserve the Nation's natural heritage for future generations. The protection afforded RNA's is a critical step in maintaining a range of biological diversity of native ecosystems and species. Because they are protected in a natural state, RNA's also provide valuable opportunities for monitoring of long-term ecological change, and comparison of the effects of resource management activities against unmanaged controls. Research Natural Areas (RNA's) are areas within National Forests that the Forest Service has designated to be permanently protected and maintained in natural condition.

Current Conditions

Under the 1985 Wasatch-Cache National Forest Land and Resource Management Plan three areas are managed as RNA's. The first two, Red Butte and Morris Creek, were established by the time the forest plan was signed in 1985; Mollens Hollow was established in 1988.

- Red Butte Canyon — near Salt Lake City — 5140 acres
- Morris Creek — adjacent to Farmington Canyon — 154 acres
- Mollens Hollow — within Blacksmith Fork watershed — 1100 acres

These three areas are managed to protect their research values as pristine examples of certain types of ecosystems. No uses are allowed that diminish the natural values of these lands. Potential uses, which are possible but limited on a permit basis, are research, baseline monitoring, or other similar non-destructive or non-manipulative activities.

In 1998 an analysis of Research Natural Area (RNA) needs was completed for National Forest Lands in Utah. These needs were defined as vegetation types that

occur on National Forest lands that are currently lacking in existing RNAs in Utah. A review of these vegetation types and potential RNA sites needs to be conducted.

Special Interest Areas and Special Areas

Background

Special Interest Areas are meant "to protect and, where appropriate, foster public use and enjoyment of areas with scenic, historical, geological, botanical, zoological, palentological, or other special characteristics. To classify areas that possess unusual recreation and scientific values so that these special values are available for public study, use, or enjoyment" (FSM 2360.2). These areas are designated by law, or may be designated administratively, as special interest areas. Areas so designated are managed to emphasize specific related values. Other uses are permitted in the areas to the extent that these uses are in harmony with the purpose for which the area was designated.

Special Areas are meant, "to protect and manage for public use and enjoyment, special recreation areas with scenic, geological, botanical, zoological, paleontological, archaeological, or other special characteristics or unique values." (FSM 2372.02).

The primary distinction between these designations, based on the above descriptions from the Forest Service Manual, is that Special Areas have recreation as an underlying value while Special Interest Areas protect and "where appropriate" foster use.

Current Conditions

Currently no Special Interest Areas or Special Areas have been established in the Wasatch-Cache National Forest. The possible appropriateness of applying these categories to certain key areas has been recognized. Six areas are identified: lower Logan Canyon, lower Red Butte canyon (within existing RNA), Willard Basin, W. C. Daniels School Forest, Ben Lomand Peak, and portions of the tri-canyon Area of Salt Lake Ranger District.

Revision Topic 6 – Roadless Areas/Wilderness Recommendations

Background

"Roadless Areas" refer to areas that are without constructed and maintained roads, and that are substantially natural. Some types of improvements and past activities are acceptable to be included in roadless areas.

NFMA regulations direct that, ``Unless otherwise provided by law, roadless areas within the National Forest System shall be evaluated and considered for recommendation as potential wilderness areas during the forest planning process."

The 1984 Utah Wilderness Act also requires that a roadless evaluation be completed during Forest Plan Revision.

In the past, roadless areas were only looked at for their potential for wilderness recommendation. It is now recognized that roadless areas have significant ecological, as well as social values. The values of roadless are of both local and national significance. Roadless areas are often aquatic strongholds for fish; provide critical habitat and migration routes for many wildlife species especially those requiring large home ranges and key watershed areas for communities and wildlife. The recognition of the values of roadless areas is increasing, as the population continues to grow and as the demand for outdoor recreation and other uses of the forests increases. These unroaded and undeveloped areas provide the Forest with opportunities for potential wilderness areas, non-motorized and limited motorized recreation, and other commodity and amenity uses. The 1985 Plan does not include any specific recognition of the values of roadless nor does it provide any management direction for roadless areas.

The Roadless Area Conservation Final Rule (RACR, January 12, 2001) established prohibitions on road construction, road reconstruction, and timber harvesting in inventoried roadless areas on National Forest System lands. Its intent is to provide lasting protection for inventoried roadless areas within the National Forest System in the context of multiple-use management. Long-term management and protection of roadless areas as directed by Forest Service Manual Interim Directives 1920-2001-1, 2400-2001-3, and 7710-2001-2,3 needs to be addressed in the Forest Plan revision while court and administrative proceedings regarding the RACR are completed.

Current Condition

The previous roadless inventory was completed in 1983 and identified 22 roadless areas totaling 746,431 acres. A portion of six of these areas (High Uintas, Mount Naomi, Wellsville Mountains, Mount Olympus, Twin Peaks and Deseret Peak) became wilderness when in 1984 the Utah Wilderness Act was enacted. When this forest plan revision effort was begun a new and updated inventory was needed to address ongoing roadless area management issues and to meet the requirements of the NFMA regulations and the Utah Wilderness Act of 1984. Each undeveloped area on the Forest identified during the inventory contains 5,000 acres or more or was adjacent to an existing wilderness area.

Because different criteria were used for the 1999 inventory than those used in 1983, ten additional areas were identified as roadless, and other areas were combined or split apart.

Based on the 1999 inventory there are 34 roadless areas on the Wasatch-Cache National Forest, totaling approximately 606,400 acres. This represents almost half of Wasatch–Cache National Forest. The Mount Naomi, Swan Creek and Gibson roadless areas are shared with the Caribou National Forest. Nobletts and White

Pine roadless areas are shared with the Uinta National Forest. Widdop Mountain roadless is shared with the Ashley National Forest. The High Uintas roadless is shared with both the Ashley and Uinta National Forests. The Stansbury roadless area is contiguous with the North Stansbury and Big Hollow BLM Wilderness study areas. Most roadless acreage on the Forest is within Utah, except for 652 acres of the High Uintas roadless area is in Wyoming.

Revision Topic 7 – Suitable Timberlands

Background

The National Forest Management Act and its implementing regulations require identification of areas suitable and available for timber harvest and determination of the Allowable Sale Quantity (ASQ) from those lands, and the certification of reforesting those lands within five years following harvest.

Suitable lands include forested lands outside of withdrawn areas (such as designated Wilderness) where reforestation can be assured and timber management activities can take place without causing irreversible resource damage to soils productivity or watershed conditions. Regulations require that lands identified as not suited for timber production be examined at least every 10 years to determine if they have become suited (36 CFR 219.12(k)(4)(ii)).

The Forest Plan revision process provides an opportunity to reassess the lands deemed suitable for timber management to account for changes in land status and uses that have occurred in the past decade. Changes may result from land exchanges and acquisitions, as well as laws, regulations and agreements that affect the uses of forested lands. Current technology, such as Geographic Information Systems (GIS) data, was not available during the 1985 Forest Plan development. The 1992 Monitoring Plan found adjustments need to be made in the suitability decisions due to operability and other concerns.

In addition the 1992 Monitoring Report (USFS, 1992) identified several areas that needed to be addressed during plan revision, including timber availability assumptions, technical feasibility and implementation assumptions, and integrated resource analysis procedures.

Current Condition

Since the 1985 Forest Plan, land exchanges have resulted in both the loss and addition of forested land. Exchanges involving the State of Utah as well as private landowners have occurred on both the Ogden and Logan Districts. These lands needed to be evaluated for their suitability for timber management. Also, site-specific project analyses have resulted in decisions that required changes to the suitable lands and ASQ. An example of the latter is a 3,000 acre wildlife corridor in the East Fork Smiths drainage on the North Slope resulting from the 1992 Record of Decision for the Westside EIS. Table 1 displays the timber volume offered and sold since the 1985 Forest Plan was signed. Units are million board feet (MMBF) and thousand cubic feet (MCF).

Table 1. Timber volume offered and sold since the inception of the Wasatch-Cache Forest Plan in 1985.

Fiscal Year	Offered (MMBF)	Sold (MMBF)
1987	13.9	12.9
1988	11.8	11.5
1988	12.4	12.4
1989	14.2	14.0
1990	8.6	8.6
1991	10.0	10.0
1992	10.0	10.0
1993	10.0	10.0
1994	5.5	4.6
1995	2.4	1.8
1996	6.6	1.7
1997	5.4	7.5[1]
1998	5.7	7.6[1]
1999	3.1	5.0[1]
2000	4.7	4.7

[1] Sold volume totals that exceed the offered volume reflect sales receiving no bid in prior years that subsequently were reoffered and sold in the current year.

There are several reasons sales may receive no bids at the initial offering, including market conditions and sale characteristics such as species, minimum bid price, timing restrictions, etc. All sales that received no bids have been re-offered and subsequently sold. Demand for timber is not a limiting factor in the timber program on the Wasatch-Cache.

Timber Demand Projections. Quantifying the demand for Wasatch-Cache National Forest timber is difficult, because local mills are no longer the exclusive processors of timber from the Forest. Purchasers are spread over a wide geographical area and none of them are totally dependent upon Wasatch-Cache National Forest timber for their supply. Mills located in Mountain View and Evanston, Wyoming, Kamas, Utah, and Ovid, Idaho have a combined annual demand of approximately 20 million board feet (mmbf). These mills are all small business concerns as defined by the Small Business Administration (SBA) and therefore qualify for SBA set-aside sales. Louisiana-Pacific, a large business, operates a sawmill in Saratoga, Wyoming and purchases sales from the Forest.

The Wyoming Timber Market Analysis (Rideout and Hesseln, 2000) described the mill capacity and supply sources for Wyoming mills. The primary Wyoming purchasers of Wasatch-Cache National Forest timber sales between 1994 and 1998 were Ayres and Baker in Mountain View and Louisiana-Pacific in Saratoga. Ayres and Baker processes 3-8 mmbf annually, with 80% coming from National Forest lands (primarily Ashley and Wasatch-Cache). Louisiana-Pacific processes

53 mmbf, with 50% coming from several National Forests. South and Jones Lumber Company in Evanston uses approximately 6 mmbf, all of which currently is procured from private sources. In addition to the local timber producers, mills in Belgrade, Montana and Montrose, Colorado also purchase timber offered on the Wasatch-Cache. These mills have a combined capacity of more than 50 mmbf annually, and purchase timber from State and private lands as well as the National Forests in their local area.

Demand for personal use fuelwood has declined significantly since the Forest Plan was implemented in 1985. At the peak demand, the Wasatch-Cache sold approximately 1-2 mmbf of fuelwood annually. This has dropped to about 250 thousand board feet (mbf) in the last two to three years. The drop in sales is related to several factors, including an awareness on the part of the public of the actual cost of cutting and hauling firewood, air quality regulations that limit wood burning in urban areas, and a reduced availability of standing dead trees that are located where they can be easily reached by firewood cutters.

Suitable Acres - The assessment of "suitable" timberlands identifies "tentatively suited" lands (available forest lands that are physically suited for timber management) and "suitable" timberlands (that portion of the tentatively suited lands considered suitable for timber management under a given alternative). Suitable lands may be thought of as those lands where timber growth and yield is a primary objective of management, and where timber harvest is a primary tool to achieve the desired future condition.

The 1985 Forest Plan identified 166,000 acres of suited lands, much of it located within inventoried roadless areas.

Revision Topic 8 – Rangeland Capability and Suitability

Background

Regulations for implementing the National Forest Management Act (NFMA) found at 36 CFR 219.22 state “the suitability and potential capability of National Forest System lands for producing forage for grazing animals and for providing habitat for management indicator species shall be determined.”

Rangelands are those areas typically dominated by shrublands, herbaceous vegetation (grasslands and forb communities), and those forest lands that continually or periodically, support an understory of herbaceous or shrubby vegetation that provides forage for grazing or browsing animals (e.g. aspen or some pinyon-juniper communities). In addition to providing forage, rangelands provide habitat for a large variety of wildlife.
Rangeland capability, as defined by the Forest Service, represents the physical attributes or characteristics of the landscape that are conducive to livestock grazing. Suitability is defined as those capable National Forest System lands that are allocated to grazing use based on decisions related to social, economic, or

environmental choices and uses foregone. These definitions vary from those used in the 1985 Forest Plan. In past planning activities, capability was equated with the term suitability.

In 1996, an Environmental Impact Statement for a Wasatch-Cache National Forest Rangeland Health Forest Plan Amendment (USDA Forest Service, 1996) was completed. The purpose of this amendment was to provide enhanced "programmatic" (i.e. Forest Plan level) direction for rangelands, establishing a general framework for future project level decisions on rangeland settings. Furthermore, the purpose was to determine the desired future condition of the rangeland resource and the standards and guidelines necessary to maintain healthy rangeland and riparian ecosystems and watershed condition and meet goals and objectives of the Forest Plan.

Current Condition

The 1985 Forest Plan identified 125 grazing allotments encompassing 934,767 acres. There are currently 98 open allotments (approximately 162 permits) on the Forest covering approximately 816,852 acres, or 67 percent, of the National Forest Lands. The number of permitted animal unit months (AUMs) grazed on the Forest has declined from nearly 300,000 at the turn of the last century to less than 87,000 today.

The Wasatch-Cache National Forest contains about 1,240,000 acres of National Forest System lands. An estimated *30* percent of those lands are capable for grazing. For comparison purposes, the 1985 Forest Plan estimated capable acres at about 36% of 934,767 acres of Forest System lands. It calculated only areas within allotment boundaries and was not applied to all rangelands across the Forest.
Rangeland condition and trend is reported annually by Allotment. Where actual monitoring data is not available, condition and trend are estimated. Table 2 shows a summary of range conditions and trends, for years 1993 and 1999, of riparian and upland rangelands with Forest Plan management objectives.

Table 2. Rangeland Condition and Trend

Setting	Status in Relation to Forest Plan Objectives	1993 Acres	1999 Acres
Riparian	*Undetermined* Condition	4,952	5,254
	Estimated Meeting	18,014	18,014
	Verified Meeting	488	748
	Estimated Moving Toward	1,355	977
	Verified Moving Toward	30	140
	Estimated Not Meeting	1,723	1,296
	Verified Not Meeting	150	120

Setting	Status in Relation to Forest Plan Objectives	1993 Acres	1999 Acres
	Total Acres w/ Management Objectives	21,760	21,295
Uplands	*Undetermined* Condition	232,421	109,317
	Estimated Meeting	150,827	337,931
	Verified Meeting	961	1011
	Estimated Moving Toward	28,176	37,778
	Verified Moving Toward	27,499	27,499
	Estimated Not Meeting	13,526	11,076
	Verified Not Meeting	400	400
	Total Acres w/ Management Objectives	221,389	415,695

Source: Forest Service RAMIS *and INFRA* databases

Revision Topic 9 – Oil and Gas Leasing

Background

The 1985 Forest Plan was approved prior to the passage of the Federal Onshore Oil and Gas Reform Act of 1987. This Act changed the role of the Forest Service in the leasing process and required additional analysis to determine which lands are available for oil and gas leasing and under what conditions. Because of this, leasing direction in the 1985 Forest Plan is no longer valid. The Forest Plan was amended in 1994 to allow leasing on a portion of the north slope of the Uinta Mountains. The remaining portion of the Uinta Mountains excluded from the 1994 decision (about 68,300 acres) has also been identified as having a high potential for oil and gas reserves being present. The oil and gas industry has expressed interest in exploring the area. There is a need to make the leasing decision for the remaining portion.

Current Condition

Since the discovery of oil and gas in the 1960s southwestern Wyoming and north central Utah has been an area of petroleum exploration and development. The two counties within this area that include Wasatch-Cache lands are Summit County, Utah and Uinta County, Wyoming. There are 19 active wells on the Wasatch-Cache National Forest. The Bridger Lake field was the first petroleum showcase in the nation. First established in 1990, it represents a cooperative venture between the Forest Service and petroleum industry to develop the nation's energy while maintaining its environmental integrity (Petroleum Showcase brochure, 1990).

A large portion of the north slope of the Uinta Mountains is currently under lease. Within the proclaimed boundary about 43,900 acres of federal minerals in Utah and 19,800 acres of federal minerals in Wyoming are currently leased.

Revision Topic 10 – Fire Management

Background

In the past 6 years, fire management has become one of the more publicly visible activities on the National Forests. In the past 15 years, we've grown to understand fire's role in shaping our ecosystems and the problems inherent in excluding fires from the landscape. The 1985 Forest Plan did not address fire as an integral part of healthy ecosystems or the need to manage fuels to reduce the risk of uncharacteristic, high-intensity wildland fire, especially in the urban-wildland interface.

There is a need to update fire management direction on the WCNF to meet substantial changes in National fire management direction. The National Fire Plan (NFP) was developed in the fall of 2000 in response to the 2000 fire season – one of the most active on record. The NFP provides guidance and direction for firefighting, restoration and rehabilitation of burned lands, hazardous fuels reduction, and community assistance. The Forest Service also issued a strategy for fuels treatment priorities for federal lands, "Restoring Fire-Adapted Ecosystems on Federal Lands: A Cohesive Strategy for Protecting People and Sustaining Natural Resources" (2001). To guide cooperative approaches for fuel treatment and hazard mitigation on federal and private land, the western governors and public land managers endorsed "A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment, 10-Year Comprehensive Strategy" (2001) and Implementation Plan (2002).

Current condition

In the last ten years there has been a tremendous increase in the development and population adjacent to the Wasatch-Cache and Uinta National Forest boundary along the Wasatch Front. Soaring populations coupled with the increased use of national forest land has increased the risk and frequency of fire. Compounding the situation is the presence of vegetative communities with uncharacteristically high fuel loading. This situation can support severe fires which can result in significant impacts to properties and natural resources

Given this situation and the current national emphasis on reducing fuels in the wildland-urban interface, the WCNF, in conjunction with the Uinta NF, recently completed the Wasatch Front Fuels Assessment Report (USDA Forest Service 2002). The Assessment analyzed the fuel situation and reduction opportunities on over 400,000 acres along the Wasatch Front. About half of the assessment area was classified as a medium/high, high, or very high fuel hazard. The oakbrush/shrub cover class dominates this area on the Wasatch-Cache.

Several areas along the Front were identified as having higher opportunities and needs for treatment. These areas include the cities and towns of North Ogden, Ogden, South Ogden, Bountiful, North Salt Lake, Sandy and Draper. Portions of the some of the canyons, specifically Parley's Ogden, Little Cottonwood were

also labeled high treatment opportunity. Emigration Canyon in particular had the most classified as the highest treatment opportunity.

Fire Regime and Condition Class. The ecosystems of the WCNF fall within a variety of fire regimes. The term fire regime is used to describe the role fire plays in an ecosystem. It considers fire frequency, seasonality, intensity, duration, and scale, as well as regularity or variability.

Table 3. Fire Regime Definitions

Fire Regime Group	Frequency (Fire Return Interval)	Severity
I	0 – 35 Years	Low Severity
II	0 – 35 Years	Stand replacement severity
III	35 – 100+ Years	Mixed severity
IV	35 – 100+ Years	Stand replacement severity
V	>200 Years	Stand replacement severity

Condition classes are defined by the degree of departure from historical fire regimes resulting in alterations of key ecosystem components such as species composition, structural stage, stand age, and canopy closure. Class 1 describes a vegetation type where the disturbance regime is largely intact and functioning. Condition Class 2 describes a vegetation type where there moderate alterations to the historic disturbance are clearly evident, such as one or more missed fire return intervals. Condition Class 3 describes a vegetation type where the disturbance regime has been significantly altered. The following table describes and categorizes the fire regime and condition class of vegetation types that comprise 5% or more land cover on the WCNF.
Currently there are no vegetation types considered to be in Condition Class 1.

Table 4. Vegetation on the WCNF by Fire Regime and Condition Class

Vegetation Type	Acres	% of Forest	Fire Regime	Condition Class
Aspen, Aspen-Conifer, Conifer-Aspen	205,600	17%	II, III, IV	3
Sagebrush	189,600	15%	II	2, 3
Engelmann Spruce and Subalpine Fir	153,400	12%	V	2
Mixed Conifer	151,700	12%	III, V	2
Barren Land	101,500	8%	n/a	n/a
Oakbrush-Maple	90,800	7%	II	2, 3
Douglas-fir	87,500	7%	I, III	3
Pinyon and Juniper	79,000	6%	II, V	3
Lodgepole Pine	61,300	5%	IV, V	2

The largest fire recorded since 1970 burned 14,200 acres in June of 2002 named the East Fork Fire near Bear River, Utah. According to the fire *statistics*, the number of large fires appears to be increasing -- 90% of the fires >100 acres have occurred since 1980. Fire seasons of 2000, 2001 and 2002 were some of the busiest on the WCNF in terms of number of fires and total acres burned.

The use of prescribed fire on the WCNF has been very limited in the past. For the past three years, the WCNF has prescribed burned approximately 1,250 acres per year, primarily in aspen stands.

Strengthening Current Management Direction

This section describes changes that are needed to clarify current management direction or to create direction that supports and is consistent with Forest Service or other national direction. Since the 1985 land management plan was signed, most areas of resource management and administration have had new Forest Service policy or regulatory direction created, or management techniques and scientific information may have been developed that need incorporation in our land management planning. Major revision topics were addressed earlier in this document. This section describes changes that are needed to clarify, update, or enhance current management direction for topics which were not considered by the Wasatch-Cache National Forest as its most pressing needs for change, but for which some updating of current direction is desirable.

Heritage Resources - The 1985 Wasatch-Cache Forest Plan's "Cultural Resources Program" focused primarily on compliance. In 1992 the agency changed to a "Heritage Program" that emphasizes a balance between protection of historic properties and public outreach for the enjoyment of American history. In addition specific direction that has been enacted since 1985 include:

- The 1992 and 1998 amendments to the National Historic Preservation Act that include (1) the development of educational and interpretive programs for public outreach and involvement (Section 110), (2) increased protection for historic properties on federal lands or lands where federal jurisdiction exists (Sections 106 and 301), and (3) consultation with appropriate Indian tribes for the management of traditional religious and cultural properties (Section 101).

- The Native American Graves Protection and Repatriation Act of 1990 and its 1995 implementing regulations require the Forest Service to consult with Indian tribes when Native American human remains and certain cultural objects are identified in the agency's archaeological collections or are discovered during the course of federal actions.

- The 1996 Executive Order #13007 requires federal agencies to protect and make accessible Indian sacred sites on public lands for Indian religious practitioners. This includes consultation with Indian tribes for the identification of sacred sites, and for when federal actions or policies may restrict access to or use of a ceremonial site, or may adversely affect the physical integrity of the site.

Landownership Changes - The 1985 Wasatch-Cache Forest Plan includes several general goals for land ownership adjustments: to consolidate lands, ensure public access, and better manage forest resources. Very specific objectives were developed in the 1985 Plan by which some of these goals might be attained. Most of these objectives are no longer valid (having been accomplished, or in some cases having become outdated). Some policy changes due to new ecosystem management priorities (acquisition of lands for species or habitat protection) are needed to update the 1985 plan.

Recreation and Non-Recreation Special Use Authorities - The Wasatch-Cache National Forest receives numerous proposals each year from individuals, corporations, and other organizations that are interested in conducting activities on the Forest. There are usually a wide range of proposals for outdoor recreation outfitter-guides, recreation residences, filmings, special event operators, energy and pipeline transmission, and electronic communication sites. Some of these proposals (e.g. transmission corridors and electronic communication sites) may permanently affect substantial portions of the Forest, and may be dealt with through allocation by management prescription category where such uses are suitable. Other proposals are for short term, low-impact activities. A means of strengthening this direction may be through the development of systematic criteria for assessing the appropriateness of proposals for some special use types in particular management areas.

In 1998, the 36 CFR 251 special use policy was revised to include new, streamlined, special use proposal review procedures. Screening criteria were established. All special use proposals will be reviewed in accordance with a two-level “screening” process before they are accepted as special use proposals and evaluated pursuant to NEPA. Additional criteria for determining where and when special uses are appropriate may be developed and incorporated into management area direction when needed to address issues or meet desired conditions.

Scenery Management System - The 1985 Forest Plan includes forest-wide standards and guidelines that were developed under the Visual Management System, 1974. This system relied on "natural landscape" as the reference point for establishing an aesthetic value for the accepted degree of alteration of a landscape. The degree of alteration was measured in terms of visual contrast with the surrounding natural landscape. In 1995, the Forest Service adopted the Scenery Management System (SMS). This system provides a framework for the systematic inventory, analysis and management of the scenery resource. SMS incorporates terms and concepts of Ecosystem Management and improves the ability to integrate aesthetics with other resource values. A key component of SMS is incorporating public values and human influences when developing a description of the character of a landscape and its perceived integrity. The new system recognizes human influences on the landscape and moves toward developing a "sense of place" by incorporating positive cultural influences and values as part of the landscape character. Accurate descriptions of the positive

attributes of both cultural and biological landscapes create a baseline landscape character or landscape character themes. Implementation of SMS requires new management direction.

Chapter Two

Summary of the AMS

Bristlecone Pine in the Bear River Range

CHAPTER 3

Response to Issues

Issue Identification and Forest Plan Response

The Revision Team identified the following set of issues after a review of the many letters that responded to the September 1999 Proposed Action for the forest plan revision as well as compilation of work completed at numerous public workshops in November and December of 1999. Over 800 comments from approximately 250 letters touched on every aspect of forest management. Narrowing the scope of the issues to those significant to this forest plan was a primary task of the team and forest leadership.

Following each significant issue is a statement that describes how the forest plan responds to the issue. During the forest planning process seven alternatives were developed which varied the response to the issues. The forest plan selected Alternative 7 as the most appropriate response to the each issue.

Significant Issues

Issue 1 – Recreation Use Conflicts/Access Management

How should increasing conflicts between and among users of motorized/mechanized vehicles (ATV's, snowmobiles, helicopters for skiing, and mountain bikes) and non-motorized recreation be addressed? How much and where is access appropriate for each of these groups? What user densities should we manage for in the future and where?

Note: TRAVEL MANAGEMENT PLANS provide the most up-to-date direction for specific travel routes open to various types of travel. <u>Forest plan revision did not address specific route changes.</u> However, winter motorized use (generally for areas rather than routes) is addressed in the forest plan. Criteria to guide future travel management planning is also included in the revised forest plan.

Response to Issue 1

Alternative 7 addresses the issue of **recreation use conflicts and access management** <u>in winter</u> by providing for winter motorized use consistent with growing demand and the nature of the activity (i.e. large distances can be covered), while identifying selected areas for separation of non-motorized winter

opportunities. Portions of big game winter ranges, specific areas for cross-country skiing, some areas recommended for wilderness, and some areas where a boundary is impractical to manage are identified and mapped as non-motorized. Winter motorized use where it exists now (Lakes and portions of High Uintas roadless areas) *is allowed* within areas recommended for wilderness as interim management until such time that Congress acts on wilderness designation. Heli-skiing continues to be allowed in currently permitted terrain.

Opportunities for summer motorized recreation are provided on routes designated as open in current Travel Maps. Some areas with potential routes not currently open on travel maps for Ogden and Logan Ranger Districts are identified for potential future motorized trail development (See Revised Forest Plan, Chapter 4.B. Management Area Direction- Desired Future Conditions). Also the concept of the Shoshone Trail System is emphasized connecting existing motorized routes on National Forest, Bureau of Land Management, and State lands to provide extended riding opportunities between communities while providing an alternative to the unauthorized trails in sensitive watersheds along the Wasatch Front. Primitive and semiprimitive recreation opportunity classes (both motorized and nonmotorized) apply defined ranges of user densities to allow for monitoring of use patterns. Upon approaching thresholds, this Alternative proposes public notification and evaluation of whether to initiate management actions (potential permit system) to maintain user densities. Other opportunity classes are managed to allow for increases in demand by more intensive measures such as site hardening and management of concentrated use sites.

Special emphasis on education and enforcement is proposed through an objective in the Revised Forest Plan in response to public comments. Off Highway Vehicle use, watershed health, and user ethics are identified as key focus areas for education and enforcement.

Issue 2 – Roadless Areas Management

How much and where should additional acreage be recommended for wilderness designation? How much, where, and how should inventoried roadless areas be protected from development? How much and where should inventoried roadless areas be available for which types of development and uses?

Response to Issue 2

Alternative 7 addresses the issue of **roadless area management** by applying evaluation of individual roadless area values (FEIS Appendix C2) and resource capabilities/conditions to mapping of management prescriptions that either maintain or mostly maintain undeveloped character (75% of roadless acres) or allow varying types and degrees of development for specific purposes consistent with the prescription emphasis (25% of roadless acres). Road construction and reconstruction are not allowed in most roadless areas, nor is cutting, sale, and removal of timber. In most of these areas, prescribed and wildland fire use will

be the primary approach to returning vegetation to properly functioning conditions. Timber harvest and road construction are allowed in portions of some roadless areas for purposes of improving habitat for terrestrial wildlife (prescription 3.2D) and to maintain or restore ecosystem composition and structure and/or reduce the risk of uncharacteristic wildfire effects (prescription 5.1), and for purposes of timber production (prescription 5.2). About 73,300 acres or 12% of inventoried roadless areas are recommended for Wilderness designation because of their high quality wilderness characteristics and minimal conflicts with other uses. In this Alternative, unlike the others, the recommended wilderness prescription (1.5) allows prescribed fire and continuation of existing snowmobiling.

Issue 3 – Biodiversity and Species Viability

What are the key factors to emphasize and what is the proper balance of management and land use activities that can maintain biodiversity on the forest? Which areas need what kind of management direction to ensure overall biodiversity as well as viability of species?

Response to Issue 3

Alternative 7 addresses the issue of **biodiversity and species viability (including watershed functions)** by emphasizing factors known to contribute to conservation biology with a combined approach of active human intervention in some areas and minimal intervention in others by taking actions as follows:

a. Identifying current, or managing to create, a system of areas representing all native ecological units and seral stages across their historic range of variation.

b. All known wildlife corridors managed to maintain function of corridor (regionally significant Bear River and currently designated western portion of East Fork Smiths Fork Uinta Mountains).

c. Manage and/or restore rangelands and manage livestock grazing (through the new Guideline for lower allowed forage utilization (30-40% rather than 50%) on lands in unsatisfactory condition, improved emphasis on permit administration, refined annual operating instructions, and Allotment Management Plan revisions) to restore proper functioning of watersheds, riparian areas, and lands in unsatisfactory condition. Closes vacant allotments (Clegg, Hardscrabble, Mill Canyon, Shingle Mill, and Wright) in the Salt Lake County and Davis County watersheds. Other vacant allotments are left open pending future site-specific analysis. However, given recent funding levels, stocking of vacant allotments is unlikely.

d. Active vegetation management practices such as suppression of fire for protection of life and property, timber harvest, thinning, mechanical treatment of fuels, and/or seeding with native species are applied to already developed areas and about 25 percent of inventoried roadless area acres, mimicking natural disturbance processes including insects and disease where possible; while practices including prescribed fire, and wildland fire use are emphasized in most

(75%) undeveloped lands to move landscapes within the historic range of variability to the degree that this is compatible with other objectives.
e. Maintain most (71%) high value inventoried roadless areas as undeveloped.
f. Road decommissioning is pursued consistent with Travel Maps and priority based on roads analysis is placed on improving water quality, fish habitat, and watershed functions and reduction of habitat fragmentation.
g. Take aggressive actions to greatly reduce noxious weeds.
h. Maintain or restore connectivity of forested lands.
i. Discourage introductions of non-native species, especially in wilderness.
j. Monitor management indicator species and their habitats to validate assumptions about habitat relationships.
k. Protect and/or restore special habitats (7 grazing allotments in the Uinta Mountains would be closed if permits are voluntarily waived without preference, to provide for bighorn sheep habitat; establish baselines of groomed or designated open over the snow routes or play areas within lynx analysis units in the Uinta Mountians).
l. Add portions of the Burro Peaks, Thompson Peak and West Beaver Allotments to the adjacent, lower allotments, but maintains existing AUMs on those allotments.
m. Encourage restoration of native cutthroat trout to key drainages (Hayden Fork, Whitney, Temple Fork, Beaver Creek, Causey, South Fork Weber).
n. Maintenance of existing Research Natural Areas (Mollens Hollow, Morris Creek, and Red Butte) except for realignment of the lower portion of Red Butte to create a Special Interest Area allowing restoration research; include additional acreage with current Morris Creek RNA.
o. Designate special interest areas in Willard Basin, and lower Logan Canyon for botanical values, and the T.W. Daniels Experimental Forest for scientific and educational purposes.

Issue 4 – Concerns About Continued Economic Contributions and Personal/Social Benefits of the Forest

What will be the effects on traditional and current economic outputs and social benefits of the forest? These include forage for livestock, timber for harvest, production of oil and gas, recreation related services and all of the accompanying "quality of life/lifestyle" benefits obtained from the forest? Where and how much of these outputs and benefits can be expected in the future?

Response to Issue 4

Alternative 7 addresses the issue of concerns about **economic contributions and social benefits of the Forest** through using opportunities for economic benefit from active vegetation management on lands capable and tentatively suitable (primarily areas mapped as 5.2 and 5.1), while mitigating for maintenance of biodiversity, species viability, and watershed health. Recreation opportunities are emphasized for their value both to local economies and to quality of life for both urban and rural communities. Values for water quality, air quality, natural

ecological functions, and perpetuation of species, as well as administrative and environmental costs of commodity outputs are recognized and included for maximizing net public benefit.

Some forested lands are identified as suitable and mapped with prescription 5.2 for emphasis on timber production. Other tentatively suited lands are available for timber harvest including salvage where that activity can be mitigated to meet habitat objectives and/or to mimic natural disturbance processes. Timber harvest is also allowed where it can be used to reduce hazardous fuels, improve aquatic or terrestrial habitat, long-term scenic or recreation site values, and/or for watershed improvement. Livestock grazing is managed on suitable rangelands to meet standards and guidelines associated with habitat and watershed needs. A lower forage utilization allowance (30-40% instead of 50%) is applied to lands in unsatisfactory condition. Allotments with substantial areas in unsatisfactory condition are highest priority for improved grazing administration. Where movement of livestock or other structural means does not accomplish satisfactory conditions (based on monitoring of key areas), or are not economically feasible, livestock grazing will be removed through grazing permit action until satisfactory conditions are achieved. Some vacant allotments are left vacant pending site-specific analysis. However, given experienced budget levels and priority of other, active allotments it is expected that most vacant allotments will remain vacant during the planning period. Within the Appeal Settlement Zone of the Uinta Mountains 47,900 acres are available for oil and gas leasing. Of those, 27,000 acres allow surface occupancy while 20,900 do not allow surface occupancy. About 20,400 acres in this Zone are unavailable. Recreation related opportunities for economic benefits are tied to the ROS classes. Although ski area boundary expansions are not allowed nor are new ski areas, world class skiing will continue. In general, outputs are expected to be slightly less than recent years and are dependent on the degree to which projects for improvement of terrestrial or aquatic habitat yield commercially viable opportunities.

Issue 5 – Environmental, Social, and Economic Impacts of Uses

How will we ensure that impacts of uses to watershed conditions, terrestrial, riparian and aquatic wildlife and fish habitats, recreation settings and scenery, and local quality of life are kept within acceptable limits? Uses include livestock grazing, timber harvest, recreation, oil & gas development, and road and trail management.

Response to Issue 5

The Forest Plan addresses the potential impacts from uses by closing vacant grazing allotments within Davis and Salt Lake County watersheds and lowering the forage utilization allowance in areas of unsatisfactory condition. It reduces potential timber harvest to sustainable levels. Relatively few acres have prescriptions emphasizing timber production (MPC5.2). Timber harvest on lands with other prescriptions must be designed to meet the intent of those

prescriptions. Lands available for oil and gas leasing are leased with timing restrictions or surface constraint stipulations to protect other resources. It provides direction for future recreation use in heavily used riparian areas.

Socially, any change to the make-up of communities or social patterns as a result of implementing Alternative 7 would be very minor. In some cases, jobs and incomes related to one type of resource development may be forgone in order to emphasize or manage an area for another resource output; other types of jobs will be associated with this other management. The larger regional economy will not be significantly impacted.

Issue 6 – Appropriate Types and Amounts of Facility Development for Wildland Settings in the Forest

How much more recreation related facility development, where and of what types, should be allowed in the future?

Response to Issue 6

Alternative 7 addresses the issue of **appropriate types and amounts of facility development** by allowing some additional facility development primarily in roaded natural, and rural ROS classes. Replacement of current facilities that have unacceptable impacts to resources is emphasized along with site designation and access hardening in concentrated recreation use areas to prevent and/or mitigate impacts. Facility design and construction must include mitigation for maintenance of biodiversity, species viability and watershed health. Trail construction is allowed consistent with management prescriptions to provide a variety of opportunities, particularly in already developed areas. Emphasis is identified for completion of the Bonneville Shoreline and Great Western Trails and to connect the existing trail opportunities on National Forest (Ogden and Logan Ranger Districts) with trails on Bureau of Land Management, State and private lands using the concept of the Shoshone Trail System. Facilities at ski areas are consistent with Resort Natural Setting landscape character theme. The only change from existing conditions for recreation opportunity classes is within ski area permit boundaries where the designation changes from roaded natural to rural to focus growing recreation use where facilities are available.

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Chapter Three

Response to Issues, Concerns and Opportunities

Snowmobiler near Humpy Creek in the Uinta Mountains

Chapter Four

Forest Management Direction

Canoers near Causey Reservoir

CHAPTER 4

Forest Management Direction

Introduction

This Chapter forms the "core" of the Revised Forest Plan. The following Revised Forest Plan Sections: A. Forestwide Direction and B. Area Specific Direction were developed to implement **Alternative 7, the Selected Alternative** in the accompanying Final Environmental Impact Statement (FEIS) and Record of Decision (ROD).

The National Forest Management Act requires **management direction** for each National Forest. This "direction" is to be expressed through goals, objectives, standards, guidelines, management prescriptions, desired future conditions, and monitoring and evaluation requirements for the forest. Some direction logically can be applied to an entire national forest and may be expressed through narrative descriptions, while other direction should apply only to specific areas of the forest and may need expression through mapping. For this reason, both **maps** to show where direction applies **and descriptions** of that direction are key components of the Revised Forest Plan. All of these components together comprise management direction.

How to use this Chapter:

The best way to use the Revised Plan depends on what purpose you have in mind- whether initiating a specific project to move toward goals identified in the Plan; trying to get an idea of the types of activities that are allowed and where; or trying to see if a proposal from someone will be consistent with the direction in the Plan each would require a little different approach and starting point. The following outline shows the major subheadings contained in this Chapter.

Section A- Forestwide Direction applies to the entire Wasatch-Cache National Forest and includes:

1. Forestwide **Desired Future Conditions** (Narrative descriptions)
2. Forestwide **Goals and Subgoals** (List of goals by resource or activity)
3. Forestwide **Objectives** (Purpose and need statement with priority actions listed)

4. Forestwide **Standards and Guidelines** (Listed by resource or activity)
5. Management **Prescriptions** (Descriptions of Categories, Forestwide Map)
6. **Recreation Opportunities**
   6.a. Summer Recreation (Descriptions of Classes)
   6.b. Winter Recreation (Descriptions of Classes)
7. **Scenery Management** (Descriptions of Themes and Objectives)
8. **Monitoring and Evaluation** (Items to be monitored, evaluated)

Section B- Area Specific Direction applies to mapped areas and includes:

1. Forest **Management Area Map**
2. **Bear Management Area**,
   Maps (Prescriptions, Recreation Opportunities, Scenery Management, Transmission Corridors)
   Desired Future Condition Description
3. **Cache Box Elder Management Area**,
   Maps (Prescriptions, Recreation Opportunities, Scenery Management, Transmission Corridors)
   Desired Future Condition Description
4. **North Wasatch Ogden Valley Management Area**,
   Maps (Prescriptions, Recreation Opportunities, Scenery Management, Transmission Corridors)
   Desired Future Condition Description
5. **Central Wasatch Management Area**
   Maps (Prescriptions, Recreation Opportunities, Scenery Management, Transmission Corridors)
   Desired Future Condition Description
6. **Stansbury Management Area**,
   Maps (Prescriptions, Recreation Opportunities, Scenery Management, Transmission Corridors)
   Desired Future Condition Description
7. **Western Uintas Management Area**,
   Maps (Prescriptions, Recreation Opportunities, Scenery Management, Transmission Corridors, Oil and Gas Leasing)
   Desired Future Condition Description
8. **Eastern Uintas Management Area**,
   Maps (Prescriptions, Recreation Opportunities, Scenery Management, Transmission Corridors, Oil and Gas Leasing)
   Desired Future Condition Description

If you want to know what **conditions we are striving for in general across the forest**, the appropriate sections to review would be A.1.Forestwide Desired Future Conditions and A.2. Forestwide Goals and Subgoals. These are arranged by resource types and their uses such as watershed, recreation, wildlife, roads and trails, etc.

If you want to know what **conditions we are striving for in a particular place** within the Forest, you would first need to check B.1.Management Area Map (showing all 7 Management Areas across the Forest) and then go to the appropriate description of Desired Future Conditions for that Management Area named in Section B.2.-6.

If you want to know **what we want to achieve for a particular resource or activity**, such as watershed health, fire management, or recreation, the appropriate section to review would be A.2. Forestwide Goals and Subgoals.

If you want to know **where you can expect to enjoy winter motorized or non-motorized activities**, or where in your local area you could legally snowmobile, you would need to review Section A.6.b. Winter Recreation Classes and then go to the Management Area Winter Recreation Maps.

If you want to know **where timber harvest will be allowed**, you would need to first familiarize yourself with A.5. Management Prescriptions to see which of these allow this activitiy and then go to the Prescription Map to locate the areas where prescriptions allowing this activity occur.

If you want to know **what kinds of limitations would apply to a project or activity** you want to propose, you would need to review A.4. Standards and Guidelines first. Then if you already know where your proposal might be, locate it on Management Prescription Maps to see what Prescription will apply and then review the direction in A.5 for that Prescription. You would also want to review the Scenery Management for the area by reviewing the Management Area Scenery Map and the descriptions in A.7.

If you want to know **what kinds of priority actions the Forest Service has identified** to address key issues that surfaced during Plan revision you would need to review A.3. Objectives to see the major areas of focus and the timeframes expected to address these.

If you want to know **what we will monitor and report to determine progress toward goals** you would need to review A.8 Monitoring and Evaluation to see the areas of focus, how they will be measured, and when reporting is planned.

These are just a few examples of how the Plan is to be used. Once you are familiar with some of the broad direction such as prescriptions and the organization of maps and descriptions it will become much easier to move quickly to the information you need.

Forest-wide Desired Future Conditions

Smithfork Pass, Mountain View Ranger District

A. Forestwide Direction

Desired Future Condition (DFC) is described for both Forestwide and specific Management Areas (Section B, this Chapter). DFC is defined[1] as an integrated visualization of what the forest or management area should look like in the future. The Desired Future Condition is the integrator of goals; therefore, goals are not mutually exclusive, but all can be accomplished to varying degrees in any given project or area.

1. Forestwide Desired Future Conditions

Air Quality and Smoke Management

Desired Condition

Smoke emissions from prescribed and wildland fires often mimic the historical frequency and for a number of resources and uses distribution for the various vegetation types across the Forest. Resulting ambient air quality and visibility values across the Forest are within federal and state standards for particulate matter and visibility.

Soil, Water, Riparian, and Aquatic Resources

Desired Condition

Riparian areas have a range of vegetative structural stages that 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.

Riparian vegetation and large woody debris reduce erosion, maintain water quality, filter sediment, aid floodplain development, improve floodwater retention, improve groundwater recharge, develop root masses that stabilize streambanks, and develop diverse channel characteristics. These channel characteristics provide habitat, water depth, duration, and temperature necessary for desired native and non-native fish viability and other designated beneficial uses, while supporting biodiversity.

Public waters are restored where water quality does not support beneficial uses and otherwise are maintained or improved.
Historically present, aquatic species distribution is maintained or is expanding into previously occupied habitat, with inter-connectivity

[1] From A Forest Planning Framework for the Northern and Intermountain Regions, USFS, April 1999.

between local populations. The amount, distribution, and characteristics of habitats are present to maintain viable populations of historically-present and desirable non-native species. Habitat conditions contribute to the delisting of species under the Endangered Species Act, and prevent further listing of species under the Act, or adding species to the Forest Service sensitive species list.

Efforts are in place to prevent new introductions of undesirable fish species and to minimize impacts from past introductions. Habitat provides fish populations for recreational, traditional and cultural uses. Human activities are at levels that allow species to maintain necessary distribution and abundance during critical life stages. Restoration activities have resulted in maintaining necessary water temperatures, reducing pollutants such as sediment, and removing barriers to fish passage to enhance population and habitat connectivity where genetic contamination to native fish species from exotic species is not an issue.

Most soils have at least minimal protective ground cover, soil organic matter, and coarse woody material. Soils have adequate physical properties for vegetative growth and soil-hydrologic function. Physical, chemical, and biological processes in most soils function similarly to soils that have not been harmfully disturbed. Degradation of soil quality and loss of soil productivity is prevented. Soil-hydrologic function and productivity in riparian areas is protected, preserving the ability to serve as a filter for good water quality and regulation of nutrient cycling. Soil productivity, quality, and function are restored where adversely impaired and contributing to an overall decline in watershed condition.

Wildlife Resources

Desired Condition

The amount, distribution, and characteristics of vegetation (live and dead) are present at levels necessary to maintain habitat for viable populations of native and desired non-native wildlife species. Species abundance and distribution change by management activities and naturally occurring events that alter structure, composition, processes, and patterns of vegetation. Management actions move habitat conditions toward Historic Range of Variability (HRV), contribute to recovery of listed species, and maintain or improve conditions for sensitive species. Human activities are at a level that allows species to maintain desired distribution during critical life stages. Habitat conditions support populations of species for recreational, traditional and cultural significance.

Vegetation

Desired Condition

Historical Range of Variability (HRV) and Properly Functioning Condition (PFC) are used to characterize vegetation, based on an array of potential vegetation groups or cover and community types. HRV and PFC represent desired ranges, and management activities result in resource conditions that remain within or more toward these desired ranges. A variety of management activities and natural processes combine to help maintain a diverse vegetative environment. Snags and coarse woody debris are present for habitat diversity.

Managed forest stands are dominated by seral tree species. In other areas, forests move through successional stages toward climax conditions, interrupted only by natural disturbance events.

Grass, forbs, and shrublands are at or moving toward properly functioning condition. Lower-elevation grasslands and shrublands are distributed in variable patterns of multiple-aged shrubs, grasses, and forbs. Mid- to high-elevation grasslands are primarily meadow complexes that are dominated by desirable sedges and grasses.

Riparian areas have a mix of seral and climax vegetation that is at or approaching properly functioning condition. Conifer trees, deciduous 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. Woody overstory vegetation provides a variety of wildlife habitats, stream shading, aesthetic values, and supports other ecosystem functions. Riparian ecosystems are classified into three Classes (Appendix VII) and are managed according to their classification. These Classes have been revised from the 1996 Rangeland Health Amendment (USDA Forest Service 1996) to incorporate appropriate consideration of threatened, endangered, proposed, and sensitive species. These areas provide stable stream banks, shorelines, and channels of streams and stillwater bodies to facilitate meeting water quality standards. They provide habitat for viable populations of wildlife and fish, provide livestock forage, support healthy aquatic ecosystems and a variety of undeveloped recreation opportunities, and aesthetic values. Existing soil productivity and water quality shall be maintained or improved. Important and distinctive values of riparian areas are considered when implementing management activities.

Upland rangeland ecosystems are those typically dominated by sagebrush, juniper, mountain brush, mahogany, maple, oak, forb, dry meadow, or seeded grass plant communities. The desired future condition is to improve or maintain stable watershed conditions by maintaining

vegetation with healthy ground cover and plant communities dominated by desired perennial grasses, forbs, with 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 game and nongame animals, songbirds, raptors, and reptiles, forage for livestock, and a variety of recreational opportunities and aesthetic values. Existing soil productivity and water quality shall be maintained or improved.

Big game winter range is included in the uplands ecosystem. These sites consist of rangelands along lower elevations of the forest (typically south-facing slopes where winter snows are the first to melt) that provide browse for big game during winter months. On the Wasatch-Cache National Forest portion of the north slope of the Uinta Mountains they are primarily those dominated by birchleaf mountain mahogany; on the western Uinta Mountains, Bear River Range, and the Wasatch Mountains they include birchleaf and curlleaf mountain mahogany, oak, mountain brush, and sagebrush communities; and on the Stansbury Mountains they are primarily curlleaf mountain mahogany and sagebrush communities. Use of browse species on big game winter range is at a level that not only provides for the continued maintenance of existing vegetation, but also provides for reproduction and replacement of decadent and dead individuals within the stands.

Aspen ecosystems are those dominated by aspen or those where aspen have been temporarily replaced by herbaceous and/or shrub-dominated communities through natural or management activities. Aspen trees dominate these areas with a variety of age classes across the landscape, representing a variety of seral stages. Associated herbaceous and woody vegetation is highly variable and is dominated by desired perennial grasses and forbs with a range of shrub cover. Aspen is managed to provide wildlife habitat, recreational opportunities, livestock forage, wood products, aesthetic values, and plant and animal diversity. Existing soil productivity and water quality shall be maintained or improved.

Conifer ecosystems are those composed of pure and mixed stands of lodgepole pine, Engelmann spruce, Douglas fir, subalpine fir and various mixes of these conifer species and aspen and understory species. These systems occur at higher elevations in areas of sufficient effective moisture, appropriate soil types and aspects. Conifer forests contain a variety of age classes and successional stages in varying patch sizes. Spruce and pine beetle infestations are kept to an endemic level though the use of a variety of management tools, including timber harvest, prescribed fire, wildland fire use. The habitats produced by these forests are valuable for a variety of wildlife species. Mature forests are maintained at sizes, which are functionally adequate for supporting dependent species. Habitat for native

species, especially species at risk, is maintained. Connectivity between forested stands is maintained at different scales to provide linkages and corridors for movement. Timber harvests occur in areas suited for timber harvest at sustainable levels, with protections provided for other ecosystem components.

Alpine areas are those above treeline with short growing seasons, often with shallow soils and low growing vegetation. Some areas with deeper soils do exist in alpine ecosystems although these areas are still subject to short growing seasons and relatively low productivity when compared to lower elevation sites. Ground cover provides protection with a diversified vegetative cover that stabilizes soil and provides for watershed conditions that absorb surface runoff and contribute to meeting water quality standards, stream stabilization and healthy habitat for fish and wildlife populations. Ground cover is at least 85 percent of potential and is characterized by perennial vegetation, moss, litter, and/or naturally occurring rock. Both livestock grazing and recreation activities are managed to maintain and protect the inherent ecological values of these fragile ecosystems. Existing soil productivity and water quality shall be maintained or improved.

Management allows use of riparian, uplands, aspen and alpine ecosystems emphasizing maintenance or restoration of the inherent biological, physical, hydrologic and aesthetic values of these ecosystems.

Native species are present in amounts and distribution similar to historical patterns, including species that were once listed, or proposed for listing, as threatened or endangered under the ESA, or listed as sensitive by the Regional Forester.

Botanical Resources

Desired Condition

Management activities provide for ecological conditions that contribute to the recovery of federally listed, proposed, or sensitive species. Native species are present in amounts and distribution similar to historical patterns, including species that were once listed, or proposed for listing, as threatened or endangered under the ESA, or listed as sensitive by the Regional Forester. Populations of non-native plant species are reduced or eradicated in rare plant actual and potential habitat. Habitats are maintained to promote pollinator success and survival. Management activities (recreation, development and other activities) are at a level that maintains desired conditions and habitat dynamics during key life stages. Pro-active efforts are made to educate and inform users of fundamental importance of plant species to society, plant conservation, and biodiversity.

Non-Native Plants

Desired Condition

Established noxious weed infestations are not increasing or reduced to low densities. New invader species are not becoming established. New infestations of species are contained or reduced. New populations of existing noxious weeds are eradicated or reduced in highly susceptible, often disturbed, areas. Native plants dominate most landscapes that have been rehabilitated.

Fire Management

Desired Condition

Fire—both prescribed and wildland—is used as a tool to enhance ecosystem resiliency and to maintain desired fuel levels. Fire plays its natural role where appropriate and desirable, but is actively suppressed where necessary to protect life, investments, and valuable natural resources. Effects of wildland fire are acceptable, and fire operates within historical (within the last 500 years) fire regimes appropriate to the vegetation type.

Mineral Resources

Desired Condition

Energy mineral development is compatible with ecosystem capabilities and resource values. Balanced use and development of mineral resources are allowed, while protecting other resource values with stipulations, mitigation, and careful monitoring. Facilities and landscape modifications are visible but are reasonably mitigated to blend and harmonize with natural features. Lands disturbed by minerals and energy will be restored through effective reclamation techniques.

Lands and Special Uses

Desired Condition

Special use authorizations, landownership adjustments, rights-of-way, landline location, and easements serve public needs. National Forest property boundaries are located and posted on the ground. Adjustments made in land ownership achieve resource management or protection objectives, provide needed access, or allow National Forest System lands to be managed more efficiently. Rights-of-way to access Forest lands are acquired to meet planned resource activities. Pro-active efforts to educate and inform users and adjacent landowners result in reduced levels of unpermitted uses, encroachments, and user conflicts.

Facilities and Roads

Desired Condition

Needed facilities are developed to the standard adequate for their intended purpose. Reconstruction and remodeling of existing facilities, and construction of new facilities, occur as facilities wear out or need to change. Facilities are safe, efficient, and meet land and resource management objectives.

The road network matches the level of management activities occurring on the Forest and supplies the transportation system needed for public use related to recreation, special uses, timber harvest, range management, minerals development, and fire protection. Roads needed for long-term objectives are maintained in a manner that provides for user safety and reduces sedimentation and migration barriers for aquatic species. Roads not needed for long-term objectives are decommissioned and stabilized.

Recreation Resources

Desired Condition

People visiting the National Forest find opportunities for a wide spectrum of recreation experiences that are harmonious with predominantly natural settings. A balance of diverse landscapes offer a variety of settings for a wide range of activities, including primitive settings where there are opportunities for solitude, risk and challenge, to more modified settings where there are opportunities for social interaction, comfort and less risk.

Recreation facilities are constructed, reconstructed, relocated, eliminated or decommissioned as needed to provide a balance of safe, efficient, and environmentally responsible experiences and opportunities. Recreation facility maintenance meets established national standards and contributes to healthy, safe recreation experiences. Recreation information and facility design and construction focus on people of all abilities and provide amenities and information to meet their needs.

Conflicts between recreationists and with other users are minimized. Local communities, partnerships, and volunteers are involved and benefit from their roles in providing recreational opportunities. Recreationists understand the potential for impacts to resources and other users and actively assist in caring for the land and resolving conflicts.

Scenic Environment

Desired Condition

The Wasatch-Cache National Forest provides a balance of diverse landscapes and natural settings. The scenic environment within the

Forests ranges from landscapes with high scenic quality displaying little or no evidence of management activities, to landscapes with different scenic quality that have dominant visible evidence of management activities. The high scenic quality in areas of outstanding value, and other highly used recreation areas and corridors are protected or enhanced.

Heritage Program

Desired Condition

Heritage Resources on the Wasatch-Cache National Forest enrich our visitor's experiences by creating opportunities to discover the Forest's unique past. They enhance local communities, and build bridges of understanding between the Forest and its neighbors. Heritage information contributes to overall Forest management by helping us understand past human interaction with Forest ecosystems.

Tribal Rights and Interests

Desired Condition

Tribes continue to have interest and reliance on ecosystems even as their cultures change, employing both traditional and contemporary ways of relating to their homelands and interest areas (lands where tribes have traditionally ranged to sustain their life way). Lands within the Forest serve to help sustain American Indians' way of life, cultural integrity, social cohesion, and economic well being.

Federal agencies take a more proactive role on the tribes' behalf, especially in areas of treaty interest, rights, traditional and cultural resources, and ecosystem integrity. Federal agencies provide opportunities for traditional American Indian land uses and resources. The presence of healthy habitats is fundamental to the achievement of both useable and harvestable levels of resources significant to American Indians, as well as to ecosystem integrity.

Designated Wilderness

Desired Condition

Wilderness is managed and protected, for the plants and animals that live there and their habitat, the preservation of large, intact ecosystems, clean air and water, and primitive recreation opportunities. Natural ecological processes are dominant. Ecosystems are influenced by natural process with little or no intervention.

Native fish and wildlife species are featured and the habitat needs of species-at-risk receive protective measures where needed.

The Forest Service and the State of Utah employ a cooperative approach to management that recognizes the unique values of wilderness in providing diverse fish and wildlife habitats and opportunities across the landscape. Reintroductions of native wildlife species are planned for cautiously and jointly in an open public process. Exotic wildlife, wildlife presently or historically within the ecosystems of the United States, species are not considered for introduction in wilderness even if desirable for recreational purposes.

The cooperative strategy for aquatic ecosystem management recognizes that self-sustaining populations of native species are an appropriate goal for wilderness waters. Some lakes and streams are cooperatively designated as fishless, and allowed to remain so in order to provide habitat for native amphibians and aquatic invertebrates. Since fishing is also an important aspect of many people's wilderness experience stocking of native species in designated locations will remain a part of the management picture. Selection of waters to stock and species will be coordinated with the state agency. Exotic fish species, species not currently or historically found in ecosystems of the United States, will not be stocked in wilderness waters.

Designated wilderness areas are managed and their values protected according to the 1964 Wilderness Act, the 1978 Endangered Wilderness Act (Lone Peak), and the 1984 Utah Wilderness Act and approved wilderness management plans. Wilderness is managed as a scarce resource, where wilderness-dependent activities are favored when managing wilderness use. Wilderness management work emphasizes the minimum tool concept that has the least discernible impact on the land.

People visiting wilderness within the National Forest find opportunities for exploration, solitude, risk, and challenge. Human use in the wilderness is provided while preserving wilderness character. The adverse impacts of human use are controlled and reduced through education and minimum regulation. Crowding and physical impacts from visitor use should not be allowed to reach the point where solitude is destroyed or evidence of humans dominates. Pristine areas, which are precious areas that approach the ideal of being "untrammeled by man", are protected to maintain their undisturbed and undeveloped character and prevent degradation of their unique and valuable wilderness values.

Recommended Wilderness

Desired Condition

Recommended wilderness areas are managed to maintain wilderness qualities. Activities allowed in recommended wilderness do not

compromise wilderness values or reduce the area's potential for wilderness designation.

Roadless Area Values

Desired Condition

Roadless areas are managed according to the management prescriptions applied. Most are protected and maintained to conserve and preserve important values and benefits of them by prohibiting activities that have a likelihood of degrading desirable characteristics of inventoried roadless areas.

Roadless areas mapped with prescriptions 1.5, 2.4, 2.6, 2.7, 3.1A, 3.1W, 3.2U, 4.1 and 4.2 are maintained for values including soil, water, diversity of plant and animal communities, habitat for TES and species dependant on large undisturbed land, primitive and semi-primitive non-motorized and motorized (open in current travel plan) recreation, reference landscapes for research, study and interpretation, landscape character and scenic integrity, traditional cultural properties and sacred sites and other identified unique conditions.

With no or limited additional road construction and timber sales in these areas, the altering of natural landscapes, habitat fragmentation and changes in native plant and animal communities is minimized. Roadless areas function as biological strongholds and refuges for many species. Sedimentation and disruption of water flows is minimized and the roadless areas provide sources of clean public drinking water. Competition by nonnative invasive species is minimized in roadless areas. Roadless areas support healthy and diverse ecosystems. There is no long-term loss of roadless characteristics and values.

Roadless areas not mapped with prescription 1.5 provide for outstanding recreation opportunities both motorized and non-motorized, such as hiking, horseback riding, ATV riding, mountain biking, snowmobiling, camping, picnicking, wildlife viewing, hunting, fishing, snowshoeing, and cross-country skiing. In some areas, roadless backcountry will be managed for semi-primitive recreation opportunities, as an alternative to high use wilderness areas and to reduce the impacts on wilderness values and pristine areas. While the areas have many wilderness-like attributes, unlike wilderness, the use of mountain bikes and other mechanized travel is often allowed.

Where possible, roadless areas will be managed to minimize conflicts between motorized and non-motorized users through management prescription categories, recreation opportunity classes and travel management plans.

Eligible Wild and Scenic Rivers

Desired Condition

River segments and their corridors that are eligible as Wild and Scenic Rivers are managed to retain their free-flowing status and outstandingly remarkable values.

Social and Economic

Desired Condition

Sustainable and predictable levels of goods and services are provided contributing to community resiliency. Firewood, post and poles, sawlogs, forage, oil and gas, and other products are provided consistent with management direction.

National Forest decisions and their associated tradeoffs are understood and accepted by many people. There is increased intergovernmental coordination with federal, state, county, and tribal governments, and a high level of communication and dialogue with a broad range of stakeholders. Local economic development goals are considered when developing National Forest land uses and management strategies.

Forest-wide Goals and Subgoals

Lake Blanche in Big Cottonwood Canyon, Wasatch Mountains

2. Forestwide Goals and Subgoals

Goals are defined as follows and are a component of forestwide management direction:
A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broadd, general terms and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principal basis from which objectives are developed. (36 CFR 219.3)

Long-term broad goals are presented in text boxes with most also having a series of more specific **Subgoals**. Subgoals are intended to clarify or further emphasize important components of broader goals.

Forestwide Goal 1-Air Resource
Ensure National Forest management activities result in meeting state and federal air quality standards, and comply with local, state and federal air quality regulations and requirements.

Forestwide Goal 2-Watershed Health
Maintain and/or restore overall watershed health (proper functioning of physical, biological and chemical conditions). Provide for long-term soil productivity. Watershed health should be addressed across administrative and political boundaries.

Forestwide Subgoals - Watershed Health

2a. Identify **areas not in properly functioning condition**. Improve plant species composition, ground cover and age class diversity in these areas.

2b. Maintain and/or improve **water quality** to provide stable and productive riparian and aquatic ecosystems.

2c. Design and implement **watershed management programs and plans** that will restore water quality and watershed function to support beneficial uses.

2d. Protect waters meeting or surpassing State water quality standards by **planning and designing** land management activities to protect water quality.

2e. Maintain and/or restore stream **channel integrity**, channel **processes**, and **sediment regimes** (timing, volume, character of

sediment input/transport) under which riparian & aquatic ecosystems developed.

2f. Maintain water in streams, lakes, and wetlands of adequate quantity and quality to provide for **instream flows** and existing downstream uses including support of healthy riparian & aquatic habitats, stability & effective function of stream channels, ability to route flood discharges, and to maintain recreation opportunities.

2g. Maintain and/or restore natural **timing and variability of water table** elevation in spring sources, meadows & wetlands.

2h. Maintain and/or restore **diversity, productivity, vigor, and regenerative capacity** of native and desired non-native **riparian and wetland plant communities** to provide an amount and distribution of **large woody debris** characteristic of natural aquatic & riparian ecosystems; provide adequate summer & winter **thermal regulation;** and to help achieve rates of **surface erosion and channel migration** characteristic of those under which desired communities develop.

2i. Maintain and/or restore **soil productivity** to improve watershed functioning through managing groundcover, soil compaction, and vegetation.

2j. Maintain and/or restore **habitat to sustain populations** of well-distributed native and desired non-native plant, vertebrate, and invertebrate populations that contribute to viability of riparian-dependent communities.

2k. **Improve** Forest users' **understanding** of how their actions can impact or protect watershed functions, and **increase participation** of Forest users in stewardship of watersheds.

Forestwide Goal 3-Biodiversity & Viability

Provide for sustained diversity of species at the genetic, populations, community and ecosystem levels. Maintain communities within their historic range of variation that sustains habitats for viable populations of species. Restore or maintain hydrologic functions. Reduce potential for uncharacteristic high-intensity wildfires, and insect epidemics.

To achieve sustainable ecosystems, meet properly functioning condition (PFC) criteria for all vegetation types that occur in the Wasatch-Cache National Forest. Focus on approximating natural disturbances and processes by restoring composition, age class diversity, patch sizes, and patterns for all vegetation types.

Forestwide Subgoals – Biodiversity and Viability

3a. Maintain or restore **viability of populations of species at risk**, Watch List Plants, and rare communities.

3b. Maintain pollinators and **minimize impacts to pollinators** or their habitats.

3c. **Increase understanding** of and support research on the distribution, ecology, and threats to **plant species at risk, non-vascular plants** and rare plant communities.

3d. Restore or maintain **fire-adapted ecosystems** (consistent with land uses, historic fire regimes, and other Forest Plan direction) through wildland fire use, prescribed fire, timber harvest or mechanical treatments. See Forestwide Guideline (G for desired landscape structure and patterns.

3e. Maintain or restore as **mature and old age classes** 40% of total conifer and 30% of total aspen cover types, well distributed across the landscape.

3f. Maintain or restore **species composition**, such that the species that occupy any given site are predominantly native species in the kind and amount that were historically distributed across the landscapes.

3g. Maintain and/or restore **tall forb communities** to mid seral or potential natural community (PNC) status.

3h. Evaluate areas with **potential** for **Research Natural Area** designation including Ben Lomond Peak (tall forb values), western portion of the Deseret Peak Wilderness (Great Basin community types and cryptogamic crusts).

3i. Maintain **viability** of species-at-risk (including endangered, threatened and sensitive species and unique communities).

3j. Manage Forest Service **sensitive species** to prevent them from being classified as threatened or endangered and where possible provide for delisting as sensitive (FSM 2670).

3k. **Improve** Forest users' **understanding** of the **values** of and potential human **impacts to biodiversity** and viability of species.

3l. Provide suitable habitat for **prey species** such as hares, squirrels, and small mammals.

3m. Provide for **connectivity** of continuous large patches of forested habitat for interior forest-dependent and wide-ranging species (such as lynx, wolverine and migratory birds).

3n. Maintain or restore aquatic and riparian habitats, through recognition and management of Riparian Habitat Conservation Areas (defined in Glossary) for **metapopulations of cutthroat trout**, recognizing the relative degree to which these fish depend on National Forest lands and conditions of these habitats off-forest.

3o. Provide adequate habitat components for **sustainable big game populations** coordinated with State wildlife management agencies, private lands and other resource needs and priorities.

3p. Protect **cave microenvironments** (including hydrology, habitat, climate, vegetation, airflow). retaining vegetation in the vicinity including above the cave.

Forestwide Subgoal - Revegetation

3q. In revegetation projects **establish a variety** of native species (avoiding monocultures).

Forestwide Subgoal - Plant Collection

3r. Allow for plant collection for sustainable cultural uses and to encourage availability of native seed sources while not jeopardizing continued vigor or existence of a plant population.

Forestwide Subgoal - Noxious Weed Control

3s. Greatly reduce known infestations of **noxious weeds** and rigorously prevent their introduction and/or spread.

3t. **Improve** Forest user's **awareness** of what noxious weeds are and how they spread and **increase** Forest users' **active participation** in reducing and preventing infestations.

Forestwide Goal 4-Fire and Fuels Management

Wildland fire use and prescribed fire provide for ecosystem maintenance and restoration consistent with land uses and historic fire regimes. Fire suppression provides for public and firefighter safety and protection of other federal, state and private property and natural resources. Fuels are managed to reduce risk of property damage and uncharacteristic fires.

Forestwide Subgoal - Fire Use

4a. Increase the **active use of fire** to return fire dependent ecosystems to proper functioning and to reduce hazardous fuels.

4b. Increase **public understanding and support** of the active use of fire to improve watershed and habitat conditions and reduce fuels.

4c. **Take timely actions** to restore proper functioning of **ecosystems after wildfire**.

Forestwide Subgoal – Fuel Reduction

4d. Reduce **hazardous fuels** (prescribed fire, silvicultural and mechanical treatments) with emphasis on interface communities (wildland/urban) and increase proactive participation of communities at risk.

Forestwide Goal 5-Road/Trail and Access Management

Provide a road and trail system that is safe, responsive to public and agency needs and desires, affordable and efficiently managed. Provide an access system that minimizes negative ecological effects and is in balance with available funding. Focus on achieving an integrated transportation system that serves multiple functions and is consistent with desired future conditions for a given area.

Forestwide Subgoal - Road/Trail and Access Management

5a. Work closely with city, county, state and tribal governments to provide for **integrated**, **coordinated** development and management (including enforcement) of **OHV activities**.

Forestwide Subgoal - Travel Management

5b. Manage **National Forest and State Scenic Byways and Backways** for their intrinsic values as identified in corridor management plans.

5c. Provide a **variety of opportunities for motorized access** while avoiding or reducing undesirable social and resource impacts.

5d. **Manage trails** to provide desired recreation opportunities for recreation users and to meet Forest Service standards.

Forestwide Goal 6-Recreation

Manage for an array of recreation opportunities and settings to improve the quality of life for a variety of Forest recreation users. Balance growth and expansion of recreation by managing within the capability of sustainable ecosystems found on the Forest for today and the future.

Forestwide Subgoals - Recreation

6a. Increase Forest **recreation user stewardship** of resources and strengthen awareness of **user ethics** for reducing resource and social conflicts.

6b. **Involve Forest users** in developing strategies for managing recreation to meet desired future conditions and address recreation pressures and demands.

6c. **Manage uses of new recreational technologies** to provide for opportunities while preventing or minimizing negative social and/or resource impacts on the Forest.

6d. **Encourage private enterprise to develop** recreational facilities on and off the Forest that provide for a range of recreation opportunities (e.g. camping and picnicking areas, trailheads, and interpretive sites).

Forestwide Subgoal - Recreation in Undeveloped Areas

6e. **Manage** recreation use of **undeveloped areas** on the forest to provide for desirable opportunities while preventing or reducing resource impacts and social conflicts.

Forestwide Subgoal - Scenery Management System

6f. Recognize and manage for the importance of **scenic forest landscapes** to overall **recreation settings** as well as to the **quality of life for communities** adjacent to the Forest.

6g. Restore, maintain or enhance landscape **scenic integrity** across the variety of landscape character themes found on the Forest.

Forestwide Goal 7-Education
Increase public understanding of and appreciation for natural and cultural resources and their management, in order to foster Forest users' active participation in wise use and conservation.

Forestwide Goal 8-Enforcement
Increase Forest Service field presence in key areas, improve effectiveness of public information on restrictions, and increase participation of individuals and organized groups in monitoring uses.

Forestwide Goal 9-Heritage Resources
Inventory, evaluate, protect and enhance heritage sites and landscapes.

Forestwide Subgoals - Heritage Resources

9a. Implement the National Heritage Strategy emphasizing the need for non-project inventories (Section 110) and public education and awareness programs.

9b. Fully **integrate** the **Heritage Program** into land and resource management.

Forestwide Goal 10-Social/Economic Contributions
Contribute to the social and economic well-being of local communities by promoting sustainable use of renewable natural resources and by participating in efforts to devise creative solutions for economic health (diversity and resiliency). Provide timber for commercial harvest, forage for livestock grazing, exploration and development opportunities for mineral resources, and settings for recreation consistent with goals for watershed health, sustainable ecosystems, biodiversity and viability, and scenic/recreation opportunities.

Forestwide Subgoals - Recreation

10a. Use **ski area** associated private and public developed recreation facilities to provide world-class skiing and mountain resort opportunities while contributing to the economy.

Forestwide Subgoals - Timber for commercial harvest

10b. Use **timber harvest** where allowed, to contribute to the economy while achieving properly functioning conditions of vegetation and watersheds.

Forestwide Subgoals - Forage for livestock grazing

10c. Manage **livestock grazing** levels and operations on suitable lands for sustainable forage use within properly functioning conditions.

Forestwide Subgoals - Mineral and energy exploration and development

10d. Provide for **mineral and energy exploration and development** to help meet the nation's needs for these resources, while contributing to local economies through royalties and employment consistent with management direction.

Forestwide Goal 11-Land Ownership

Achieve a national forest ownership pattern that reduces management costs and helps meet ecosystem management objectives. Acquire land to connect large tracts of public ownership to maintain biologic and hydrologic linkages in partnership with other public agencies. Locate and maintain national forest boundaries that are visible to forest users and neighbors.

Forestwide Subgoal - Land Ownership

11a. Acquire **access and rights-of-way** for general public and administrative use.

11b. **Acquire lands or easements** needed to facilitate Bonneville Shoreline and Great Western Trails development.

Forestwide Goal 12-Non-recreation Authorizations (Special Uses)

Manage the non-recreation authorizations program to balance priorities commensurate with the greater long-term public interest. Current restrictions in funding and personnel preclude additional authorization without reallocating program emphasis.

Forestwide Subgoals - Special Uses

12a. Continue to allow for most **currently authorized uses** while encouraging opportunities to phase out or move to private lands uses with limited public benefits.

12b. **Minimize** the **addition** of special use encumbered areas of National Forest.

Forestwide Subgoal - Transportation and Utility Corridors

12d. Utilize **currently designated utility corridors** fully for power transmission lines of 66kV or greater and oil and gas pipelines 10" or greater.

Forestwide Goal 13-Designated Wilderness

Maintain wilderness ecosystems and character, primarily influenced by the forces of nature, to provide opportunities for public use, enjoyment, and understanding of wilderness, and to preserve a high quality wilderness resource for present and future generations. Manage wilderness to sustain wild ecosystems for values other than those directly related to human uses.

Forestwide Subgoal - Wilderness

13a. Manage Wildernesses **recognizing differences** in population proximity and consequent role in providing wilderness experiences for more people.

Forest-wide Objectives

Upper Provo Falls, Western Uinta Mountains

3. Forestwide Objectives

Objectives are defined as follows and are a component of forestwide management direction:

Objectives are concise, time specific statements of measurable planned results that respond to preestablished goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals. (36 CFR 219.3)

Objectives for Education and Enforcement

Developed in response to Goals 7 and 8-education and enforcement, Subgoals 2k-watershed, 3t- noxious weeds, 4b-fire, 4d-fuels, 5a-OHV, 6a,b, and e-user ethics.

Purpose: To bring people who recreate in and use the Wasatch-Cache National Forest into a clear awareness of the potential impacts of their actions on natural resources such as watershed and wildlife, as well as on the experiences of other users of the Forest. To successfully integrate key messages teaching appropriate behavior while using the forest into a wide variety of public contact points from field to office, to businesses that supply recreation related products. To increase Forest Service field presence and to encourage individuals and organizations to actively work to maintain and improve resources such as trails, and to educate peers for monitoring and modifying behavior to protect resources and reduce user conflicts.

Need: A common thread heard throughout the public participation in Plan revision is the call for better education and enforcement. Given growth in population and use of the Forest along with such a large land area and limited Forest Service staffing, the need for educating forest users so they can assist in caring for the land and respecting other users is critical. Many who commented on revision wanted to see education and enforcement rather than additional restrictions on uses. They felt that education is really the only way to resolve a number of the issues raised during plan revision. Numerous organizations asked to be involved in education and enforcement efforts in order to protect the privilege of using the forest in the desired mode. An assessment of current education efforts revealed a lack of consistency and focus. Currently there is no strategy for what types of education are the priorities or how the work should be funded.

Objectives to accomplish desired conditions:

1.a. Develop within 1 year, and subsequently implement a Forest Interpretation & Education Plan with responsiveness to

education/enforcement issues raised during Plan revision. This Plan should integrate funding support including partnerships, for education and enforcement in key focus areas.

1.b. Develop key messages for focus areas within 1 year and set measurable education/enforcement goals. Focus areas are: OHV use, recreation user ethics, role of fire and fuels hazards, noxious weeds, and watershed health.

Objectives for OHV and Non-Motorized Travel Management

Developed in response to Goal 2-watershed health, Subgoal 2k-watershed, Goal 5-road/trail and access management, Subgoal 5a-access management, 5c-motorized opportunities, Goal 6-recreation, Subgoals 6a and 6b-user involvement.

Purpose: To provide a variety of recreation access opportunities both motorized and nonmotorized that meet user needs and desires while at the same time protecting and restoring watersheds, and providing for the needs of wildlife. To reduce conflicts between recreation users.

Need: Comments from the public proved that this issue is one of the most important to visitors to the Wasatch-Cache. Motorized uses are increasing rapidly in areas close to population centers. Technology continues to change resulting in previously seldom used areas being frequented by many. Drainage by drainage recreation management planning has not kept pace with user expectations, needs for development of opportunities engineered for the activity within the capability of the land, and compatibility with other uses. User-created trails are causing unacceptable resource damage and undesirable use patterns. In the winter, snowmobilers may be entering areas where motorized use is not allowed and affecting the experience of non-motorized recreation users. This may be the result of trails/areas that are not well marked or users that are not well informed. Some travel management plans are over ten years old and do not address mechanical uses such mountain biking or distinguish routes designated only for ATV use. Motorized users desire loop trails and adequate mileage for quality motorized opportunities, and these are lacking especially in the Logan and Ogden areas. Users far outnumber enforcement abilities.

Objectives to accomplish desired conditions:

2.a. Update the Salt Lake, Ogden and Logan Ranger District Travel Management Plans within 5 years (Includes user created route inventory, maintenance levels 1 and 2 roads analysis, updating of Road Management Objectives, and refining of winter decisions where appropriate).

2.b. Expand communication medias (signs, maps, brochures, and websites) to improve user knowledge of opportunities, restrictions, and riding conditions. Complete this within 2 years for messages common to all areas and **2.c**. within 1 year of completing Travel Plan update decisions, for messages specific to a particular area.

2.d. Expand or initiate peer education through motorized use organizations and dealerships within 2 years for winter and 3 years for summer.

Objectives for Vegetation Management

Developed in response to Goal 2-watershed health, Goal 3-biodiversity and viability, Subgoals 3d-fire-adapted ecosystems, Goal 4-fire and fuels management, Subgoal 4b-public support, and Goal 10-economic contributions, Subgoal 10b-timber,and 10c-forage.

Purpose: To achieve forest and rangeland vegetation composition, structure, and patterns in properly functioning condition (i.e. within their historic ranges of variation). To move toward a variety of vegetation types, age classes, and patch sizes covering the landscape and contributing to healthy watersheds, aquatic and terrestrial wildlife habitats, recreation environments, and production of commodities such as wood and forage.

Need: A forestwide assessment concluded that aspen communities as well as conifer, sagebrush and several other vegetation types are currently outside the historic range of variation. This appears to be primarily related to successful fire suppression in vegetation types that evolved with repeated fires. A few *examples* of ramifications of the current situation include: fuel build-ups that may result in larger and hotter fires than historic; undesirable changes in vegetation composition and patterns such as extreme loss of aspen with it's highly productive and diverse understory that provides habitat elements for many wildlife and bird species as well as outstanding scenery; undesirable changes because of increases in canopy cover of shrubs such that grasses and forbs valuable for preventing erosion and providing forage are underrepresented; undesirable changes in hydrologic functioning because of particular types of vegetation's role in intercepting and storing water as well as contributing organic materials for soil productivity.

Because of the very large acreages currently not functioning properly, *no one approach can create enough change in vegetation across the landscape in a reasonable time frame, to reach desired conditions.* (In addition, several factors (staffing/skills, budgets, appeals & litigation) limit ability to accomplish this work.) For example vegetation modeling shows that even with prescribed fire use on 3,200 acres per year (many

times greater than recent years), it will require 20 years to return to aspen within historic ranges. In many areas, such as areas with adjacent urban development (wildland urban interface) it will not be practical to use fire, at least not without some other preparatory treatments. Timber harvest can also be used to contribute to movement toward the historic range of variation for some vegetation types. However in areas where there are dense trees or vegetation with little commercial value, (such as many of the alpine fir stands) and/or where there are no existing roads, it will likely not be practical or economical to use commercial timber harvest. Stewardship contracting is being piloted in various forests to determine feasibility of treating vegetation where commercial value is limited. Given the complexity of the situation, a number of actions are recommended.

Objectives to accomplish desired conditions:

3.a. Allow fire to play a more active role in returning vegetation to historic ranges of variation by developing and incorporating Wildland Fire Use for priority areas of the Forest into the Wasatch-Cache Forest Fire Management Plan at the rate of one per year for priority areas.

3.b. Stimulate aspen regeneration and reduce other encroaching woody species in aspen by treating (fire use and/or timber harvest) approximately 3,200 acres average annually[1] for a 10-year total of 32,000 acres.

3.c. Restore natural disturbance patterns and increase age-class diversity in conifer cover types by treating (timber harvest and/or fire use) approximately 850 acres average annually[1] for a 10-year total of 8,500 acres.

3.d. Increase grass and forb production and plant species and age-class diversity in sagebrush and pinyon/juniper by treating approximately 2,000 acres average annually[1] for a 10-year total of 20,000 acres.

Objectives for Wildland Urban Interface Fuels Management

Developed in response to Goal 4-fire and fuels, Subgoal 4d-fuels reduction.

[1] We expect to begin the decade with smaller acreages, ramping up over the first 5 years and with experience and skills gained during that period, to be able to achieve larger acreages over the last 5 years-bringing the total to the desired acreage. However, where fire is the selected treatment, air quality and weather are limiting factors outside our control.

[1] We expect to begin the decade with smaller acreages, ramping up over the first 5 years and with experience and skills gained during that period, to be able to achieve larger acreages over the last 5 years-bringing the total to the desired acreage. However, where fire is the selected treatment, air quality and weather are limiting factors outside our control.

Purpose: To work with the States of Utah and Wyoming and communities at risk to reduce unwanted wildfire on or near the Forest. To emphasize the safety of people and the protection of property in the heavily populated and increasingly developed wildland urban interface adjacent to the national forest.

Need: Soaring populations and a desire to live near forested lands coupled with increased use of national forest system lands have increased the risk and frequency of fire. Compounding the situation is the presence of vegetative communities that have uncharacteristically high fuel loading because of years of fire suppression. The gambel oak and bigtooth maple vegetation types found along the Wasatch Front are an example of this situation. These communities support severe fires, which can result in significant impacts to properties and natural resources.

Objectives to accomplish desired conditions:

4.a. Treat approximately 2,000 wildland urban interface acres annually for a 10-year total of 20,000 acres.

4.b. Expand outreach and education by helping communities and homeowners recognize fire hazards, and design fire resistant homes and landscapes by participating annually in Community Planning meetings and city or rural planning groups.

4.c. Expand community participation in fuels treatment and restoration and assist in the development of community fire plans by assisting State and private groups to develop 3 to 5 fuel reduction plans annually.

Objectives for Rangeland Management

Developed in response to Goal 2-watershed health all Subgoals, Goal 3-biodiversity and viability, Subgoals 3f-species composition, 3l-prey species, 3n-cutthroat trout, 3o-big game, 3s-noxious weeds, and Goal 10-economic contributions, Subgoal 10c-forage.

Purpose: To manage rangeland ecosystems so they support vegetation with adequate ground cover to protect watersheds and plant communities with desired species composition, structure, and function dominated by desired perennial grasses and forbs, with a range of shrub cover. To manage riparian areas for proper functioning with deep-rooted vegetation or rocks armoring stream banks and allowing sediment filtration and erosion prevention. To protect spring sources, associated wetlands and other critical areas from excessive use and to restore these to proper functioning condition. To manage for rest and deferred rotation grazing systems, riparian pastures and/or necessary structural improvements that are in place and maintained. To ensure that grazing permit holders move livestock as needed to comply with riparian stubble height requirements,

upland utilization standards, and to achieve ground cover standards. To encourage permit holders to share responsibility with the Forest Service for monitoring use, and to take full responsibility for movement and control of their livestock.

Need: Public comment on the Forest Plan as well as other recent projects consistently expresses concern about the condition of rangelands and frustration with our ability to manage and administer livestock grazing in some portions of the forest. Current information about potential and existing conditions of rangelands is lacking across major portions of the Forest although we know we are not meeting desired conditions in a number of riparian and upland sites. Progress toward implementation of the 1996 Rangeland Health Amendment has been slow and/or inconsistent across the Forest. Resources available to administer grazing permits, collect and interpret monitoring data, and develop up-to-date Allotment Management Plans are entirely inadequate currently.

Objectives to accomplish desired conditions:

5.a. Fully implement the Rangeland Health Amendment Forestwide by finalizing riparian classification and notifying permit holders of utilization standards based on this classification within 1 year,

5.b. Validating key areas and focusing monitoring of utilization standards in Allotments containing riparian dependent TES within 3 years,

5.c. Developing ground cover potentials for missing vegetation cover types within 2 years,

5.d. Assess/validate existing conditions and continue establishing long-term trend monitoring for 10% of Allotments annually.

5.e. Establish clear expectations with all permit holders to achieve stated purposes within 1 year.

5.f. Assess and prioritize noxious weed infestations for appropriate treatment within 1 year.

Objectives for Concentrated Use Camping Management

Developed in response to Goal 2-watershed health, Goal 6-recreation, Subgoals 6a-user stewardship, 6b-user involvement, and 6e-reducing impacts.

Purpose: Provide for management of undeveloped recreation use sites by designating Concentrated Use Areas (CUAs) in currently heavily used locations striving to protect recreational activities while achieving compatibility with standards for resource protection rather than user convenience.

Need: Camping in areas outside of developed facilities yet readily accessed by car or RV is a popular recreation activity. Scattered throughout the forest are areas where this type of undeveloped camping is so popular that soil has been compacted and vegetation is denuded destroying the natural amenities that made the area popular for recreation initially. Often these areas are in or affect fragile riparian areas. Years of increasing use have left sites with undesirable resource conditions. However the recreation use of these areas is well established and many are even traditional undeveloped family camping and family reunion sites, and a desired opportunity.

Objectives to accomplish desired conditions:

6.a. Inventory undeveloped recreation sites in General Forest Areas and identifies CUAs forest-wide within 1 year.

6.b. Develop and implement CUA recreation plans for CUAs prioritizing those areas with the highest use and impacts for both recreation activities and resource conditions. Work with users to design sites meeting their needs and desires while protecting resources including scenery. Complete 1 site-specific plan every 3 years for highest priority areas. Establish appropriate density for designated concentrated use sites for these areas during plan development.

6.c. Initiate public education and outreach explaining the purpose of the new management actions during and after development of CUA recreation plans. Communicate through variety of available medias (including signing on site) the opportunities and restrictions within 1 year of plan completions.

Objectives for Bonneville Shoreline, Great Western and Shoshone Trails

Developed in response to Goal 5-road/trail management, Subgoals 5a-coordination of OHV, 5c-motorized access, 5d-trails, Goal 6-recreation, and Subgoal 11b-lands/easements.

Purpose: The Bonneville Shoreline Trail, designated in 1999 as one of sixteen national Millennium Legacy Trails, is envisioned to be an aesthetically pleasing (though urban influenced), non-motorized recreational trail experience, nearby yet apart from the urban Wasatch Front and its many communities stretching from Santaquin to the Idaho border with a loop around the Wellsville Mountains in Northern Utah. Recognizing the open nature of the BST corridor in several locations, motorized trails and roads that closely parallel the trail are generally not provided. In addition to recreational purposes, the trail may serve as a fire buffer, a recognizable, defensible physical boundary for the Forest, and access for fire suppression to protect property in the wildland urban interface. The Great Western Trail, proposed as a National Discovery

Trail, is envisioned to be a continuous interstate trail that helps users experience and learn about aspects of American life and history and that connects urban with rural/backcountry areas having both motorized and non-motorized segments facilitating winter and summer uses. The existing route crosses all Ranger Districts of the Wasatch-Cache except Mountain View. The Shoshone OHV trail would be a motorized trail on State, BLM, private and National Forest system lands on the Logan and Ogden Ranger districts. The proposed Shoshone Trail would establish a network of motorized trails in northern Utah to connect the existing trail opportunities on the National Forest with trails on BLM, State and private lands. The trail would provide extended riding opportunities between communities while providing an alternative to the unauthorized trails in sensitive watersheds along the Wasatch front.

Need: The Bonneville Shoreline and Great Western trails are two very important regional trails yet critical portions of each remain incomplete. The Shoshone trail would provide a motorized trail network in northern Utah. These trails serve a variety of users and provide both recreational and economic benefits to local communities. Access to the national forest continues to be threatened as development near the forest continues. In the future the Great Western trail, Bonneville Shoreline trail and the Shoshone Trail will be recognized and valued as unique opportunities to provide recreation corridors across multiple ownerships in the face of continuing urban development.

Objectives to accomplish desired conditions:

7.a. Focus trail development and management emphasis on Bonneville Shoreline and Great Western trails, working with the public and other agencies to complete these trails using partnerships and grants as much as possible, while minimizing impacts to big game winter range, adjacent property owners, and Wilderness.

7.b. Coordinate with the State, Counties, BLM and local partners to establish a trail system (Shoshone Trail) in northern Utah to address the demand for motorized trail recreation while decreasing unauthorized uses in more sensitive areas.

Forest-wide Standards and Guidelines

Wellsville Mountains in the northern Wasatch-Cache National Forest

The following set of Standards and Guidelines apply across all of the Wasatch-Cache National Forest. Additional Standards and Guidelines also exist specific to each Management Prescription, and these take precedence over the more general forestwide standards and guidelines. See Management Prescription Map for the area you are interested in and Chapter 4, A.5. for the corresponding Prescription Standards and Guidelines.

4. Forestwide Standards and Guidelines

Standard: binding limitations to be placed on management activities within the Plan area; they are within the authority and ability of the Forest Service to enforce. Adherence is mandatory. A project that varies from a relevant standard may not be authorized unless the Forest Plan is amended to modify, remove, or waive application of the standard. **Guideline:** statements describing a preferred or advisable course of action that is generally expected to be carried out. Deviation from compliance does not require Forest Plan amendment, but the rationale for such deviation shall be documented in the project decision document.

Air Resources

Additional management direction for air quality can be found in Forest Service Manual 2500 - Watershed and Air Management.

Guidelines for Air Resource:

(G1) Minimize the amount and impact of smoke from "fire use" activities by identifying smoke-sensitive areas, using "best available control measures," monitoring smoke impacts, and following guidance in State smoke management plans.

Soil and Water Resources

Additional management direction for soil, water and riparian resources can be found in Forest Service Manuals 2500 - Watershed and Air Management; 3500 - Cooperative Watershed Management; and Forest Handbooks - 2509.13 Burned Area Emergency Rehabilitation Handbook; 2509.22 - Soil and Water Conservation Practices Handbook. ***Appendix II*** *provides additional Watershed Health Guidance Sources.* ***Appendix VII*** *provides ground cover potentials and riparian classification.*

Standards for Watershed, Riparian, and Aquatic Habitat Health:

(S1) Allow no ground-based skidding and oil and gas surface occupancy on slopes greater than 40%.

(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.

(S5) Prior to issuance of a permit or license for activities such as mining, hydropower development, snowmaking, or water transmission facilities, instream flow determinations will be required of all future permitted and

licensed activities. For existing authorized uses and activities, minimum instream flows will be established to meet the beneficial use of the stream, and will be a condition of any licensing and permit renewal.

(S6) Within legal authorities, ensure that new proposed management activities in watersheds containing 303d listed water bodies improve or maintain overall progress toward beneficial use attainment for pollutants which led to listing; and do not allow additions of pollutants in quantities that result in unacceptable adverse effects (Appendix II provides clarification of terms used in this Standard)

(S7) Allow management activities to result in no less than 85% of potential ground cover for each vegetation cover type. (See Appendix VII for potential ground cover values by cover type.)

Guidelines for Watershed, Riparian, and Aquatic Habitat Health:

(G2) Projects in watersheds with 303(d) listed waterbodies should be supported by scale and level of analysis sufficient to permit an understanding of the implications of the project within the larger watershed context.

(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.

(G4) At the end of an activity, allow no more than 15% of an activity area (defined in Glossary) to have detrimental soil displacement, puddling, compaction and/or to be severely burned.

(G5) Do not allow activities that could result in water yield increases that would degrade water quality and impact beneficial uses.

(G6) In Riparian Habitat Conservation Areas (defined in Glossary) when projects are implemented, retain natural and beneficial volumes[1] of large woody debris.

(G7) Manage Class 1 Riparian Area Greenlines for 70% or more late-seral vegetation communities as described in Intermountain Region Integrated Riparian Evaluation Guide (USDA Forest Service, 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.

(G8) In stream channels naturally occurring debris shall not be removed unless it is a threat to life, property, important resource values, or is otherwise covered by legal agreement.

[1] Defined during development of site-specific Riparian Management Objectives.

(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.

(G10) Encourage water users that divert, augment, or operate reservoirs to regulate discharges to prevent or reduce damage to downstream properties.

(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.

(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.

(G13) Any long-term crossing of stream channels containing fish habitat will provide for desirable aquatic passage.

Biodiversity and Viability/Terrestrial and Aquatic Habitats

Additional management direction for vegetation can be found in Forest Service Handbook 2409.17. Additional management direction for snags and coarse woody debris can be found in Forest Service Manual 5150 and FSM 2550. Additional management direction for wildlife resources can be found in Forest Service Manual 2600 and Forest Service Handbook 2609.13. Additional management direction for Threatened, Endangered, and Sensitive Plants can be found in Forest Service Manual 2670. Additional management direction for riparian and aquatic resources can be found in Forest Service Manuals 2500 and 2600, and the following Forest Service Handbooks: 2510, 2511, 2521, 2526, 2527, 2531, 2532, 2541, 2542, 2552, 2554, 2601, 2603, 2604, 2620, 2621, 2622, 2623, 2624, 2625, 2670, 2672, 2676, 2509.18, and 2509.22.

Appendix I contains additional Species Conservation Guidance Sources. In accordance with the CA the Wasatch-Cache will manage lynx and lynx habitat consistent with the LCAS and lynx Science Report. Some standards and guidelines from the LCAS have been adopted as itemized standards and guidelines for this Forest Plan. Other LCAS standards and guidelines are not necessarily itemized in the plan because they are covered by other management and planning direction or would be evaluated at the project level in coordination with the Fish and Wildlife Service. However, the Plan conclusively adopts the entire CA and LCAS wherever applicable to Forest planning processes. Appendix XI contains a listing of Botanical Resources.

Standards for Biodiversity and Viability/Terrestrial and Aquatic Habitats:

(S8) In Lynx Analysis Units with current habitat at 30% or more in unsuitable condition (defined in Glossary), allow no vegetation management activities that would result in a further increase of unsuitable conditions.

(S9) Timber management projects shall not change more than 15 percent of lynx habitat within a Lynx Analysis Unit to an unsuitable condition.

(S10) In Lynx Analysis Units allow no net increase in groomed or designated open over-the-snow routes or play areas.

(S11) Plant species at risk (Listed in Appendix XI) or their plant parts may not be collected even for scientific purposes, unless it is under the direction of the Forest or Regional Botanist and such collection does not jeopardize the continued vigor or existence of a plant population. Permits are required from U.S. Fish and Wildlife Service for collection of federally listed species.

(S12) Prohibit forest vegetation treatments within active northern goshawk nest areas (approximately 30 acres) during the active nesting period.

(S13) At least 20 percent of each forested cover type by ecological section (McNab and Avers 1994) shall be maintained with old forest landscape structure with patch sizes of at least 10 acres. These old forest areas are dynamic, changing location as disturbances occur.

(S14) Allow no net decrease in areal extent of tall forb communities.

Guidelines for Biodiversity and Viability:

(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 as follows except in the Wildland Urban Interface (defined in Glossary), where vegetation structure and pattern should be managed to reduce threat of severe fire to property and human safety.

Table G14. Desired Structure and Pattern for Cover Types

Cover Type	Landscape Structure	Landscape Patterns
Alpine	Characterized by a lack of arboreal vegetation, landscape dominated by shallow soils, fell-fields, boulders, tundra, and turf-forming vegetation with some areas with low shrubs (e.g. <1 ft. tall.)	Boulder fields, alpine turf and meadows within historical ranges.
Limber Pine Bristlecone Pine	Balanced Range:	Open Forests to woodlands, canopies do not close and trees

Cover Type	Landscape Structure	Landscape Patterns
	Grass/Forb, seedlings and saplings = 10-20 % Young, Mid Aged and Mature forests = 30-50 % Old Forests = 20-40%	are distributed in sparse or widely spaced stands or widely spaced clumps of trees.
Engelmann Spruce-Subalpine Fir	Balanced Range: Grass/Forb about 10% Seedling/Sapling about 10% Young Forest about 20% Mid Aged Forest about 20% Mature Forest about 20% Old Forest about 20% 40% of the stands have multiple canopies. Stand Density Index (SDI) not greater than 335 and Basal Area less than 150	Patterns are within historical ranges. Pattern sizes, shapes and corridors are maintaining processes. The role of fire is to maintain a heterogeneous pattern of species and structure classes. A mixed severity fire regime produces vegetation mosaics due to patchy nature of the fire, preventing development of large continuous blocks of homogeneous ages and species.
Aspen	Balanced Range: Grass/Forb and Seedling/Sapling = 40 % Young, Mid Aged and Mature forests = 30% Old Forests = 30% Stand Density Index not greater than 300 and Basal Area less than 140.	Patterns are within historical ranges. Pattern sizes, shapes and corridors are maintaining processes. The role of fire is to influence distribution of structural classes and patterns across landscapes.
Mixed Conifer (Uinta Mountains) This cover type is not listed in the Regional PFC document.	Balanced Range: Grass/Forb about 10% Seedling/Sapling about 10% Young Forest about 20% Mid Aged Forest about 20% Mature Forest about 20% Old Forest about 20%	Patterns are within historical ranges. Pattern sizes, shapes and corridors are maintaining processes.
Mixed Conifer (Bear River Range) This cover type is not listed in the Regional PFC document.	Balanced Range: Grass/Forb about 10% Seedling/Sapling about 10% Young Forest about 20% Mid Aged Forest about 20% Mature Forest about 20% Old Forest about 20%	Patterns are within historical ranges. Pattern sizes, shapes and corridors are maintaining processes.
Lodgepole Pine	Balanced Range: Grass/Forb about 10% Seedling/Sapling about 10%	Patterns are within historical ranges. Pattern sizes, shapes and corridors are maintaining processes. The role of fire is to

Cover Type	Landscape Structure	Landscape Patterns
	Young Forest about 20% Mid Aged Forest about 20% Mature Forest about 20% Old Forest about 20% 20% of the stands have multiple canopies. Stand Density Index (SDI) not greater than 350 and Basal Area less than 90 sq. ft.	maintain a heterogeneous pattern of age and size classes across the landscape.
Interior Douglas-fir	Balanced Range: Grass/Forb about 10% Seedling/Sapling about 10% Young Forest about 20% Mid Aged Forest about 20% Mature Forest about 20% Old Forest about 20% Not more than 50% of the stands have multiple canopies. Stand Density Index (SDI) not greater than 298 and Basal Area less than 160 sq. ft.	Patterns are within historical ranges. Pattern sizes, shapes and corridors are maintaining processes. Fire's role on dry and mesic sites is to prevent a shade-tolerant understory from developing. Subsequent light burns maintain these stands in a park-like condition.
Pinyon-Juniper	Balanced Range: Grass/Forb about 10% Seedling/Sapling about 10% Young Forest about 20% Mid Aged Forest about 20% Mature Forest about 20% Old Forest about 20%	Patterns are within historical ranges. Pattern sizes, shapes and corridors are maintaining processes. Pinyon-Juniper is primarily limited to habitats that offer protection from fire such as bare ridgetops and rock outcrops.
Mountain Mahogany	Balanced Range: Grass/Forb about 10-20% Early Seral about 20-40% Mid Seral about 20-40% Late Seral about 20-40%	20-40% of acres are in mid-seral or later structural stages in patches of >25 acres. Pattern is more or less heterogeneous mosaic of structural classes.
Gambel Oak	Balanced Range: Grass/Forb about 10-20% Early Seral about 20-40% Mid Seral about 20-40% Late Seral about 20-40%	20-40% of acres are in mid-seral or later structural stages in patches of >25 acres. Pattern is more or less heterogeneous mosaic of structural classes. Fire helps to maintain these classes.
Bigtooth Maple This cover type is not listed in the Regional PFC document.	Balanced range of size and age classes.	20-40% of acres are in mid-seral or later structural stages. Pattern is a more or less heterogeneous mosaic of structural classes. Fire helps maintain these classes.
Tall Shrub (Mountain Brush)	Multiple vegetation layers with alternating vertical dominance.	Acreages and dispersion within historical ranges.
Tall Forb	Minimum ground cover of 90% leading into the winter season.	Patterns within historical range on area still suitable for Tall Forb dominance
Sagebrush(Big)/Grassland	Balanced range of structural	Patterns are within the historical

Cover Type	Landscape Structure	Landscape Patterns
	stages. 40% of area with 15% or more crown cover (as measured by line intercept method).	range.
Riparian	Amount and type of vegetation community 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.

(G15) In goshawk habitat design all management activities to maintain, restore, or protect desired goshawk and goshawk prey habitats including foraging, nesting and movement.

(G16) When treating vegetation in the following cover types, maintain or restore snag and woody debris habitat components at the stand level (where they are available distributed over each treated 10 acres). If the minimum number of snags is unavailable, green trees should be substituted. If the minimum size is unavailable, then use largest trees available on site.

Table G16 The snag and woody debris requirements for spruce-fir, mixed conifer, Douglas fir, lodgepole, aspen-lodgepole and aspen forest types.

Snags				Woody Debris		
Forest Type	Minimum Diameter (Inches)	Retention Density (minimum snags per 10 acres)	Minimum Snag Height (feet)	Minimum Coarse Debris (≥ 3 inches) Tons/10 Acres Down Logs	Minimum Down Logs (per 10 acres)	Minimum Log Size diameter/length (midpoint or largest available)
Spruce-Fir	18	30	30	100	50	12 inch/8 feet
Mixed Conifer	18	30	30	100	50	12 inch/8 feet
Douglas Fir	18	30	30	100	50	12 inch/8 feet
Lodgepole	8	30	15	50	50	8 inch/8 feet
Aspen-Lodgepole	8	30	15	50	50	8 inch/8 feet
Aspen	8	200	15	30	50	6 inch/8 feet

(G17) Where snags or coarse woody debris are below the desired range, the felling of snags and transport of felled snags or coarse wood off-site including firewood gathering will not be allowed, except to reduce hazards to humans or property along roads, trails, and in or adjacent to developed facilities.

(G18) In Lynx Analysis Units design all management activities to maintain, restore, or protect desired lynx and lynx prey habitats including foraging, denning and movement.

(G19) In Lynx Analysis Units with less than 10% denning habitat well-distributed, retain disturbance areas smaller than 5 acres with tree mortality that could contribute to denning habitat.

(G20) In Lynx Analysis Units maintain or restore (defer action) denning habitat in patches larger than 5 acres comprising at least 10% of habitat.

(G21) For projects that may affect Forest Service Sensitive species, develop conservation measures and strategies to maintain, improve and/or minimize impacts to species and their habitats. Short-term deviations may be allowed as long as the action maintains or improves the habitat in the long term.

(G22) Use native plant species, preferably from genetically local sources (harvesting seed from a project area's native species prior to project implementation), in revegetation efforts to the extent practicable. If no native seed of suitable origin is available, then certified weed free non-persistent non-natives may be used.

(G23) Avoid actions on the Forest that reduce the viability of any population of plant species classified as Threatened, Endangered, Sensitive or recommended sensitive. Use management actions to protect habitats of plant species at risk from adverse modification or destruction. For species that naturally occur in sites with some disturbance, maintain the appropriate level of disturbance.

(G24) Management activities that negatively affect pollinators (e.g. insecticide, herbicide application and prescribed burns) should not be conducted during the flowering period of any known Threatened, Endangered, and Sensitive plant populations in the application area. An exception to this guideline is the application of *Bacillus thuringiensis*.

(G25) Integrated weed management should be used to maintain or restore habitats for threatened, endangered, proposed and sensitive plants and other native species of concern where they are threatened by noxious weeds or non-native plants. When treating noxious weeds comply with policy in Intermountain Region's Forest Service Manual *2080,* Supplement *#R4 2000-2001-1* (Appendix III).

(G26) Protect key big game calving, fawning and lambing habitat and provide security in summer concentration areas.

(G27) Provide recommendations on appropriateness of wildlife transplants based on habitat assessments.

(G28) Discourage introduction of non-indigenous plant and animal species to national forest lands.

(G29) Avoid disruptive management activities in elk calving areas, elk spring use areas, and bighorn sheep lambing areas from May 1 through June 30.

(G30) Avoid disruptive management activities (not public recreation activities) on deer, elk, mountain goat and bighorn sheep winter range from November 15 through April 30.

Plant Collection (non-tree)

Additional management direction can be found in Forest Service Handbook 5109.19.

Guidelines for Plant Collection:

(G31) Following appropriate environmental analysis, commercial collection of native species (plants, plant parts, or seeds -quantity, location and appropriateness) may be allowed.

(G32) Except for Forest Service approved scientific or restoration projects, or cultural use, no collections of seeds or plants are permitted in Research Natural Areas, Special Interest Areas, Wilderness or recommended wilderness, developed recreation sites, the Central Wasatch Management Area, and within the Cache Box-Elder Management Area from mouth of Logan Canyon to Temple Fork and Tony Grove-White Pine areas.

Fire and Fuels Management

Additional management direction for fire management can be found in Forest Service Handbook 5109.19.

Standards for Fire Management:

(S15) Human life (firefighter and public safety) is the highest priority during a fire. Once firefighters have been assigned to a fire, their safety becomes the highest value to be protected with property and natural/cultural resources being secondary priorities.

(S16) Human-caused fires (either accidental or arson) are unwanted wildland fires, and will be suppressed. Natural ignitions will be suppressed in areas not covered by an approved Wildland Fire Implementation Plan included in the Forest Fire Management Plan.

Guidelines for Fire and Fuels Management:

(G33) When assigning protection priorities to property and natural and cultural resources, decisions will be based on relative values to be protected, commensurate with fire management costs, and suppression costs should be appropriate for values protected.

(G34) The full range of suppression tactics is authorized forestwide consistent with forest and management area emphasis, direction and Forest Fire Management Plan.

(G35) The full range of fuels reduction methods is authorized consistent with management direction for the specific area.

(G36) Under documented preplanned and specified conditions, wildland fire use is authorized forestwide except in the following areas. These areas will be protected through an appropriate management response if they are threatened.

- Administrative sites
- Developed recreation sites
- Recreation residence site
- Communication sites
- Oil and gas facilities
- Mining facilities
- Above-ground utility corridors
- High-use travel corridors

(G37) Use prescribed fire in wilderness only to meet wilderness management objectives. The objective of prescribed fire management in wilderness (FSM 2324.21) is to reduce, to an acceptable level, the risks and consequences of wildfire within wilderness or escaping from wilderness.

(G38) Minimum impact suppression techniques will be implemented when managing wildland fire activities within wilderness.

(G39) Manage fire to protect, restore or enhance threatened, endangered, candidate, proposed, and Forest Service sensitive species and their habitats.

Roads, Trails, and Access Management

Additional management direction that also applies to roads can be found in Forest Service Manual 7100, 7300, 7400, 7500, 7600 and 7700, as well as Forest Service Handbooks 7309.11, 7409.11, 7509.11, 7709.55, 7709.56, 7709.56b, 7709.57, 7709.58, 7709.59 and FS-643, USDA, FS, 1999. Additional management direction for trails is in Forest Service Manual 2350, Trails Management Handbook 2309.18.

Standards for Road/Trail and Access Management:

(S17) All decommissioned roads/trails will be properly drained.

(S18) Summer motorized and mechanized access is managed on an “open on designated routes” basis.

(S19) If the only access to National Forest requires crossing private land where public access is restricted, the adjacent National Forest land will be closed to motorized and mechanized use without a permit authorizing motorized use.

(S20) When constructing or maintaining roads, trails and facilities, use Best Management Practices to minimize sediment discharge into streams, lakes and wetlands.

Guidelines for Road/Trail and Access Management:

(G40) Limit uses on trails when necessary to protect resource values, resolve user conflicts, and/or create unique opportunities. Examples: Snowshoeing, snowboarding, hiking and/or dogs may be prohibited on groomed cross-country/skate ski and/or snowmobile routes to reduce track damage and/or user conflicts.

(G41) Winter motorized and nonmotorized means of access may be separated in high use areas (in timing and/or location) where user conflicts and safety are a concern.

(G42) When revising Travel Management Plans, provide specific direction for managing mechanized transport such as mountain bikes.

(G43) Winter recreation uses may be closed or limited when one or more of the following conditions exist:

- Use causes significant impacts to adjacent landowners, and/or agencies from use that begins on national forest land.
- Use affects water quality in municipal watershed areas.
- Use affects key winter wildlife habitats, such as big game winter range, migration routes, or during wildlife stress periods such as during severe winters or special considerations such as threatened, endangered, candidate, proposed, and Forest Service sensitive species needs.

(G44) When constructing and reconstructing roads, trails, and facilities minimize potential effects on habitat of plant species at risk and key big game winter and spring ranges.

(G45) Access routes for heavy equipment should be selected to limit disturbance to riparian vegetation and to limit the number of stream crossings.

(G46) Specify and control locations for water supply points, service areas, and any other needs for road and facility construction projects.

(G47) Waste material should be handled in a manner to avoid sidecasting materials to areas where they may enter a stream.

(G48) Include motorized access in authorizations such as term grazing permits, communication sites, transmission lines, permits to drill, reservoirs and weather stations when needed for management consistent with management prescription and coordinated to mitigate impacts. In Lynx Analysis Units in winter, motorized use in these authorizations will be authorized only on designated routes.

Recreation

Additional management direction for recreation resources can be found in Forest Service Manual 2300, 2710, 2720, as well as Forest Service Handbooks 2309.18, 2309.23, 2709.11, and Region 1/Region 4 Handbook 2509.22.

Guidelines for Recreation Management:

(G49) Manage recreation opportunities consistent with Management Prescriptions Categories (MPCs*),* Recreation Opportunity Spectrum (ROS) Classes, Landscape Character Themes (LCTs), Scenic Integrity Objectives (SIOs), and in accordance with Winter Recreation Maps as well as District Travel Management Plans.

(G50) Design, construct, and operate recreation facilities, trails and concentrated use areas to provide a beneficial recreation experience, reducing social conflicts and minimizing or avoiding adverse effects on watershed integrity, soil productivity, aquatic/riparian systems, terrestrial species and their habitats, and cultural resources.

(G51) In Semi-Primitive Non-Motorized areas, use of motorized equipment may be approved for administrative purposes.

(G52) Explore opportunities for separation of conflicting uses in time (for example alternating days) as well as space (closure of area to specific uses) to resolve conflicts while continuing to offer varied recreation opportunities.

(G53) Where recreation demand exceeds resource capabilities or significantly changes the recreation setting available to users, determine limits of acceptable change and take actions to manage within those limits.

(G54) Use interpretation and environmental education to assist in improved understanding and ownership of forest stewardship needs.

(G55) The Winter Recreation Map allocation applies when there is an adequate depth of snow to protect vegetation. When there is not adequate snow, summer ROS Maps and descriptions as well as Travel Management Plans apply and use of snowmobiles is not allowed off designated routes.

(G56) Establish seasonal camping stay and group size limits where needed to meet management goals.

(G57) In the Tri-Canyon Area, cooperate with public and private entities to encourage the use of mass transit to access recreational facilities and programs adjacent to travelways.

Standards for Climbing:

(S21) Climbing areas determined to negatively impact plant species at risk will be closed.

Guidelines for Climbing:

(G58) No live vegetation can be removed from any cliff face, top or base in areas of known species at risk plant populations.

Scenic Resources

Additional management direction for recreation resources can be found in Forest Service Manual 2300, 2710, 2720, as well as Forest Service Handbooks 2309.18, 2309.23, 2709.11.

Standards for Scenery Management

(S22) Management actions that would result in a scenic integrity level of Unacceptably Low (defined in Glossary) are prohibited in all Landscape Character Themes.

Guidelines for Scenery Management

(G59) Manage Forest landscapes according to Landscape Character Themes, and Scenic Integrity Objectives as mapped. (See Chapter 4, A.7. Scenery Management for definitions).

(G60) Resource management activities should not be permitted to reduce Scenic Integrity below Objectives stated for Management Prescription Categories.

(G61) For management activities viewable from Concern Level 1: (defined site-specifically) Scenic Byways (viewshed corridors 0-4 miles) and use areas, travelways, and Scenic Backways (viewshed corridors <1/2 mile) apply the Landscape Character Theme in which the management activity occurs and apply a Scenic Integrity Objective of high.

(G62) For management activities viewable from Concern Level 2: (defined site-specifically) use areas and travelways (viewshed corridors <1/2 mile) apply the Landscape Character Theme in which the management activity occurs and apply a Scenic Integrity Objective of at least moderate.

(G63) Duration of visual impacts to allow for herbaceous and woody plants are established will be determined during project planning by the following criteria:
- Capability of the landscape to recover
- The relationship of management activity to the seen area of sensitive, use areas and travel ways.

(G64) Establishment of herbaceous vegetation may extend to 3 years after project completion for foreground and middleground in Concern levels 1 and 2 use areas and travel ways. Consider immediate initiation of reseeding in these areas where natural recovery is questionable.

Timberland Resources

Additional Standards and Guidelines that apply to timber management activities can be found in the Timber Sale Contract Provisions, procurement contracts, the Forest Service Manual, and the following Forest Service Handbooks: FSH 2409.13 - FSH 2409.15 - FSH 2409.17.

Appendix IV. provides a discussion of anticipated silvicultural systems and related vegetation management practices.

Standards for Timber Management:

(S23) Regulated timber-harvest activities will occur on only those lands classified as capable, available, and suitable for timber production.

Guidelines for Timber Management:

(G65) The choice of silvicultural system should be one that allows emulation of the pattern (including size), timing, and frequency of natural disturbances found in the landscape being treated (For emphasis, FSH 2409.26).

(G66) In Lynx Analysis Units precommercial thinning will be delayed until stands no longer provide snowshoe hare habitat. In lodgepole pine precommercial thinning may be allowed following consultation with U.S. Fish and Wildlife Service, and if shown to result in enhancement or maintenance of snowshoe hare and lynx habitat.

(G67) Timber cutting on other than suitable lands may occur for such purposes as salvage, fuels management, insect and disease mitigation, protection or enhancement of biodiversity or wildlife habitat, or to perform research or administrative studies or scenic-resource management consistent with other management direction.

(G68) When trees are to be harvested on other than suitable lands, exceptions to the five-year restocking standard are appropriate as documented in project decisions when the harvest meets one of the following criteria:

- For permanent openings that serve specific management direction
- Where provided for in specific management practices and prescriptions
- Where it is desirable to delay the onset of regeneration of crown closure to meet specific desired conditions and management objectives

(G69) Apply the following appropriate silviculture systems by Forest Cover Type

Table G69. Management activity appropriate by forest cover type.

Management Activity	Engelmann Spruce/ Subalpine Fir	Lodgepole Pine	Interior Douglas-Fir and White Fir	Aspen	Mixed Conifer
Silvicultural System – EVEN-AGED					
Clearcut with Reserves	N	A	WJ	A	WJ
Shelterwood	A	A	A	N	A
Seedtree	N	N	WJ	N	WJ
Coppice	N	N	N	A	N
Silvicultural System – TWO-AGED					
Irregular Shelterwood	A	A	A	N	A
Coppice with Standards	N	N	N	A	N
Silvicultural System – UNEVEN-AGED					
Group Selection	A	A	A	A	WJ
Single-tree Selection	A	N	A	N	WJ
Stocking Control: (thinning)					
Precommercial	A	A	A	N	A
Commercial	A	A	A	N	A
Salvage of Dead Material	A	A	A	A	A
Reforestation					
Site Preparation	A	A	A	WJ	A
Planting	A	A	A	N	WJ
Seeding	N	N	N	N	N
Natural	A	A	A	A	A
Regeneration Protection	WJ	WJ	WJ	WJ	WJ
Tree Improvement	WJ	WJ	WJ	WJ	WJ
A = Acceptable, WJ = When Justified, N = Not Acceptable					

(G70) When trees are harvested on suitable lands, the cutting must be in such a way that units are adequately restocked within five years after final harvest. Minimum restocking levels are defined in the following table.

Table G70: Minimum trees restocking level by tree species, with percent area meeting minimum stocking level.

Species	Minimum Stocking (Trees/Acre)	Percent of Area Meeting Minimum Stocking
Lodgepole pine	150	70
Douglas-fir	150	70
Mixed Conifer	150	70
Spruce-fir	150	70
Aspen	300	70

Livestock Grazing

Additional management direction for rangeland resources can be found in FSM 2200, Range Management, WO Amendment 2200-90-1, Chapters 10-50; Intermountain Interim Directive FSH 2209.3-99-9, Grazing Permit Administration Handbook, Chapter 90, Rangeland Management Decision Making; and FSH 2209.21 Rangeland Ecosystem Analysis and Management Handbook, R4 Amendment 2209.21-93-1, Chapters 10-40.

Standards for Livestock Grazing:

(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:

Table S24: Percent utilization of key grass or grass like vegetation, by vegetation type, for rangelands in satisfactory condition.

Vegetation Type	Condition	Percent Utilization Key Grass 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.

Riparian Class	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).

Guidelines for Livestock Grazing:

(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 (i.e. in unsatisfactory condition), maximum allowed forage utilization will be 30-40 percent.

(G72) Modify grazing practices that prevent attainment of desired future conditions for vegetation and/or aquatic resources.

(G73) Delay livestock use in post-fire and post-harvest created forest openings until successful regeneration of the shrub and tree components occurs (aspen trees reach an average height of 6 feet).

(G74) Stock driveways and trailing routes will be located outside of Riparian Habitat Conservation Areas unless terrain and/or vegetation are prohibitive. When driveways and trailing routes must pass through Riparian Habitat Conservation Areas, they will be located and livestock moved through them in such a way to minimize the extent and/or severity of potential damage caused by trailing.

(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:
- 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 (trees and shrubs),
- stream bank trampling on key reaches, and
- stubble height and/or incidence of use on key species in the uplands.

Mineral and Energy Resources

Additional requirements and direction that apply to mineral management can be located in 36 CFR 228, Subpart A through E; FSM 2800, Minerals and Geology, WO Amendment 2800-96-1, Zero Code; FSM 2810, Mining Claims, WO Amendment 2800-90-1, FSM 2820, Mineral Leases, Permits and Licenses, WO Amendment 2800-94-1; FSM 2830, Mineral Reservations and Outstanding Mineral Rights, WO Amendment 2800-90-1; FSM 2840, Reclamation, WO Amendment 2800-90-1.

Appendix IX provides stipulations for oil and gas leasing.

Standards for Minerals and Energy:

(S27) No explosives or seismic helicopter activity are allowed one week prior to and during the general bull elk and buck deer rifle hunting seasons.

(S28) Oil and gas exploration and development activities will be consistent with standard lease terms and supplemental stipulations listed in Appendix IX.

Guidelines for Minerals and Energy:

(G76) Require warning systems for public safety when explosives are being used.

(G77) Route helicopter flight paths to reduce conflicts with other resources (including recreation) that are sensitive to this activity.

(G78) Restrict disruptive or surface disturbing activities during periods of concentrated public use.

(G79) Avoid campgrounds, recreation residences, roads, and other heavy use areas with helicopter landing and refueling sites and parking areas.

Lands

Additional management direction that also applies to the Lands program can be found in Forest Service Manual 5400, 5500, 7150 as well as Forest Service Handbooks 2709.12, 2709.15, 5409.13 and 5409.17.

Guidelines for Land Ownership:

(G80) Where there is an assertion that there is a nonfederal property interest, such as a right-of-way under RS 2477, an in-holding, or other such interest (including easements) that may be impacted by Forest Service management activities, the Forest Service will evaluate the assertion and give due consideration to any valid existing property right that may exist.

Special Uses: Recreation and Non-Recreation

Additional management direction for Special Uses can be found in Forest Service Manuals 2710, 2720, 2730, 2770 and Forest Service Handbooks 2709.11, 2709.12, 2709.15 and 36 CFR 251, subpart B.

Standards for Special Uses:

(S29) Allow no net increase in the number of recreation residences.

(S30) All motion picture and video filming utilizing crews, special equipment, special effects and vehicles requires a special use permit.

Guidelines for Special Uses:

(G81) Before issuing recreation or non-recreation special use authorizations, ensure that each proposal clearly demonstrates why use of National Forest System lands is necessary and why lands under other ownership cannot be used. Deny proposals for use when the request is based solely on affording the proponent a lower cost or less restrictive location than can be obtained on non-Federal lands, or when reasonable options exist on non-National Forest System lands. Use the process identified in FSH 2709.11 to determine whether special use proposals will be accepted for detailed review under NEPA. Provide only for authorizations that meet the tests of prudent, reasonable, and absolutely in the public interest.

(G82) The following existing recreation residence tracts will continue to be allocated as special use development areas: Bountiful Peak, Brighton, Christmas Meadows, Evergreen, Elbow Fork, Mill D, Soapstone, Hailstone, Pineview, Firs, Porter Fork and Logan River (Beirdneau, Birch Glen, Brachipod, Brown's Roll Off, Chokecherry,Gus Lind, Juniper, Lower Card, Pine Bluff, Upper Card and Valhalla). Decisions to issue new recreation residence permits following expiration of the current term permit requires a determination of consistency with the Forest Plan. Follow the process depicted in FSH 2709.11, section 41.23c.

(G83) A special use permit for commercial still photography is required only:
- (a) When it includes the use of actors, models, sets, or props that are not a part of the sites natural or cultural resources or administrative facilities;
- (b) When the photography takes place at locations where members of the public are generally not allowed;
- (c) When the photography would adversely impact National Forest lands, resources or other users.

Guidelines for Transportation and Utility Corridors:

(G84) The following are corridors established and types of utilities allowed (See Transportation and Utility Corridors Map). Where the purpose of a utility line is to accommodate an individual small end user on national forest or for smaller utilities, placement is not restricted to these designated corridors.

Table (G84). Corridors on the Wasatch-Cache National Forest for underground, overhead and surface use. Corridor widths are also identified.

Corridor Name	Corridor Width	Underground	Overhead	Surface
North Ogden Canyon	½ mile	Yes	Yes	No
Ogden Canyon	1 mile	Yes	Yes	Yes
Box Elder Canyon	1 mile	Yes	Yes	Yes
Weber Canyon	1 mile	Yes	Yes	Yes
Meridian Peak	1 mile	Yes	Yes	No
Little Mountain and Parleys Canyon	½ mile	Yes	Yes	No
Wasatch Front	1 mile	Yes	Yes	No
Ward Canyon	1 mile	Yes	Yes	No
Blacksmith Fork Canyon	1 mile	Yes	Yes	No
Monte Cristo	1 mile	Yes	Yes	No

(G85) The following will continue to be designated communication sites for commercial communication facilities. Accommodate requests for additional facilities at these sites where access and space is available.

- Shephards Peak
- Scotts Peak
- Red Spur
- Hidden Peak
- Wellsville
- Mt. Ogden
- Alta
- Logan Hill

(G86) The following will continue to be designated communication sites for non-commercial use:

- Scotts Peak (Forest Service)
- Francis Peak
- Red Spur (Forest Service)
- Monte Cristo
- Huntsville Guard Station
- Logan Peak
- Mud Flat
- Moffit Peak
- Poison Mountain

Wilderness

Additional management direction for wilderness is in Forest Service Manual 2320, 1964 Wilderness Act, 1978 Endangered Wilderness Act, 1984 Utah Wilderness Act, Wilderness-Primitive Areas 36 CFR 293, Wilderness Management 36 CFR 219.18, Forest Service Poster and Sign Guidelines, and minimum requirements analysis.

Standards and Guidelines for Wilderness Management:

Refer to Appendix VI. for standards and guidelines for individual or groups of Wilderness areas.

Caves

Additional direction for management of caves is in the 1988 Federal Cave Resources Protection Act, 36 CFR 290 Cave resources management, and Forest Service Manual 2372.

Standards for Caves:

(S31) No action will be taken to prevent or hinder ingress or egress of cave-dependent wildlife.

Guidelines for Caves:

(G87) Protect caves and their entrances by not signing their location, gating where unacceptable damage to known cave resources is occurring or has a high potential to occur (without substantially altering the entrance), not allowing activities in the vicinity that could cause sedimentation into the cave, a change in natural hydrology, ground disturbing activities such as use of heavy equipment or blasting soil sterilization or addition of nutrients or other chemicals (pesticides, herbicides, fertilizers).

Heritage

Additional management direction for heritage resources is in Forest Service Manual 2360 and the National Heritage Strategy.

Standards for Heritage Resources Management:

(S32) Review undertakings that may affect cultural resources to identify potential impacts. Compliance with Sections 106 and 110 of the National Historic Preservation Act shall be completed before the responsible agency official signs the project decision document.

Guidelines for Heritage Resources Management:

(G88) Design any mitigation measures necessary to resolve adverse affects to sites in such a way that they provide the maximum public benefit that the sites (or the information derived from them) can offer.

Management Prescriptions

Sheep Grazing in Summer Range

5. Management Prescriptions

Relationships Between Map Layers

This Forest Plan includes multiple map layers with accompanying definitions and management direction. The primary maps are Management Prescriptions (MP), Recreation Opportunity Spectrum (ROS), Winter Recreation (WR), and the Scenery Management System (SMS). Management Prescriptions define the primary land use allocation with the other three maps further defining intended management for a given land area. In most instances the four map layers are compatible by design. However, in the instance of a conflict between direction for a Management Prescription and any of the three other layers, the Management Prescription takes precedence. If site-specific analysis identifies a conflict, the Forest Plan Maps may need to be amended to bring the other layers into consistency with the overlying Management Prescriptions. In addition there are Transmission Corridor maps tied to Forestwide Guideline 82, and Oil and Gas Leasing maps for the North Slope Uinta Mountains.

Management Prescriptions

Management Prescriptions are defined as "management practices and intensity selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives." Management Prescription 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. Each Prescription includes a set of standards and guidelines showing activities that are not allowed, and parameters within which activities that are allowed should be conducted. Each Category identifies emphasis and focus, highlighting considerations that must be included in the harmonious and coordinated management of the various resources there, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, etc. consistent with the definition of multiple-use. Prescriptions are meant to identify the tools/activities that can be used to achieve objectives. *Emphasis* as used in these Prescriptions is defined as focus or highlighting, not exclusive or "dominant" use. In the event of a conflict between uses, resolution will be based on the specific merits of the situation rather than assuming that the Prescription implies a "trumping" of one resource over another. The entire Management Direction package for the area must be considered, not just the Prescription.

Consistency of Prescriptions with Multiple-Use and Other Laws

The Multiple-Use Sustained-Yield Act of 1960 defines the term "multiple-use" to mean: the management of all the various renewable surface resources of the National Forests so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some

or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some lands will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output." (P.L. 86-517, 74 Stat.215; 16 U.S.C. 528(note), 528-531, Sec. 4. (a).

Highlighting of considerations through emphasis in a Prescription Category may also be based on needs and opportunities tied to other key laws that guide and direct management of the National Forests. Some of these include the Forest and Rangeland Renewable Resources Planning Act, National Forest Management Act of 1976, Clean Water Act, Clean Air Act, Wilderness Act, Endangered Species Act of 1973, Wild and Scenic Rivers Act, Mining and Minerals Policy Act of 1970, National Environmental Policy Act, National Historic Preservation Act, North American Wetlands Conservation Act, and the Intermodal Surface Transportation Efficiency Act of 1991 (Scenic Byways Program and Symms National Recreational Trails Act of 1991). For example Prescription Category 2 has subcategories directly tied to the Wild and Scenic Rivers Act.

The Multiple-Use Act as well as the Forest and Rangeland Renewable Resources Planning Act and National Forest Management Act identify the need for periodic adjustments to conform to changing needs and conditions. The monitoring components of this Forest Plan are designed to surface indicators of needs for change and to initiate actions to adjust management.

As described above, the Prescription Categories are not intended to stand-alone. They are one part of the Management Direction package that also includes goals and subgoals, objectives, desired future conditions, standards, guidelines, and monitoring and evaluation requirements. Where an activity is allowed in the Prescription, the standards and guidelines provide specific parameters within which the activity must be managed.

MPC maps of alternatives can be found in the Map Packets and with each Management Area within this Plan.

Allowed Activities Explanations

The following terms are used within each of the Management Prescriptions and their standards and guidelines. For brevity, only the term is used within the Management Prescription. For clarity, the intent of these terms is spelled out below.

Timber Harvest refers to commercial removal of vegetation for a variety of purposes including providing raw wood materials, improving wildlife habitat,

adjusting age class distribution to mimic historic disturbance regimes, providing fire-resistant landscapes and commercial thinning. Timber harvest may be used to salvage trees or stands substantially damaged by wind, fire, or other significant disturbance; reduce susceptibility to insects and disease; or to develop stand structures that meet the desired future conditions, provided this can be done in harmony with the management emphasis for the area.

Vegetation/Fuel Treatment refers to a host of activities including, thinning, seeding; planting; mechanical treatments such as cutting by hand with chainsaws, cutting using tracked eqiupment or equipment on wheels for roller-chopping, chaining, crushing, or chipping; chemical application; and biological treatments (i.e., specialized grazing regimes). These are methods used to achieve a broad range of multiple-use objectives including maintaining or restoring healthy ecosystems, reducing likelihood of unwanted wildfire, removing public safety hazards, reducing potential for high-intensity wildfires and resulting erosion, improving forage or browse production, restoring native plant communities, improving or restoring watersheds, and providing for specific elements of terrestrial or aquatic wildlife habitats.

Prescribed Fire refers to any fire ignited by management actions to meet specific objectives. A written, approved presribed fire plan must exist, and site-specific NEPA analysis requirements must be met prior to ignition. Prescribed fire plans are docments prepared by qualified personnel, approved by the agency administrator, and include criteria for the conditions under which the fire will be conducted (a prescription). Prescribed fire activities include actuallly lighting a fire using a fire accelerant with ground or aviation equipment and personnel; and may include the following: removal or piling of vegetation to secure perimeter lines, clearing areas for helicopter operations, clearing holding lines to bare mineral soil using hand tools or heavy eqiupment (i.e., bull dozers), using fire resistant foam or water on holding lines, constructing temporary camps for base operations, using aviation resources for fire retardant or water drops to reduce high-intensity fire behavior, closing areas to livestock grazing before and after burning, and closing roads and areas to the public before and after burning.

Wildland Fire Use is the management of naturally ignited wildland fires to accomplish specific prestated resource management objectives in predefined geographic areas outlined in the Fire Management Plan. The term does not include fires that are human-caused (either accidental or arson) that are considered unwanted wildland fires and that must be suppressed. It also does not include the use of those fires that are management ignited, referred to as prescribed fires. Use of wildland fire requires a Wildland Fire Implementation Plan which is a progressively developed assessment and operational management plan that documents the analysis and selection of strategies and describes the appropriate management response for a wildland fire being managed for resource benefits.

Road Construction refers to activity that results in the addition of forest classified or temporary road miles. **Road** is defined as a motor vehicle travelway over 50 inches wide, unless designated and managed as a trail. A road may be classified, unclassified, or temporary. (FSM 7705)

Note: Where road construction is not allowed by a Management Prescription the responsible official may authorize road construction or reconstruction when:

a. A road is needed to protect public health and safety in cases of an imminent threat of flood, fire, or other catastrophic event, that without intervention would cause the loss of life or property;
b. A road is needed to conduct a response action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to conduct a natural restoration action under CERCLA, section 3d11 of the Clean Water Act, or Oil Pollution Act;
c. A road is needed pursuant to reserved or outstanding rights, or as provided by statute or treaty; or
d. Realignment is needed to prevent irreparable resource damage by a classified road. The road must be deemed essential for public or private access, natural resource management, or public health and safety, and the resource damage associated with the road cannot be corrected by maintenance.

New Trail Construction refers to development of any "pathway for foot, horse, or trail vehicles "(bikes, scooters, snomobiles, and all terrain vehicles[motorized OHV 50" or less]) FSM 2305.05, WO Amendment 2300-94-3, 7/8/94, pg. 8-9. and FSH 2309.18 WO Amendment 2309.18-91-2, 11//8/91 pg. 1-2). To determine whether a trail is open to motorized or mechanized uses refer to District Travel Management Plans. **Note:** In Prescriptions where new trail construction is not allowed, reconstruction and/or realignment to correct resource impacts from existing trails is allowed.

Grazing refers to grazing of forage by permitted livestock managed under an approved Allotment Management Plan and terms of a livestock grazing permit. Forestwide and management prescription standards and guidelines provide direction for grazing management until site-specific desired conditions and/or objectives can be developed. Grazing may also include use of livestock under contract to reduce fuels.

New Recreation Development refers to major structural public use facilities such as campgrounds and
trailheads. It does not refer to construction within already established developed recreation sites. Trails and single restrooms are not considered recreation development for these descriptions.

Summary of Management Prescription Categories

1.0 Wilderness

1.1 Existing Wilderness - Opportunity Class I
1.2 Existing Wilderness - Opportunity Class II
1.3 Existing Wilderness - Opportunity Class III
1.4 Existing Wilderness - No Class
1.5 Recommended Wilderness

2.0 Special Management Areas

2.1-2.3 Wild, Scenic, and Recreational Rivers (not used on revision maps)
2.4 Research Natural Areas
2.5 Scenic Byways
2.6 Undeveloped Areas
2.7 Special Interest Areas and Special Areas

3.0 Protection, Maintenance or Restoration of Aquatic/Watershed or Terrestrial Integrity

3.1 Aquatic Habitat/Watershed Emphasis (A - Aquatic, W - Watershed, **Alt. 7 only**)
3.2 Terrestrial Habitat Emphasis (D - Development allowed, U - Undeveloped, **Alt. 7 only**)

4.0 Multiple Resource Uses With Recreation Needs and Opportunities

4.1 Emphasis on Backcountry non-motorized recreation settings
4.2 Emphasis on Dispersed non-motorized recreation settings
4.3 Emphasis on Backcountry Motorized recreation settings
4.4 Emphasis on Dispersed Motorized recreation settings
4.5 Emphasis on Developed Recreation Areas

5.0 Multiple Resource Uses With Forested Vegetation Management Needs and Opportunities

5.1 Emphasis on maintaining or restoring forested ecosystem integrity while meeting multiple resource objectives.
5.2 Emphasis on managing timber for growth and yield while maintaining or restoring forested ecosystem integrity.

6.0 Multiple Resource Uses With Rangeland Vegetation Management Needs and Opportunities

6.1 Emphasis on maintaining or restoring non-forested ecosystem integrity while meeting multiple resource objectives.
6.2 Emphasis on managing for livestock forage production while maintaining or restoring non-forested ecosystem integrity.

7.0 Intermingled Public/Private Lands *(Earlier in the planning process, this prescription was used in combination with other prescriptions to show management emphasis for forest lands in close proximity to private lands. The prescription has been eliminated.)*

8.0 Concentrated Development Areas
8.1 Mineral Development Emphasis

Management Prescription Categories

1.0 - Wilderness

Theme

This prescription includes areas designated by Congress as wilderness and areas recommended by the Forest Service for Wilderness designation. Management emphasis is on maintaining wilderness attributes, including natural appearance, natural integrity, opportunities for solitude, opportunities for primitive recreation, and any identified special features.

Although the theme for management prescription category 1 is wilderness, multiple-use means the harmonious and coordinated management of a variety of resources, without impairment of the productivity of the land. The Forest-wide standards and guidelines, as well as standards and guidelines developed specifically for this prescription category, provide the limits or constraints to guide this coordinated management. As long as other allowed resource activities, such as livestock grazing or fire use, meet the direction in the standards and guidelines, then they are consistent with the wilderness and recommended wilderness prescription categories.

Additional management direction for individual designated wildernesses can be found in Appendix VI beyond what is provided in forestwide DFCs, management prescriptions, goals, standards, and guidelines. Managing wilderness is somewhat different than managing other areas of the forest, in part because they are specifically designated by Congress, and much required direction for them is provided in the designation legislation. While this plan applies three management prescriptions in designated wilderness, all three of these prescriptions must satisfy characteristics of wilderness defined in the Wilderness Act (1964). Additionally, wildernesses, since they have been Congressionally designated at different times in the past, do not necessarily conform to the conventions that were used for assigning portions of the forest to management areas. For example, the High Uintas Wilderness lies within two management areas. All other designated wildernesses on the Wasatch-Cache fall within single management areas. Some forest plans have set aside Wildernesses as separate management areas or develop specific management plans for individual wildernesses; this plan has not done this. Appendix VI outlines management direction that is intended to help meet the unique needs of the wildernesses on this forest.

Management Emphasis
You Will See

The area is managed to allow natural processes to prevail in adherence with the 1964 Wilderness Act and the 1984 Utah Wilderness Act.

1.1 Existing Wilderness - Opportunity Class I
1.2 Existing Wilderness - Opportunity Class II
1.3 Existing Wilderness - Opportunity Class III
1.5 Recommended Wilderness

1.1 Opportunity Class I: This area in existing wilderness is characterized by an unmodified natural environment. Human induced change is temporary and minor. Outstanding opportunities for solitude and unconfined recreation are available for visitors, who travel in small groups, practice excellent wilderness ethics and spend extra effort to leave no trace. Encounters with others are rare.

1.2 Opportunity Class II: This area in existing wilderness is characterized by predominately unmodified natural environment. Human induced change is evident but will recover (slowly in higher elevation areas). Outstanding opportunities for solitude and unconfined recreation exist. Encounters with others are more frequent than Class I.

1.3 Opportunity Class III: This area in existing wilderness is characterized by predominately unmodified natural environment, but impacts could persist from year to year. During peak season and in popular areas concentrated use is more common and opportunities for solitude and unconfined recreation more limited.

(S1.1-3-1) Timber harvest, vegetation/fuel treatment, road building, new recreation development, mountain biking, and use of motorized equipment such as chainsaws and helicopters are not allowed. Exceptions to motorized equipment use may be granted in emergency situations (i.e., wildland fire, search and rescue).

(S1.1-3-2) Allow no net increase in miles of trail with the exception of the Bonneville Shoreline Trail.

(G1.1-3-1) Grazing and wildland fire use are allowed; prescribed fire is allowed to meet wilderness fire management objectives (FSM2324.2).

1.5 Recommended Wilderness: These are areas recommended for wilderness. They were identified through the Forest Plan revision roadless area inventory, evaluation and recommendation process. This analysis is required by the National Forest Management Act (NFMA) planning regulations and the 1984 Utah Wilderness Act. Congress retains the final

authority for designating wilderness areas. For areas recommended as wilderness, wilderness characteristics must be protected until Congress takes final action (FSH 1909.12,7.31). These areas are managed to maintain the characteristics qualifying them as capable and available for wilderness recommendation. Activities must not result in long-term changes to the wilderness character.

(S1.5) Timber harvest, vegetation/fuel treatment, road building, new recreation development, new trail construction, mountain biking, and use of motorized equipment such as chainsaws and helicopters are not allowed. Exceptions to motorized equipment use may be granted in emergency situations (i.e., wildland fire, search and rescue).

(G1.5-1) Snowmobiling is allowed as shown on Winter Recreation and Travel Management Maps.

(G1.5-2) Wildland fire use, and prescribed fire are allowed.

(G1.5-3) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

2.0 – Special Management Areas

Theme

This prescription includes areas that have been or will be administratively or Congressionally designated for the conservation of specific values. These areas are Wild and Scenic Rivers and their corridors, Research Natural Areas, Forest Service Scenic Byways, and Special Interest Areas. Management emphasis is on maintaining, enhancing, or restoring those values for which the area was established or designated.

Although the theme for management prescription category 2 is special management areas, multiple-use means the harmonious and coordinated management of a variety of resources, without impairment of the productivity of the land. The Forest-wide standards and guidelines, *as* well as standards and guidelines developed specifically for this prescription category, the limits or constraints to guide this coordinated management. As long as other allowed resource activities, such as livestock grazing, fire use, or road construction meet the direction in the standards and guidelines, then they are consistent with the Special Management Area prescription category.

Management Emphasis You Will See

2.1 **2.3 Wild and Scenic Rivers:** Wild (2.1), Scenic (2.2), and Recreational (2.3) Rivers include land corridors that extend 1/4 mile from each bank. Rivers and their corridors found suitable as additions to the Wild and Scenic

Rivers System are managed to protect their free-flowing waters and existing or potential outstandingly remarkable values. Wasatch-Cache National Forest Plan Revision did not include Suitability determination. These Prescription numbers will not be used until such time as suitability work is completed, however eligible segments must be managed according to standards included in Appendix VIII of this Revised Forest Plan.

2.4 Research Natural Areas: Manage existing and proposed Research Natural Areas to protect their unique and/or representative qualities. Limit human-induced effects as much as possible for the purpose of using the ecotype as a benchmark from which to measure human-induced effects elsewhere. Each designated Research Natural Area may have a management plan developed to provide additional direction specific to that area.

(S2.4) Timber harvest, grazing, road construction, new recreation development and new trail construction are not allowed.

(G2.4-1) Vegetation/fuel treatment, wildland fire use and prescribed fire are allowed to meet specific research objectives and/or to perpetuate the unique or representative ecosystem.

2.5 Scenic Byways: Manage Scenic Byways to protect and maintain their outstanding scenic quality. Scenic Byway Corridor Management Plans may be developed for designated Byways to further define desired conditions and tailor management direction.

(G2.5-1) Timber harvest, vegetation/fuel treatments, prescribed fire and wildland fire use are allowed when these activities are necessary to maintain or enhance the scenic setting for the long term.

(G2.5-2) Grazing is allowed and managed for compatibility with other elements of Scenic Byway Corridor Management Plans.

(G2.5-3) Road building, new recreation development, and new trail construction are allowed for purposes of enhancing use and enjoyment of the scenic byway corridor, while maintaining or enhancing the scenic setting.

2.6 Undeveloped Areas: Manage to protect undeveloped landscapes in a manner other than formal recommended wilderness. Although other uses and activities may occur, the primary emphasis is protection to assure the values and unique qualities associated with undeveloped areas are recognized and preserved. No new developments or activity that would alter the landscape or character are allowed, however use of motorized equipment (such as chainsaws for trail clearing) is allowed.

(S2.6) Timber harvest, vegetation/fuel treatment, road construction, new recreation development, and new trail construction are not allowed.

(G2.6-1) Motorized uses, including snowmobiling, are allowed as shown on Winter Recreation and Travel Management Maps.

(G2.6-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

(G2.6-3) Wildland fire use and prescribed fire are allowed to mimic conditions within the historic range of variability and to protect property in the wildland urban interface.

2.7 **Special Interest Areas and Special Areas**: Manage to protect particular values or unique qualities of special interest. Objectives for **Special Interest Areas** is "to protect and, where appropriate, foster public use and enjoyment of areas with scenic, historical, geological, botanical, zoological, palentological, or other special characteristics. To classify areas that possess unusual recreation and scientific values so that these special values are available for public study, use, or enjoyment" (FSM 2360.2). Objectives for **Special Areas** are: "To protect and manage for public use and enjoyment, special recreation areas with scenic, geological, botanical, zoological, paleontological, archaeological, or other special characteristics or uniques values." (FSM2372.02) Special Interest and Special Areas may have management plans developed to address specific needs and opportunities for the individual area.

(S2.7) Timber harvest, road construction, and new recreation development are not allowed.

(G2.7-1) Vegetation/fuels treatment, prescribed fire and wildland fire use are allowed in circumstances where these activities help perpetuate the unique ecosystem, for hazardous fuel reduction, and to protect property in the wildland urban interface .

(G2.7-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

(G2.7-3) New trail construction is allowed if associated with resource interpretation and public study, use, or enjoyment.

(G2.7-4) Allow manipulative restoration where needed for scientific study and increased public understanding of the unique values of the area.

3.0 – Multiple Resource Uses Where Aquatic/Watershed and Terrestrial Habitat Integrity are Emphasized

Theme

This prescription includes lands where management emphasis is on maintaining or restoring aquatic/watershed and terrestrial habitat integrity. Integrity refers to the degree to which the elements of habitat and the ecosystem functions that link them together and sustain habitat values are complete and capable of performing desired functions. Although other uses and activities are allowed, the primary management needs and opportunities are to provide high quality watershed conditions, fish and aquatic habitats, and wildlife habitats that allow proper functioning of ecosystems and sustain biological diversity and population viability. Commodity production is allowed as part of management activities designed to improve or maintain aquatic habitats, watershed conditions and terrestrial habitats.

Although the theme for management prescription category 3 is aquatic/watershed and terrestrial habitat integrity, multiple-use means the harmonious and coordinated management of a variety of resources, without impairment of the productivity of the land. The Forest-wide standards and guidelines, as well as any standards and guidelines developed specifically for this prescription category, provide the limits or constraints to guide this coordinated management. As long as other allowed resource activities, such as livestock grazing, fire use, or road construction meet the direction in the standards and guidelines, then they are consistent with the habitat integrity prescription category.

Management Emphasis You Will See

Emphasis is on protection, maintenance, and/or restoration of quality aquatic habitats, watershed conditions, and terrestrial habitats. This prescription can include areas where resource and habitat values are not at desired conditions and need to be actively restored. It also can include areas where these values are at desired conditions and need to be conserved. Other uses and activities are allowed provided they can be conducted within the standards and guidelines. Grazing by livestock is allowed as managed to meet standards and guidelines which support desired hydrologic, aquatic, and terrestrial conditions.

The importance of these areas is for meeting mid to long-term watershed and habitat objectives, with the strategy of taking a low to moderate risk approach to managing for biodiversity and population viability this planning period (10-15 years). The tools associated with this prescription are of moderate intensity and can provide for improvement of existing conditions through natural processes and/or moderate management activities. Management activities are designed to pose low risk of sediment delivery and low risk of adversely affecting the hydrologic regime, riparian areas, and important terrestrial habitat.

3.1 Aquatic Habitat (3.1A) /Watershed (3.1W) Emphasis: Emphasis is on maintaining or improving quality of watershed conditions and aquatic habitats. Watershed function and aquatic habitat values are recognized as important and may require restoration to reach desired conditions. Areas of municipal watershed and public drinking water sources will be managed to maintain or improve soil processes and watershed conditions. Where improvement is needed, it is achieved by implementing watershed improvement projects, and by applying soil and water conservation practices to land-disturbing activities.

3.1A consists of the stream and adjacent riparian areas (or 300 feet either side of the stream whichever is greater). Because of the large number of existing facilities (roads, developed recreation sites, trails), already located within areas mapped as 3.1A, and because of their relatively high value and small proportion of the landscape, development outside already developed areas within this prescription is to be avoided. Protect or restore proper hydrologic functioning.

(S3.1A-1) New recreation facility development is not allowed.

(S3.1A-2) Cutting fuelwood larger than 5 inches in diameter is not allowed.

(G3.1A-1) Timber harvest, vegetation/fuel treatments, prescribed fire, and wildland fire use are allowed only for the purposes of maintaining, improving or restoring riparian and aquatic habitat to desired conditions or to protect property in the wildland urban interface.

(G3.1A-2) Livestock grazing is allowed with the utilization standard for Riparian Class 1, and to meet site-specifically developed desired conditions.

(G3.1A-3) Road construction is not allowed except for road crossings.

(G3.1A-4) New trail construction is allowed if consistent with site-specifically defined riparian management objectives.

3.1W consists of uplands identified as important watersheds.

(S3.1W) Timber harvest, road construction and new recreation facility development are not allowed.

(G3.1W-1) Vegetation/fuel treatment, prescribed fire, and wildland fire use are allowed for the purposes of maintaining, improving or restoring watersheds to desired conditions, and to protect property in the wildland urban interface.

(G3.1W-2) Livestock grazing is allowed on open allotments to meet site-specifically defined desired conditions.

(G3.1W-3) New trail construction is allowed with consideration of existing road/trail densities.

3.2 Terrestrial Habitats (3.2U Undeveloped/3.2D Developed) Emphasis: Manage upland habitats to provide for sustaining and/or recovering desired plant and animal species and/or communities. Maintain or restore lands to meet desired conditions of habitat for threatened, endangered, and sensitive species. Considerations for these areas include winter ranges and **corridors** for seasonal migrations as well as movement of genetic materials, individuals, and populations; vegetation composition, structure, and pattern needed for life cycle stages; needs for control or eradication of undesirable non-native species; and protection of special or unique habitats.

3.2U consists of those terrestrial habitat areas protected from development because of potential impacts to key habitat elements.

(S-3.2U) Timber harvest, road construction, and new recreation developments are not allowed.

(G3.2U-1) Vegetation/fuel treatment, prescribed fire and wildland fire use are allowed for the purposes of maintaining, improving or restoring terrestrial habitat, for hazardous fuel reduction, and to protect property in the wildland urban interface.

(G3.2U-2) New trail construction is allowed with consideration of existing road/trail densities and site-specifically developed habitat objectives.

3.2D consists of those terrestrial habitat areas where development is allowed for the purpose of maintaining, improving, or restoring key habitat elements.

(G3.2D-1) Timber harvest, road construction, vegetation/fuel treatment, prescribed fire and wildland fire use are allowed for the purposes of maintaining, improving or restoring terrestrial habitat, for oil and gas exploration, for hazardous fuel reduction, and to protect property in the wildland urban interface.

(G3.2D-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

(G3.2D-3) New recreation development and new trail construction are allowed with consideration of existing road/trail densities and site-specifically defined terrestrial habitat desired conditions.

4.0 – Multiple Resource Uses with Recreation Needs and Opportunities

Theme

This prescription includes lands managed with special consideration for General Forest Areas and Developed Recreation areas. Recreation needs and opportunities are emphasized is these areas. A wide spectrum of recreational settings may be provided. Facilities are constructed and maintained, and routes and areas for motorized and non-motorized recreation opportunities are designated. Winter recreation maps define where snowmobiling, heliskiing, and opportunities for non-motorized winter recreation activities occur. Landscape elements may be altered by human activities and developments. Recreation as well as other uses, are managed to ensure maintenance of watershed functions including water quality. The prescription subcategories (4.1-4.5) are based primarily on differences in recreation activities and desired settings. These include 1) access, 2) remoteness, 3) naturalness, 4) level of facilities and site management, 5) social encounters, and 6) visitor impacts and management.

Although the theme for management prescription category 4 is recreation settings and opportunities, multiple-use means the harmonious and coordinated management of a variety of resources, without impairment of the productivity of the land. The Forest-wide standards and guidelines, as well as standards and guidelines developed specifically for this prescription category, provide the limits or constraints to guide this coordinated management. As long as other allowed resource activities, such as livestock grazing, fire use, or road construction meet the direction in the standards and guidelines, then they are consistent with the recreation prescription category.

Management Emphasis
You Will See

4.1 Emphasis on Backcountry Non-motorized Settings: These areas provide recreation opportunities in remote and isolated settings where visitors can obtain a relatively high degree of solitude and the environment is in a near-natural state. Access within these areas is through the use of non-motorized trails. Sights and sounds of others are minimal. Visitors will largely be managed off-site, with signs and regulations posted at area boundaries. Management of recreation impacts my be as undeveloped or CUAs limited to a semi-primitive nature with regulation of use a priority management tool over site-hardening. The need for visitor self-reliance is high. Management visibility is low with backcountry ranger patrols focusing on monitoring and maintaining natural conditions and processes.

(S4.1) Timber harvest, road construction[1] and new recreation development are not allowed.

[1] One polygon of Prescription 4.1 in the Western Uintas Management Area allows road construction for purposes of oil and gas exploration and development. These roads will not be open for public use and will be decommissioned upon completion of oil and gas operations.

(G4.1-1) Vegetation/fuel treatment, prescribed fire, and wildland fire use are allowed to mimic historic conditions and to restore ecosystem functioning.

(G4.1-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

4.2 Emphasis on Recreation Non-motorized Settings: These areas provide recreation opportunities in a semi-primitive to modified setting where visitors can obtain various degrees of solitude within a near-natural environment. Access to the perimeter of these areas may be motorized, but travel within the area is non-motorized. Sights and sounds of others may be noticeable. Visitors can expect various levels of regulation. Signs and other information are found both at portals and within the prescription area. Management of recreation impacts are less limited than in backcountry and can range from semi-primitive to rural depending on management objectives at specific areas and visitors' desires for convenience. Impacts to natural resources, such as soil compaction or loss of vegetation are dealt with through various management techniques and regulations.

(S4.2) Timber harvest and road construction are not allowed[1].

(G4.2-1) Vegetation/fuels treatment, prescribed fire, and wildland fire use are allowed to mimic historic conditions and to restore ecosystem functioning.

(G4.2-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

(G4.2-3) New recreation development and new trail construction are allowed.

4.3 Emphasis on Backcountry Motorized Settings: These areas provide recreation opportunities in a more remote and isolated setting where visitors can obtain a higher degree of solitude and the environment is in a near-natural setting. Access to and within these areas is primarily through the use of motorized trails and roads. Sights of other visitors are low and sounds of other users are low to moderate. Visitors are largely managed off-site, with signs and regulations posted at area boundaries. Management of recreation impacts is of a semi-primitive nature with regulation of use a priority management tool over site modification. Visitor self-reliance is high. Management visibility is low with backcountry ranger patrols focusing on monitoring and maintaining natural conditions and processes.

[1] One polygon of Prescription 4.2 in the Eastern Uintas Management Area allows road construction for purposes of oil and gas exploration and development. These roads will not be open for public use and will be decommissioned upon completion of oil and gas operations.

(S4.3) New recreation development is not allowed.

(G4.3-1) Timber harvest, vegetation/fuels treatment, road construction, prescribed fire and wildland fire use are allowed to mimic historic conditions and to restore ecosystem functioning as compatible with the backcountry recreation opportunity and natural setting desired.

(G4.3-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

(G4.3-3) New trail construction is allowed.

4.4 Emphasis on Recreation Motorized Settings: These areas provide recreation opportunities within a range of semi-primitive to rural settings. Visitors may be able to obtain a moderate degree of solitude, but this prescription area provides opportunities for increased social interaction. Access to and within these areas is primarily through the use of motorized trails and roads. Sights and sounds of others may be noticeable throughout the area. Management of recreation impacts range from semi-primitive to rural depending on the ROS category at the specific area and visitor desires for convenience. Impacts to natural resources are dealt with through various management techniques and regulations. Management visibility is moderate to high with ranger patrols focusing on education, user ethics, and enforcement.

(G4.4-1) Timber harvest, vegetation/fuel treatment, road construction, prescribed fire and wildland fire use are allowed to mimic historic conditions, to restore ecosystem functioning, and to protect property in the wildland urban interface, and are designed to be compatible with motorized recreation, but must not detract from the recreation setting over the long-term.

(G4.4-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

(G4.4-3) New recreation development and new trail construction are allowed.

4.5 Developed Recreation Areas: These areas include developed facilities such as campgrounds, trailheads, boat docks, and resorts under special use permit as well as adjacent areas associated with these sites. High levels of visitor interaction can be expected where sights and sounds of others are noticeable and there are moderate to high opportunities for social interaction. Access to these areas is primarily by motorized roads with some trails. Visitors can expect higher levels of regulation. Signs and visitor information are noticeable throughout the area. Site development tends toward the

Roaded Natural to Rural end of the Recreation Opportunity Spectrum (ROS). Facilities vary from rustic using native materials to facilities designed primarily for visitor comfort or convenience and built using synthetic materials. Visitor impacts can be noticeable. Impacts to natural resources are dealt with through various management techniques and regulations. Management visibility is high with managers focusing on public safety, service, education, user ethics, and enforcement. ADA level development is encouraged. Because of the large capitol investments in these areas, site protection is paramount.

(S4.5) Livestock grazing and wildland fire use are not allowed.

(G4.5-1) Timber harvest, road construction, vegetation/fuel treatment, prescribed fire, new recreation development, and new trail construction are allowed for the purposes of providing public enjoyment, safety, and protection of site investments.

5.0 – Multiple Resource Uses with Forestland Vegetation Management Needs and Opportunities

Theme

This prescription includes lands that are predominantly forested. Emphasis is on maintaining and restoring forest ecosystem functioning to achieve sustainable resource conditions, while providing favorable conditions for commodity and non-commodity outputs and services.

Although the theme for management prescription category 5 is forestland vegetation, multiple-use means the harmonious and coordinated management of a variety of resources, without impairment of the productivity of the land. The Forest-wide standards and guidelines, as well as standards and guidelines developed specifically for this prescription category, provide the limits or constraints to guide this coordinated management. As long as other allowed resource activities, such as recreation, livestock grazing, aquatic habitat restoration or road construction, meet the direction in the standards and guidelines, then they are consistent with the forestland prescription category.

Frequently used terms include the following:
Sustainability is the ability to maintain a desired condition or flow of benefits over time. The ecosystem management principle of sustainability implies our ability to define and measure where ecosystems are now as compared to their historic range of variability. The concept of "historic range" recognizes that ecosystems are dynamic in nature and that disturbance and change is a common component. Areas that are within their historic range of variability are said to be in proper functioning condition.

Management Emphasis
You Will See

5.1 Emphasis on maintaining or restoring forested ecosystem integrity while meeting multiple resource objectives. Emphasis is on properly functioning conditions. Emphasis is not on timber growth and yield. Instead it is on maintaining or restoring vegetation composition, structure and patterns within the historic range of variability.

(G5.1-1) Timber harvest, vegetation/fuel treatment, prescribed fire and wildland fire use are allowed to maintain or restore proper functioning conditions, for hazardous fuel reduction, to protect property in the wildland urban interface, and to provide for commodity and non commodity outputs and services.

(G5.1-2) Road construction, new recreation development and new trail construction are allowed.

(G5.1-3) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

5.2 Emphasis on managing timber for growth and yield while maintaining or restoring forested ecosystem integrity. Emphasis is on timber growth and yield. Forested landscapes range in appearance from near natural to altered where management activities are evident. Goods and services are provided within the productive capacity of the land, and ecological functions are maintained. The quantity of goods and services produced may or may not fully meet demand. Amenity values are provided for by management area direction.

(G5.2-1) Timber harvest, road construction and vegetation/fuel treatment are allowed for the purpose of timber growth and yield while maintaining productive capacity.

(G5.2-) Prior to use of prescribed fire and wildland fire use, investments made for timber production, such as road systems and silvicultural improvements, and the value of the timber for wood production receive consideration.

(G5.1-3) Grazing is allowed on open allotments to meet site-specifically defined desired conditions that consider need for timber regeneration.

(G5.2-4) New recreation development and trail construction are allowed when compatible with commercial timber production.

6.0 – Multiple Resource Uses with Rangeland Vegetation Management Needs and Opportunities

Theme

This prescription includes lands that are predominantly non-forested. Management focuses on non-forest vegetation composition, structure, and pattern to achieve properly functioning conditions while providing sustainable commodity and non-commodity outputs, values and services.

Although the theme for management prescription category 6 is rangeland vegetation, multiple-use means the harmonious and coordinated management of a variety of resources, without impairment of the productivity of the land. The Forest-wide standards and guidelines, as well as standards and guidelines developed specifically for this prescription category, provide the limits or constraints to guide this coordinated management. Resource activities such as recreation, fire use, aquatic habitat restoration or road construction, meet the direction in the standards and guidelines, then they are consistent with the rangeland prescription category.

Management Emphasis
You Will See

6.1 Emphasis on maintaining or restoring non-forested ecosystem integrity while meeting multiple resource objectives. Emphasis is on non-forested vegetation properly functioning conditions (i.e. vegetation composition, structure and patterns within the historic range of variability). Management encompasses the full range of land and resource treatment activities.

(G6.1-1) Timber harvest, vegetation/fuel treatment, prescribed fire and wildland fire use are allowed to maintain or restore proper functioning conditions, for hazardous fuel reduction, to protect property in the wildland urban interface, and to provide for commodity and non commodity outputs and services.

(G6.1-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

(G6.1-3) Road construction, new recreation development, and new trail construction are allowed.

6.2 Emphasis on managing for livestock forage production while maintaining or restoring non-forested ecosystem integrity: Emphasis is on managing vegetation composition and structure to produce forage for livestock. Livestock use is managed to ensure that rangelands are in satisfactory condition and/or with an upward trend. Goods and services are provided within the productive capacity of the land, and ecological functions are maintained. Non-forested landscapes range in appearance from near

natural to altered where management activities are evident. The quantity of goods and services produced may or may not fully meet demand. Amenity values are provided for by management area direction.

(G6.2 -1) Timber harvest, vegetation/fuels treatments, prescribed fire, and wildland fire use are allowed to maintain or improve forage production or for hazardous fuel reduction.

(G6.2-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

(G6.2-3) Road construction, new recreation development, and new trail constuction are allowed when compatible with livestock grazing.

7.0 – Intermingled Public/Private Lands

Note: this Prescription number does not appear on the maps. Private lands are shown on the maps in gray. Areas adjacent to these lands are subject to the following direction.

Theme

This prescription addresses National Forest System lands that are intermingled with lands owned or managed by others. The purpose of identifying this prescription is to highlight the special need for coordinated land management with private landowners. Management emphasis is to cooperate with adjacent landowners in managing for diverse interests.

Management Emphasis You Will See

Areas with intermingled private lands (shown in gray on Maps) in an **urban or town interface** will be managed with the following considerations: Emphasis is on protecting natural ecosystem components from degradation while allowing for high levels of day use. Access for recreation to the National Forest System lands will be kept open, and specific public access points will be identified to assure access as well as to limit resource degradation. Motorized recreation may be limited to the extent necessary to be compatible with adjacent owners' needs and management area direction. Fire use is allowed only if adjacent private property will be protected from fire. Fuels treatment is emphasized to protect property in the wildland urban interface.

Areas with intermingled private lands (shown in gray on Maps) in a **rural interface** will be managed with the following considerations: Emphasis is on protecting natural ecosystem components from degradation while allowing for moderate use. Access for recreation to the National Forest System lands will be kept open, and specific public access points will be identified to assure access as well as to limit resource degradation. Any grazing or timber activities will be

carefully coordinated with adjacent owners. Motorized recreation may be limited to the extent necessary to be compatible with adjacent owners' needs and management area direction. Fire use is allowed only if adjacent private property will be protected from fire.

8.0 – Concentrated Development Areas

Theme

This prescription includes lands managed for concentrated development and use within a multiple use context.

Management Emphasis
You Will See

Uses and facility development dominate the landscape and often require extensive site alterations. Emphasis is on maintaining or restoring the existing facilities and uses.

8.1 Features may include oil and gas production sites or other mineral development sites for common variety (saleable) minerals.

(S8.1) Wildland fire use is not allowed.

(G8.1-1) Timber harvest, vegetation/fuel treatment, and prescribed fire are allowed as compatible with oil and gas production.

(G8.1-2) Road construction, new recreation development, and new trail construction are allowed as compatible with oil and gas production.

(G8.1-3) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

Recreation Opportunities Spectrum

Horseback Riders in the High Uintas

6a. Recreation Opportunities Spectrum (ROS)

Summer Recreation

The Forest Service has used ROS since the 1980's as a management tool to describe and allocate outdoor recreation settings. See Forest Service, ROS Book, 1986 (USDA Forest Service**.** 1986a.). ROS is applied only to non-snow seasons and is a key component of management direction in this Forest Plan. The ROS system provides a way to help managers and recreation users understand what recreation experiences to expect through narrative descriptions and where these are available across the forest through maps. ROS can help people visualize the variety of natural outdoor settings, the types of activities that can be pursued, and how many other people might be found in an area of the forest. The system is applied in combination with other management direction such as management prescriptions, desired future conditions, standards, guidelines, goals, and objectives to define expectations about management of a particular area of the forest.

Table 11 provides a description of each of the seven ROS classes applied to the Wasatch-Cache National Forest. These classes were applied using rules established in the ROS manual (USDA Forest Service**.** 1986a.) in conjunction with minor adjustments for local conditions. ROS (non-snow season) maps are included within Section B of this Chapter "Area Specific Direction" for each Management Area. Descriptions provided for physical, managerial and social settings are to be applied as guidelines (as opposed to standards).

ROS Application and Relationship to Travel Planning and Management

The relationship between ROS mapping and Travel Management Plans must be defined because each has some effect on the other. During development of this Revised Forest Plan, it became clear that ROS mapping should be used as guidance for management of recreation settings with access type (such as motorized or non-motorized) allowances determined through site-specific travel management planning.

The following examples are provided to clarify the relationship of ROS and travel planning. A mapped ROS Class such as Semi-Primitive Non-Motorized is not intended to preclude consideration of future motorized routes in that area, for example to develop a loop between existing motorized routes. Likewise, an area mapped as Semi-Primitive Motorized because of an existing motorized trail is not intended to be precluded from consideration for closure and return to non-motorized status. ROS Maps provide direction for managing recreation settings *until such time that Travel Management Plans are updated through site-specific analysis*. As Travel Plans are updated, that analysis can include alternatives that will amend the Forest Plan ROS Maps. In other words, ROS Mapping necessarily follows Travel Management Plan updates, rather than precluding certain changes

to them. This ensures that a range of options can be considered at the site-specific level, which is the appropriate scale for decision-making on designated open travel routes. This is an expected and appropriate type of adaptation of the Plan to changes in the future.

ROS also has implications for road maintenance objectives. The ROS classification encourages a particular maintenance level for a road and a distinction is made in travel ways, based on the design and ability to allow passenger car travel. In the State of Utah licensed vehicles can drive on all roadways that allow travel, whereas unlicensed vehicles are only allowed on primitive roadways that are not designed or maintained for passenger car travel. In general, Semi-Primitive Motorized (SPM) denotes travel ways that are not maintained for passenger car use (i.e. more primitive type roads). However, there are instances where SPM may be mapped over higher maintenance level roads. We expect that road maintenance objectives will be validated and updated during Roads Analysis or Travel Management Plan updates at which time either the road maintenance objective may be adjusted or the ROS maps may be adjusted to match the validated objective.

Finally, it is important to recognize that the ROS maps are NOT Travel Management Maps and do not show which routes are designated as open to motorized uses. A ROS Class of motorized on the map may be the result of motorized routes nearby but off National Forest that influence the recreation setting on National Forest. A good example of this is in some areas of the Wasatch Front foothills where roads off Forest create sights and sounds that cause the adjacent Forest to be mapped as semi-primitive motorized even though there are no motorized routes within them on National Forest.

Table 11. Settings and opportunity descriptions for identified ROS classes.

ROS CLASS	DESCRIPTION	
	Setting	**Characteristics**
Wilderness/Primitive	**Physical**	**Theme:** Remote (3 miles from motorized use), predominately unmodified, naturally evolving landscape character **Location:** MPC 1.1, High Uintas Wilderness **Infrastructure:** *Access* – non-motorized trails are present *Fishing Sites* – rivers and lakes *Camp/Picnic Sites* – not developed or defined, leave no trace *Sanitation* – no facilities, leave no trace *Water Supply* – undeveloped natural *Signing* – minimal, constructed of rustic natural materials *Interpretation* – through self discovery and at trailheads *Water Crossing* – minimal, some bridges made of natural (non-dimensional) materials may exist, but are rare **Vegetation:** Natural, no treatments except for fire use

ROS CLASS	DESCRIPTION	
	Setting	**Characteristics**
Wilderness/Primitive	**Managerial**	Few signs, few encounters with rangers, travel on foot and horse, no motorized or mechanized travel allowed
	Social	**Local adjustment:** High Uintas Wilderness may have the sights and sounds of commercial flight routes near by or directly over the Wilderness **Off Trail System:** Very Low encounters with other parties **Trials:** Low encounters with other parties **Camp Spacing:** Should not be closer than one mile apart **Opportunities:** Closeness to nature; self-reliance, moderately-high to high challenge and risk; little evidence of people off of trails
Wilderness/Semi-Primitive Non-Motorized	**Physical**	**Theme:** Remote (less than 3 miles from motorized use), predominately unmodified, naturally evolving landscape character **Location:** MPC 1.2 & 1.3, High Uintas MPC 1.1 - 1.3, Mt. Olympus, Twin Peaks, Lone Peak, Deseret Peak, Mount Naomi and Wellsville Mountain Wildernesses **Infrastructure:** *Access* – non-motorized trails are present *Fishing Sites* – rivers and lakes *Camp/Picnic Sites* – not developed or defined, leave no trace *Sanitation* – no facilities, leave no trace *Water Supply* – undeveloped natural *Signing* – minimal, constructed of rustic natural materials *Interpretation* – through self discovery and at trailheads *Water Crossing* – minimal, some bridges made of natural (non-dimensional) materials may exist, but are rare **Vegetation:** Natural, no treatments except for fire use
	Managerial	Few signs, few encounters with rangers, travel on foot and horse, no motorized or mechanized travel allowed
	Social	**Off Trail System:** MPC 1.1 in Mt. Olympus, Twin Peaks, Lone Peak, Deseret Peak, Mount Naomi, and Wellsville Mountain Wildernesses Low encounters with other parties **Trails:** MPC 1.1 in Mt. Olympus, Twin Peaks, Lone Peak, Deseret Peak, Mount Naomi, and Wellsville Wildernesses –Low encounters with other parties MPC 1.2, 1.3 in High Uintas, Mt. Olympus, Twin Peaks, Lone Peak, Deseret Peak, Mount Naomi and Wellsville Mountain Wildernesses –Low encounters with other parties **Local Adjustment:** High Uintas, Mt. Olympus, Twin Peaks, Lone Peak, Deseret Peak and Mount Naomi, and Wellsville Wildernesses all have the sights and

ROS CLASS	DESCRIPTION	
	Setting	Characteristics
Wilderness/Semi-Primitive Non-Motorized	Social	Sounds of commercial flight routes near by or directly over the wilderness **Local Adjustment:** Mt. Olympus, Twin Peaks, Lone Peak, Deseret Peak Mt. Naomi, and Wellsville Wildernesses are adjacent to population centers and the sights and sounds of these communities could be evident **Local Adjustment for Weekends and Holidays Trails:** High Uintas, Mount Naomi, Wellsville Mountain and Deseret Peak Wildernesses – MPC 1.2 – Moderately Low encounters with other parties **Local Adjustment for Weekends and Holidays Trails:** Mt. Olympus, Twin Peaks, and Lone Peak Wildernesses – MPC 1.2 – Moderate encounters with other parties **Local Adjustment for Weekends and Holidays Trails:** High Uintas, Mount Naomi, Wellsville Mountain, and Deseret Peak Wildernesses – MPC 1.3 – Moderate encounters with other parties **Local Adjustment for Weekends and Holidays Trails:** Mt. Olympus, Twin Peaks, and Lone Peak Wildernesses – MPC 1.3 – High encounters with other parties (reason for high encounters is because access to a desired destination is on a cherry stem trail) **Camp Spacing:** MPC 1.2 - 1.3, High Uintas – Campsites should be no closer than ¼ mile apart MPC 1.1, Mt. Olympus, Twin Peaks, Lone Peak, Deseret Peak and Mount Naomi Wildernesses – Campsites should be no closer than ½ mile apart MPC 1.2, Mt. Olympus, Twin Peaks, Lone Peak, Deseret Peak and Mount Naomi Wildernesses – Campsites should be no closer than ¼ mile apart MPC 1.3, Mt. Olympus, Twin Peaks, Lone Peak, Deseret Peak and Mount Naomi Wildernesses – Campsites should be no closer than 100 feet apart **Opportunities:** Closeness to nature; self-reliance, high challenge and risk; little evidence of people off of trails

ROS CLASS	DESCRIPTION	
	Setting	Characteristics
Semi-Primitive Non-Motorized	Physical	**Theme:** Predominately a natural evolving /natural appearing landscape character with minimal rustic improvements to protect resources **Infrastructure:** *Access* – non-motorized trails are present closed and temporary roads may be present *Fishing Sites* – rivers, lakes, and reservoirs *Camp/Picnic Sites* – not developed, leave no trace *Sanitation* – no facilities, leave no trace *Water Supply* – undeveloped natural *Signing* – rustic constructed of natural materials *Interpretation* – through self discovery, at trailheads
Semi-Primitive Non-Motorized	Physical	*Water Crossing* – rustic structures or bridges made of natural materials **Vegetation:** Predominately natural, treatment areas exist to enhance forest health but are few and widely dispersed.
	Managerial	Minimum or subtle signing and regulations, some encounters with rangers, motorized travel prohibited
	Social	**Off Trail System:** Low encounter with other parties **Trails:** Low to Moderate encounters with other parties **Local Adjustment:** Some areas are adjacent to population centers and the sights and sounds of these communities could be evident **Local Adjustments for Weekends and Holidays Trails:** Check with local Ranger Districts for information on trails with High encounters with other parties **Camp Spacing:** Usually less than 6 parties visible from a campsite **Opportunities:** Closeness to nature, self-reliance high to moderate challenge and risk, some evidence of others

ROS CLASS	DESCRIPTION	
	Setting	Characteristics
Semi-Primitive Motorized	Physical	**Theme:** Predominately a natural appearing landscape character with minimal improvements to protect resources **Infrastructure:** *Access* – motorized trails and primitive raods (maintenance level 2 roads) *Fishing Sites* – rivers, lakes, and reservoirs with some trails and primitive roads *Camp/Picnic Sites* – not developed, leave no trace, some identified concentrated use areas *Sanitation* – limited facilities, rustic, may have rustic outhouse available *Water Supply* – undeveloped natural, rustic developments *Signing* – rustic, made of natural materials *Interpretation* – self discovery, some located on site or at trailheads *Water Crossing* – rustic structures or bridges made of natural material, some designed for motorized use **Vegetation:** Treatment areas are very small in number, widely disbursed, and consistent with natural vegetation patterns.
	Managerial	Minimum or subtle on-site controls with some restrictions, motorized and mechanized travel restricted to designated travel routes, no motorized or mechanized travel allowed off designated travel routes
	Social	**Motorized Travel Ways:** Low to moderate contact frequency on loop travel ways, moderate contact frequency on cherry stem travel ways **Local adjustment for Weekends and Holidays:** Check with local Ranger Districts for information on travel ways with High encounters with other parties **Concentrated Use Sites:** Low to moderate group and family interaction **Opportunities:** Closeness to nature, high degree of challenge and risk using motorized equipment, evidence of motorized equipment on trails and primitive roads, and by audible motor sounds

ROS CLASS	DESCRIPTION	
	Setting	Characteristics
Roaded Natural	Physical	**Theme:** Predominately a natural appearing and developed natural appearing landscape character with nodes and corridors of development such as campgrounds, trailheads, boat launches, small-scale resorts, and recreation residences **Infrastructure:** *Access* – Roads (typically maintenance levels 3-5) and motorized and non-motorized trails *Fishing Sites* – rivers, lakes, reservoirs with some facilities *Camp/Picnic Sites* – concentrated use areas and developed sites *Sanitation* – developed outhouses that blend with natural setting *Water Supply* – often developed *Signing* – Rustic with natural materials to more refined using a variety of materials such as fiberglass, metal, etc. *Interpretation* – simple roadside signs, some interpretive programs *Water Crossing* – bridges generally constructed of natural materials **Vegetation:** Changes (treatments) to the natural vegetation patterns are evident, but in harmony with natural environment
	Managerial	Opportunity to be with other users in developed sites, some obvious signs (information and regulation) and low to moderate likelihood of meeting Forest Service Rangers, motorized and mechanized travel restricted to designated routes, no motorized or mechanized travel allowed off designated travel routes
	Social	**Developed and Concentrated Use Areas:** Moderate evidence of human sights and sounds **Travel Ways:** Moderate to high sites and sounds of humans **Opportunities:** Moderate concentration of users at campsites, little challenge or risk
Rural	Physical	**Theme:** Predominately a altered landscapes of developed natural appearing, resort natural setting and water recreation rural appearing with natural appearing backdrops, ski resorts, campgrounds, interpretive sites, marinas, boat launch, swimming beaches, trailheads and reservoirs **Infrastructure:** *Access* – roads (typically level 4 and 5) and trails are hardened *Fishing Sites* – some facility development *Camp/Picnic Sites* – designed for user comfort, natural to synthetic materials that blend with the natural environment, may have hookup amenities such as hot water, electricity, and sewage disposal sites *Sanitation* – developed, design for user comfort

ROS CLASS	DESCRIPTION	
	Setting	**Characteristics**
Rural	**Physical**	*Water Supply* – developed, designed for user convenience *Signing* – rustic to highly designed that harmonizes with the landscape character *Interpretation* – complex roadside signs, some staffed facilities, visitor centers, and interpretive programs *Water Crossing* – bridges of varying size that are in harmony with the landscape **Vegetation:** Treatment areas often dominate, but blend with natural appearing landscape by utilizing lines , forms, colors, and textures of the surrounding natural landscape
	Managerial	Obvious signing (regulation and information), education and law enforcement staff available, motorized and mechanized travel restricted to designated routes, no motorized or mechanized travel allowed off designated travel routes
	Social	**Developed Use Areas and Travel Ways:** High interaction among users is common **Opportunities:** Little challenge or risk associated with being in the outdoors
Urban	**Physical**	**Theme:** Predominately, heavy site modifications and facilities of resort natural setting and water recreation rural appearing with natural appearing backdrops; highly developed ski areas and resorts are examples of urban nodes within the National Forest system lands **Infrastructure:** *Access* – travel routes highly developed (typically levels 4 and 5) for motorized use often with mass transit supplements available; trails are constructed for ease of movement; majority of routes are concrete, paved, or graveled *Camp/Picnic Sites* – developed and designed for user comfort, variety of construction materials used, campsites in close proximity to each other, nearby cafés and restaurants *Sanitation* – developed and designed for user comfort, most have running water *Water Supply* – developed and designed for user comfort, many have hot water available *Signing* – natural and synthetic materials appropriate *Interpretation* – exhibits in staffed visitor centers, roadside exhibits, etc. *Water Crossing* – bridges constructed of a variety of materials, design for user convenience and safety **Vegetation:** Often planted, manicured and maintained
	Managerial	Intensive on-site management obvious signs and staffing, education and law enforcement available; motorized and mechanized travel restricted to designated routes; no motorized or mechanized travel allowed off designated travel routes

ROS CLASS	DESCRIPTION	
	Setting	Characteristics
	Social	**Developed Areas:** Opportunity to be with others; high degree of interaction with people
Urban	Social	**Opportunities: Challenge and risk are unimportant except for competitive sports**

Winter Recreation

Cross country skier in the Wasatch Mountains

6b. Winter Recreation

The Wasatch-Cache National Forest is using Winter Recreation Classes as a management tool to describe and map outdoor winter recreation areas. Winter Recreation (WR) is one of four mapped management direction elements used in this Revised Forest Plan, the others being Management Prescription Categories (MPC), Recreation Opportunity Spectrum (ROS) and Scenery Management System (SMS). The WR system provides a way to help managers and recreation users understand where winter motorized recreation can occur; areas where Heli-skiing is allowed; and where winter motorized use is not allowed. These Winter Recreation Classes and Maps replace the winter portion of District Travel Management Plans. The system is applied in combination with other management direction such as desired future conditions, standards, guidelines, goals, and objectives to define expectations about management of a particular area of the forest.

The classes below provide a description of each of the four WR classes applied to the Wasatch-Cache National Forest. These classes were applied using criteria established in Appendix B WR Process.

Winter Recreation Classes

Winter Recreation maps answer three basic questions:

1. "Where can I snowmobile?"
2. "Where is helicopter skiing allowed?"
3. "Where is winter motorized use not allowed?"

The Winter Recreation Class applies when there is an adequate depth of snow present on the ground to protect vegetative resources. When there is an inadequate depth of snow present, summer ROS maps as well as Travel Management Plans apply and use of snowmobiles is not permitted off of designated routes.

Four classes mapped for Winter Recreation are:

1) **Wilderness**—these areas show designated wilderness. Snowmobiling, heli-skiing, or other motorized use is not allowed.
2) **Non-motorized Areas** – These areas emphasize non-motorized winter recreation such as x-country skiing, snowshoeing, etc., no snowmobiles or other motorized uses are allowed.
3) **Motorized** – Snowmobiling is permitted in these areas and/or on designated routes. Non-motorized uses are also permitted here.
4) **Heli-skiing** – These areas allow heli-skiing (helicopter supported backcountry skiing), generally, there is no snowmobiling allowed in these areas unless otherwise noted. Other non-motorized uses are permitted.

Scenery Management System

Lakes Region in the Western Uintas Management Area

7. Scenery Management System

The WCNF has used the Scenery Management System (SMS) *Landscape Aesthetics A Handbook for Scenery Management; 1995 Agriculture Handbook # 701* (USDA Forest Service. 1995b.) since the late 1990's as a management tool to describe, allocate and provide direction for arranging, planning, and designing landscape attributes relative to the appearance of places and expanses in outdoor settings. SMS is one of four management direction elements with maps and descriptions in this Revised Forest Plan, the others being Management Prescription Categories (MPC), Winter Recreation Classes and summer Recreation Opportunity Spectrum (ROS). SMS is a guideline intended to assist managers and help the public understand the scenic resource management framework for project level decisions and larger area analyses. The system is applied in combination with other management direction such as desired future conditions, standards, guidelines, goals, and objectives to define expectations about management of a particular area of the forest.

The Tables below provide descriptions of the five Landscape Character Themes (LCT) with landscape character descriptions and Scenic Integrity Objects (SIO) applied to the Wasatch-Cache National Forest. These allocations were applied using SMS framework and criteria in conjunction with adjustments for local management direction. SMS maps of alternatives can be found in the Map Packets.

Table 12. Conversion Table for Management Prescription Categories converted to Landscape Character Themes with Scenic Integrity Objectives applied for the Wasatch-Cache National Forest.

Scenery Conversion Table		
Management Prescription Categories	**Landscape Character Theme**	**Scenic Integrity Objective**
1.0 – 1.5 Wilderness	Natural Evolving	Very High
2.1-2.3 Wild, Scenic, and Recreational Rivers 2.4 Research Natural Areas 2.6 Undeveloped 2.7 Special Interest Area	Natural Appearing	High
2.5 Forest Service Scenic Byway Highway 89 – Logan Canyon, Highway 150 – Mirror Lake Highway 39 – Mouth of Ogden Canyon - Monte Cristo Segment, Highway 190 – Big Cottonwood Canyon, Highway 210 – Little Cottonwood Canyon	Developed Natural Appearing	High
3.1 Aquatic Habitat	Natural Appearing	High

Scenery Conversion Table

Management Prescription Categories	Landscape Character Theme	Scenic Integrity Objective
3.1a Aquatic Habitat Emphasis	Natural Appearing	High
3.1w Watershed Emphasis	Natural Appearing	High
3.2 Terrestrial Habitat	Natural Appearing	Moderate
3.2d Terrestrail Habitat - developed	Natural Appearing	Moderate
3.2u Terrestrail Habitat - undeveloped	Natural Appearing	High
4.1 Backcountry non-motorized 4.2 Recreation non-motorized	Natural Appearing	High
4.3 Backcountry Motorized 4.4 Recreation Motorized	Natural Appearing	High
4.5 Developed Recreation Areas Along Scenic Byway Corridors within ½ mile of road. Includes campgrounds, Trailheads, overlooks and so forth.	Developed Natural Appearing	High
4.5 Developed Recreation Area Ski areas –Snowbird, Solitude, Brighton, Snowbasin and Alta	Resort Natural Setting	High
4.5 Developed Recreation Area Pineview Reservoir	Water Recreation Rural Appearing	High
5.1 Forested Vegetation Multiple resource objectives	Natural Appearing	Moderate
5.2 Forest Vegetation Timber growth and yield	Natural Appearing	Low
6.1 Rangeland Vegetation … Multiple resource objectives	Natural Appearing	High
6.1 Rangeland Vegetation Livestock forage production	Natural Appearing	High
8.0 Concentrated Development Areas Communication sites	Natural Appearing	Moderate

Scenery Conversion Table		
Management Prescription Categories	**Landscape Character Theme**	**Scenic Integrity Objective**
8.1 Mineral Development Emphasis	Natural Appearing	Moderate
Utility Corridor (Not mapped as a Management Prescription)	Natural Appearing	Low
Utility Corridor (Not mapped as a Management Prescription)	Developed Natural Appearing	Low

Table 13. Landscape Character Themes with Landscape Character Description and Scenic Integrity Objectives definitions for the Wasatch-Cache National Forest.

Wasatch-Cache National Forest
Landscape Character Theme with Landscape Character Description and Scenic Integrity Objective Definition Table

Landscape Character Theme	Landscape Character Description		
Natural Evolving	The natural evolving landscape character originates primarily from natural disturbances and succession of plants, with subtle changes due to indirect human activities. The existing landscape character generally continues to change gradually over time through natural processes. Notes: 1. Fire use or large-scale forest mortality due to insects and disease may be responsible for dramatic changes to the landscape character of an area, but *in* each of these cases *they* would be considered a natural process. 2. Change in the natural evolving landscape character from active range allotments of sheep and/or cattle. The landscape should appear natural to most recreation users other than the presence of cattle and/or sheep (Sight, sound, smell).		
	SIO	**Landscape Integrity Description**	
	Very High	The valued landscape character "is" intact with only subtle if any deviations. The Natural Evolving landscape character and sense of place is expressed at the highest possible level.	
		Landscape Elements	**Landscape Integrity Attributes**
		Land Form	No cultural modification.
		Vegetation	Change in Vegetation mosaics from Wildland Fire. No vegetation management activities.

Wasatch-Cache National Forest Landscape Character Theme with Landscape Character Description and Scenic Integrity Objective Definition Table

Landscape Character Theme	Landscape Character Description		
		Water Form	Natural lakes, pond and water courses.
		Cultural Features	Active range allotments of sheep and /or cattle. Trails and rustic signing within immediate foreground (0 to 300 feet). See ROS class Wilderness/Primitive and Wilderness/Semi Primitive.

Natural Appearing	The existing landscape character has been influenced by both direct and indirect human activities, but appears natural to the majority of viewers. Natural elements such as native trees, shrubs, grasses, forbs, rock outcrops and streams or lakes dominate the views. While there is evidence of human influence from historic use, campgrounds, small organization camps, rustic structures and management activity, it *is* part of the *valued built environment in the* landscape to the majority of viewers.		
	SIO	**Landscape Integrity Description**	
	High	Landscapes where the valued landscape character "appears" intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely, and at such scale, that they are not evident.	
		Landscape Elements	**Landscape Integrity Attributes**
		Land Form	Dams with vegetated faces. Roads where the geometry of road in cuts and fills would not be evident, but would appear to be part of the landscape.
Natural Appearing		Vegetation	Mechanical treatment and fire use mimics natural appearing openings, lines, edges and form found in the surrounding landscape. Fuel breaks are mitigated to mimic natural appearing lines, forms and edges found in the existing landscape. Manage vegetation for properly functioning condition at landscape scale (see Revised Forest Plan Vegetation Landscape Structure and Pattern Types for Properly Functioning Condition Table).
		Water Form	Reservoirs that have minimum water levels maintained for conservation pools and canals that mimic natural appearing lines, forms and edges found in the existing landscape. Stock ponds that mimic natural appearing lines, forms and edges found in the existing landscape.

Wasatch-Cache National Forest Landscape Character Theme with Landscape Character Description and Scenic Integrity Objective Definition Table

Landscape Character Theme	Landscape Character Description		
Natural Appearing		Cultural Features	Campgrounds, group sites, organization camps, picnic areas, recreation cabins, and organizational sites follow architectural themes and harmonize with the surrounding landscape. Historic sites are maintained or enhanced to propagate their inherent values. Roadway guardrails integrate into the surrounding landscape. Bridges complement the surrounding landscape. Fences are subordinate to the landscape by use of color and blending with the historical cultural context of the communities. Parking lots, trailheads, restrooms are present. Architecture is thematic and borrows from the form, line, color and texture of the surrounding landscape. Parking lots, roads, and other amenities appear to be part of the natural appearing landscape by eliminating the geometry of the built feature upon the landscape. For example, road cuts do not slice through the landscape, but are shaped, contoured and constructed so that the landscape is only interrupted by the track of road.
	SIO	**Landscape Integrity Description**	
	Moderate	Noticeable deviations remain visually subordinate to the valued landscape character being viewed.	
		Landscape Element	**Landscape Integrity Attributes**
		Land Form	Dams, road cuts and fills with slope rounding and contouring with minimal vegetation of grasses etc.
		Vegetation	Mechanical treatments and fire use are subordinate to the surrounding landscape by repeating the form, line and edge found in the surrounding landscape. Fuel breaks are mitigated to mimic natural appearing lines, forms and edges found in the existing landscape.
		Water Form	Stock ponds, reservoirs, canals.
		Cultural Features	Electronic Sites harmonize with the surrounding landscape. Oil fields repeat the form and line of adjacent landscapes and are compatible in color and texture. Mineral development sites are of such a scale that they are subordinate to, and borrow the form, line, color and texture from the surrounding landscape.

Wasatch-Cache National Forest Landscape Character Theme with Landscape Character Description and Scenic Integrity Objective Definition Table

Landscape Character Theme	Landscape Character Description		
	SIO	**Landscape Integrity Description**	
	Low	Deviations dominate the landscape character being viewed. However, activities borrow from the form, line, color, texture and scale found in the landscape character being viewed that are compatible with the surroundings.	
		Landscape Elements	**Landscape Integrity Attributes**
		Land form	Should be contoured to fit the form, line, color and texture of the surrounding landscape.
		Vegetation	Openings in vegetation dominate, but pull from the forms, lines and texture of the surrounding landscape.
		Water Form	No water forms under this management.
		Cultural Features	Utility towers' and poles' scale are dominant, but the color integrates into the surrounding landscape.

Landscape Character Theme	Landscape Character Description		
Developed Natural Appearing	This landscape character theme is characteristic of National, National Forest and State scenic byways with developed recreation facilities, concentrated use areas and undeveloped recreation impacts within the foreground of the viewshed (1/2 mile). In these areas, the roadway, recreation amenities, and development are anticipated features in the landscape. For users these amenities are part of the valued natural appearing landscape. Users of these amenities are attracted to the natural appearing landscape, but desire a moderate to easy interaction with the landscape through the use of these amenities. This landscape character is adjacent to Natural Evolving, and Natural Appearing landscape character themes and should draw from, complement and harmonize with these themes.		
	SIO	**Landscape Integrity Description**	
	High	Landscapes where the valued landscape character "appears" intact. Deviations may be present but must repeat the form, line color, texture, and pattern common to the Developed Natural Appearing landscape character so completely, and at such scale, that they are not dominant.	
		Landscape Elements	**Landscape Integrity Attributes**
		Land Form	Dams with vegetated faces. Roads and trails where the geometry of travel way in cuts and fills would not be evident, but would appear to be part of the landscape.

Wasatch-Cache National Forest Landscape Character Theme with Landscape Character Description and Scenic Integrity Objective Definition Table			
Landscape Character Theme	**Landscape Character Description**		
Developed Natural Appearing		Vegetation	Mechanical treatment mimics natural appearing lines, forms and edges found in the landscape. Fire use mimics natural appearing lines, forms and edges found in the landscape. Fuel breaks are mitigated to mimic natural appearing lines, forms and edges found in the landscape. Parking lots with more than 20 spaces should have a minimum of 10% of the interior parking area landscaped. Interior landscape area should be of such a size that the vegetation could sustain itself without irrigation. Landscape areas should be dispersed throughout the parking area to effectively break up the expanse of the parking lot. Manage vegetation for properly functioning condition at landscape scale (see Revised Forest Plan Vegetation Landscape Structure and Pattern Types for Properly Functioning Condition Table).
		Water Form	Reservoirs that have minimum water levels maintained for conservation pools and canals that mimic natural appearing lines, forms and edges found in the landscape.

Wasatch-Cache National Forest Landscape Character Theme with Landscape Character Description and Scenic Integrity Objective Definition Table

Landscape Character Theme	Landscape Character Description		
		Cultural Features	Campgrounds, group sites, organization camps, picnic areas, recreation cabins, interpretive structures and organizational sites follow architectural themes and harmonize with the surrounding landscape. Historic sites are maintained or enhanced to propagate their inherent values. Roadway guardrails integrate into the surrounding landscape. Bridges complement the surrounding landscape. Fences are subordinate to the landscape by use of color and blending with the historical cultural context of the communities. Parking lots, trailheads, restrooms are present. Architecture is thematic and borrows from the form, line, color and texture of the surrounding landscape. Parking lots, roads, and other amenities appear to be part of the natural appearing landscape by eliminating the geometry of the built feature upon the landscape. For example road cuts do not slice through the landscape, but are shaped, contoured and constructed so that the landscape is only interrupted by the track of road.

Resort Natural Setting	This landscape character theme is characteristic of developed recreation facilities such as ski resorts and recreation resort communities. In these areas, recreation amenities are the main attraction for people and why they come to an area. Facilities are designed and constructed to harmonize with the natural setting. While the form of the base areas facilities dominate the foreground views, it declines as it transitions into the mountain and becomes subordinate in the middleground and background views. Likewise, recreational opportunities provided in base areas rely more heavily on constructed facilities, while those higher on the mountain become increasingly oriented toward the natural setting. This landscape character is adjacent to Natural Evolving, Natural Appearing and Developed Natural Appearing landscape character themes and should draw from, complement and harmonize with these themes.		
	SIO	**Landscape Integrity Description**	
Resort Natural Setting	High	Landscapes where the valued landscape character "appears" intact. Recreation amenities are designed and maintained so that they complement and harmonize with the natural appearing landscape.	
		Landscape Elements	**Landscape Integrity Attributes**

Wasatch-Cache National Forest
Landscape Character Theme with Landscape Character Description and Scenic Integrity Objective Definition Table

Landscape Character Theme	Landscape Character Description		
		Land Form	Parking lots, roads, and travel ways appear to be part of the natural setting by eliminating the geometry of the built feature upon the landscape and bringing the contour of the existing landscape into the built structure. For example, road cuts do not slice through the landscape, but are shaped, contoured and constructed so that the landscape is only interrupted by the track of road.
		Vegetation	Ski runs and play areas draw from the forms, lines, colors and textures found in the surrounding landscape. Parking lots with more than 20 spaces should have minimum of 10% of the interior parking area landscaped. Interior landscape area should be of such a size that the vegetation could sustain itself without irrigation. Landscape areas should be dispersed throughout the parking area to effectively break up the expanse of the parking lot. Manage vegetation for properly functioning condition at landscape scale (see Revised Forest Plan Vegetation Landscape Structure and Pattern Types for Properly Functioning Condition Table).
		Water Form	Detention and retention basin for water run off, landscaped ponds and pools.
		Cultural Features	Parking lots follow contours of the land and are visually broken to reduce their dominance. Ski trails are subordinate to adjacent LCT landscapes by repeating openings found in the surrounding landscape. Trams and ski lifts blend with vegetation or lines and colors found in the resort scene. Architecture harmonizes with the surrounding landscape visually and is in context with other structures found in the resort.

Water Recreation Rural Appearing	This theme is characteristic of Pineview Reservoir recreation complex. The scenic qualities of Ogden Valley attract visitors, and maintaining rural character is important to many landowners in this area. In these areas recreation amenities are the main attraction for people and why they come to an area. The cultural setting of farms, fields, pastures, influences development on the private lands. Housing, businesses, roads and other developments dominate some views.	
	SIO	**Landscape Integrity Description**

Wasatch-Cache National Forest Landscape Character Theme with Landscape Character Description and Scenic Integrity Objective Definition Table

Landscape Character Theme	Landscape Character Description		
	High	Landscapes where the valued landscape character "appears" intact. Recreation amenities are designed and maintained so that they complement and harmonize with the valued landscape character.	
		Landscape Elements	**Landscape Integrity Attributes**
		Land Form	Parking lots, roads, and travel ways appear to be part of the Rural setting by repeating the geometry of both the built and natural environment on the landscape. Contouring of cuts and fills of travel ways would be rounded where retaining walls that incorporate rural type materials are not used. Beach areas, boat ramps, and trails are present.
		Vegetation	Trees, shrubs and ground cover should be native species with minimal use of non-natives. Parking lots with more than 20 spaces should have minimum of 10% of the interior parking area landscaped. Interior landscape area should be of such a size that the vegetation could sustain itself without irrigation. Landscape areas should be dispersed throughout the parking area to effectively break up the expanse of the parking lot.
		Water Form	Reservoirs, ponds.
		Cultural Features	Campgrounds, group sites, picnic areas, interpretive structures and marinas follow architectural themes and harmonize with the surrounding landscape.

Wasatch-Cache National Forest Landscape Character Theme with Landscape Character Description and Scenic Integrity Objective Definition Table

Landscape Character Theme	Landscape Character Description
Natural **1985 Forest Plan**	The natural landscape character originates primarily from natural disturbances and succession of plants, with subtle changes due to indirect human activities. The existing landscape character generally continues to change gradually over time through natural processes. Each degree of change in integrity describes a different degree of acceptable alteration of the natural landscape. The degree of visual alteration is measured in terms of visual contrast with the surrounding natural landscape. This LCT represents the existing 1985 Forest Plan direction which used Visual Quality Objectives (VQO) as developed under the Visual Management System. In AH 701 a cross walk for terminology and component changes from the Visual Management System to SMS is provided. The following is an application of those changes: **Visual Management System** / **Scenery Management System** VQO – Preservation / Very High Scenic Integrity Objective VQO – Retention / High Scenic Integrity Objective VQO – Partial Retention / Moderate Scenic Integrity Objective VQO – Modification / Low Scenic Integrity Objective (Note: Natural LCT was only applied to alternative 4, existing 1985 Forest Plan)

SIO	Landscape Integrity Description
Very High	The viewed landscape character "is" intact with only subtle if any deviations. Allows for ecological change only. Management activities, except for very low visual impact recreation facilities, are prohibited.
High	Landscapes where the viewed landscape character "appears" intact. Deviations may be present but must repeat the form, line color, texture, and pattern common to the landscape character so completely, and at such scale, that they are not evident. For example, clearings created by timber harvest must be similar in size and shape to natural openings in the landscape being viewed so that, when ground cover has become established, the clearing looks completely natural.
Moderate	Noticeable deviations in the viewed landscape, must remain visually subordinate to the landscape character being viewed. For example, clearings created by timber harvest are evident, but the natural character of the landscape is still the primary influence of the view.

Wasatch-Cache National Forest Landscape Character Theme with Landscape Character Description and Scenic Integrity Objective Definition Table		
Landscape Character Theme	**Landscape Character Description**	
	Low	Deviations dominate the landscape character being viewed. However, activities, structures, and roads borrow from the form, line, color, texture and scale found in the landscape character being viewed that they are compatible with the surroundings.

Monitoring and Evaluation

Cutthroat Trout on the Wasatch-Cache National Forest

8. Monitoring and Evaluation

Implementing regulations for the National Forest Management Act state "At intervals established in the plan, implementation shall be evaluated on a sample basis to determine how well objectives have been met and how closely management standards and guidelines have been applied. Based upon this evaluation, the interdisciplinary team shall recommend to the Forest Supervisor such changes in management direction, revision, or amendments to the forest plan as are deemed necessary." (36 CFR 219.12(k))

The purpose of Forest Plan monitoring and evaluation is to evaluate, document, and report how well we are implementing the Forest Plan, how well the Plan is working, and if Plan purpose and direction remain appropriate. **Monitoring** determines actual conditions and circumstances and compares them with assumptions and expected or desired results. Second, **evaluation** examines the reasons for the conditions we find and where these do not match desired conditions, identifies potential alternative approaches.

Types of Monitoring

The monitoring identified in this Forest Plan is not all of the monitoring conducted on a National Forest. Other forms of monitoring, which address other laws, policies, and site-specific decisions are also on-going. Three categories of monitoring (FSM 1925.21) comprise both Forest Plan and individual project monitoring:

- Implementation Monitoring – Used to determine if plans, prescriptions, projects, and activities were implemented as designed and in compliance with the Plan;

- Effectiveness Monitoring – Used to determine if plans, prescriptions, projects, and activities are effective in accomplishing Plan goals, and objectives, and moving toward desired conditions; and

- Validation Monitoring – Used in cases of uncertainty to determine if initial data, assumptions, and coefficients used to predict outcomes in the development of the Plan are correct.

Most monitoring at the National Forest level is in the first two categories.

Forest Plan Monitoring and Evaluation

The following Tables display the Monitoring Plan for the Wasatch-Cache National Forest Revised Forest Plan. This monitoring reflects important decisions made in the Forest Plan. It includes 13 different areas of focus tied closely to key goals and objectives. For each area a series of questions are posed along with one

or more indicators that will be measured. In many cases annual measurement will need to be evaluated after multiple years to determine trends and in some cases the focus will shift after 5 years from implementation to effectiveness.

Expected precision and reliability of the monitoring for each area is included as required. (36 CFR 219.12(k)[4]) Two classes of precision and reliability are used:

- **Class A** has methods that are generally well accepted for modeling or measuring the resource or condition. Results are repeatable and often statistically valid. Reliability, precision, and accuracy are very good. The cost of conducting these measurements is higher than other methods. These methods are often quantitative in nature.

- **Class B** methods are based on project records, communications, on-site ocular estimates, or less formal measurements like pace transects, informal visitor surveys, air photo interpretation, and other similar types of assessments. Reliability, accuracy, and precision are good, but usually less than Class A. Class B methods are often qualitative in nature, but still provide valuable information on the status of resource conditions.

We expect to achieve monitoring and evaluation in each of the areas, but actual budget levels and funding mixes (amounts by "program areas" such as recreation, watershed, wildlife, timber, etc.) will affect accomplishment. We may see swings in relative emphasis tied to funding or current issues but we expect to be able to monitor and evaluate some movement toward goals and objectives in each focus area. We also expect that partnerships can be developed to accomplish more in monitoring and evaluation.

Table ME-1. Wasatch-Cache National Forest Monitoring Plan

	What are we trying to find out? (Tie back to Issues, Topics, DFCs, Goals, Objectives, etc.)	Actions, effects or resources to be measured.		Measurement and Reporting Frequency	Precision and reliability
		Indicators	How to measure		
Implementation	(1) Education-Information: Are we delivering key education/enforcement messages identified during plan revision to Forest employees and users? (Key Focus Areas are: OHV use, recreation user ethics, fire's role/hazardous fuels, noxious weeds, watershed health)	Degree to which key messages have been integrated into internal and external programs.	Number of products conveying key messages. (i.e. -Publication -Information products -Presentations -Public contacts)	Annual First five years focus on initiating programs and contacts.	Class B
Effectiveness	Are these effective? Do they provide resource protection and/or reducing recreation conflicts? Are users changing behaviors?	User groups assisting in protecting resources and educating other users. Perceptions of recreation users with regard to conflicts.	Number of user groups and individuals involved. Survey responses from users.	Annual 2nd five years continue education and focus on effectiveness. Annual after first 5 years	Class B

	What are we trying to find out? (Tie back to Issues, Topics, DFCs, Goals, Objectives, etc.)	Actions, effects or resources to be measured.		Measurement and Reporting Frequency	Precision and reliability
		Indicators	How to measure		
Implementation	(2) Recreational Opportunity: Are we providing recreation opportunities for both motorized and nonmotorized users while protecting and restoring watersheds and providing for needs of wildlife? Are conflicts between users being reduced?	Users routes and modes of trans-portation are identified; ROS adapted	Travel Manage-ment Plans updated for the Ogden, Logan and Salt Lake districts.	Annual until completed Completed within 5 years	Class B
	It is assumed that if travel management plans are followed and designated routes are maintained, watersheds will be restored, wildlife provided for and user conflicts will be reduced.	Actions taken: - Signs installed - Maps Available – Enforcement occurring	- Percent area signed - Number of outlets for maps, - Staff contacts	Annual	Class B
Effectiveness	Are there a variety of quality recreational opportunities available? (Develop additional factors or criteria as needed- loop trails are just one.)	Loop Trails provided for all users.	Miles of loop trail (motorized /nonmotorized)	Annual	Class A
	Are users complying with Travel Management Plans?	Degree of compliance with designated routes.	non-compliance instances (trends).	Annual	Class B
	Are users helping to prevent or reduce their impacts, staying on designated routes?	Degree of user assistance.	Individuals assisting in compliance, education, and enforcement.	Annual	Class B

	What are we trying to find out? (Tie back to Issues, Topics, DFCs, Goals, Objectives, etc.)	Actions, effects or resources to be measured.		Measurement and Reporting Frequency	Precision and reliability
		Indicators	How to measure		
Effectiveness and	(3) Vegetation Management: Are cover types (by ecological sections) trending toward Properly Functioning Conditions?	Patch size, cover type, and age class distribution.	Acres in cover types/age classes by ecological sections and cause of change (prescribed fire, wind throw, wildland fire use, mechanical treatment).	Annual Evaluated at 5 year intervals.	Class B
Effectiveness | Implementation	(4) Fuels Reduction: Are fuels reductions in the urban interface protecting property and human health and safety? Is the public becoming more aware of the threat?	Reduction of hazardous fuels at the wildland urban interface and awareness of landowner responsibilities.	Acres of hazardous fuels treated along the urban interface compared with total acres of interface having fuels hazard.	Annual Evaluated at 5-year intervals.	Class A
	Have the number and size of unwanted wildland fires been decreased as a result of fuels reduction efforts along urban interface areas.	Fires in the urban interface within treated areas and nontreated area.	Number and size of unwanted fires within interface	Annually Evaluated at 5-year intervals	Class A

	What are we trying to find out? (Tie back to Issues, Topics, DFCs, Goals, Objectives, etc.)	Actions, effects or resources to be measured.		Measurement and Reporting Frequency	Precision and reliability
		Indicators	How to measure		
Implementation	(5) Rangeland Management: Are rangeland standards and guidelines being implemented and actions being taken to correct problems? The assumption is that when range standards and guidelines are being followed conditions will improve.	Key areas at DFC or moving towards DFC. Monitor key areas. Documented non-compliance	Percent of allotments administered to standard. Percent of permit holders actively involved in meeting standards.	Annual for some portion of Allotments.	Class B
— Effectiveness	Are noxious weeds infestations increasing or decreasing in number and/or size?	Noxious weed infestations.	Number and size (acres) of existing and new infestations of noxious weeds. Acres of noxious weeds *Identified *Controlled *Reduced.	Annual	Class B
	Are springs and wetlands associated with livestock watering functioning properly?	Water developments and spring sources condition.	Percent of "critical" areas – springs, wetlands	Annual	Class B

	What are we trying to find out? (Tie back to Issues, Topics, DFCs, Goals, Objectives, etc.)	Actions, effects or resources to be measured.		Measurement and Reporting Frequency	Precision and reliability
		Indicators	How to measure		
			protected and/or properly functioning.		
	Do rangeland plant communities have desired species composition and is ground cover adequate?	Riparian and upland condition and trend.	Acres meeting, moving toward, or not moving toward "Forest Plan Objectives" (desired conditions), relative proportion of verified vs. estimated acres reported	Annually 1st year establish baseline work: designate remaining key areas, finalize riparian value classes; monitor utilization.	Both Class A and B
Effectiveness	(6) Recreation Concentrated Use Areas: Are we managing Concentrated Use Areas to provide for recreational amenities while meeting standards and guidelines for resource protection?	Concentrated Use Area's actively managed.	Number of completed Concentrated Use Area Plans (1 plan to be developed every 3 years)	Annual update. Evaluated at 5-year intervals.	Class B
		Concentrated Use Area Plan	Documentation of meeting or	3 years after Concentrated	Class B

	What are we trying to find out? (Tie back to Issues, Topics, DFCs, Goals, Objectives, etc.)	Actions, effects or resources to be measured.		Measurement and Reporting Frequency	Precision and reliability
		Indicators	How to measure		
	The assumption is that if plans are developed and implemented, recreation opportunities and resource protection will be provided.	implemented.	not meeting resource standards and recreational amenities.	Use Area plan implementation.	
Effectiveness | Implementation	(7) Major Trail Development: Are trail development efforts focused on development and management of Bonneville Shoreline, Great Western and Shoshone concept trails?	Trail constructed.	Miles of Bonneville Shoreline, Great Western and Shoshone concept trails developed.	Annually	Class A
	Are we working with the public and other agencies to complete these trails using partnerships and grants as much as possible?	Partnerships, grants, and volunteerism.	Numbers of participants.	Annually	Class B
	Are we minimizing impacts to big game winter range, adjacent property owners, and Wilderness?	UDWR Coordination. Property owner involvement.	Route segments with winter range and/or Wilderness mitigation? Percent of property owners giving informed	Annually	Class B

	What are we trying to find out? (Tie back to Issues, Topics, DFCs, Goals, Objectives, etc.)	Actions, effects or resources to be measured.		Measurement and Reporting Frequency	Precision and reliability
		Indicators	How to measure		
			consent.		
Implementation	(8) Management Indicator Species: Are forest management actions affecting Management Indicator Species (MIS) and what are the population trends and habitat relationships?	Active Goshawk territories.	Goshawk - Number of active territories	Annual update. Evaluated at 5-year intervals.	Class B
		Snowshoe hare presence and population index.	Snowshoe hare – Pellet counts along transects.	First 2 yrs Establish baseline. Annual update. Evaluated at 5-year intervals.	Class A
		Beaver populations across the Forest.	Beaver – Number of a active dams.	1-2 4th order HUCs per year after baseline establishment.	Class A

	What are we trying to find out? (Tie back to Issues, Topics, DFCs, Goals, Objectives, etc.)	Actions, effects or resources to be measured.		Measurement and Reporting Frequency	Precision and reliability
		Indicators	How to measure		
		Cutthroat Trout population estimates	Fish Condition index	One 4th order HUC per year.	Class A
	Are the trends in populations and habitat reflective of species trends in general?	Conditions of habitat.	Changes in habitat in relationship with PFC monitoring described above (age-class diversity and patch size) correlated to populations trends.	Evaluate after 5 years.	Class B
Implementation	(9) Endangered Species Act: Are we protecting Threatened and Endangered species and their habitat while implementing the Plan?	Terms and conditions or reasonable and prudent measures, which result from consultation (formal or	Numbers and types of mitigation or protection measures implemented, documented	Annually	Class B

	What are we trying to find out? (Tie back to Issues, Topics, DFCs, Goals, Objectives, etc.)	Actions, effects or resources to be measured.		Measurement and Reporting Frequency	Precision and reliability
		Indicators	How to measure		
		informal) under Section (7) (a) of the Endangered Species Act.	results.		
Effectiveness and	(10) Resource Protection: Are we implementing terms and conditions, mitigation measures, BMPs, standards and guidelines, and are these effective on new and, where appropriate, existing projects? It is assumed that as mitigation measures, BMPs, and standards and guidelines are implemented on individual projects, their effectiveness will be evaluated and measures will be adjusted as needed to provide resource protection.	Conditions on the ground (varies by nature of specific project) and effectiveness of measures applied.	Numbers and types of BMPs, standards, and guidelines implemented, documented results.	Stratified sampling of projects annually, representing management activities that commonly occur on the Forest.	Class B
Implementation	(11) User Density Thresholds: Are we approaching user density thresholds in areas mapped with Semi-Primitive ROS Class?	Party contacts in areas anticipated to reach threshold.	Average weekend number of party contacts per 8-hour period by area (trail or designated route).	Annual update. Evaluated at 5-year intervals.	Class B

	What are we trying to find out? (Tie back to Issues, Topics, DFCs, Goals, Objectives, etc.)	Actions, effects or resources to be measured.		Measurement and Reporting Frequency	Precision and reliability
		Indicators	How to measure		
Implementation	(12) NFMA compliance: Are we complying with appropriate NFMA requirements?	[i] Stocking of lands;	[i] Trees/acre, over percent of area treated by tree species.	5 years from treatment.	Class A
		[ii] Lands suited for timber production;	[ii] Lands identified as not suited for timber production examined to determine if they have become suited;.	10 years from ROD	Class B
		[iii] Harvest unit size limits;	[iii] Maximum size limits for harvest areas are evaluated to determine whether such size limits should be continued.	5 years from treatment.	Class B
		[iv] Amount of destructive insects and disease	[iv] following management activities, use	5 years from treatment.	Class B

What are we trying to find out? (Tie back to Issues, Topics, DFCs, Goals, Objectives, etc.)		Actions, effects or resources to be measured.		Measurement and Reporting Frequency	Precision and reliability
		Indicators	How to measure		
		organisms.	report from Ogden Field Office.		
Effectiveness	(13) National Historic Preservation Act as amended: Are cultural resources being protected as the Forest Plan is implemented and are mitigation measures sufficient prevent damage to cultural resources from project activities?	Review up to 10% of projects in the field to determine if mitigation measures were effective at protecting the site.	Number of projects that protected cultural resources	Annually Summarized every five years	Class B

Area Specific Direction

Tie Hack – Millcreek Drainage in the Uinta Mountains

B. Area Specific Direction

Management Area Desired Future Conditions

The following descriptions apply all of the Forestwide and Area Specific Direction in an integrated way to the specific areas of land involved. They are intended to take the broad conceptual Forestwide goals for various resources and uses, the mapped management prescriptions, recreation opportunities and scenery objectives and fit them together in a clear complementary way, given the particular area's land capabilities, needs, and opportunities. Projects are to be developed consistent with these. While no one project is likely to achieve all of the goals, objectives and desired future conditions, the aggregate of multiple projects over time should move toward them.

Bear River Range West of Bear Lake

Bear Management Area

Desired Future Conditions

Bear Management Area
Setting Description:

The Bear management area is located along the western front of the Bear Lake valley in Northern Utah. It forms the east slope of the Bear River Range and creates the border for three ecological subsections Bear River Highlands, Bear Lake Section, and Monte Cristo-Weber Valley Hinterlands (Bailey, 1994). This transition area has a mosaic of vegetation types, with conifer, aspen and mountain mahogany at higher elevations and sagebrush and grass on the lower slopes. Infrequent broad canyons descend from the upland to the base of the Bear Lake valley. The Ogden River scenic byway (Highway 39), and Logan Canyon scenic byways wind their way down the slope of the Bear management area. Scenic overlooks provide exceptional views of Bear Lake, contrasted with the upland desert beyond. Year-round recreationists can find trails, primitive roads, camping spots, and open snow play fields to explore. Cattle and sheep can be seen grazing on rangelands in the area. Forest openings resulting from vegetation management approximate historic patterns. Monte Cristo and Sunrise campgrounds provide a pleasing setting for recreation amidst quaking aspen, lodgepole pine and Douglas-fir.

Although American Indians apparently did not use the Bear MA resources intensively in the past, archaeological sites illustrate that they sough specific resources such as game, berries, bison, and wetland plants and animals near springs. European settlers of Rich County also relied on the resources of Bear MA, particularly the grasslands for grazing their stock and water resources for irrigation of land.

Watershed Desired Future Conditions:

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 as 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.

In the Woodruff and Sugar Pine drainages, soil erosion is reduced and ground cover and stream flow is increased. This is accomplished by controlling or reducing current activities that accelerate soil erosion, closing ghost roads, and through fire use and management of recreation use. Potential for improvement of riparian condition and health is evident in Sugar Pine Canyon, where fencing is used to exclude livestock from portions of the riparian area.

In the watersheds southwest of Garden City, riparian and upland ground cover conditions will be improved through compliance with the travel plan, implementation of rangeland health standards, watershed restoration activities, and dispersed recreation site rehabilitation work.

Biodiversity/Viability Desired Future Conditions:

Vegetation and Disturbance Processes

Restoration and/or maintenance of a healthy and sustainable, broad scale, north-south wildlife corridor within this management area will be a priority in all management decisions. Vegetation will form a mosaic of habitat types, diverse in species composition and structure approximating historic patterns. Fire use will play a role in reducing fuels, and restoring and/or maintaining the dynamic of aspen and mountain brush regeneration, and the balance of age classes in these types. The loss of aspen to conifer once apparent in the area will be curtailed and the proportion of young aspen will be within the historic range of variability. Vegetation treatments (including fire use and timber harvest) will be used to improve the ratio of aspen to conifer in the mix of vegetation across the landscape. Fire use, coordinated with livestock grazing management, will also be used to restore a balance in sagebrush age classes and cover ratios to forbs and

grasses, resulting in improved forage and plant composition for both domestic and wild grazing animals.

A balanced mix of age classes across the landscape, approximating historic patch size and juxtaposition, will provide habitat for a variety of forest, shrub and grassland wildlife species. A large, even-aged patch of young lodgepole pine in Slideout Canyon, characteristic of historical patterns of fire disturbance in this area, will provide habitat for interior species requiring this forest structure. In the spruce-fir forest, along the eastern portion of the management area, selective timber harvest will be used to approximate historic disturbances common in this type, such as small-scale fires. Vegetation treatments used to improve water flows in New and Old Canyons also will increase the ratio of aspen to conifer in this area.

Remnant tall forb communities will be maintained and protected from levels of use that could cause negative changes in plant composition. Specific efforts will be made to find economically feasible approaches to restoration of tall forb communities where site potential still exists or can be recreated. Some altered sites, dominated by tarweed and where soil loss is apparent, will remain. Opportunities will be sought to apply economically feasible restoration techniques to these sites, as research develops.

Integrated pest management will be successfully employed to control priority noxious weed infestations. Habitats where rare plants exist will be emphasized. The extent of other weedy invasive species will be reduced to endemic levels where efforts can be coordinated with noxious weed control.

Botanical Threatened, Endangered, and Sensitive Species Protection/Recovery

Rare plant habitats will be managed to maintain or restore and provide for recovery of populations of Threatened and current and proposed Sensitive plant species.

Riparian plant habitats and rare riparian species will be protected from trampling and overuse by livestock grazing and recreational uses. Populations of non-native plant species will be reduced or eradicated in actual and potential rare plant habitat. Habitats will be maintained to promote pollinator success and survival and to provide for nesting needs. Proper stocking levels and utilization intensities of wildlife will maintain and protect rare plants and their associated habitat. Pro-active efforts will be emphasized to educate and inform forest users of the fundamental importance of plant species to society, plant conservation, and biodiversity.

Wildlife Habitat

Restoration and/or maintenance of a healthy and sustainable, broad scale, north-south wildlife corridor within this management area will be a priority in all management decisions.

Big game winter ranges, generally below 7,000 feet and located along the forest boundaries, will be maintained and enhanced. These will become more valuable and important as urban encroachment continues into previously undeveloped winter range. Sagebrush and other mountain brush age classes will be maintained in a higher proportion of older age classes than elsewhere to provide browse above snow. Big game winter ranges will be monitored in cooperation with the Utah Division of Wildlife Resources to ensure population management and prevent habitat deterioration. These ranges will be maintained and enhanced with the goal of holding big game on the Forest longer to help decrease impacts on private lands below.

Terrestrial Wildlife Threatened, Endangered, and Sensitive Species Protection/Recovery

Management activities will conform to objectives, standards and guides as identified in Conservation Strategies, Agreements, and/or Guidelines for protection of TES species.

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, trails and campgrounds. The value of riparian habitat conservation areas (300 feet on each side of the channel) will be recognized and protected. Riparian areas in the Woodruff Creek Drainage will be restored.

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. Additional water developments for improved management of livestock grazing will be designed to not reduce existing amphibian habitat.

Aquatic Threatened, Endangered, and Sensitive Species Protection/Recovery

Management priority will be given to the Bonneville cutthroat trout meta-population in the Woodruff Creek Drainage. Boreal toad habitat will be protected and enhanced where possible.

Special Interest Areas Desired Future Conditions:

The scientific and educational values of the T.W. Daniel Experimental Forest in this management area will be recognized, and its purposes will be highlighted as a Special Interest Area (SIA).

Inventoried Roadless Areas Desired Future Conditions:

The Bear management area has four inventoried roadless areas, including Swan Peak, Sugar Pine, Lamb Canyon, and a portion of Rock Creek-Green Fork. Roadless values in these areas will be mostly maintained, providing semi-primitive recreation opportunities, both non-motorized and motorized on designated routes in non-snow conditions, with much of the area open to snowmobiling. About 800 acres of roadless will be managed to allow development including road construction and timber harvest.

Eligible Wild and Scenic Rivers Desired Future Conditions:

High Creek (High Creek Lake to Forest boundary for ecological values) will be managed to protect values which made this segment eligible in the inventory. Activities within the corridor will maintain a ”Wild” classification.

The Lefthand Fork Blacksmith’s Fork (source to mouth for scenic values), Logan River (Confluence with Beaver Creek to bridge at Guinavah-Malibu Campground for scenic, recreation, geologic, hydrologic, fishery and ecological values), and Beaver Creek (South Boundary of State land to Mouth for fishery values) will be managed to protect values which made them eligible in the inventory. Activities within the corridors will maintain a “Recreational” classification.

The Logan River (Idaho state line to confluence with Beaver Creek for fishery values), White Pine Creek, Temple Fork, Spawn Creek, and Bunchgrass Creek (all source to mouth for fishery values), and Little Bear Creek (Little Bear Spring to Mouth for fishery values) will be managed to protect values that made them eligible in the inventory. Activities within the corridors will maintain a “Scenic” classification.

Roads/Trails/Access Desired Future Conditions:

Roads and trails will be designed and maintained to protect watersheds while providing a variety of recreation and access opportunities. Routes in need of improved drainage and /or alignment to minimize impacts to watersheds will be identified and incrementally repaired to achieve access with proper watershed functioning. Seasonal road closures will be used to protect the road surfaces when wet, to minimize impacts to wildlife, and/or to provide non-motorized hunting experiences. Gravel sources for improvement and maintenance of forest roads will be evaluated and developed. Roads and trails will be clearly marked to inform visitors of allowed types of uses, and users stay on designated routes. Compliance with the current travel plan will be excellent and users will assist with monitoring. Roads and travel ways not needed as part of the road system will be closed and restored to production of vegetation and protection of watersheds. Opportunities for motorized recreation will be provided through a series of roads and trails (mostly derived from existing routes) with varying

degrees of difficulty, opportunities for viewing scenery, and access to attractions. Loops will be provided where possible.

Efforts will be made to obtain right-of-ways for public access to the National Forest. Existing right-of ways are maintained.

Recreation Desired Future Conditions:

Recreation

A variety of recreation opportunities and settings will be provided. Management for recreation will be emphasized in developed areas and along popular travel routes, as identified in 4. management prescriptions. Recreation will be managed to ensure use is within acceptable limits for longterm watershed health and resource protection.

Newly constructed recreation facilities will emphasize day use but may include additional overnight use. As recreation facilities are reconstructed and maintained, emphasis will be given to protect water quality and stream/riparian habitat. Access points to water will be identified and placed to provide for an enjoyable recreational experience. Some will be hardened to ensure properly functioning watershed conditions.

Developed

Any increase in developed recreation in this management area will be designed outside riparian areas and floodplains.

Dispersed

Dispersed recreation activities and areas will meet a wide variety of user preferences. Separation of some types of recreation uses will be used in reducing conflicts. Opportunities for horse use will be enhanced in suitable areas, such as the Monte Cristo area. The Curtis Creek road will be improved to disseminate recreation from other areas where demand exceeds supply and to provide for increased recreation opportunities. Dispersed opportunities will be emphasized along corridors including Highway 39, Wasatch Ridge, Dairy Ridge, Baldy Ridge loop, and Old and New Canyons, particularly during the fall. Motorized vehicles will stay on clearly marked, designated open, roads and trails. Opportunities for motorized loop systems for ATVs will be evaluated (focusing on existing roads or routes), and trails and trailheads will be considered for development where suitable. Recreationists will keep vehicles and camping impacts within marked areas, and outside of sensitive areas to ensure watershed and other resource protection.

The majority of the area will be open to snowmobiling.

Recreation impacts will be monitored, users will be informed and assist with needed changes in management. Hardening of sites and use of barriers in and near riparian areas will be employed to reduce or prevent unacceptable impacts.

Closure of some riparian areas to camping will be accomplished where that use cannot be made compatible with standards for resource protection.

Recreation use in the Bear Lake area is increasing. Cabins and second homes being built will increase the demand for recreation opportunities on the adjacent national forest. Some upland areas will be identified and hardened to accommodate increased dispersed recreation use. Some sensitive areas will be closed and rehabilitated. Investments in a variety of trail opportunities, hardened sites, or other amenities will make the new areas more attractive to users, while reducing impacts. Enforcement of the travel plan will be a priority to protect resources and inform users.

In the winter, parking for both motorized and non-motorized winter dispersed recreation use will be provided. Conflicts between these uses will be minimized through some separation of uses, clearly marked areas, user cooperation, and additional law enforcement. Portions of the Swan Peak and Franklin Basin areas will provide parking and an area for cross-country skiing separate from snowmobiling, alleviating some of the conflict between these two user groups.

Recreation Special Uses

Recreation special use permits will be administered to ensure permit compliance. Non-commercial recreation special use proposals will be processed in a timely manner. Commercial recreation special use proposals will be evaluated through a competitive process, after a bona fide public need is established.

Heritage Resources

Inventory efforts will continue in this management area to identify and document sites representative of early American Indian habilitation and use and early European pioneer settlement in the 1800s in Rich County. Representing the presence of the Wasatch-Cache National Forest within Rich County, the Randolph Guard Station is maintained as an active work site and its historical values are enhanced. We will explore opportunities for local groups to use Randolph Guard Station in an appropriate manner through partnerships that will benefit the community while preserving its historic integrity and value. The importance of springs and the presence of early American Indian use is recognized and valued. Additional water developments and maintenance for improved management of livestock grazing are designed to not adversely affect significant cultural resources in the area.

Land Ownership Desired Future Conditions:

Desirable land ownership changes will be completed to block up ownership and eliminate isolated forest and private parcels. Landlines adjacent to communities will be surveyed and posted, and encroachments will be eliminated or prevented.

Timber Management Desired Future Conditions:

Timber harvest and removal of forest products (e.g. thinning, firewood gathering) will be management tools used to help restore and maintain forested ecosystems to properly functioning conditions. Research on alternative silvicultural systems that approximate natural disturbance regimes will continue in Slideout Canyon.

Rangeland/Livestock Grazing Desired Future Conditions:

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 are in place. These systems will help to improve and maintain plant vigor and composition, aquatic health and terrestrial habitat. Conflicts with other uses will be minimized consistent with the management direction package for each area. Riparian and upland vegetation will be at or moving toward desired composition that meets multiple resource goals 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. Active cooperation will be employed to manage grazing where forest lands are adjacent to lands managed by the Bureau of Land Management (BLM).

Grazing permit holders will move livestock as needed to ensure riparian stubble height requirements, upland utilization standards, and ground cover standards are 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.

Non Recreation Special Uses Desired Future Conditions:

Non-recreation special uses will be administered to ensure permit compliance. Special use proposals will be processed after a bona fide public need is established. Overhead lines will be converted to underground wherever possible. A communication site may be designated on Little Monte for public safety concerns.

Social (non-recreation) Desired Future Conditions:

The Forest Service is aware of the dominant role that agricultural enterprise and outdoor recreation have in the adjacent rural area. Agency participation will continue with local communities such as Randolph to plan and implement economic development projects.

Logan Canyon, Bear River Range

Cache Box Elder Management Area

Desired Future Conditions

Cache Box Elder Management Area Setting Description:

The Cache-Box Elder management area is located in the northeast mountain ranges of northern Utah. The management area covers three ecological subsections (Bailey, 1994), Bear River Highlands, Cache Front and Wellsville Mountains. The diverse character of the well-defined plateaus, wide valley floor, and sharply rising mountains is the consequence of a turbulent geologic history. The limestone walled canyons are a result of sediment left by a shallow tropical sea. Glaciated cirques and upland basins are the result of ancient glaciers. Faults and sinking valley blocks created the steep mountain slopes and the multi level lineal benches are the remnants of Lake Bonneville. The two mountain ranges included in this unit are the Bear River Mountains and the Wellsville Mountains, with elevations ranging from 5,000 to 10,000 feet.

The portion within the Bear River Highlands on the east has rolling uplands cut through by valleys. Mixed conifer stands (Engelmann spruce, subalpine fir, lodgepole pine, limber pine, and Douglas-fir) form a mosaic with aspen, maple, shrublands and grasslands. In many aspen stands the dark green conifers can be seen rising up through older, decadent aspen. Livestock can be seen grazing on

gentler slopes throughout the area. Fences and water developments are constructed to better distribute livestock for appropriate use of forage. The mostly unpaved road system forms a series of corridors along which recreation thrives, primarily on weekends. Visitors engage in activities including scenery viewing, camping, hunting and fishing, all terrain vehicle (ATV) riding, hiking and horseback riding. In the winter, deep snow packs blanket open flats and rolling hills, providing outstanding recreation opportunities, such as snowmobiling, skiing, snow shoeing and sledding. In the higher elevations, snow covered peaks and bowls with wind swept cornices provide a contrast to the gentle slopes and flat lands.

Canyons within the Cache Front are deep, with sheer limestone walls and cliffs. These canyons provide unique habitats for a number of endemic plants. Logan Canyon Scenic Byway (Highway 89) travels along the Logan River and Beaver Creek, dropping down into the Bear Lake Valley below, providing outstanding opportunities for scenery viewing. Recreation is a major feature in these canyons. Developed recreation facilities include campgrounds, summer homes, picnic areas and trails. Popular recreation activities in this unit include fishing and hunting, kayaking, picnicking, biking, rock climbing, hiking, snowmobiling, and ATV-riding, as well as scenery and wildlife viewing. North facing slopes in these canyons support mixed conifer-aspen stands at the higher elevations contrasted with maple and mountain brush at lower elevations. Oak occurs in the southern portion of the unit. Junipers dot the south and west facing, grass covered slopes. The contrast between these vegetation types is especially apparent in the fall as the aspen, maple and oak leaves change colors, creating a remarkable scenic attraction. Wilderness opportunities for solitude, challenge and primitive recreation are provided in the Mount Naomi Wilderness.

The Wellsville Mountains are at the northern end of the Wasatch Mountains, jutting out of the Cache and Great Salt Lake valley floors, creating a north-south wall between these valleys. On the east side, maple dominates the lower slopes and is interspersed with aspen at mid elevations. Conifers reach down from higher elevations along north-facing slopes of the steep, short side canyons, creating fingers of dark green. On the west facing side, steep, rocky slopes and extensive cliffs are prominent. The Wellsville Wilderness provides opportunities for solitude and challenge, with hiking and horseback riding being the dominant recreation uses.

This area of the Wasatch-Cache National Forest and Utah in general is rich in history and has a legacy of cultural resources that illustrates its past. The Logan Scenic Byway has always been a major travel corridor, for American Indians through the early European settlers of the valley to today's travelers as evidenced by many historic and prehistoric sites in the canyon. The traditional American Indian trail that leads from Fish Haven, ID to Brigham City area travels through a portion of the Wellsville Mountains. The craggy Wasatch Front mountains also contain several rock art panels and sites created by past American Indians.

The Cache Box Elder area witnessed the growth of the European settlement in the Cache Valley and the City of Logan. Logging sites are found throughout the area, most distinctly represented by Temple Fork Saw Mill. Logan's construction and development are represented by manganese mill sites in the canyons east of Logan. The Civilian Conservation Corps has left a rich legacy in Logan Canyon. The CCC presence is seen throughout the canyon, but especially in the stonework, most notable in Guinivah Campground and Amphitheater. Numerous Forest Service administrative buildings in this Management Area display the historic role and presence of the Forest Service.

Watershed Desired Future Conditions:

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. Stream flows will remain natural with the exception of the three Logan River dams and the municipal water withdrawals. Spring sources and associated wetlands will be protected from excessive use and will be restored to proper functioning. Riparian areas will be properly functioning with 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. Spring sources will be fenced and provide water for livestock.
Designated access points will be provided to streamsides for recreation along popular creeks. Where dispersed recreation is heavy, or expected to become heavy, restore vegetation to trampled areas. Riparian and upland ground cover conditions in Saddle Creek, Left Hand Fork Blacksmith Fork, Temple Fork, and South Fork Little Bear River, Rock Creek areas will be improved through compliance with travel plan, rangeland health standards, watershed restoration activities, dispersed site rehabilitation work, use of prescribed fire, closing unneeded roads, and recreation use management.

Tony Grove Lake will be removed from the State of Utah 303(d) list by determining reasons for the exceedances of Utah dissolved oxygen water quality standards and implementing solutions to the problem if it is management related.

Biodiversity/Viability Desired Future Conditions:

Vegetation and Disturbance Processes

Restoration and/or maintenance of a healthy and sustainable, broad scale, north-south wildlife corridor within this management area will be a priority in all management decisions. Vegetation will form a mosaic of habitat types, diverse in species composition and structure approximating historic patterns. Fire use will play a role in reducing fuels, and restoring and maintaining the dynamic of aspen and mountain brush regeneration, and the balance of age classes in these types. Vegetation treatments (including such things as fire use and timber harvest) will

be used to improve the ratio of aspen to conifer in the mix of vegetation across the landscape. In the spruce-fir forest, along the eastern portion of the management area, selective timber harvest will be used to approximate small-scale historic disturbances common in this type, such as spruce beetle infestations and small fires. Spruce beetle activity will remain at endemic levels.

Fire use, coordinated with livestock management, will also be used to restore a balance in sagebrush age classes and cover ratios to forbs and grasses, resulting in improved forage and plant composition for both domestic and wild grazing animals.

Remnant tall forb communities will be maintained and protected from levels of use that could cause negative changes in plant composition. Specific efforts will be made to find economically feasible approaches to restoration of tall forb communities where site potential still exists or can be recreated. Some altered sites, dominated by tarweed and where soil loss is apparent, will remain. Opportunities will be sought to apply economically feasible restoration techniques to these sites, as research develops.

In the Wellsville Mountains, some maple communities will be treated (i.e., with fire or cutting) to increase the component of younger age classes in this type.

Integrated pest management will be successfully employed to control priority noxious weed infestations. Minimum tools for pest management will be used in designated and recommended Wilderness. Habitats where rare plants exist will be emphasized. The extent of other weedy species will be reduced where efforts can be coordinated with noxious weed control.

Botanical Threatened, Endangered, and Sensitive Species Protection/Recovery

Rare plant habitats will be managed to maintain or restore and provide for recovery of populations of Threatened and current and proposed Sensitive plant species. Cliff, crevice, and ledge habitats will be protected and provide for the viability of a variety of cliff species along with a balance of recreational climbing opportunities. Recreational activities (rock climbing, hiking, biking, skiing) in Maguires Primrose and Frank Smith's Violet habitats, will be at a level that maintain individuals and habitat dynamics during key life stages including flowering and fruit production. Continued interactions with the local climbing community will provide for conservation of Logan Canyon endemics and recreational enjoyment. Reconstruction activities associated with Highway 89 will meet the requirements of the Bear River Endemics Conservation Agreement and provide for the viability of the Logan Canyon endemic species. Riparian plant habitats and rare riparian species will be protected from trampling and overuse by livestock grazing and recreational uses. Populations of non-native plant species will be reduced or eradicated in actual and potential rare plant habitat. Habitats will be maintained to promote pollinator success and survival

and to provide for nesting needs. Proper stocking levels and utilization intensities will maintain and protect rare plants and their associated habitat. Proactive efforts will educate and inform forest users of the fundamental importance of plant species to society, plant conservation, and biodiversity.

Protective measures will be provided for Maguires Primrose and Frank Smith's Violet populations in the lower portions of Logan Canyon. Wheeler's Angelica habitat will be improved through targeted noxious weed programs and riparian conservation. The US Forest Service requirements of the Maguires Primrose Recovery Plan and the Bear River Endemics Conservation Agreement with US Fish and Wildlife Service will be met.

Wildlife Habitat

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 decisions.

Big game winter ranges (generally below 7,000 feet), located along the east, west, and southern forest boundaries will be maintained and enhanced. These will become more valuable and important as urban encroachment continues into previously undeveloped winter range. Sagebrush and other mountain brush age classes will be maintained in a higher proportion of older age classes than elsewhere to provide browse above snow. Big game winter ranges will be monitored in cooperation with the Utah Division of Wildlife Resources to ensure population management and prevent habitat deterioration. Big game winter ranges will be maintained and enhanced with the goal of holding big game on the Forest longer to help decrease impacts on private lands below.

Terrestrial Wildlife Threatened, Endangered, and Sensitive Species Protection/Recovery

TES species and other species of concern are covered in Forest-wide DFC's. TES species with suitable habitat or present within the unit include bald eagle, Canada lynx, wolverine, Townsend's (western) big-eared bat, boreal owl, flammulated owl, northern goshawk, peregrine falcon, northern three-toed woodpecker, and Bonneville cutthroat trout. Management activities will conform to objectives, standards and guides as identified in Conservation Strategies, Agreements, and/or Guidelines for protection of TES species.

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, trails and campgrounds.

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.

Aquatic Threatened, Endangered, and Sensitive Species Protection/Recovery

Management priority will be given to the Bonneville cutthroat trout meta-populations in the Logan River and upper Blacksmith Fork. Isolated populations, such as in upper Saddle Creek, will be protected and their habitats enhanced. Springs will be protected and their value recognized. Additional water developments will be permitted to reduce or eliminate impacts of grazing. These developments will provide for existing amphibian habitat. Non-native fish in streams will be maintained through natural means. Stocking in the reservoirs above the dams of the Logan River will be considered a valid approach to meeting angler demands. Access trails along the front will be designed to minimize development in the riparian habitat conservation areas (300 feet on each side of the channel). User-created trails will be modified to eliminate or significantly reduce impacts to the stream and riparian vegetation. The values of instream flows for aquatic and semi-aquatic species will be recognized and protected.

Research Natural Areas and Special Interest Areas Desired Future Conditions:

Logan Canyon Special Interest Area (SIA) and Mollens Hollow Research Natural Area (RNA) will be maintained to ensure continuance of ongoing natural conditions and processes. It is desirable to maintain habitat for pollinators here and to continue carrying out the recovery plan for Primula species.

The scientific and educational values of the T.W. Daniel Experimental Forest in this management area will be recognized, and its purposes highlighted as a SIA.

Aspen communities in Franklin Basin, outside existing livestock allotments, will be maintained for potential establishment as a Research Natural Area.

Roadless Areas Desired Future Conditions:

There are 10 roadless areas in the Cache-Box Elder Management Area. They are Wellsville Mountains, Mount Naomi, Mount Logan (north, south, west), Right Hand Fork, Temple Peak, Mollens Hollow, Gibson, and Mahogany Range. Two of these, Mount Naomi and Wellsville Mountains are adjacent to existing Wilderness. Roadless values will be mostly maintained except in Boulder Mountain, Mollens Hollow, and some portions of Right Hand Fork and Mt. Naomi. Within these areas development including timber harvest and road construction will be allowed.

The Mount Naomi Roadless Area will remainsmostly undeveloped, providing semi-primitive recreation opportunities, both non-motorized and motorized on designated routes in summer and motorized for about half of the area in winter. Return of fire to the area will improve diversity of vegetation age classes. Low impact improvements will be made to facilitate horse use of the area. Bonneville cutthroat habitat within the roadless area will remain in a healthy condition.

Wilderness and Recommended Wilderness Areas Desired Future Conditions:

The Wellsville Mountain and Mt. Naomi Wildernesses provide semi-primitive settings for small to moderate sized groups. Relatively light use patterns do not require a permit system. Boundaries will be surveyed and clearly marked at potential access points. Winter and summer motorized trespass in designated wilderness will be curtailed. Compliance with non-mechanized uses in Wilderness will be excellent.

Visitors to the Wellsville Mountain and Mt. Naomi Wilderness will be provided trailhead information on area opportunities to match their desire for finding a level of solitude and sense of challenge. Opportunity classes will be managed to provide different visitor density levels while still providing for a Wilderness experience. Human impacts will be largely unnoticable other than on system trails and at campsites. Human impacts to streams and water bodies will be minimized. Campsites will be screened from high use trails to improve the visitor experience. Natural ecological processes will dominate the landscape.

Mt. Naomi Wilderness will provide opportunities for a balance of day and overnight use. This Wilderness will provide a greater sense of remoteness and solitude than the Wellsville Mountains. Water is available and many streams run year round. In contrast, the Wellsville Mountain Wilderness is largely a day use area. It provides a greater sense of physical challenge due to the steepness of the terrain and lack of water. Views from this area will often be dominated by the developed valleys below, reducing the sense of remoteness. Few level areas for campsites are available making separation of day vs. overnight uses and finding solitude more difficult. However, solitude will be available due to the lower density of visitors.

Roads/Trails/Access Desired Future Conditions:

Roads and trails will be designed and maintained to protect watersheds while providing a variety of recreation and access opportunities. Routes in need of improved drainage and /or alignment to minimize impacts to watersheds will be identified and incrementally repaired to achieve access with proper watershed functioning. Gravel sources for improvement and maintenance of forest roads will be evaluated and developed. Seasonal road closures will be used to protect the road surfaces when wet, to minimize impacts to wildlife, and/or to provide non-motorized hunting experiences. Roads and trails will be clearly marked to

inform visitors of allowed types of uses, and users will stay on designated routes. Compliance with the current travel plan will be excellent and users will assist with monitoring. Roads and travel ways not needed as part of the road system will be closed and restored to production of vegetation and protection of watersheds. Opportunities for motorized recreation will be provided through a series of roads and trails (mostly derived from existing routes) with varying degrees of difficulty, opportunities for viewing scenery, and access to attractions. Loops will be provided where possible.

Efforts will be made to obtain right-of-ways for public access to the National Forest. Existing right-of ways will be maintained. A priority for right-of-ways will be the linkages to community trails along the front.

The winter snowmobile route will be groomed under a Memorandum of Understanding (MOU) with the state of Utah, Parks and Recreation Department. In the Tilda Springs area there will be evaluated a loop ATV Trail designed to keep down effects to the north-south wildlife corridor while still providing for this opportunity.

Recreation Desired Future Conditions:

Recreation

A variety of recreation opportunities and settings will be provided. Management for recreation will be emphasized in developed areas and along popular travel routes, as identified in 4. management prescriptions. Opportunities for fall hunting and winter snowmobiling will continue to be popular activites. Recreation will be managed to ensure use is within acceptable limits for longterm watershed health and resource protection.

Newly constructed recreation facilities will emphasize day use. As recreation facilities are reconstructed and maintained, emphasis will be given to protect water quality and stream/riparian habitat. Access points to water will be identified and placed to provide for an enjoyable recreational experience. Some will be hardened to ensure properly functioning watershed conditions.

Developed

The majority of developed recreation facilities are in the Logan Canyon corridor. No new developed recreation expansion is anticipated there. Where use already exceeds allowable encroachment into riparian areas, restoration will be planned or completed. Any increase in developed recreation in this management area will be designed outside riparian areas and floodplains.

Dispersed

Dispersed recreation activities and areas will meet a wide variety of user preferences. Separation of some types of recreation uses will be used in reducing

conflicts. The headwater area of Curtis Creek and Sinks areas will be explored for accommodating increased dispersed recreation.

Opportunities for horse use will be enhanced in suitable areas, such as Franklin Basin, West Hodges, and Tony Grove Backcountry Trailhead. Motorized vehicles will stay on clearly marked, designated open, roads and trails. Opportunities for motorized loop systems for ATVs are evaluated, and trails and trailheads will be considered for development where suitable (e.g. Sinks area, Left Hand Fork, Elk Valley, and Tilda Springs).

Recreationists will keep vehicles and camping impacts within marked areas, outside of sensitive areas, to ensure watershed and other resource protection. The Franklin Basin, Curtis Ridge and Monte Cristo areas will be considered for enhancing horse camping opportunities. Adequate parking, loading, and other support facilities will need to be provided.

Recreation impacts will be monitored, users will be informed and assist with needed changes in management. Hardening of sites and use of barriers in and near riparian areas will be employed to reduce or prevent unacceptable impacts. Closure of some riparian areas to camping will be accomplished where that use could not be made compatible with standards for resource protection.

Some upland areas will be identified and hardened to accommodate increased dispersed recreation use (e.g. Sinks area and upper Curtis Creek). Some sensitive areas will be closed and rehabilitated. Investments in a variety of trail opportunities, hardened sites, or other amenities will make the new areas more attractive to users, while reducing impacts. Enforcement of the travel plan will be a priority to protect resources and inform users.

In the winter, parking for both motorized and non-motorized winter dispersed recreation use will be provided. Conflicts between these uses will be minimized through some separation of uses, clearly marked areas, user cooperation, and additional law enforcement. There will be some opportunities provided for non-motorized winter recreation in some locations outside Wilderness, in areas where motorized winter activities are not allowed.

Recreation Special Uses

Recreation special use permits will be administered to ensure permit compliance. Non-commercial recreation special use proposals will be dealt with in a timely manner. Commercial recreation special use proposals will be evaluated through a competitive process, after a bona fide public need is established.

Heritage Resources

Efforts will be made in this management area to identify and document sites representative of prehistoric American Indian habitation and early pioneer settlement in the 1800s. Several historical sites in the Cache Box Elder area are

well known and well documented. The public will be actively encouraged to visit these sites, including Ephraim's Grave, Tony Grove Guard Station, and the Temple Fork Saw Mill. Funding will be made available for historic guard station facility and site maintenance and to improve access and information availability.

Partnerships will be developed with local and state institutions for research potential, skill development, and interpretive aid. Partnerships with the Utah State University for high altitude archaeology and the Utah State University Department of Landscape Architecture for documenting and repairing/restoring the Civilian Conservation Corps structures and stonework in Logan Canyon Scenic Byway are two that will be pursued.

Partnerships will be developed with local and state institutions to preserve and keep historical documents, artifacts, photographs, and personal histories that are significant to the cultural heritage of the Forest unit. Partnerships include:

- Utah State Historical Society
- Utah State University "Special Collections"
- Jensen Historical Farm
- Hyrum City Museum
- Cache County Daughters of the Utah Pioneers Museum

Land Ownership Desired Future Conditions:

Desirable land ownership changes will be identified and pursued, dependent on opportunities. Blocking up ownership to eliminate isolated forest and private parcels will be a priority especially because of the intermingled landownership pattern. Public access will be acquired and/or maintained. Landlines adjacent to communities will be surveyed and posted, and encroachments will be eliminated.

Timber Management Desired Future Conditions:

Timber harvest and removal of forest products (e.g. thinning, firewood gathering) will be management tools used to help restore and maintain forested ecosystems to properly functioning conditions.

Rangeland/Livestock Grazing Desired Future Conditions:

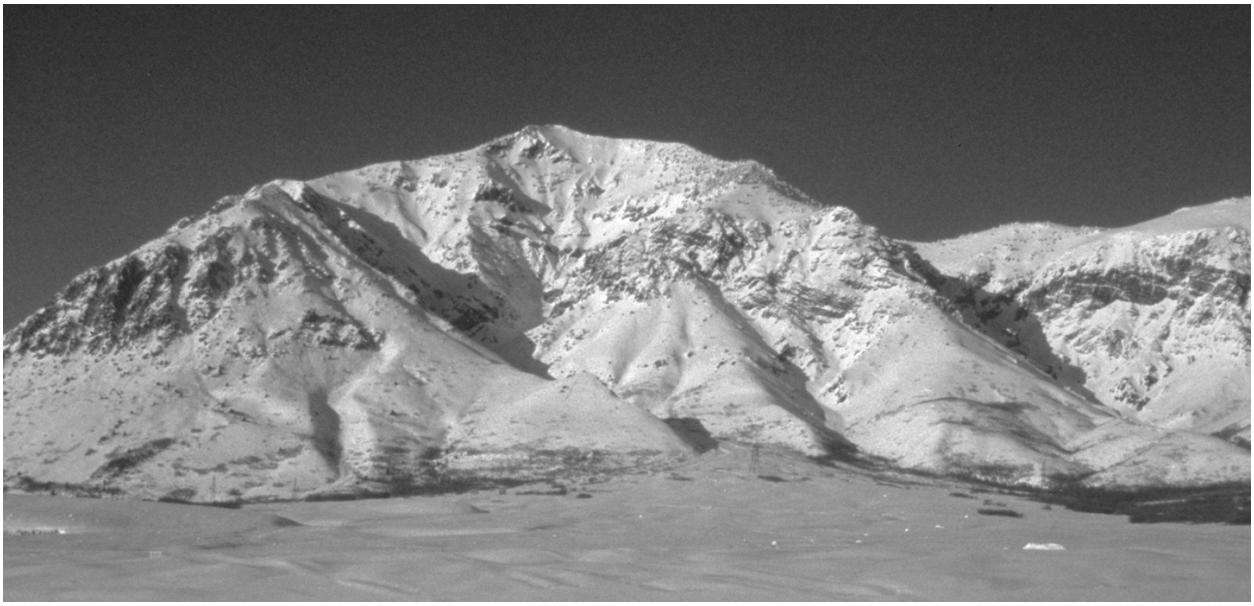
Livestock grazing is a permitted use within active allotments. Grazing levels will be adjusted and managed with up-to-date Allotment Management Plans (AMPs). AMPs prescribing rest and deferred rotation grazing systems and riparian pastures will be in place. These systems will help to improve and maintain 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.

Non Recreation Special Uses Desired Future Conditions:

Non-recreation special uses will be administered to ensure permit compliance. Special use proposals will be processed after a bona fide public need is established and consistent with management direction. Overhead lines will be converted to underground wherever possible. The use of Logan Peak, Logan Hill, Wellsville, Red Spur, and Mud Flat as designated communication sites will continue.



Ben Lomond Peak, Wasatch Mountains

North Wasatch Ogden Valley Management Area

Desired Future Conditions

North Wasatch Ogden Valley Management Area Setting Description:

The North Wasatch Ogden Valley Management Area is located in the Wasatch Mountains of northern Utah. The Area covers two ecological subsections, Monte Cristo Hinterlands and Northern Wasatch. Managed by three Ranger Districts, Logan, Ogden, and Salt Lake, this Management Area forms the west-facing slope of the Wasatch front and goes east to the divide between the Cache and Bear Lake Valleys. The Wasatch Front is composed of deep V-shaped canyons cut through the benches of ancient Lake Bonneville and forming pyramidal shapes that mirror into the Great Salt Lake. North facing slopes support mosaics of dark green conifer of varying densities. Scrub oak and mountain mahogany are found on the dryer slopes along with talus, rock cliffs and grassy side hills creating scattered openings. Cottonwood, dogwood, willow, birch and cherry occur along streams to their headwaters. Horizontal lines can be seen on the upper slopes left from early efforts to stabilize watersheds.

The northwestern part of the North Wasatch is characterized by jagged, craggy pinnacles and ridgelines supported by eroded rock ramparts. Ben Lomond Peak spires to an elevation of 9,712 feet, overlooking surrounding landscapes. To the east from Ben Lomond, Mount Ogden, and Francis Peak abut moderately defined drainages through subalpine stands of coniferous forest. Large basins include talus slopes, conifer patches, and aspen groves. On lower slopes oak, mountain shrub, and maple cover rolling foothills into the valleys. In Ogden Valley, Pineview Reservoir's footprint is surrounded by a rural patchwork of fence

farmsteads, pastures, farmlands and small rural communities. Trappers once called the valley of the convergence of three rivers "Ogden's Hole" because of the plentiful trapping for beaver. The valley has changed over time and now includes the rural communities of Ogden Valley along with the popular water playground Pineview, attracting visitors from Ogden and surrounding communities.

Ridgelines and broad valleys covered in aspen, scrub, and sage flat mosaics create a landscape prime for both winter and summer recreation. Connecting canyons provide places for weekend campers who enjoy developed and dispersed camping. Conifer stands of lodgepole pine, Douglas-fir and subalpine fir, mingled with aspen cover the eastern flank of this unit where cattle and sheep graze the grassland openings.

Near Causey Reservoir numerous rock outcrops can be seen jutting from the mountainsides. Mostly subalpine fir is found on north facing slopes in the Monte Cristo area, while Douglas fir is on north facing slopes along the Wasatch Front. An intermingled public/private land ownership pattern is evident across much of the area. Watershed improvements from 1930's Civilian Conservation Corps work is still evident in the Davis and Willard Peak areas. Most of the Front is acquired private land that did not become National Forest until the 1930s' after floods and degradation in the earlier part of the century. Major utility corridors are located across the forest in this area. Davis County, especially the area along the Front, is very arid even at the higher elevations. East and West Canyons are also a part of this Management Area.

Watershed Desired Future Conditions:

Along the Wasatch Front from Mueller Park to North Ogden, soil erosion will be decreased, and soil stability increased through closing and rehabilitating unneeded roads, and through improved recreation use management. Properly functioning watershed conditions reduce susceptibility to debris flows during high spring runoff or intense thunderstorm activity. Undeveloped areas will be maintained in that character to protect identified values.

Riparian and upland ground cover conditions in Box Elder Creek area, and around Pineview Reservoir will be improved through compliance with travel plan, rangeland health standards, watershed restoration activities, and developed recreation site rehabilitation work.

Pineview would be removed from the State of Utah 303(d) list by determining reasons for exceeding State of Utah total phosphorus, dissolved oxygen, and temperature water quality standards and implementing solutions to the problem if it is management related.

Davis County/Weber Box Elder Front - Watershed protection for quality water and normal flow regimes along with maintenance of undeveloped character will

continue to be a primary emphasis in all management decisions regarding this area of highly intermingled private/public urban/wildlands. Any disturbance or development must consider watershed integrity and susceptibility to debris flows that can originate on National Forest System lands. Cooperation with other agencies for protection of Davis County municipal watersheds is ongoing. In general, recreation will be managed with watershed condition as a priority. User created trails within riparian areas will be evaluated and relocated and/or designed, armored and adequately drained to reduce impacts to streams while allowing access for recreation. Trail alignments will be corrected to prevent excessive erosion while continuing to provide access. The Little Bear area will be recognized and managed as a sensitive watershed because of risks from ATV use and illegal off-road travel. In the Public Grove area unneeded roads will be closed and rehabilitated, springs will be protected and flows returned. In both of these areas motorized use will be on designated routes including loops.

Biodiversity/Viability Desired Future Conditions:

Vegetation and Disturbance Processes

Aspen will be a priority for treatment and movement toward properly functioning conditions in the Monte Cristo area. Fuel loads, especially in oakbrush, across the urban interface in Box Elder, Weber, and Davis Counties will be reduced and broken up to protect life and property. Access will be provided for fire protection. A fuel control program will be in place between Ogden Valley and the National Forest.

Integrated pest management will be successfully employed to significantly reduce noxious weeds with a priority on protecting the forest boundary, habitats where rare plants exist, and limiting further invasive spread of weeds. There will be full active coordination with counties and the State for cooperative management of priority areas for weed control.

Botanical Threatened, Endangered, and Sensitive Species Protection/Recovery

Management activities in rare plant habitat will maintain or restore populations of current and proposed Sensitive plant species. Ski area activities at Snowbasin will continue to maintain or restore habitat for Burke's Draba. Cliff, crevice, and ledge habitats will be protected and provide for a variety of cliff species balanced with recreational climbing, biking, and hiking opportunities. Recreational activities in Burke's Draba and Wasatch Rockcress habitats will be managed at levels that maintain individuals and habitat dynamics during key life stages including flowering and fruit production. Wildlife introduction programs (mountain goats) will maintain and protect rare plants and their associated habitat through proper stocking levels and utilization intensities. Signed Conservation Agreements will be implemented and contribute to the recovery of threatened species. Riparian plant habitats and rare riparian species will be protected from

trampling and overuse by livestock grazing and recreational uses. Non-native plant species will be reduced or eradicated in rare plant actual and potential habitat. Pollinator success and survival will be provided through plant community management. Pro-active efforts will be made to educate and inform Forest users of the fundamental importance of plant species to society, plant conservation, and biodiversity.

Wildlife Habitat

Maintenance of the broad scale, regionally significant north-south wildlife corridor in this Management Area with connections to the north and southeast will be a priority in all management decisions.

Big game winter ranges (generally below 7,000 feet) that occur along the entire western boundary of the Management Area and abutting Ogden Valley will be protected and enhanced, recognizing these become more valuable and important as urban encroachment continues into previously undeveloped areas. Browse species age classes here will be maintained with a higher proportion of older age classes than in other areas to provide browse above the snow. Big game use will be monitored in cooperation with the Utah Division of Wildlife Resources to ensure population management prevents habitat deterioration.

In Lynx Analysis Units, recreation and vegetation management will conform to objectives, standards and guidelines identified in the Lynx Strategy.

The Middle Fork Wildlife Area is managed to protect wintering habitat for deer, elk and moose, in additional to year-round wildlife protection.

Terrestrial Threatened, Endangered, and Sensitive Species Protection/Recovery

Habitats for Ogden Rocky Mountain snail will be maintained and impacts related to trails and hiking will be reduced. Habitat for eagle roosting at the top of Willard canyon will be monitored and maintained. Opportunities for osprey nesting and winter eagle roosting will be provided at Pineview and Causey Reservoirs. Caves in the vicinity of Causey will be protected to meet habitat needs of the bats that use them.

A number of species-at-risk occur within and/or have habitat within this Management Area.

Aquatic Desired Future Conditions

Trout Habitat- Aquatic habitats in Wheeler Creek, South Fork Ogden River, and Ogden River will be managed to maintain cool, clear water and well-vegetated stream banks for cover and bank protection. Instream cover, in the form of deep pools and structures such as boulders and logs, will be maintained and their value recognized. Water temperature will be preserved through well-vegetated banks.

Natural reproduction will be maintained through minimizing sediment input from roads, trails and campgrounds and providing for instream flows. Management priority will be for conservation of the Bonneville cutthroat trout populations in Wheeler Creek, and headwaters of the North Fork Ogden River. Also potential expansion of populations in the headwaters of the South Fork Ogden River will be recognized. The values of springs will be recognized and protected. The values of instream flows for aquatic and semi-aquatic species will be recognized and protected.

Recreation facilities will be constructed and maintained to protect water quality and stream/riparian habitat. Hardened access points to water will be identified and placed to provide for an enjoyable recreational experience and at the same time ensure proper watershed functioning. The fisheries of Pineview Reservoir and Causey Reservoir will be recognized as important recreation opportunities.

Access trails along the front will be designed to minimize development in riparian habitat conservation areas (300 feet on each side of the channel). User-created trails will be modified to eliminate or significantly reduce impacts to the stream and to riparian vegetation.

Special Interest Areas Desired Future Conditions:

The Special Interest Area in Willard Basin will be managed to protect and/or restore remnant tall forb communities while allowing continued motorized access on designated routes. A tall forb site near Ben Lomond Peak will be evaluated as an alternative to the Willard Basin area for establishment as a Special Interest Area or Research Natural Area.

Roadless Areas Desired Future Conditions:

All the roadless areas on the Ogden Ranger District (Burch, Lewis, and Willard Peak) will maintain or mostly maintain roadless values. They will be closed to winter motorized use with exception of a limited portion of the east side of the Willard Peak Roadless Area. Public Grove “Roadless Area” will remain open to winter motorized use.

Burch Creek Roadless Area will be managed to mostly maintain roadless values while continuing to provide non-motorized, relatively rugged dispersed recreation opportunities. Any proposal for special uses in the area must consider the prohibition on road construction and potential impacts to roadless characteristics. The communication site on Mount Ogden will be managed to minimize impacts to roadless values.

Lewis Peak Roadless Area will continue to provide designated Travel Plan motorized single-track trails (including the Great Western Trail) managed to prevent off trail use and expansion of user defined trails. Winter motorized use

will not be allowed. It will be managed to mostly maintain roadless values. Any proposal for special uses in the area must consider the prohibition on road construction and potential impacts to roadless values.

The southern half of the Willard Peak Roadless Area will be managed to maintain roadless values; the northern half will mostly maintain roadless values. Any proposal for special uses in the area must consider potential impacts to roadless values. Provisions will be made for managed ATV use that ensures minimum impacts to roadless values by providing trailhead facilities and ATV trails including loops and signing.

Francis, Hogback, and Farmington are roadless areas in Davis County off the Bountiful-Farmington Skyline Drive. Roadless values in the Francis and Farmington Roadless Areas are maintained or mostly maintained except for about 3,000 acres. Here development may be allowed. Development is allowed in the Hogsback Roadless Area. Stable watersheds are maintained.

These will be managed to provide non-motorized and motorized recreation opportunities and to maintain the scenic integrity for Skyline Drive and Francis Peak views.

Public Grove Hollow roadless area was originally mapped as roadless but later found to be less than the minimum 5,000 acre size requirement and is no longer considered within the roadless inventory.

Wilderness and Recommended Wilderness Areas Desired Future Conditions:

The Upper South Fork recommended wilderness area will be surveyed and boundaries marked to clearly identify the area. Existing trails will be maintained and/or relocated to meet safety standards and to prevent watershed/soil impacts. New trail development will be limited. A trailhead will be provided in the Cabin Ridge/Bluebell Flat areas to provide access.

Causey Reservoir will be managed for non-combustion engine motorized boat access (electric motors only).

Eligible Wild and Scenic Rivers Desired Future Conditions:

The Left Fork South Fork Ogden River (Frost Canyon/Bear Canyon confluence to Causey Reservoir for scenery values) will be managed to protect the values that made it eligible in the inventory. Activities within the corridor will maintain a “Wild” classification.

Willard Creek (source to Forest boundary for scenery and wildlife values) will be managed to protect values that made it eligible in the inventory. Activities within the corridor will maintain a “Scenic” classification.

Roads/Trails/Access Desired Future Conditions:

Trails and trailheads will be designed to support year-round use where possible. A connection for the Bonneville Shoreline Trail will be created through the North Ogden area in cooperation with the cities of North Ogden, Pleasant View and Willard. Needed access and rights of way will be maintained or acquired to complete the Bonneville Shoreline trail along the Wasatch Front. Public access to National Forest in Davis and Weber Counties will be a priority to maintain or obtain, as development continues from Fruit Heights, Kaysville, Ogden, North Ogden, Pleasant view and Ogden Valley. Seasonal road closures are used to protect the road surfaces when wet, to minimize impacts to wildlife, and/or to provide non-motorized hunting experiences.

The Ogden front will continue to be closed to winter motorized use providing non-motorized designated trail opportunities while providing maximum protection to these high value watersheds. Opportunities for limited summer motorized use on designated routes (Skyline Trail/Great Western Trail in Lewis Peak Area).

In the Public Grove area, trails, roads, and routes will be evaluated and appropriate actions determined. ATV loop opportunities will be explored, designated routes will be clearly marked and users will assist with monitoring. Compliance with the current Travel Plan will be excellent. Deterioration of resources from illegal user trails and OHV activity will be minimized and restored.

In Davis County roads and trails will be managed to protect and maintain resource values and provide motorized and non-motorized recreation opportunities. The Travel Plan for this area will be updated and enforced. Parking will be provided for users of Farmington Canyon roads and trails.

Snowmobile opportunities will be provided in Farmington Canyon, Ward Canyon, Skyline Drive, and Sessions Mountain Road on designated routes.

A backcountry link in the Forest will be provided for the Great Western Trail through North Davis and Morgan Counties. An integrated trail/transportation network, including loop trails linked into National Forest trails system will be provided adjacent to Ogden Valley and from Pineview Reservoir.

The Ogden River Canyon Scenic Byway will be managed to protect scenic values while offering a variety of recreation opportunities.

Recreation Desired Future Conditions:

A wide range of recreation opportunities occurs in this management area. Management specifically for recreation is emphasized in the Pineview, South Fork of the Ogden River and Monte Cristo areas.

Dispersed Recreation

The area will have a stronger management presence than in the past in order to provide opportunities while protecting resources, minimizing user conflicts and providing key education messages. Regulation or controls such as designation of parking and camping, and enforcement will be emphasized.

Motorized recreation opportunities in Davis County will continue to be provided with priority in the Ward and Farmington Canyons area. The existing network of motorized routes will be clearly signed, and enforced. Compliance with the current Travel Plan will be excellent. Partnerships with counties will continue to provide recreation opportunities, education, and enforcement. Motorized access will specifically be coordinated with Box Elder County through their access management plan.

Access issues involving private land, urban interface, continued growth, and loss of access will be resolved and trails will be maintained for single track motorized, hiking and biking in the Davis County area and on the Skyline Trail in Weber County.

The Great Western Trail route will be managed for recreation within the area. The Willard area will continue to provide dispersed recreation opportunities with emphasis on day use. Opportunities for dispersed camping will be provided in the Dock Flat area. Emphasis along the Front, Pineview, and South Fork Ogden River will be day use with overnight use allowed only in designated areas.

Dispersed recreation sites will be managed to protect resource values. Opportunities for dispersed camping and parking will be clearly defined. Areas where use is not sustainable will be restored to production of vegetation and watershed protection.

The Farmington Canyon area will be managed for dispersed recreation anticipating increased demands while protecting resource values. The Skyline Drive from Bountiful to Farmington will continue to be managed as a Scenic Backway protecting scenic integrity and providing dispersed recreation opportunities in Davis County.

The roadless areas from Willard to Ogden Canyon will provide non-motorized recreation opportunities in winter except from east of the road to Willard Peak to the Weber-Box Elder County line, which will be open for winter motorized uses.

In the Dry Bread area of Monte Cristo, designated dispersed overnight settings will be provided and users will understand concerns for resource protection making use of the area accordingly.

Snowbasin Ski Area
Ski area development will be maintained within the current (2001) permit boundary. A comfortable carrying capacity (based on parking and facilities rather than a certain number of people) will be established within scenic and technical considerations. The ski area will appear generally natural, to the extent possible and will provide a positive recreation experience. Visual integrity of ridgelines will be maintained.

Developed Recreation

Developed recreation sites will be managed to standard. Those not meeting standards will be modified, rehabilitated, or removed.

More developed day use opportunities will be provided with no net increase in developed overnight capacity for the Ogden Ranger District. The Salt Lake Ranger District will evaluate the need for developed and day use facilities in the Davis County portion of the District.

The Willard Peak Campground will be managed as a level one standard campground. Historic features in the area will be protected and highlighted with interpretive messages.
The horse pasture, administrative site, and recreation facilities in Box Elder Campground area near Mantua will be maintained and improved.

A variety of recreation opportunities will be provided for the Ogden Valley area while maintaining a rural setting. Pineview will be managed primarily as a day use facility, except for Anderson Cove Campground. Around the Pineview area recreation opportunities will be maintained at current (2001) capacity. Portions of the shoreline away from recreation sites will be maintained as undeveloped. Updated facilities will be provided for without expansion of facilities. Parking will be allowed only at designated areas.

The boat use limit on Pineview will be maintained at September 1998 levels.

Causey Reservoir will be managed for non-motorized opportunities with primary emphasis on day use.

Scenery Management

A broad range of scenery will be present within this diverse management area. Both heavily developed and modified sites and very natural appearing areas are present. Along the Wasatch Front in Davis and Weber Counties the scenery of the area will continue to be a valuable and pleasurable natural backdrop for the urban area. Views from the Scenic Byway in Ogden Canyon, Ogden Valley, and over

Monte Cristo will be managed for their recognized values. Guidelines for scenery management will be applied to project undertakings. The following landscape character themes will be found in the management area as mapped: Natural Evolving, Natural Appearing, Developed Natural Appearing, and Resort Natural Setting, and Water Recreation Rural Appearing.

Heritage Resources

Inventory efforts will continue to document the American Indian sites as well as the early European settlement of the area. Through potential partnerships with the Utah State University and Weber State University, high altitude archaeology investigations along the Wasatch Front will be emphasized. The history of early ski resort development, focusing on Snowbasin, is an important historical aspect of this region and will be valued. The incredible archaeological resources in the Public Grove area will be valued and protected from further erosion and road damage. Partnerships with the Northwestern Shoshone Band of Indians will ensure sensitive and adequate protection and interpretation of the Public Grove area.

Land Ownership Desired Future Conditions:

Access to the east slope of National Forest in Morgan County will be acquired and/or maintained. Along the Wasatch Front, current access will be maintained and rights-of-way for continued public access will be obtained. Forest boundaries will be surveyed and clearly marked. Trespass and encroachments will be prevented. Appropriate isolated parcels will be disposed of and National Forest boundaries will be consolidated in the Ogden Valley, Middle Fork, and Public Grove areas.

Acquisition of private lands along the Ogden Front will be explored to provide for recreation access to the Bonneville Shoreline Trail.

The Pineview Recreation Residence Tract will be exchanged for other more appropriate lands.

Timber Management Desired Future Conditions:

Although there are no capable available timberlands in the area, there are needs for reducing fuels and providing buffers adjacent to interface communities. If economic use can be made of any of the fuel materials, there may be potential for some type of commercial harvest.

Rangeland/Livestock Grazing Desired Future Conditions:

The Public Grove area will continue to provide forage for livestock while sustaining healthy, productive diverse rangeland vegetation. In the Causey

recommended wilderness, trespass issues with unauthorized livestock use will be resolved. Areas along the Weber Box Elder Front, both east and west faces, will continue to be closed to livestock grazing for watershed protection. The east slope of the Wasatch Range will continue to provide forage for livestock while sustaining healthy, productive diverse rangeland vegetation.

Vacant Allotments will be removed from allotment status to maintain watersheds and provide for ungrazed reference areas.

Non Recreation Special Uses Desired Future Conditions:

Proposals for any new special uses along the front must consider the prohibition on road construction, and provide adequate erosion control, along with scenic protection. Special use proposals meeting the screening criteria will be processed.

In Weber and Box Elder Counties a number of water storage and water developments just off and onto the forest, will be managed to meet scenic integrity objectives and to prevent accelerated erosion.

The existing communication site on Francis Peak will be continued. In Weber County, the mountaintop communication site on Mount Ogden and the site at the Huntsville Guard Station will continue to be available for that use. However, no additional mountaintop sites will be allowed.

Social (non-recreation) Desired Future Conditions:

The area's extensive urban population growth and diverse user needs and desires will be met with a variety of opportunities, developments, and programs based on the niche of National Forest within the broader region and that embrace diverse cultures. Fuels (primarily oakbrush) will be reduced along the wildland urban interface to protect life and property from unwanted wildfires.

Albion Basin, Little Cottonwood Canyon

Central Wasatch Management Area

Desired Future Conditions

Central Wasatch Management Area Setting Description:

Located east of Salt Lake City in the Wasatch Mountain Range, the Central Wasatch Management Area extends from the Davis and Salt Lake County line on the North to the Salt Lake and Utah County line on the South. It contains three designated Wilderness areas, Mt. Olympus, Twin Peaks, and Lone Peak and four major ski areas, Brighton, Solitude, Alta and Snowbird. The canyons in this area are valuable watersheds for Salt Lake and adjoining cities along the Wasatch Front.

Seven major canyons comprise the Central Wasatch Area. These range from broad, gentle sloping drainages in the north to steep narrow drainages in the south. Mountain peaks rise nearly seven thousand feet above the Salt Lake Valley. Lone Peak reaches an elevation of 11,253 feet and provides an impressive backdrop to the valley below. The U-shaped canyon of Little Cottonwood Creek rises from typical stream bottoms of cottonwood, willow and dogwood to the granite, red-quartzite and limestone walls of the upper mountainside. The circular basin at Brighton to the north drains into the V-shaped canyon of Big Cottonwood Creek. The ski areas include runs that appear

similar to avalanche chutes falling from open glacial troughs through aspen and conifer stands.

The Central Wasatch was the first center of urban development in Utah with the arrival of Brigham Young and European settlers to the Salt Lake Valley. Early European settlers' use of the canyons immediately adjacent to Salt Lake for wood, stone for temples and building construction, and water diversion/supplies are evident through historic sites. Early American Indians also used the canyons and their resources with rock art panels and small habitation sites present in the canyons. The birth of the modern ski industry resides in the Tri-canyon area of Salt Lake. Prior to skiing, these canyons were carved open for their mineral resources during the mining era of the region.

Small communities such as Alta and Brighton have developed in these canyons supporting recreation, skiing, and in the past, mining activities. Each of these communities has a character of its own set within aspen and conifer stands. Developed campgrounds, picnic areas, and trailheads are located in the major drainages providing refuge from the summer heat in urban areas below. The variety of vegetation and rock types from low to high elevations provides remarkable scenery enjoyed both within the Canyons and as the backdrop to the cities along the front. Mill Creek Canyon is a highly popular area for evening and weekend picnics, hiking, biking, and running or walking with only a short drive from the city below. A wide variety of recreation opportunities are provided for a growing urban population.

Drier, more rolling mountains typify the northern end of this area in Lambs, Emigration, and Red Butte Canyons. Lower elevations, poorer soils, past fires, and historic activities have created a vegetation mosaic with patches of scrub oak, maple, grasses and forbs. Cottonwood trees and other hardwoods occur along streams in the area. Rock outcrops are common along ridges and on sideslopes creating an interesting variety of colors and textures across the landscape.

Watershed Desired Future Conditions:

The underlying premise of resource management in this Management Area is the need to provide long-term, high quality culinary water to the large urban population of the Salt Lake Valley. Salt Lake City owns all or the largest percentage of water rights in each of the Wasatch Canyons except Red Butte, and has congressionally delegated authority to protect the water supply. Congress also directed the Forest Service to administer designated watersheds in cooperation with Salt Lake City for the purpose of storing, conserving and protecting water from pollution. Providing quality recreation opportunities within the framework of watershed protection will be an increasing challenge as the Wasatch front population and national and international destination use of the area continues to grow. Continued coordination and cooperation among federal,

state, and local government agencies, residents, businesses, and the recreating public will be imperative in order to meet these growing demands.

Given the importance of water coming from this area, watershed maintenance, protection and enhancement will be a primary consideration in all management decisions. Watersheds and streams will continue to provide high quality water supplies to the Salt Lake Valley. Various uses and developments (ski resort design and development, campgrounds, picnic areas, trailheads and trails) will be designed to prevent or fully mitigate impacts, resulting in properly functioning conditions in these watersheds. Impacts from historic activities will be mitigated to the greatest extent that is economically feasible.

Concerns about watershed degradation due to OHV use and unauthorized, user-created trails in the Corner Canyon Preservation area will be addressed through cooperation and coordination with other units of government (Draper City, Salt Lake County, the Uinta National Forest, and Alpine City).

In Little and Big Cottonwood Canyons the integrity of the stream corridor and side drainages will be an emphasis given the opportunity that public lands adjoining the stream here provides. Decisions responding to increasing recreation demands will give first consideration to desired water quality and riparian conditions, and the limited wildlife habitat here. Provisions will be made for a wide range of recreation uses including access and sanitation facilities that prevent deterioration of watershed conditions. Major trailheads and restrooms will be provided and maintained in cooperation with partners such as Salt Lake City. Users will be aware of the need to restrict in-water activities because of water quality and compliance with watershed ordinances will be excellent. Watershed protection and public education about appropriate behavior in these watersheds will be consistently accomplished in cooperation and partnerships with other agencies.

In Millcreek Canyon, the integrity of the stream corridor will continue to improve with developed recreation site hardening and changes in user behavior resulting from effective educational efforts. Concerns about water quality will be important to users as well as managers, and annual monitoring will indicate that conditions are on a steadily improving trend. Efforts to work with adjacent landowners within this Canyon will be successful in achieving a stream corridor that is properly functioning along its entire length. In the event that Millcreek Canyon becomes designated as a culinary watershed by Salt Lake City, management of the area will be adjusted accordingly in full cooperation with the City.

Biodiversity/Viability Desired Future Conditions:

Vegetation and Disturbance Processes

Vegetation cover types will form a mosaic of plant communities representing a diverse mix of ages, sizes, and species. Fire use will play a role in reducing fuels, maintaining the historic dynamic of aspen regeneration and ratio of conifer to aspen and mountain brush vegetation patterns and age classes. Mechanical treatment of fuels along with limited use of prescribed fire will emphasize the safety of people and protection of property in the heavily populated and increasingly developed urban wildland interface adjacent to National Forest.

Some of the Forest's healthiest and most beautiful tall forb (wildflower) communities occur in this management area. These healthy and recovering tall forb communities will be protected from uses that could cause undesirable changes in plant composition and abundance. Seed collection will occur in some of these plant communities to help revegetate disturbed areas. Seed collection will occur on a rotational basis (collecting in different areas from year to year) so that natural reproduction can continue to function across the entire area over time. Non-native plant species will be used for rehabilitation of disturbed areas only when native seeds and/or plants are unavailable.

Each of the permitted ski areas will be implementing vegetation management plans that meet resort needs while maintaining the health and vigor of native shrubs and trees.

Integrated pest management will be successfully employed to reduce noxious weeds. Active management will be a priority along travel routes, in designated and recommended Wilderness, and in habitats where rare plants exist. The extent of other weedy species, such as those introduced through various planting programs, will be reduced where efforts can be coordinated with noxious weed control.

Red Butte Canyon Research Natural Area (RNA) will continue to provide important research opportunities and baseline information about the ecological composition, structure, and function of plant communities (such as Gambel oak, aspen, riparian, and Douglas-fir) that naturally dominate the area.

Botanical Threatened, Endangered, and Sensitive Species Protection/Recovery

Rare plant habitats will be managed to maintain or restore populations of current and proposed Sensitive plant species. Riparian plant habitats and rare riparian species will be protected from trampling and the adverse effects of overuse and development. Populations of non-native plant species will be reduced or eradicated in actual and potential rare plant habitat. Habitats will be maintained

to promote pollinator success and survival and to provide for pollinator nesting needs.

Ski area management activities will be designed to maintain or restore habitat for species including sensitive species such as Wasatch Jamesia, Garrett's bladderpod, Utah Ivesia, and Utah bladderpod. Recreational rock climbing will be managed to protect cliff, crevice, and ledge habitats for the plants that grow there. Recreational activities in habitats for rare plants such as Wasatch shooting star, alpine pepperplant, Utah ivesia, and Garrett's bladderpod, will be managed at a level that maintain individuals and habitat dynamics during key life stages including flowering and fruit production. Inventories will be conducted in known habitat for slender moonwort, a proposed threatened species that, based on historic collections, occurred on the Forest. Wildlife introduction programs will include reintroduction assessments, proper stocking levels and utilization intensities to maintain and protect rare plants and their associated habitat.

Protective measures and educational programs will provide for the maintenance of species at risk and contribute to their recovery. Pro-active efforts will be made to educate and inform Forest users of fundamental importance of plant species to society, plant conservation, and biodiversity. Viable populations of the many rare plant species and the areas with rare plant populations within the management area will be managed and protected.

Wildlife Habitat

Big game winter ranges are generally found below 7,000 feet, and include the entire western boundary of this Management Area. These habitats on national forest land will be protected and enhanced, with recognition that they become more important as urban development reduces the winter range available on private lands. Browse species will be managed to emphasize older age classes in winter range to provide browse above snow.

Terrestrial, Threatened, Endangered, and Sensitive Species Protection/Recovery

A number of species-at-risk occur within and/or have habitat within this Management Area.

In the Central Wasatch direction concern linkage habitat for lynx from the Lynx Conservation Strategy will be implemented considering watershed priorities and constraints, established uses of the area, and wilderness.

The golden eagle, which is not a threatened, endangered or sensitive species but is protected by The Bald And Golden Eagle Protection Act of 1940, has been a concern in the area. This species will continue to be monitored, and management activities designed in conformance with U. S. Fish and Wildlife Service raptor management guidelines (1999).

Aquatic Conditions

Fish Habitat: Aquatic habitats will be managed to maintain cool, clear water and well-vegetated stream banks for cover and bank protection. Instream flows and cover, in the form of deep pools and structures such as boulders and logs, will be maintained and their value recognized. Water temperature will be preserved through stable well-vegetated banks. Natural fish reproduction will be maintained through minimizing sediment input from roads, trails and campgrounds.

Amphibian and Invertebrate Habitat: Marshy edges of ponds or lakes and springs will be protected to allow for the development of in-water and riparian vegetation. Soils around water bodies will not be compacted and will allow for burrowing and over-wintering of amphibians.

Developed trails will be designed to minimize development in riparian habitat conservation areas (300 feet on each side of the stream channel). User-created trails will be modified or closed and rehabilitated to eliminate or significantly reduce impacts to the stream and to riparian vegetation. Springs will be protected and their value recognized.

Aquatic Threatened, Endangered, and Sensitive Species Protection/Recovery

The conservation of the Bonneville cutthroat trout population in Deaf Smith Canyon will be given management priority. The value of Red Butte RNA for the conservation of June sucker and Bonneville cutthroat trout will continue to be recognized.

Research Natural Areas Desired Future Conditions:

Red Butte Research Natural Area is part of a national network of ecological areas designated in perpetuity for research and/or education to maintain biological diversity on National Forest System lands. Red Butte RNA will continue to be managed for non-manipulative research, observation, and study. Red Butte RNA will also assist in implementing the Endangered Species Act and the monitoring provisions of the National Forest Management Act. This RNA will continue to provide unique research opportunities in an urban/wildland interface setting.

Trails surrounding the Research Natural Area will be realigned to protect against unauthorized public access. As a result of educational efforts, people will understand the value of research natural areas and compliance with the area closure will improve. Red Butte Creek will continue to provide important habitat for the native Bonneville cutthroat trout.

Special Interest Areas Desired Future Conditions:

The lowermost portion of the existing Red Butte RNA will be redesignated as a Special Interest Area in order to allow for necessary safety improvements of the

dam and reservoir. Red Butte Reservoir will be reconstructed to meet State dam safety standards and will be maintained by the Central Utah Water Conservancy District to provide a refuge for the Endangered June sucker. The area will be managed for restoration research complementary to management of the adjacent RNA, and will provide the opportunity for limited, guided educational tours to enhance public understanding of the ecosystem and of the values associated with designated research areas.

Inventoried Roadless Areas Desired Future Conditions:

The Central Wasatch management area has six inventoried roadless areas, including Lone Peak, Mount Aire, Mount Olympus, Mueller Park, Red Butte, and White Pine. Roadless values in these areas are maintained or mostly maintained, providing semi-primitive recreation opportunities, both non-motorized and mechanized on designated routes in non-snow conditions. About 500 acres of roadless are managed to allow development.

Wilderness and Recommended Wilderness Areas Desired Future Conditions:

Designated wilderness in the Tri-canyon area (Mt. Olympus, Twin Peaks and Lone Peak) provides undeveloped landscapes that will continue to play an important role in the spectrum of land management intensities for the area. The three wildernesses will be managed to protect ecological integrity and to provide non-motorized and non-mechanized recreation opportunities. . The Tri-canyon wilderness areas will be recognized and managed as wild areas that have emphasis on maintaining diverse and viable populations and habitat for flora and fauna including threatened, endangered and sensitive species, and valuable watershed while still existing adjacent to large urban areas and high use developed recreation canyons. Within the wilderness, any modification of the natural environment will conform to wilderness management principles. Wilderness use is will continue to be predominately day use in these areas. Overnight use areas are limited and will be closely monitored to protect other wilderness values. It is expected that high use levels will occur all year long in these wilderness areas, since winter use is as popular as summer use because of the adjacent large urban area. Opportunities for different levels of use and encounters will be available. Wilderness character and values will be maintained. Existing rugged and remote low use pristine areas between trail corridors and other adjacent developed use will be managed to prevent degradation, protect other wilderness values and maintain limited visitor encounters.

Wilderness users will be well educated in the principles of minimal impact use, and will apply those principles. Opportunities for solitude and primitive, unconfined recreation will be provided, but not to the degree possible in more remote wildernesses. National forest lands adjacent to wilderness will be managed in a manner that facilitates effective boundary management, and national forest lands visible from wilderness will be managed with special

attention to scenic integrity. Management of the wilderness boundary along the Wasatch Front portion will intensify to prevent user created trails and other challenging urban interface problems from damaging wilderness resources. Given the fact that the wildernesses are adjacent to private lands and to urban development, the sights and sounds of humanity will continue to be easily visible and audible from many wilderness vantage points. Non-wilderness backcountry areas will also provide an alternative to wilderness with important open space, recreation opportunities, and scenic views.

Additional trails will not be built into the wilderness except to facilitate short segments of the Bonneville Shoreline Trail along the wilderness Wasatch Front boundary and only where absolutely necessary to minimize resource impacts or to better manage visitor use. Wilderness character and values will be maintained, especially in pristine low-use areas where deterioration is prevented. Those user-created routes that receive high use will be evaluated for inclusion in the trail system and, if included, will be properly maintained. Those user routes that are causing resource damage, especially multiple user-created routes near lakes, will be closed and restored to natural conditions. The creation of additional user trails will not be allowed. Baseline information on use and conditions will be part of monitoring to inform future wilderness management decisions. Major emphasis will be placed on user education because of high visitor use and adjacency to the urban population. Total use levels in the Tri-canyon wilderness areas will be closely monitored to protect other wilderness values. In the future management may need to limit resource impacts from user visitation. Such management may include, but is not limited to use capacity analysis, allowed use limits and quotas, permit systems, designated camp sites, a wilderness unit management plan or needed amendments to wilderness management in this Forest Plan. Lone Peak Wilderness will be managed as one unit in coordination with the Uinta National Forest, and consistent management applied where necessary to avoid confusion by users. Compliance with Wilderness regulations will be high; violations of the boundary by motorized vehicles, and violations of watershed regulations will be negligible. Additional outfitter and guides will not be allowed in wilderness and current outfitter and guide areas and use levels in the wilderness will be closely monitored and adjusted if needed to protect wilderness values.

Eligible Wild and Scenic Rivers Desired Future Conditions:

Red Butte Creek (source to Red Butte Reservoir for ecological values) will be managed to protect the values that made it eligible in the inventory. Activities within the corridor will maintain a “Scenic” classification.

Little Cottonwood Creek (source to the Murray City Diversion for scenery, geology/hydrology, and ecological values) will be managed to protect the values that made it eligible in the inventory. Activities within the corridor will maintain a “Recreational” classification.

Roads/Trails/Access Desired Future Conditions:

Protection of watershed conditions will be a primary factor in managing roads, trails and access. In the Tri-canyon area (Big and Little Cottonwood Canyons and Mill Creek) parking capacities of canyon parking lots (ski areas, summer use homes, developed and dispersed recreation sites) will be not exceed 2000 levels unless modification is needed for watershed protection or to facilitate mass transit. Mass transit will be commonly used during winter, reducing crowding and increasing safety for users of the canyons. The Forest Service will work actively with other parties to explore options for reducing private vehicular use within these Canyons.

A comprehensive evaluation of the existing trail system (including user created routes) will be conducted, and a strategy developed to meet increasing demand while maintaining watershed condition and meeting social expectations for various types of opportunities. Trails to be retained will be modified and included as system trails; those not retained will be closed and rehabilitated where needed for watershed protection. Trails will be signed to standard, and compliance with rules addressing allowable uses will be excellent. Creation of new routes by users will be significantly curtailed. Users will assist with monitoring and will be well informed of impacts and needs for remaining on designated trails to prevent watershed deterioration. Travel planning for motorized access will be completed, and monitoring and enforcement will be accomplished through coordination with other agencies.

Trails that provide access to wilderness and backcountry areas will be well designed and maintained with the goals of natural resource protection and visitor safety. The use of trails will be managed to address safety concerns and user conflicts associated with different modes of access. Managerial and enforcement capability will, however, limit the degree to which competing trail uses can be effectively separated. Regional trails, such as the Great Western Trail and the Bonneville Shoreline Trail will be recognized and valued as unique opportunities to develop recreation corridors across multiple ownerships in the face of expanding development across potential trail corridors.

Recreation Desired Future Conditions:

Recreation activities and developments within ski resorts

The ski resorts in Big and Little Cottonwood Canyons will continue to serve as hubs of year-round outdoor recreation use on both private and public lands within the permit areas. Recreation opportunities offered on public lands within the resort boundaries will be complementary to and compatible with those that are allowed and/or emphasized on surrounding public lands outside the boundaries. Opportunities that build on the unique values of public land are featured over those that are focused on the constructed environment. Activities that facilitate

public understanding, appreciation, and respect for land and natural resources will be encouraged.

Lands and facilities within ski area permit boundaries will be managed with a primary emphasis on developed winter recreation while providing complementary summer recreation opportunities. The scope and scale of major facilities approved in past master development planning are expected to serve the general needs of the skiing and snowboarding public for the 10-15 year horizon of this forest plan. Additional development within that timeframe will generally involve the replacement and/or modification of existing facilities, modifications of existing ski runs, and adjustments to evolving technologies and user preferences. New resort developments on National Forest System lands will be confined to the permit boundaries in effect at the time of revision, though small-scale site-specific adjustments could be considered to address important management issues. Development and modifications at the resorts will continue to be designed to balance the comfortable carrying capacity within each resort, based on latest technologies, use patterns, and existing facilities, within the capabilities of the natural environment and transportation infrastructure.

Development will be designed with a high level of attention to scenic integrity, within the context of overall resort development. Facilities will be designed and constructed to harmonize with the natural setting, rather than to contrast with that setting. While developments in base areas will be visually dominant, that dominance will decline on the mountainsides and new development on ridgelines, beyond the levels approved at the time of plan revision, will be minimal. Special attention will be given to the scenic integrity of views from backcountry and wilderness trails. Non-winter recreational opportunities provided in base areas will rely more heavily on constructed facilities, while those higher on the mountain will become increasingly oriented toward the natural setting.

Balanced diversity of recreational opportunities

The Tri-canyon area provides a wide array of recreational opportunities designed to serve a large and growing urban population while maintaining stable watersheds, water quality, ecological integrity of the land, its physical resources, and its biological communities.

Recreation visitors to this area will accept a moderate to high level of responsible interaction with other users as a price they are willing to pay for ease and convenience of access from the urban setting. They can also expect that environmental education and appreciation programs will be present and enhance their recreation experiences. Although it will be possible to experience a range of user densities and regulation, this will not be an area in which people can expect either optimal solitude or optimal freedom. Proponents of the many activities offered will recognize that their use is limited by the needs and values associated with competing activities. People with diverse needs and values will function in

an atmosphere of cooperation and constructive resolution of differences rather than continually fighting to win at the expense of others.

Visitors to the Tri-Canyon area will make increasing use of mass transit to reduce congestion on the highways, and mass transit opportunities will expand to include year-round operations. Recreation activities on the national forest will feature non-motorized access. Watershed protection mandates, the relatively short distances to backcountry destinations, the relative ease of non-motorized access, and the relatively small area within which to buffer the competition and conflict between motorized and non-motorized uses are factors to consider in dealing with specific recreation management decisions.

Diverse winter backcountry recreation opportunities will continue to be found outside ski area boundaries. Ski and snowboard mountaineering, snowshoeing, and ski touring will occur throughout the area, with the location and extent of each activity dictated primarily by terrain. Helicopter skiing will continue to operate as a component of the recreation picture in the Central Wasatch. Helicopter skiing and ski mountaineering will continue to compete for untracked conditions, and those users seeking quiet in the winter backcountry may continue to object to helicopter skiing in preferred terrain. Information will continue to be available to all backcountry visitors to help them make informed decisions and avoid conflicts. Wilderness boundaries in the area were intentionally designed by Congress to allow for ridgeline helicopter landing zones, and no new wilderness is recommended on the Wasatch-Cache in the helicopter permit area. It is uncertain, however, whether helicopter skiing can be managed to remain profitable over the long term while accommodating a reasonable level of compromise with competing backcountry uses.

Mountain weather and backcountry avalanche forecasting will continue to be provided through cooperation among the Forest Service, state and local government agencies, and private parties. Avalanche control activities for canyon highways will continue to be a cooperative venture involving the Forest Service, and state and local government agencies. New technologies for avalanche control will be reviewed and considered as they become available.

Recreation Special Uses

The number of permitted outfitter-guide recreation operations will remain essentially the same as year 2000 over the next 10-15 years. The existing determination of desirable and appropriate guided services remains valid**,** and demand is in balance with supply. Opportunities to conduct conservation education and interpretive activities will continue to be provided, and may expand. Recreation events that have been authorized will continue. No new major events will be authorized (events involving more than 100 people), except those occurring within ski resort permit boundaries, authorized under the resorts' Special Use Permits and identified in resorts' operating plans.

Recreation facilities will be constructed and maintained to standard to protect water quality and stream/riparian habitat. Hardened access points to water will be identified and placed to provide for an enjoyable recreational experience and at the same time meet watershed functions.

Scenery Management

The scenery of the area will continue to be a valuable and pleasurable natural backdrop for the urban area. Views up and within the canyons of natural and developed areas will be carefully managed to sustain scenic resources. Views from the Scenic Byways in Emigration, Big Cottonwood and Little Cottonwood Canyons will be managed for their recognized values. Guidelines for scenery management will be applied to project undertakings. The following landscape character themes will be found in the management area as mapped: Natural Evolving, Natural Appearing, Developed Natural Appearing , and Resort Natural Setting.

Heritage Resources

Inventory efforts will continue to document the American Indian sites as well as the early European settlement of the area. Research and interpretive efforts will focus on developing the mining and early ski industry history of the tri-canyon area. Active partnerships with ski resorts will foster better interpretations and value for the early history of the canyons. Through partnerships with organizations such as Wilderness Watch, fragile and sensitive rock art sites will be protected and preserved. Historic Forest Service administrative sites, including campgrounds, amphitheaters, and guard stations, will continue to be repaired and preserved for future use.

Land Ownership Desired Future Conditions:

The ownership of Red Butte dam will be resolved and the boundary of the Red Butte Research Natural Area will be adjusted to accommodate management of the dam and reservoir and to recognize and project the ecological integrity of the canyon upstream from the reservoir. Public access to National Forest lands will be maintained and/or acquired. Coordination with local agencies and landowners will emphasize maintenance or improvement of access. Work will be conducted in cooperation with appropriate entities to acquire high priority inholdings for inclusion as public lands for the purpose of watershed protection.

Timber Management Desired Future Conditions:

No lands in this Area are capable/available for commercial timber harvest.

Rangeland/Livestock Grazing Desired Future Conditions:

Vacant Allotments will be removed from allotment status for watershed protection and to serve as ungrazed reference areas.

Non Recreation Special Uses Desired Future Conditions:

Existing communication sites at Scotts Peak, Hidden Peak, Shepard Peak, and Alta will be available for additional use, however no additional communication sites will be designated.

Social (non-recreation) Desired Future Conditions:

The Central Wasatch Canyons will continue to enhance the quality of life for a large, diverse, urban population with stable watersheds, high quality water, scenery, and natural retreat opportunities within easy reach of the urban valley.

Western side of the Stansbury Mountains

Stansbury Management Area

Desired Future Conditions

Stansbury Management Area
Setting Description:

The Stansbury Management Area is located at the south end of the Great Salt Lake between Tooele Valley on the east and Skull Valley on the west. It occupies the south end of the Stansbury mountain range. North south trending, the unit rises from the valley floor and varies in elevation from 5400 feet to 11,031 feet at the top of Deseret Peak in the Deseret Peak Wilderness. This is a semi-arid range created by basin and range type faulting and defined by steep V shaped canyons, juniper forests and craggy mountain peaks. Many of the north-facing slopes are accented by dark green fingers of conifer extending down the ridgelines. Vegetation is a mosaic of juniper and Douglas-fir at lower elevations and Spruce/Fir at higher elevations. Hardwood bottoms and openings of sagebrush and grass/forb meadows also occur. Crested wheat grass was planted in the 1960's, and covers large areas at lower elevations on the east side of the Stansbury range. Native species are beginning to reestablish in these communities, but the crested wheat grass is likely to persist for decades into the

future. The replacement of aspen by conifers due to fire suppression has likely resulted in lower water flows in the streams. Few perennial streams and springs are found on the Area. South Willow Canyon is the location of the only developed campground facilities. In addition, South Willow Creek is essentially completely diverted at the Forest boundary so no perennial flow occurs east of the Forest. Mining Fork has been diverted from its natural stream channel into South Willow Creek at a location near the S curves. Historically mining occurred although its remnants are no longer dominant on the landscape. Primitive roads that go up many of the canyons are braided and are creating a high impact on the landscape as people drive vehicles further up the mountain and off designated routes.

Watershed Desired Future Conditions:

Given the scarcity of perennial streams in this semi-arid area and their high value for wildlife, fish and aesthetics, all uses will be managed with specific attention to maintaining or enhancing the integrity of stream, spring, and riparian environments. Watersheds are in properly functioning condition. Adequate ground cover prevents soil erosion and compaction and adequate infiltration and moisture holding capabilities provide for storage and release of water to streams and aquifers similar to historical rates. Stream flows will be protected to at least maintain existing stream flows. Management of conifer-dominated aspen stands will be focused in part on increasing water flow in perennial streams. Spring sources and floodplains will be protected from compaction by livestock, vehicles, and recreation use. They will be restored to proper functioning conditions. Riparian areas will be properly functioning with rejuvenated plant communities, adequate deep-rooted vegetation and hardening along banks to allow for sediment filtering, erosion prevention, and runoff within historic ranges. Adequate water will be available for proper distribution of livestock while maintaining adequate ground cover and forage use within utilization standards. Riparian areas will be protected from overuse and trampling from livestock grazing and recreation uses.

Riparian and upland ground cover conditions on the east slopes of the Stansbury Mountains will be improved through compliance with travel plan, rangeland health standards, watershed restoration activities, and developed site rehabilitation work

Biodiversity/Viability Desired Future Conditions:

Vegetation and Disturbance Processes

Vegetation cover types form a mosaic of habitat diverse in species composition, plant communities, and size/age/structural classes within communities. Fire use will play an active role in reducing fuels, maintaining the historic dynamic of aspen regeneration and ratio of conifer to aspen vegetation patterns and age classes. Fire use coordinated with livestock grazing management will also be

used to restore the dynamic of juniper age classes and canopy cover as well as healthy understory of forbs and grasses, resulting in improved forage and plant composition for both domestic and wild grazing animals as well as diversity of habitat for a variety of other wildlife species.

Crested wheat grass plantings will be managed to maintain the reintroduction of native grasses and forbs. Forb communities at higher elevations in the Wilderness will be protected from recreation impacts. Areas of macrophytic crusts will be identified and protected.

Integrated pest management will be successfully employed to keep noxious weed populations at a minimum with emphasis along travel ways.

Areas will be identified as native seed-collection sites for their use in recovery, reestablishment, and rehabilitation of disturbed sites.

The unique qualities and character of the Great Basin ecosystem will be recognized in decision-making.

Botanical Threatened, Endangered, and Sensitive Species Protection/Recovery

Occupied and potential habitat for rare plant species, such as the Sensitive *Potentilla cottamii*, will be maintained and known populations will be protected from impacts from various sources.

Populations of non-native plant species will be reduced or eradicated in rare plant actual and potential habitat. Habitats will be maintained to promote pollinator success and survival. Proper stocking levels and utilization intensities of wildlife in introduction programs will maintain and protect rare plants and their associated habitat. Pro-active efforts will be made to educate and inform Forest users of the fundamental importance of plant species to society, plant conservation, and biodiversity.

Wildlife Habitat

The Big Creek Wild Horse Territory will be managed for a maximum of 25 head as described in the management plan.
Big game winter ranges (generally below 7,000 feet) which include the entire perimeter of the Area, will be maintained and enhanced with the goal of holding big game on the Forest longer to help decrease impacts on private lands below. Sagebrush and other mountain brush species age classes will be maintained in a higher proportion of older age classes than in other locations to provide browse above the snow. Big game use will be monitored in cooperation with the Utah Division of Wildlife Resources to ensure population management prevents habitat deterioration.

Terrestrial Threatened, Endangered, and Sensitive Species Protection/Recovery

A number of species-at-risk occur within and/or have habitat within this Management Area.

Aquatic Conditions

Fish Habitat: Aquatic habitats will be managed to maintain cool, clear water and well-vegetated stream banks for cover and bank protection. Instream cover, in the form of deep pools and structures such as boulders and logs, will be maintained and their value recognized. Water temperature will be preserved through well-vegetated banks. Natural reproduction will be maintained through minimizing sediment input from roads, trails and campgrounds. The value of riparian habitat conservation areas (300 feet on each side of the channel) will be recognized and protected. Springs will be protected and their value recognized

Amphibians and Invertebrates Habitat: Marshy edges of ponds or lakes and springs will be protected to allow for the development of in-water and riparian vegetation. Soils around water bodies will not be compacted and will allow for burrowing and over wintering of amphibians. Additional water developments will be permitted to reduce or eliminate impacts of grazing. These developments will not be allowed to reduce existing amphibian habitat.

Aquatic Threatened, Endangered, and Sensitive Species Protection/Recovery:

No “threatened”, “endangered”, and “sensitive” aquatic or semiaquatic species are known to exist in the Stansbury Mountains.

Research Natural Areas Desired Future Conditions:

A **potential** Research Natural Area on the west slope of Deseret Peak Wilderness will be studied for its inclusion into the system. The RNA that focuses on maintaining Great Basin elements would be managed for its wide range of botanical and ecological elements, and for its scientific value as a baseline for monitoring these elements.

Roadless Areas Desired Future Conditions:

Inventoried roadless areas and Wilderness occupy the majority of acreage in the Stansbury Management Area. Major portions of the inventoried roadless area located north and south of the existing Deseret Peak Wilderness will be managed as undeveloped areas (MPC 2.6), protecting roadless values. The eastern front of the roadless area allows development. Actions will be taken to improve conditions related to dispersed recreation between Davenport Canyon and South Willow Canyon. See Vegetation and Recreation Desired Future Condition descriptions for the portions of this roadless area that were mapped with prescriptions other than 2.6.

Wilderness Desired Future Conditions:

Use in the Deseret Peak Wilderness occurs primarily from June to October with limited use occurring during the winter. It is expected that use will continue to increase in the area including more visitors during the winter season. The area will continue to be managed to provide a variety of day and overnight use opportunities for both hiking and horseback riders. As population levels continue to grow in Tooele County, use is expected to increase in the Deseret Peak Wilderness area. To effectively manage this use, Forest Service presence in the Stansbury Mountains including Deseret Peak Wilderness will increase in frequency to protect and maintain wilderness values. There will be an increased emphasis on user education including leave no-trace and minimal impact techniques to protect those wilderness values. Overall, the Deseret Peak Wilderness will be managed to have lower use levels and encounters than the tri-canyon wilderness areas on the Salt Lake Ranger District. Opportunities for solitude and the ability to maintain pristine areas generally will higher in the Deseret Peak Wilderness area. High use will mainly occur in areas out of the South Willow Canyon corridor. Access that is currently threatened in some areas of the Stansbury Mountains is maintained and sufficient to allow adequate visitor access to the Deseret Peak Wilderness and adjacent roadless backcountry areas.

Areas within existing Wilderness, directly adjacent to the Stansbury Front motorized trail running north south along the length of the range, will be managed as opportunity class III for compatibility. Corridors along non-motorized trails will be managed as opportunity class II with the remainder managed as opportunity class I, where conditions are predominantly pristine.
As use increases in the Deseret Peak Wilderness, it is expected that trail maintenance of the higher use trails will increase, although many trails in the Stansbury Mountains will continue to be maintained and managed as primitive trails. Motorized use trespass in wilderness will be curtailed in both summer and winter. Additional outfitter and guides will not be allowed in the Deseret Peak Wilderness. Total use levels in the Deseret Peak Wilderness area will be closely monitored to protect other wilderness values. Tools to help manage this use in the future may be initiated to limit resource impacts from user visitation. Such tools may include, but are not limited to use capacity analysis, allowed use limits and quotas, permit systems, designated camp sites, a wilderness unit management plan or needed amendments to wilderness management in this Forest plan. The Deseret Peak Wilderness is managed as a unique ecosystem on the Wasatch- Cache National Forest, because the Stansbury Mountains are part of the Great Basin. Wilderness management for Deseret Peak will be designed to minimize impacts and declines of the Great Basin flora and fauna and their habitat. This will include effective management and monitoring of the range allotments that occur in the Stansbury Mountains and overlap into the wilderness. A close working relationship is kept with the adjacent Skull Valley Goshute Tribe and Bureau of Land Management on issues that affect the Stansbury Mountains ecosystem.

Roads/Trails/Access Desired Future Conditions:

Management presence in the area will increase significantly over that noted in the 2000 Plan Revision process. Signing will be current and well maintained and users will assist with monitoring of Travel Plan implementation. The increased management presence, as well as expansion of partnerships with Tooele County and City, is expected to help. Unclassified roads will be restored to natural conditions and barriers used to reduce problems.

Davenport - ATV routes are closed and traffic is confined to main routes.

The Stansbury Front motorized trail will be designated for both two-wheeled and ATV opportunities and necessary drainage design will be incorporated. The designated route will be clearly marked and compliance with the open on designated routes policy will be excellent. Wilderness trespass cases will be few. The network of user created routes in the Davenport and North and South Willow areas will be evaluated and designated appropriately as either continued motorized access or closed and rehabilitated where not needed for access or where causing unacceptable resource impacts. Improved signing and establishment of approved routes will eliminate encroachment into the wilderness. Roads will be maintained to provide adequate drainage and stream and riparian impacts will be minimized.

Access will be clearly identified from all main approaches to the area: in East Hickman and Mining Fork.

Recreation Desired Future Conditions:

Substantial changes to recreation patterns of use will be implemented to define and improve the range of recreation experiences present in the area, providing for a growing population in adjacent areas while sustaining natural resources. Considerably more agency emphasis and presence in the area will be noticeable. Recreation management will be specifically emphasized in the area from Davenport Canyon to South Willow Canyon providing a gradient of opportunities along the east slope.

Davenport - Opportunities in Davenport will be primarily designated dispersed where camping is allowed just off the road. The riparian area will be managed to allow recreation access to hardened points while protecting overall functioning with adequate vegetation cover. Users will be able to clearly see the areas intended for parking and camping and will assist with preventing additional compaction or denuding of vegetation. Future growth will be least accommodated in Davenport canyon.

North Willow - Dispersed sites along North Willow Creek will be closed and rehabilitated. The riparian area will be protected and dispersed camping will

occur away from the stream channel. Opportunities in North Willow provide designated dispersed sites where camping is allowed. Future dispersed growth is best accommodated in this canyon. Designated dispersed sites will be clearly marked and some facilities such as fire rings will be available. Increased management presence and hardening of sites will be accomplished. The riparian area will be managed to allow recreation access to hardened points while protecting overall watershed functioning with adequate vegetation cover. Users will be informed of areas designated for parking and camping and will understand how their actions can prevent additional compaction or denuding of vegetation.

South Willow - Camping will be allowed in designated sites only. Dispersed camping will be discontinued. Medina flat will be a horse and ATV parking area. South Willow Canyon will b*e a fee area.* Developed recreation opportunities will be provided in South Willow Canyon. Campgrounds will provide full service facilities. Users will camp only in developed campgrounds. South Willow also will provide improved trailheads from which non-motorized, motorized and horse travel can originate. The Medina Flat Trailhead will be modified and better delineated to provide for both horse and motorized users in a safe compatible setting. The Loop Campground Trailhead will be a primary access point to the Deseret Peak Wilderness. Denuded sites will be rehabilitated or moved to allow for streambank recovery. Vegetation in the stream corridor will be healthy and age classes more diverse than the decadent cottonwoods of 2000. The riparian area will be managed to allow recreation access to hardened points while protecting overall functioning with adequate vegetation cover.

An improved trailhead and reliable access into East Hickman Canyon will be provided to recreationists. Dispersed camping will be allowed in the general area. Impacts to soils, vegetation, and the riparian area will be reduced through modification and delineation of travel routes and trailhead improvement. Access to Big Hollow will be from a trailhead outside the forest boundary.

Motorized trail will provide a unique opportunity for access adjacent to Deseret Wilderness and users will assist with preventing any motorized encroachment into Wilderness.

Recreation opportunities on the west side of the Stansbury Mountains will be maintained as dispersed.

Recreation Special Uses

The number of authorized outfitter-guide recreation operations will remain essentially the same over the next 10-15 years. The existing determination of desirable and appropriate guided services remains valid, and the demand is in balance with supply. Opportunities to conduct conservation education and interpretive activities will continue to be provided and may expand. There continues to be little or no demand for organized recreation events. Any proposals will be analyzed on a case-by-case basis.

Scenery Management

The scenery of the area will continue to be diverse and unique within the Wasatch-Cache. A variety of settings from pristine to moderately developed are present. Views from the top of the Stansbury Range of off forest areas are recognized as spectacular and the viewpoints will be recognized and managed for their value. Views from the Scenic Byways in South Willow Canyon will be carefully managed so that foreground use does not detract from broader landscape views. Guidelines for scenery management will be applied to project undertakings. The following landscape character themes will be found in the management area as mapped:
Natural Evolving, Natural Appearing, and Developed Natural Appearing.

Heritage Resources

Inventory efforts continue to identify and record all American Indian and early European sites, particularly mining locations, in the area. Prehistoric archaeological sites are numerous in the Stansbury Range and their value will be recognized. Active partnerships are established with the Skull Valley Band of Goshiute Indians to enhance and appreciate their unique culture and history in the Stansbury Range. The importance of springs and the presence of early American Indian use at these areas is recognized and valued. Additional water developments and maintenance for improved management of livestock grazing are designed to not adversely affect significant cultural resources in the area.

Land Ownership Desired Future Conditions:

Public access rights-of-way will be maintained or obtained. Public access will be acquired through Hickman Canyon on the East side and Box Canyon on the West side.

Timber Management Desired Future Conditions:

Commercial timber harvest is not planned in the Stansburys.

Rangeland/Livestock Grazing Desired Future Conditions:

Livestock grazing will continue to be a compatible use within each of the prescription areas. It will be managed to maintain or improve watershed, terrestrial habitat, riparian and aquatic conditions and minimize conflicts with other uses consistent with management direction for the area. Plant communities will be at or moving toward desired composition, structure and function as described in Forestwide Desired Future Conditions and above under vegetation.

Structural improvements such as fences and water developments will be well maintained and will serve to improve distribution and control of livestock use. Structural improvements that are not needed will be removed from the forest.

Grazing permit holders will take full responsibility for monitoring use, movement, and control of livestock to meet standards designed to ensure multiple resource sustainability. Grazing systems will provide for rest or deferment of all areas for some portion of the rotation to achieve improved plant vigor and composition.

Deadman Allotment, currently vacated will be removed from allotment status for watershed protection and to provide an un-grazed reference area.

Non Recreation Special Uses Desired Future Conditions:

Newly authorized utility uses will be located in existing designated utility corridors.

Social (non-recreation) Desired Future Conditions:

This management area provides a backdrop to the expanded urban development of Tooele County and serves to enhance quality of life for residents of the area as well as visitors from outside the County. Community and county partnerships in management provide for enjoyment of the area while assisting with local land stewardship.

Hayden Peak on the western edge of the High Uintas Wilderness

Western Uintas Management Area

Desired Future Conditions

Western Uintas Management Area Setting Description:

Located in the Northeastern corner of Utah, next to the Southwestern border of Wyoming in the Uinta Mountains, this area rises in elevation from 6,800 in the foothills to 12,718 feet on Ostler Peak. This Management Area contains four ecological subsections: West Flank Uintas, High Uintas, North Slope Outwash and Monte Cristo-Weber Valley Hinterlands (Nelson, 1993) and is managed by two Ranger Districts, Kamas and Evanston. The Western Uintas Management Area includes diverse landscapes of open sagebrush flats, aspen, and coniferous forests, high mountains, semi-circular cirque basins, deep U-shaped river valleys, grassy meadows, alpine tundra and an abundance of lakes, streams and wetlands. The high amount of wetlands in the area is a unique feature compared with other areas in the intermountain west. It offers a wealth of recreation opportunities such as backcountry hiking and horseback riding, ATV trails, fly-fishing, scenic driving, rock climbing, backpacking, mountain biking, hunting, peak bagging, large group/family camping, snowmobiling, snowshoeing and cross-country skiing. Cattle or sheep can be seen grazing in portions of the area, as well as elk, deer, and moose.

Created by glaciers, this landscape is composed of broad vistas of deep U-shaped valleys coursed by mountain streams that tumble down steps of hard quartzite stone, and meander through open grassy meadows with lush riparian borders. At the heads of these U-shaped valleys are majestic domed peaks and stacked blocked ridgelines whose concave bases are blanketed with conifer and patches of aspen. Large and small lakes that reflect the surrounding peaks are scattered across the landscape. Rolling uplands provide large open snowfields mingled with conifer and aspen stands in winter that in summer provide a vivid display of colorful wildflowers. Campgrounds, trailheads and visitor pullouts follow the gentle weaving alignment of Mirror Lake Scenic Highway as it climbs from broad valleys through the Upper Provo River Canyon to the summit. There, Bald Mountain is at the headwaters of four of the most important river systems in Utah (Duchesne, Provo, Bear, and Weber) and swirled quartzite originally arising from ancient ocean bottoms has been polished smooth by Pleistocene Glaciers. Bald, Murdock, Hayden and many other peaks stand on the horizon as sentinels with coats of talus and craggy cliff bands.

Watershed Desired Future Conditions:

Upper Weber River Area - A watershed assessment will evaluate current conditions and identify actions to maintain or restore proper functioning condition for high quality and quantity of water to serve a wide variety of instream and downstream uses. Development on adjacent private lands in this drainage has resulted in some threats to water quality and quantity, however the Counties work on multiple agency sewer planning provides a means for correcting and/or preventing decreases in water quality. Water quantity is important for meeting growing potable water needs accompanying development on private lands. The City of Oakley has recently established a sole source aquifer designation (2000 feet underground) with most water coming from beneath Seymore and Pinon Canyons. The importance of protecting this watershed is recognized and management actions will be carefully planned and executed with this value as a priority.

In portions of the Upper Weber River drainage, historic grazing use effects and remnants of 1950's to 1960's watershed improvement structures still remain, although ground cover sufficient to prevent accelerated soil loss in these areas is gradually returning. Bluegrass bottoms common in riparian areas as a result of historic overgrazing will gradually be restored to deeper rooted sedges and woody plants that protect stream banks, filter sediment and provide shade for improved aquatic habitat.

Road maintenance and decommissioning will be employed to improve watershed conditions. Roads to be decommissioned were identified in the travel management planning process with full public involvement. Designated access points to streams in riparian areas will be identified and clearly marked for dispersed recreation enjoyment while protecting streamside integrity. Vehicles

will stay on designated travel routes. Sedimentation of streams will be reduced through revegetation and barriers to motor vehicles.

Beaver Creek Area– The Shingle Creek diversion into the Upper Provo is recognized as inherent to the culturally altered character of the watershed. The main stem of Beaver Creek will continue to function properly with abundant willows in a variety of age classes, channel integrity, channel processes, sediment regimes, and woody debris characteristic of conditions under which this riparian aquatic ecosystem developed. Shingle Creek and Slate Creek will be the focus of activity to restore riparian conditions to proper functioning. Downcutting in Yellow Pine and Coop Creeks will no longer be active and the stream level will stabilize. The Lefthand Fork of Beaver Creek is a municipal watershed and will be protected for this use.

Provo River Area – The diversion into the Upper Provo from the Duchesne River is recognized as inherent to the culturally altered character of the watershed. Streambank and wetland restoration and protection projects for mitigation along the Provo River will be emphasized, improving ground cover conditions along riparian areas.

Provo River Area – The diversion into the Upper Provo from the Duchesne River is recognized as inherent to the culturally altered character of the watershed. Streambank and wetland restoration and protection projects for mitigation along the Provo River will be emphasized, improving ground cover conditions along riparian areas.

Beaver Creek Area– The Shingle Creek diversion into the Upper Provo is recognized as inherent to the culturally altered character of the watershed. The main stem of Beaver Creek will continue to function properly with abundant willows in a variety of age classes. Shingle Creek and Slate Creek will be the focus of activity to restore riparian conditions to proper functioning. Downcutting in Yellow Pine and Coop Creeks will no longer be active and the stream level will stabilize. The Lefthand Fork of Beaver Creek is a municipal watershed and will be protected for this use.

Duchesne River Area –The tunnel diversion is recognized as inherent to the culturally altered character of the watershed. Coordination with water users for releases to Jordanelle will improve the compatibility of releases with the channel's ability to handle flows. Mirror Lake would be removed from the State of Utah 303(d) list by determining reasons for exceeding Utah dissolved oxygen water quality standards, and implementing solutions to the problem if it is management related.

Whitney Area – Watershed impacts (lack of ground cover, soil erosion and compaction, and loss of soil productivity) from destruction of vegetation (caused by ATV use and past sheep grazing) will be reduced. Roads and user created

travel ways not needed as part of the road system will be closed and restored to production of vegetation and protection of watersheds. Tall forb communities will be improved in their composition.

Around Whitney Reservoir and Beaver Lake adverse resource effects from concentrated use areas will be reduced by actively managing where vehicles are allowed to drive and park.

Hayden Fork - Streambanks damaged by historical (tie hacking) activities will be stabilized.

Biodiversity/Viability Desired Future Conditions:

Vegetation and Disturbance Processes

Areawide - Aspen with encroaching conifers on uplands and in riparian areas will be restored to seral aspen with a variety of age classes. Also see Forestwide desired future conditions for rangelands.

Native seed collection areas will be identified and used on a rotational basis so seeds are available for revegetation/rehabilitation projects in this management area.

Upper Weber River Area - In the Upper Weber, the aspen cover type along the forest boundary will be maintained. Natural processes will dominate within the recommended wilderness area. Conifer vegetation outside the recommended wilderness area is difficult to treat because of steep slopes coupled with continuous canopies adjacent to private land. A combination of hand felling and underburning might be used to reduce fuels and provide a buffer adjacent to private lands. Wildland fire use will play a role in recommended wilderness.

Tarweed areas having altered site potential as a result of soil loss, such as Hoyt Peak and Paulsin Basin, will remain, although as research develops approaches to restoring these, opportunities are sought to apply economically feasible restoration techniques. Remnant healthy and recovering tall forb communities will be protected from uses that could cause undesirable changes in plant composition. Specific efforts will be launched to test economically feasible approaches to restoration of tall forb communities where site potential still exists or can be recreated.

Integrated pest management will be successfully employed to greatly reduce noxious weeds with a priority on preventing infestations in recommended wilderness and in habitats where rare plants exist.

Beaver Creek Area – Aspen management will be emphasized to increase age class diversity and decrease conifer encroachment with priority placed on areas

adjacent to winter range and other vegetation types. Prescribed or wildland fire use will be the preferred treatment in Hoyts, Wide Hollow, and Paulsin Basin. Mechanical thinning of invading species (such as Juniper and Gambel Oak) followed by prescribed fire will be employed to maintain the unique Ponderosa pine component of the landscape. Mountain Mahogany stands (curl leaf only) will be sustained by avoiding burning and coordinating with Utah Division of Wildlife Resources to reduce browsing impacts by big game. Gambel oak and mountain brush will be managed to increase age class diversity and reduce fuel loading adjacent to private property. Sagebrush will be managed to increase the diversity of age classes and decrease canopy cover and, as a consequence increase grass-forb cover. Some understory burns will be provided for in timbered areas to maintain older fire resistant trees and reduce fuels.

Highway 150 corridor – Endemic outbreaks of insect and disease in forested stands is a naturally occurring process that will continue. Management along the Mirror Lake Scenic Byway will be designed to assure a sustained forested environment retaining scenic qualities and desirable recreation settings for the long-term. High scenic integrity will be considered in designing any vegetation treatments. Vegetation in developed and dispersed recreation sites will be monitored to determine tree health, vigor and condition. Public safety will be a priority when managing forest stands while striving for maintenance of desirable snag and woody debris conditions in developed and established dispersed recreation sites.

Whitney Area (West Fork of the Bear River) – Forests of the Whitney area are characterized by a variety of forest types. There are stands of mixed aspen and conifers in the lower to mid elevations and stands of spruce and lodgepole pine with a subalpine fir component throughout the area. These forested areas are interspersed with large and small meadows throughout the mid and lower elevations with a few open parks on ridges. The age and density of the spruce and lodgepole pine stands makes them susceptible to bark beetle epidemics. A combination of tree mortality from forest insects and fire has undoubtedly been the historically most important disturbance processes in this area. The disturbances from these agents in the Whitney area have probably been on a smaller scale than those farther to the east due to wetter climate and the naturally fragmented nature of the landscape. Therefore, the patch sizes tend to be smaller. The presence of aspen in some areas indicates a relatively more frequent fire history than would have occurred in the upper elevations where spruce predominates. The aspen and lodgepole pine stands in the area are dependent on periodic disturbance to remove encroaching subalpine fir and spruce and to regenerate new age classes of these species. Aspen regenerate through sprouting from roots following fire. Lodgepole pine cones opened by the heat of fires spread seed to regenerate a new forest of lodgepole pine, while stands of mixed species regenerate and proceed through successional stages at a slower rate following the less frequent fires at higher elevations. Although the spruce are a long-lived species, they become susceptible to spruce bark beetles as they age and have a

much longer regeneration cycle. Spruce bark beetles reached an epidemic level in the Humpy and Meadow Creek drainage in the early 1990's. Stands in these areas were treated by removing individual infested trees, felling trap trees, and installing pheromone baited traps. Spruce beetles have stayed at an endemic level throughout the area since then.
The Spruce cover type which can be important habitat for the boreal owl, lynx, and marten will be maintained by managing stand densities and structures to keep spruce beetles at less than epidemic levels. Aspen and lodgepole pine stands will be managed to rejuvenate and increase age class diversity in patch sizes similar to those that occurred historically and in a manner that maintains connectivity for wildlife movement through the landscape.

Bear River Drainage including the Hayden Fork, Stillwater, East Fork, and Mill Creek - The forests of the Bear River drainage excluding Whitney are characterized by mixed aspen and lodgepole pine stands in the lower elevations, some pure lodgepole pine stands in mid-elevations and mixed lodgepole pine, subalpine fir and Engelmann spruce in the higher elevations. These forests are dependent on disturbance to maintain a properly functioning condition. Aspen regenerate through sprouting from roots following fire while lodgepole pine cones opened by the heat of fires spread seed to regenerate a new forest of lodgepole pine. Stands of mixed species regenerate and proceed through successional stages at a slower rate following the less frequent fires at higher elevations. The fires historically responsible for these processes varied in frequency and intensity. Mixed lodgepole pine and aspen regenerated concurrently following fires with mixed regimes (some stand replacing and some ground fires). Most of the pure lodgepole pine type appears to have regenerated following large, stand replacing fires. Upper elevation stands appear to have a relatively infrequent fire history that is probably due in part to the wetter conditions during the fire season. These upper elevation stands are frequently in smaller patch sizes with changes in species composition dependent on how large and intense the fire was and how long the succession from seral lodgepole pine to subalpine fir and Engelmann spruce has been progressing. The role of fire in the ecosystem has been replaced to some extent by timber harvest over the last 100+ years. Extensive tie-hacking around the turn of the century produced uneven-aged stands in some areas and even aged stands where it was followed by fire. Extensive overstory harvesting on railroad lands intermingled with National Forest land as well as some of the same type of harvesting on National Forest land in the Mill Creek area has resulted in considerable acreage of 30 to 40 year old stands with mixed species and scattered relic overstory trees. More recent timber harvest on National Forest land has resulted in primarily even aged lodgepole pine stands intermingled with mature forest.

The area will be managed for aspen, mixed lodgepole pine and aspen, and lodgepole pine in patch sizes, species composition and stand structure and ages similar to what fire historically created. These treatments will be accomplished

through timber harvest, mechanical treatment, and prescribed and wildland fire use consistent with management prescriptions.

Restoration of aspen in riparian areas where conifers have encroached will be emphasized to improve habitat for a variety of species including beaver. Beaver are an essential ecosystem component due to their important effects on watershed and wetland functions.

The highest priority for treatment will be the mixed aspen and conifer stands where conifers are gradually replacing the aspen. There is not as much risk of losing the aspen component in stands composed predominantly of aspen at lower elevations.

Botanical Threatened, Endangered, and Sensitive Species Protection/Recovery

Management activities within rare plant habitats will maintain or restore and provide for recovery of populations of current and proposed Sensitive plant species and plant species at risk. Livestock grazing intensities will be managed at a level that maintain rare plant habitat dynamics and provides for the maintenance of pollinator habitat and diversity. Riparian and aquatic plant habitats and species will be protected from trampling and overuse by recreational users and grazing wildlife and livestock. Activities associated with timber harvest will maintain or restore habitat for current or proposed Sensitive species and will support a diversity of pollinators. Cliff, crevice, and ledge habitats will be protected and provide for a variety of cliff species balanced with recreational climbing opportunities. Forest users will become aware of the fundamental importance of plant species to society, plant conservation, and biodiversity.

Wildlife Habitat

The western-most boundary of the Western Uintas is an important linkage for biodiversity maintenance. It connects wildlands to the north and west with the rest of the Uinta Mountains running east-west and also linking to wildlands in Colorado. All management activities will take the priority for a functioning corridor into full consideration.

Big game winter ranges (generally below 7,000 feet) in the Kamas Valley will be protected and enhanced, recognizing these become more valuable and important as urban encroachment continues into previously undeveloped areas. Browse species here will be maintained with a higher proportion of older age classes than elsewhere to provide browse above snow for big game.

Big game use will be monitored in cooperation with the Utah Division of Wildlife Resources to ensure population management prevents habitat deterioration.

Upper Weber River Area – The area is recognized as a critical linkage between the broad scale north-south wildland corridor created by the Cache Box Elder and

Bear Management Areas to the north and west, and the east-west wildlands of the Uinta Mountains. Coordination with the State will be employed to maintain big game numbers at levels appropriate for sustainable winter range habitat management. Low elevation oakbrush will be treated to maintain and improve big game winter range while providing fuel breaks along the private property interface. Fire will be used to the extent possible to maintain age class and species diversity. Working relationships with adjacent landowners will protect private property from unwanted fire and provide for desirable vegetation mosaics/age class diversity.

Beaver Creek Area – The area is recognized as a critical linkage between the broad scale north-south wildland corridor created by the Cache Box Elder and Bear Management Areas to the north and west, and the east-west wildlands of the Uinta Mountains. These areas provide the only wildland connection between southern Idaho/Wyoming and Colorado wildlands making maintenance of integrity a priority in all management decisions. High winter range values will be maintained or enhanced. Aspen will be managed to increase age class diversity and reduce conifer encroachment. Spruce fir will be managed to provide habitat, maintaining healthy mature stands with a spruce component for boreal owl, snowshoe hare, lynx and marten.

Provo River Area – In Cedar Hollow, winter ranges will be maintained or enhanced. In the Duchesne River drainage as well as lakes in the upper Provo, high elevation osprey nest sites will be recognized as important and protected.

Whitney Area – Wildlife travel and migration corridors will be protected. Spruce fir will be managed to provide habitat, maintaining healthy mature stands with a spruce component for boreal owl, snowshoe hare, lynx and marten.

Terrestrial Threatened, Endangered, and Sensitive Species Protection/Recovery

In Lynx Analysis Units, recreation and vegetation management will conform to objectives, standards and guidelines identified in the Lynx Conservation Strategy.

The Goshawk Conservation Strategy will be incorporated into all management activities.

Aquatic Conditions

(Fish habitat, amphibians and invertebrates habitat, Threatened, Endangered, and Sensitive Species protection/recovery)

Areawide - Trout Habitat - Aquatic habitats will be managed to maintain cool, clear water and well-vegetated stream banks for cover and bank functioning. Instream cover, in the form of deep pools and structures such as boulders and logs, will be maintained and their value recognized. Water temperature will be preserved through stable well-vegetated banks. Natural reproduction will be

maintained through minimizing sediment input from roads, trails and campgrounds and providing for instream flows.

Recreation facilities will be constructed and maintained to protect water quality and stream/riparian habitat. Hardened access points to water will be identified and placed to provide for an enjoyable recreational experience and at the same time ensure proper watershed functioning.

Amphibian Habitat - Marshy edges of ponds or lakes and springs will be protected to allow for the development of in-water and riparian vegetation. Soils around water bodies will not be compacted and will allow for burrowing and over wintering of amphibians. River rehabilitation designs will incorporate toad and amphibian habitat needs. Spotted frogs have been found in this area.

Access trails will be designed to minimize development in riparian habitat conservation areas (300 feet on each side of the channel). The values of springs will be recognized and protected. The values of instream flows for aquatic and semi-aquatic species will be recognized and protected. Non-native fish will be maintained through natural means in streams. Stocking will provide the majority of angler demands in lakes and reservoirs along the Mirror Lake Highway. Management will emphasize conservation of the Bonneville cutthroat trout population in the headwaters of the Bear River, Beaver Creek in the Weber River Drainage, and Boulder Creek in the Provo River Drainage. Bonneville cutthroat populations in the upper Bear River Drainage will be expanded and strengthened in coordination with the State of Utah.

Beaver Creek, Mill Creek, and West Fork Bear – The fish community is very diverse in this area. This diversity will be maintained.

Roadless Areas Desired Future Conditions:

The Nobletts roadless area will be managed for semi-primitive non-motorized recreation opportunities and low use consistent with the terrestrial habitat management prescription. This will mostly maintain roadless values.

The Lakes Roadless Area will be managed consistent with the Backcountry Management Plan (USFS 1999): Direction from that decision applies to both the recommended wilderness portion and the rest of this inventoried roadless area. Quality semi-primitive non-motorized recreational settings and experiences are provided which are sensitive to soil, wetlands and riparian areas, water quality, scenery, wildlife, and vegetation resources as well as the needs of people. The majority of the area will be managed to maintain or mostly maintain roadless values. Development will be allowed on about 18,000 acres of the roadless area.

Management in about half of this portion of the High Uintas Roadless Area will maintain or mostly maintain roadless values. The remaining portion will be managed to allow development.

Wilderness and Recommended Wilderness Areas Desired Future Conditions:

Lakes Roadless Area - The recommended wilderness in the Lakes Roadless Area will have boundaries clearly marked and will be managed consistent with the 1999 Backcountry Management Plan (See Lakes Backcountry below under Recreation Desired Future Conditions) with one exception. Mountain bike trail use and other mechanized use will not be present within the recommended wilderness. Snowmobiles will be allowed. Quality semi-primitive non-motorized (summer) recreational settings and experiences will be provided which are sensitive to soil, wetlands and riparian areas, water quality, scenery, wildlife, and vegetation resources as well as the needs of people. Motorized access for reservoir maintenance will be allowed in recommended Wilderness. Once-in once-out access will be employed as it was in High Lakes Stabilization.

High Uintas Wilderness – This area will be managed in accordance with the 1997 High Uintas Wilderness Management Plan, including its DFCs and monitoring**.** Motorized uses are not allowed in designated Wilderness and the boundary of this wilderness will be adequately marked and enforced.

High Uintas Additions Roadless Area - The recommended wilderness will be managed to maintain and protect wilderness characteristics. Existing access points at East Fork Bear River Trailhead and the Bear River-Smiths Fork Trail will provide adequate public access.

Eligible Wild and Scenic Rivers Desired Future Conditions:

The Ostler Fork (source to mouth for ecological values), Left Hand, Right Hand, and East Forks Bear River (Alsop Lake and Norice Lake to near trailhead for scenic and hydrologic values), Boundary Creek (source to confluence with East Fork Bear for ecological values), and Middle Fork Weber River (source to confluence with Weber River for scenic values) will be managed to protect values which made them eligible in the inventory. Activities within the corridors will maintain a ”Wild” classification.

The Hayden Fork (source to mouth for scenic and ecological values), Beaver Creek (source to forest boundary for recreation values), and Provo River (Trial Lake to U35 Bridge for scenic and recreational values) will be managed to protect values which made them eligible in the inventory. Activities within the corridors will maintain a “Recreational” classification.

The Stillwater Fork (source to mouth for scenic and ecological values) will be managed to protect values that made it eligible in the inventory. Activities within

the corridor will maintain a "Wild" classification within Wilderness and "Scenic" classification below Wilderness.

Roads/Trails/Access Desired Future Conditions:

Areawide - Roads and trails will be designed and maintained to protect watersheds while providing a variety of recreation and access opportunities. Routes in need of improved drainage and for alignment to minimize impacts to watersheds will be identified and incrementally repaired to achieve access with proper watershed functioning. Roads and trails will be clearly marked with allowed types of uses, and users will stay on designated routes. Compliance with the current travel plan will be excellent and users will assist with monitoring. Adequate opportunities for motorized recreation will be provided through a series of roads and trails (mostly derived from existing routes) with varying degrees of difficulty, opportunities for scenery, and access to attractions. Loops will be provided where possible. There will be increased opportunity for a recreation east-west transit along the North Slope road system in all seasons.

Provo River Area - Cedar Hollow and Murdock Basin ATV trail systems will continue to provide motorized recreation opportunities in distinct settings (Cedar Hollow for lower elevation, earlier season use and Murdock for higher elevation with access to the vicinity of various lakes later in summer). Signing and barricades for decommissioned roads will no longer be needed as the roads will be recovered and revegetated with users complying with travel plans. The trail system will be protected from expansion by user defined or extended trails. A wide variety of snowmobile experiences will be provided on 9,000 to 10,200 elevations. The existing road system and travel plan will be adequate to meet access needs.

Recreation Desired Future Conditions:

Management specifically for recreation is emphasized in the Mirror Lake Highway, Spring Canyon, Echo Lake, Iron Mine, Gardners Fork, Whitney, and East Fork and Stillwater Fork of the Bear River with Management Prescription Category 4.0.

Areawide - Recreation opportunities will be maintained as primarily general public use. Recreation facilities will be constructed and maintained to protect water quality and stream/riparian habitat. Hardened access points to water will be identified and placed to provide for an enjoyable recreational experience and at the same time ensure watershed functions. Fishing experiences will vary from easily accessible lakes, reservoir and rivers, to remote lakes and streams.

Lower Weber River Area – The Hoyt and South Fork area will be managed mostly for day use dispersed recreation.

Upper Weber River Area – Recreation use areas in Smith Morehouse and Gardner's Fork will be hardened to provide access while protecting soils and vegetation. Non-motorized backcountry or wilderness experience will predominate in the interior of the watershed in summer. Opportunities for winter motorized use will be provided both inside and outside the recommended wilderness area until such time as Congress acts. Parking for snowmobile use in this area continues to be provided although National Forest lands for this may be limited. Developed recreation facilities will remain at the level available in 2000. This area has a lower development density than the more heavily used portions of the Management Area (i.e. the Provo River). User density levels will remain similar to those of 2000. A variety of outfitter guide supported recreation opportunities will continue to be offered off-forest in the Upper Weber consistent with the 1999 Backcountry Management Plan (USFS, 1999).

Beaver Creek Area – provides a wide variety of recreation opportunities. Taylors Fork and Shingle Creek will be evaluated to emphasize ATV/camping opportunities while protecting riparian zones, water quality and watershed functions. Recreation sites (Taylors Fork and Shingle Creek) will be evaluated for close-out or rehabilitated in areas where damage is or has potential to occur to riparian and wetlands. Use will be shifted to resistant sites that do not contribute to resource problems. Cedar Hollow will be considered for ATV/camping opportunities to provide for existing and some future demand.

Existing developed facilities will be maintained. Water systems will be modified or replaced to meet State requirements for potable water systems in developed sites. Priority will be for replacement of older underground water systems. Existing designated dispersed recreation sites will be hardened and additional designated sites may be added to protect resources and provide for increasing demand. Anticipate higher occupancy rates of developed campgrounds and facilities as population increases. Demand will not be fully met in higher use periods. Designated dispersed camping sites will be maintained, rehabilitated and hardened to protect riparian areas and water quality.

Lakes Backcountry (interior of upper Weber and Provo Watersheds) - Horseback riders, hikers, backpackers, anglers, hunters, and nature enthusiasts will enjoy a variety of semi-primitive non-motorized recreational opportunities in non-snow seasons that provide opportunities for quiet, privacy, self renewal, experiencing nature, challenge, and self-reliance. In winter, snowmobilers as well as skiers and snowshoers will enjoy a variety of semi-primitive motorized and non-motorized recreational opportunities. Campsites and trails will be located in or relocated to areas that are more resistant to human impacts. This will result in the reduction of soil compaction and erosion, less human activity in wetlands and riparian areas providing higher quality wildlife habitat, fewer visible campsites, less soil erosion resulting in organic and mineral soil loss, and less vegetation loss. Campsites will generally be visually screened, increasing opportunities for quiet and privacy. Areas disturbed by human use (campsites and trails) that have

been relocated or closed will be revegetated with naturally occurring vegetation species.

From the Mirror Lake Highway to the Provo-Weber crest (Yellow Pine, Coop Creek, Shingle Creek and Norway Flats) - Outfitter guided summer and winter opportunities including youth programs and a winter yurt system will continue at 2000 levels (see below under Recreation Special Uses).

Provo River Area – Large organizational camp opportunities will be maintained and education efforts will be supported with Forest Service programs when possible. Expansion of dispersed recreation opportunities will be provided along Spring Canyon Road with improvements in keeping with the need to protect wetlands and settings. Scenic byway management will be expanded to include ridgeline to ridgeline scenery areas.

Bear River Area - Protection of scenery along the Scenic Byway and heavily developed recreation use areas will be provided. Dispersed areas will be defined or designated to better integrate developed and dispersed opportunities, while reducing resource impacts. A wide variety of easily accessible recreation opportunities (winter and summer motorized and non-motorized) will continue to be present in the Bear River Drainage. Intensively managed summer and winter opportunities in the Lily Lake/Wolverine Trail system area will be continued as will the Bear River snow park. Partnerships with governments and private and volunteer interests to provide a balance of recreation opportunities will be continued. The high quality backcountry values currently present will be maintained. Large organizational camp opportunities will be maintained and education efforts will be supported with Forest Service programs when possible.

Recreation Special Uses Desired Future Conditions:

Outfitter Guide partnerships with the Forest Service will enhance land stewardship goals by providing long term benefits in land stewardship education. Outfitter Guide activities (non-profit environmental education groups, schools, and universities, and for profit commercial operations focus on a preponderance (>51%) of their time on the forest providing: educational opportunities for instructing the membership of other organizations in leave no trace backcountry camping and travel techniques ("Train-the-Trainer" programs); low impact educational access for school and university groups; low impact opportunities for service projects to complete needed work to protect and restore forest resources under Forest Service technical supervision; low impact access for minorities and youth at risk, special populations, and other underrepresented social groups; low impact opportunities for service projects administered by outfitter guides with technical supervision by forest service employees; and managed use, to the extent possible, which decreases the likelihood of restricting overall user numbers.

Soapstone and Christmas Meadows summer home areas will be continued under recreation residence special use permits. Boundaries on permits will be simplified where complicated boundaries existed. When current permits expire for the two cabins at Trial Lake, a new evaluation will be conducted to determine if the permits will be extended.

Heritage Resources Desired Future Condition

Continue inventory efforts to identify and record all American Indian and early European sites, particularly mining locations, in the area. The local and regional history associated with the tie hack sites will be developed and appreciated. Interpretive brochures and/or trails will be developed in coordination with designation of a historic tie hack district. The Mirror Lake Scenic Byway will include interpretation of culture and history of the area. Investigation in high-altitude prehistoric sites will continue on the Wasatch-Cache NF portion of the Uinta Mountains in coordination with the Ashley NF's ongoing investigations along with interested educational institutions and tribal programs. Historic guard stations will continue to be restored, maintained, and valued as working administrative sites.

Scenery Management

The outstanding scenic quality of the Mirror Lake Scenic Byway will be maintained and protected. The following landscape character themes will be found in the management area as mapped: Natural Evolving in Wilderness and Natural Appearing in all other Prescription areas with scenic integrity objectives of Very High for Wilderness and High for all others.

Land Ownership Desired Future Conditions:

Boundary encroachment problems at the forest boundary in Upper Weber and Bear River area will be resolved by marking and survey in cooperation with local governments and landowners. Existing portals will be maintained for adequate public access.

Efforts to acquire private lands and block up National Forest ownership in intermingled private lands will be continued. Acquire small inholdings in Western Uintas. If intermingled lands are not acquired, acquiring easements across private lands will be a priority.

Timber Management Desired Future Conditions:

Treatments will emphasize restoring properly functioning condition, maintaining species composition and stand structure, and where possible within intermingled ownerships, managing for patch sizes that would have occurred historically. Because of past harvesting in roaded areas and the heavy recreational use of the

area, most of these treatments will be on a small geographic scale with a low level of disturbance per acre.

In the Hayden Fork area traditional forest products such as Christmas trees, posts and poles, firewood and teepee poles will continue to be provided.

Rangeland/Livestock Grazing Desired Future Conditions:

Upper Weber River Area - This steep mostly timbered area is marginal for livestock grazing. Vacant allotments or permits waived without preference will be evaluated for whether continuing domestic livestock grazing is appropriate.

Beaver Creek, Provo River, and Whitney Areas – Livestock grazing will be managed to maintain or move toward desired future conditions for rangeland vegetation (see Forestwide Desired Future Conditions).

Bear River Area - From the Hayden Fork drainage to the east, if sheep permits for upper elevation allotments are voluntarily waived without a preference, permits will not be reissued and allotments will be closed to domestic livestock for purposes of future bighorn sheep habitat.

Non Recreation Special Uses Desired Future Conditions:

Special use authorizations for research projects, water developments, and filming will be managed to ensure public benefit as do other authorizations.

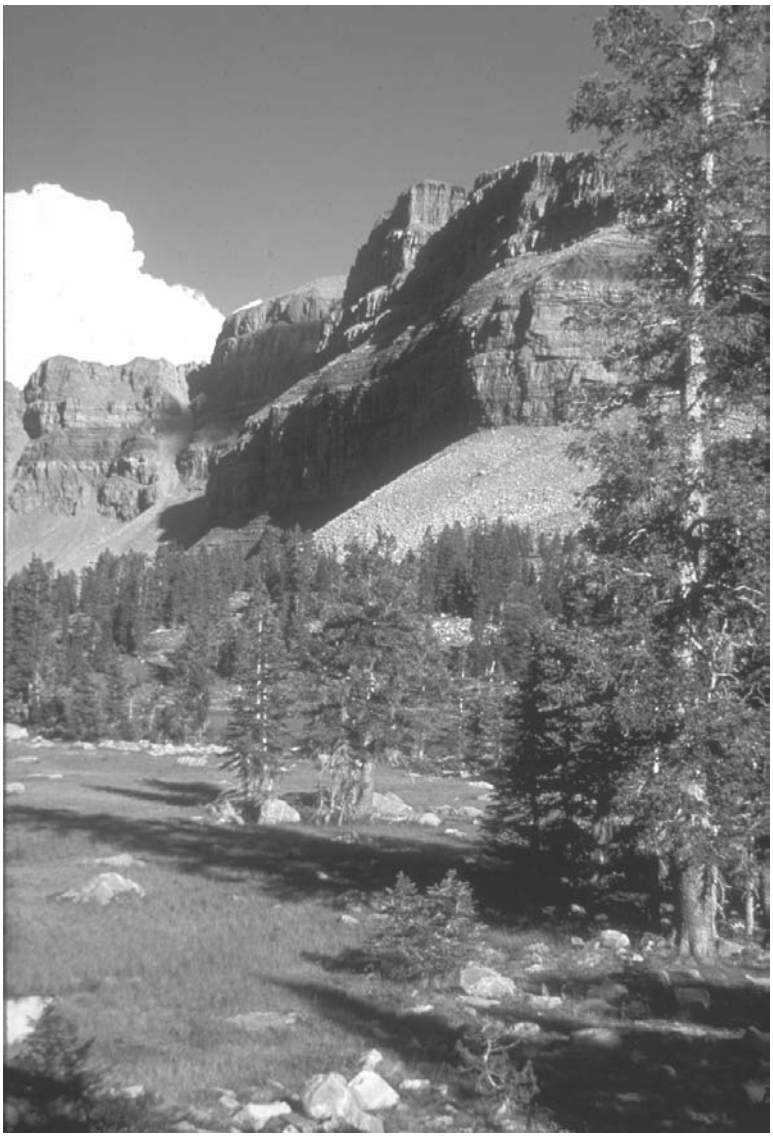
Minerals Desired Future Conditions:

The most northern portion of the management area is available for oil and gas leasing. About half of the available acres allow surface occupancy with special stipulations to protect resources. The portion of the Bear River area managed for nonmotorized backcountry recreation opportunities will not allow surface occupancy. Once the existing leases expire in the area recommended for wilderness they will not be reissued.

Operating plans for mining locatable minerals will incorporate appropriate Forest Plan direction for the area.

Social (non-recreation) Desired Future Conditions:

Risks to private property from unwanted fire will be reduced through close coordination with local communities. In the Soapstone and Weber River summer home areas, permit holders, The State of Utah Department of Natural Resources and private homeowners will work cooperatively to provide fuel breaks and defensible space.



Subalpine meadow near Dead Horse Lake, Uinta Mountains

Eastern Uintas Management Area

Desired Future Conditions

Eastern Uintas Management Area Setting Description:

Located in the Uinta Mountains, the largest east/west mountain range in the lower 48 States, and found in the northeastern corner of Utah and the southern border of Wyoming, the Eastern Uintas Management Area ranges in elevation from 8,000 feet along the northern Forest boundary to 13,442 feet at Gilbert Peak. Within this Management Area there are three ecological subsections: High Uintas, North Slope Outwash, and Phil Pico Highlands (Nelson 1993) that are managed by two Ranger Districts- Evanston and Mt. View. The diverse landscapes of the Eastern

Uintas include open sagebrush flats, aspen, mixed conifer, and pure coniferous forests, high jagged mountains, semi-circular cirque basins, deep U-shaped river valleys, grassy meadows, alpine tundra and a profusion of lakes, streams and wetlands.

The area offers a variety of recreation opportunities such as backcountry hiking, horseback riding, fishing, camping, snowmobiling, cross-country skiing, ATV riding and hunting. The area is also rich in history and community ties to national forest resource uses from extensive tie hacking for construction of railroads, to livestock grazing, oil production, timber harvest, and reservoirs for agricultural irrigation. A network of roads and trails criss-cross the lower slopes providing access for a variety of recreation opportunities and other forest uses. Traveling these routes one climbs from southern Wyoming's gray-green sage prairies and shimmering aspen groves through deep green conifer to views of jagged barren peaks. Upper portions of the area are primarily undeveloped (unroaded) where semi-circular glacial basins surround streams with rich riparian vegetation. These streams often flow from mountain ice and snow melting to lake to reservoir to mountain plain through concave valleys. Giant rock ramparts can be seen at the entrance of the three main rivers: Beaver, Henrys and Blacks Fork flowing from their headwaters in the High Uintas Wilderness. Oil wells and oil production facilities are sprinkled through the lower uplands of the landscape, mostly hidden from a distance by careful design and placement in pockets of vegetation. Remnants of bygone eras can be found throughout the landscape in sagging log cabins, wooden check dams, stumps cut waist high and historic ranger stations.

Watershed Desired Future Conditions:

East and West Fork Smiths Fork of Wyoming would be removed from the State of Wyoming 303(d) list by determining reasons for exceeding Wyoming silt water quality standards and implementing solutions to the problem if it is management related. Bridger Lake, Marsh Lake, and China Reservoir would be removed from the State of Utah 303(d) list by determining reasons for exceeding Utah dissolved oxygen water quality standards and implementing solutions to the problem if it is management related. Bridger Lake would be removed from the State of Utah 303(d) list by determining reasons for exceeding Utah temperature water quality standards and implementing solutions to the problem if it is management related.

Tie-hacking and probably turn-of-the-century grazing have left an impact on most of the watersheds on the North Slope of the Uintas. Tie-hackers cleared obstructions and straightened channels to permit floating of ties to collection points. Anecdotal accounts of turn-of-the century grazing indicate substantial erosion and likely effects on stream channel conditions. This has caused many indirect influences on current management. Restoration of properly functioning stream channels is expected to be a long process that includes careful management of streamside and upland facilities and uses, and consideration of

streamside vegetation management and instream structures to augment the process of restoration.

A priority will be placed on developing and implementing a watershed restoration plan for Archie Creek, a tributary of the West Fork of the Smiths Fork. It has a scoured stream channel and is not in a properly functioning condition. Priority will be placed on determining what vegetation treatments or structures can be used to begin the restoration of this stream channel. Options might include treating adjacent vegetation to encourage regeneration of aspen and willows and subsequent beaver activity and/or installing in-stream structures in the smaller upper tributaries. The lower 2 miles of this stream are on private property. Needs for water downstream from the Forest are increasing as growth and development of adjacent communities occurs. There could be requests to evaluate increased storage in existing reservoirs in the area (Stateline and Meeks Cabin) to meet needs of a growing population.

Biodiversity/Viability Desired Future Conditions:

Vegetation and Disturbance Processes

The forests of the eastern Uintas are characterized by aspen stands along the lower elevation fringes grading into mixed aspen and lodgepole pine and then into vast stands of lodgepole pine and finally into mixed lodgepole pine, subalpine fir and Engelmann spruce in the higher elevations.

These forests are dependent on disturbance to maintain a properly functioning condition. Aspen regenerate through sprouting from roots following fire where lodgepole pine cones opened by the heat of fires spread seed to regenerate a new forest of lodgepole pine. Stands of mixed conifer species regenerate and proceed through successional stages at a slower rate following the less frequent fires at higher elevations. The fires historically responsible for these processes varied in frequency and intensity. It is likely that fires at dryer, lower elevations occurred more frequently and removed encroaching conifers at the same time they regenerated pure aspen stands.
Above the band of pure aspen, mixed lodgepole pine and aspen regenerated concurrently following fires with mixed regimes (some stand replacing and some ground fires). Most of the pure lodgepole pine type appears to have regenerated following large, stand replacing fires. Some of the lodgepole pine stands on drier sites appear to have experienced cycles of surface or mixed severity fires that allowed them to develop an uneven-aged structure.

Upper elevation stands appear to have a relatively infrequent fire history that is probably due in part to the wetter conditions during the fire season. These upper elevation stands are frequently in smaller patch sizes with changes in species composition dependent on how large and intense the fire was and how long

succession from seral lodgepole pine to subalpine fir and Engelmann spruce has been progressing.

Vegetation will be managed for aspen, mixed lodgepole pine and aspen, and lodgepole pine in patch sizes, species composition and stand structure similar to what fire historically created. These treatments will be accomplished through timber harvest, mechanical treatment, prescribed fire, and use of wildland fire as consistent with the mapped management prescription categories. The highest priority for treatment will be the mixed aspen and conifer stands where conifers are gradually replacing the aspen, and in riparian areas where conifers have encroached. This emphasis is intended to improve habitat for a variety of species including beaver. Beaver are an essential ecosystem component due to their important effects on watershed and wetland functions.

The role of fire in the ecosystem has been replaced to some extent by timber harvest over the last 100+ years. Extensive tie-hacking around the turn of the century produced uneven-aged stands in some areas and even aged stands where it was followed by fire. Extensive harvesting on railroad lands intermingled with National Forest land in the West Fork Blacks Fork area has resulted in considerable acreage of 30 to 40 year old stands with mixed species and scattered relic overstory. More recent timber harvest on National Forest land has resulted in primarily even aged lodgepole pine stands intermingled with mature forest on National Forest Land.

The importance of winter range in the Widdop Mountain area will continue to be recognized. Areas dominated by birchleaf mountain mahogany will be managed so that use of browse is at a level that not only provides for the continued maintenance of existing vegetation, but also provides for reproduction and replacement of decadent and dead individuals within the stands. The aspen component of winter ranges will be maintained. Monitoring will continue in cooperation with States of Utah & Wyoming and the Ashley National Forest. The desired condition is to maintain browse utilization at less than 50% on mountain mahogany across the landscape, including all land ownerships.

Botanical Threatened, Endangered, and Sensitive Species Protection/Recovery

Management activities within rare plant habitats will maintain or restore and provide for recovery of populations of current and proposed Sensitive plant species and plant species at risk. Livestock grazing intensities will be managed at a level that maintains rare plant habitat dynamics and provides for pollinator diversity. Riparian and aquatic plant habitats and species will be protected from trampling and overuse by recreational users, livestock and grazing wildlife. Energy development and exploration activities will protect current and proposed Sensitive species and their associated habitats. Activities associated with timber harvest will maintain or restore habitat for current or proposed Sensitive species, their habitats, and support a diversity of pollinators. Populations of Uinta

Greenthread will be protected and maintained. Pro-active efforts will be made to educate and inform Forest users of the fundamental importance of plant species to society, plant conservation, and biodiversity. A Conservation Agreement for Uinta Greenthread will be finalized and implemented to protect population viability and ensure recovery.

Wildlife Habitat

Active vegetation management and burning will be used to maintain habitat in areas emphasizing terrestrial wildlife habitat. Road construction or reconstruction is allowed to accomplish this.

Big game winter ranges (generally below 7,000 feet) along the Eastern North Slope of the Uintas will be maintained and enhanced with the goal of holding big game on National Forest longer to help decrease impacts on private lands below. Browse species age classes will be maintained with a higher proportion of older age classes than elsewhere to provide forage above the snow. Big game will continue to be monitored in coordination with the Utah Division of Wildlife Resources and Wyoming Game and Fish Department to ensure population management prevents habitat deterioration.

Riparian vegetation composition and structure (especially in aspen and willow) will be improved providing habitat for beaver and moose.

Big horn sheep habitat and movements will be monitored. Habitat will be enhanced through burning or other vegetation treatments to open travel corridors and to encourage mixing with Sheep Creek sheep.

Terrestrial Threatened, Endangered, and Sensitive Species Protection/Recovery

In Lynx Analysis Units, recreation and vegetation management will conform to the Lynx Conservation Strategy.

Aquatic Conditions

Fish Habitat - Aquatic habitats will be managed to maintain cool, clear water and well-vegetated stream banks for cover and bank functioning. Instream cover, in the form of deep pools and structures such as boulders and logs, will be maintained and their value recognized. Water temperature will be preserved through well-vegetated banks. Natural reproduction will be maintained through minimizing sediment input from roads, trails and campgrounds and providing for instream flows. The values of instream flows for aquatic and semi-aquatic species will be recognized and protected**.** The importance of the National Forest in the conservation of Colorado River cutthroat trout will be recognized. Work will continue with the States of Utah and Wyoming in pursuit of restoration efforts to maintain and expand Colorado River cutthroat trout. Restoration efforts will emphasize considerations at the watershed scale.

Amphibian Habitat - Marshy edges of ponds or lakes and springs are protected to allow for the development of in-water and riparian vegetation. Soils around water bodies are not compacted and allow for burrowing and over wintering of amphibians including the Boreal Toad.

Roadless Areas Desired Future Conditions:

The Widdop Mountain Roadless Area will be managed to maintain existing uses and motorized access on designated routes consistent with the current Travel Plan for hunting, recreation and other allowable uses. The area will be managed to allow development.

Management in about half of this portion of the High Uintas Roadless Area, primarily in the East, Middle and West Blacks Fork areas, will maintain or mostly maintain roadless values. The remaining portion will be managed to allow development.

Wilderness and Recommended Wilderness Areas Desired Future Conditions:

The High Uintas Wilderness is managed according to the 1997 Forest Plan Amendment. The portion of Upper West Fork Beaver Creek and Middle and East Fork Black's Fork recommended for Wilderness will be managed consistent with this desired future.

Eligible Wild and Scenic Rivers Desired Future Conditions:

The Henry's Fork (Henrys Fork Lake to trailhead for scenic, recreational, wildlife and ecological values), East Fork Blacks Fork (headwaters to confluence with Little East Fork for ecological values), Little East Fork (Source to mouth for ecological values), and East Fork Smiths Fork (Red Castle Lake to trailhead for scenic, recreational, wildlife and ecological values) will be managed to protect values which made them eligible in the inventory. Activities within the corridor will maintain a "Wild" classification.

The West Fork Beaver Creek (source to Forest boundary for wildlife and ecological values), Middle Fork Beaver Creek (Beaver Lake to mouth for wildlife and ecological values), and West Fork Blacks Fork (source to trailhead for scenic and ecological values) will be managed to protect values which made them eligible in the inventory. Activities within the corridor will maintain a "Wild" within Wilderness and "Scenic" below Wilderness classification.

The Blacks Fork (confluence West Fork and East Fork to Meeks Cabin Reservoir for historic values) will be managed to protect values which made it eligible in the inventory. Activities within the corridor will maintain a "Recreational" classification.

The West Fork Smiths Fork (source to Forest boundary for historic values) will be managed to protect values which made it eligible in the inventory. Activities within the corridor will maintain a "Scenic" classification

Roads/Trails/Access Desired Future Conditions:

Roads and trails will be designed and maintained to protect watersheds while providing a variety of recreation and access opportunities. Routes in need of improved drainage and/or alignment to minimize impacts to watersheds will be identified and incrementally repaired to achieve access with proper watershed functioning. Access trails will be designed to minimize development in riparian habitat conservation areas (300 feet on each side of the channel). User-created trails will be modified to eliminate or significantly reduce impacts to the stream and riparian vegetation.

Roads and trails will be clearly marked with allowed types of uses, and users will stay on designated routes. Compliance with the current travel plan will be excellent and users will assist with monitoring. Roads and travel ways not needed as part of the road system will be closed and restored to production of vegetation and protection of watersheds. Adequate opportunities for motorized recreation will be provided through a series of designated roads and trails (mostly derived from existing routes) with varying degrees of difficulty, opportunities for scenery, and access to attractions. Loops will be provided where possible. There will be increased opportunity for a recreation east-west transit along the North Slope road system in all seasons.

Recreation Desired Future Conditions:

Recreation will be emphasized in the Management Prescription Category 4.0 at Bridger Lake/East Fork Smiths Fork and Middle Fork Blacks Fork areas.

Wilderness users will find a variety of trailheads with some including easy access for sedans, developed trailhead camp sites, horse loading ramps, corrals, and sanitary facilities while others are little more than a wide spot in the road for parking and require high clearance vehicles to access remoter areas of the High Uintas Wilderness.

Road access on the North Slope will continue to have a variety of conditions and opportunities with standards varying from State highway to roads requiring high clearance vehicles. Some of the rougher roads on dry sites on the North Slope will be open to all vehicles to provide opportunities for people who enjoy taking their 4-wheel drive vehicles on difficult routes. Most of the roads and all of the motorized trails on the North Slope will be open to ATV and motorcycle use. Use of these vehicles will be allowed only on designated routes during non-snow periods to prevent resource damage.

There will continue to be opportunities for mountain bikers to ride several trails that do not allow motorized vehicles as well as all of the trails and roads open to motorized vehicles. There will continue to be opportunities for horseback day rides on non-motorized trails outside of the Wilderness as well as pack trips into the Wilderness.

Campers can find experiences varying from developed campgrounds adjacent to the roads to dispersed campsites adjacent to low standard roads to remote wilderness and non-wilderness backpacking camps. The number of developed areas (campgrounds) will be maintained at the same level as 2000, however changes within existing sites may be made to update the facilities, increase capacity, and address resource concerns. There will continue to be some areas outside of Wilderness that allow larger groups such as boy-scout troops to camp in a remote setting. There will continue to be campgrounds adjacent to lakes and streams with fishing opportunities. Most of the developed and dispersed sites will allow use of ATVs into and out of the camp-site, but to provide some areas with more serenity, some sites will not allow ATVs. There will continue to be several cabins available for rent. Dispersed recreation activities and areas will meet a wide variety of user preferences. Separation of some types of recreation uses is expected to be successful in eliminating or reducing conflicts.

Appropriate densities of motorized dispersed recreation use will be defined and maintained within dispersed recreation corridors with a prescription emphasizing recreation management. Dead Horse and Bridger Lake trail systems will continue to provide an opportunity for ATV, motorcycle and mountain bike enthusiasts with various skill levels to explore a large network of trails with a variety of challenges. Recreationists will keep vehicles and camping impacts within marked areas to ensure use is within sustainable limits for watershed and other resource protection.

Cross-country skiers will continue to find experiences from groomed trails with no snowmobiling allowed (such as in the Henrys Fork area) to remote back-country skiing both inside and outside Wilderness, with little chance of encountering another visitor.

Snowmobilers will continue to find groomed trails like those originating at the Deadhorse trailhead. They can find play areas in open meadows and ridges throughout the Management Area. Snow conditions tend to be better in the Western Uintas MA for snowmobiling than they are on the east end.

Recreation impacts will be monitored, especially in sensitive areas, and users will be informed and will assist with needed changes in management. Designation of sites for dispersed camping will be employed to restrict or mitigate recreation impacts in riparian areas and to aquatic systems, while continuing to provide opportunities in and near these attractive areas. Hardening of sites and use of barriers will be employed where needed to reduce or prevent unacceptable

impacts. In areas where standards for protection of riparian or other ecosystems have been exceeded in the past, efforts to remove use, direct use and/or harden areas will be employed to correct deteriorated conditions and ensure sustainability. Closure of some riparian areas to camping will be accomplished where that use could not be made compatible with standards for protection.

Recreation Special Uses Desired Future Conditions:

There will continue to be outfitted and/or guided opportunities including summer horseback trips, hunting trips, and snowmobile tours. The Forest Service will continue to provide opportunities for local organizations that sponsor events in the Forest, as appropriate and in the public interest. Dog sled races, mountain bike races, road bike races, archery events, retriever dog contests, cross-country ski tours, and yurt rentals are some of the opportunities available.

Heritage Management Desired Future Conditions:

Continue inventory efforts to identify and record all American Indian and early European sites, particularly mining locations, in the area. The local and regional history associated with the tie hack sites will be developed and appreciated. Interpretive brochures and/or trails will be developed in coordination with designation of a historic tie hack district. Investigation in high-altitude prehistoric sites will continue on the Wasatch-Cache NF portion of the Uinta Mountains in coordination with the Ashley NF's ongoing investigations along with interested educational institutions and tribal programs. Historic guard stations will continue to be restored, maintained, and valued as working administrative sites.

Scenery Management

A broad range of scenery will be present within this diverse management area. Modified areas as a result of timber harvest and oil fields to very natural appearing areas are present. The scenery of the area will continue to be a valuable and pleasurable natural backdrop for visitors. Guidelines for scenery management will be applied to project undertakings. The following landscape character themes will be found in the management area as mapped: Natural Evolving in Wilderness and Natural Appearing in all other Prescription areas with scenic integrity objectives of Very High for Wilderness and High for all others except 5.2 which is Low and 8.0 which is Moderate.

Land Ownership Desired Future Conditions:

Because of the inherent complexity of management of checkerboard intermingled private lands, consolidating ownership patterns is generally desirable. Opportunities to block up land ownerships will be pursued, while ensuring that desirable lands are not disposed. Where intermingled lands are not acquired, easements across private lands are a priority.

Timber Management Desired Future Conditions:

Opportunities for timber harvest will continue to be provided in keeping with other resource values. Management in some forested areas will emphasize growth and yield of timber while in others, timber harvest or prescribed fire may be used to provide the disturbance needed to maintain species composition or stand structure and restore properly functioning conditions to forest ecosystems. Christmas trees, post and poles, firewood, teepee poles, sawlogs and other forest products will continue to be provided consistent with other resource management direction.

Management will be designed to reduce the likelihood of forest insect epidemics. This management will maintain a diversity and spatial distribution of age classes in lodgepole pine in the eastern Uintas.

Existing road templates that are needed for future management and administrative needs will be retained. Roads that are closed will be stabilized by scarification, seeding and in some cases removing drainage structures until they are needed again.

Rangeland/Livestock Grazing Desired Future Conditions:

Livestock grazing will be a compatible use in each of the prescription areas within active allotments. It will be adjusted and managed to maintain or improve watershed, terrestrial habitat, riparian and aquatic conditions and minimize conflicts with other uses consistent with management direction for the area. Vegetation will be at or moving toward desired composition, structure and function as described in Forestwide Desired Future Conditions.

Structural improvements such as fences and water developments will be well maintained and serve to improve distribution and control of livestock use. Structural improvements that have been determined as not needed will be removed from the forest. Grazing permit holders will take full responsibility for monitoring use, movement, and control of livestock to meet standards designed to ensure multiple resource sustainability. Grazing systems will provide for rest or deferment of all areas for some portion of the rotation to achieve improved plant vigor and composition.

From the Hayden Fork drainage to the east, if sheep permits for upper elevation allotments are voluntarily waived without a preference, permits will not be reissued and allotments will be closed to domestic livestock for purposes of future bighorn sheep habitat.

The East Fork sheep driveway will be managed as a driveway for as long as it is needed. Permittees take responsibility for following the driveway management plan and minimizing impacts.

Non Recreation Special Uses Desired Future Conditions:

All private roads on National Forest Lands will be properly permitted.

Minerals Desired Future Conditions:

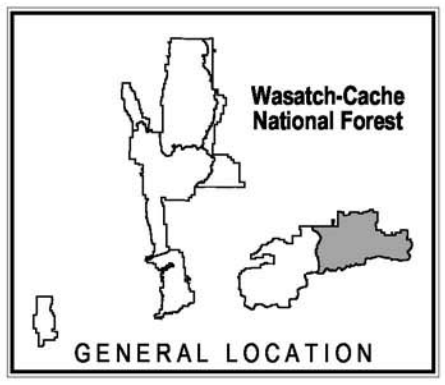
The majority of the management area is available for oil and gas leasing with surface occupancy. The existing oil fields will continue to be managed as an oil and gas showcase to demonstrate oil and gas production in an environmentally sensitive manner.

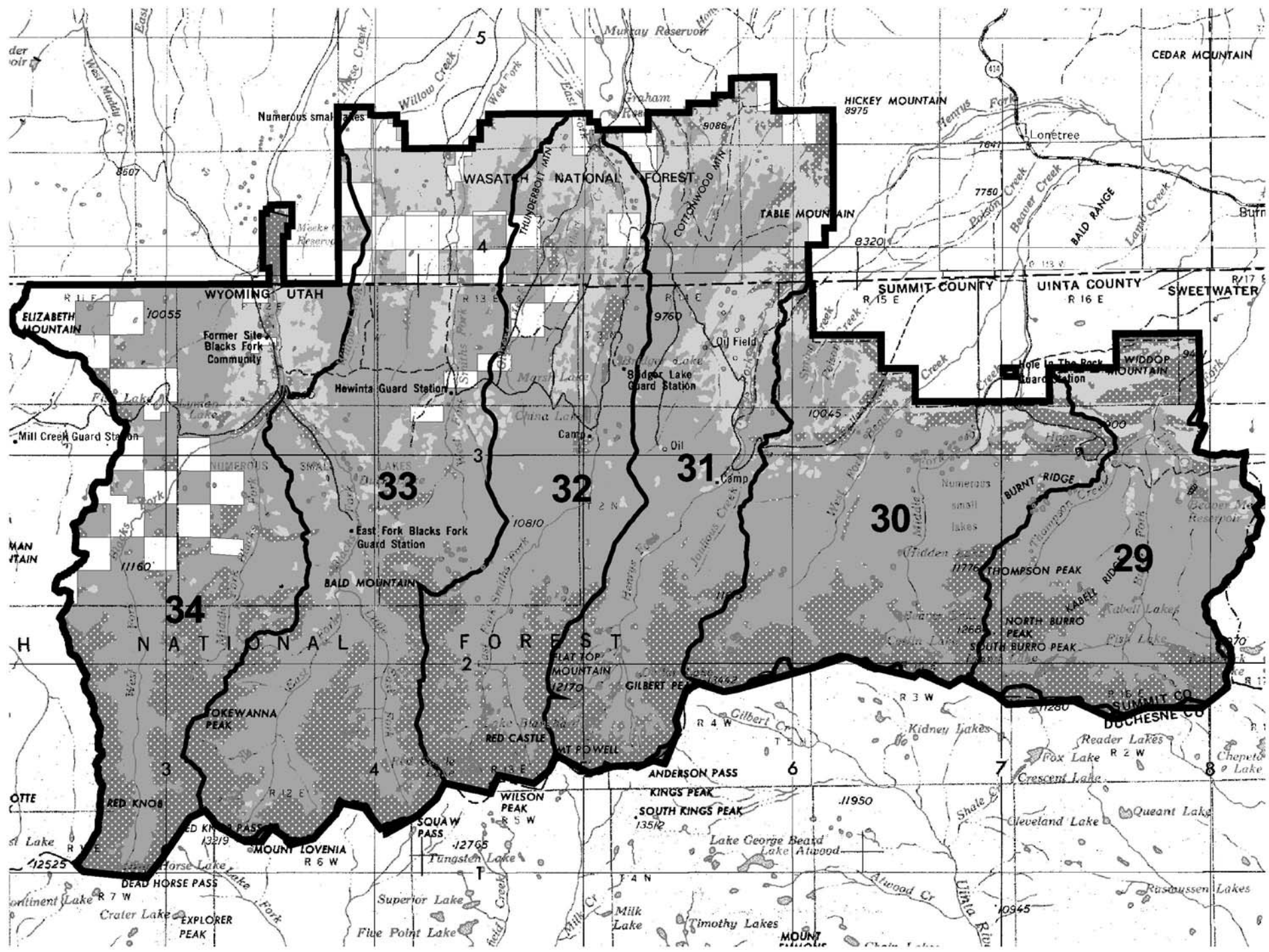
Social (non-recreation) Desired Future Conditions:

Citizens of communities near the North Slope as well as those from other areas will continue to be actively involved in management and stewardship of the Forest.

Appendices

Beaver, a Management Indicator Species, on the Wasastch-Cache National Forest





Lynx Analysis Units & Habitat

Eastern Uintas Management Area

Wasatch-Cache National Forest
Revised Forest Plan

- Primary Habitat
- Secondary Habitat
- Non-Habitat
- Analysis Units
- Land Not Managed by the National Forest within the Management Area
- Management Area Boundary

2 0 2 4 Miles

Scale 1:240,000

A scanned version of the U.S. Geological Survey (1970), 1:250,000 map is being used for the location/reference information. This data was not used for analysis and does not represent Wasatch-Cache National Forest data.

The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. They may be: developed from sources of differing accuracy, accurate only at certain scales, based on modeling or interpretation, incomplete while being created or revised, etc. Using GIS products for purposes other than those for which they were created, may yield inaccurate or misleading results. This information was released February 2003. The Forest Service reserves the right to correct, update, modify, or replace, GIS products without notification.

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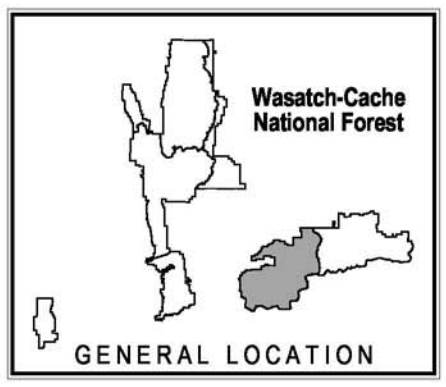
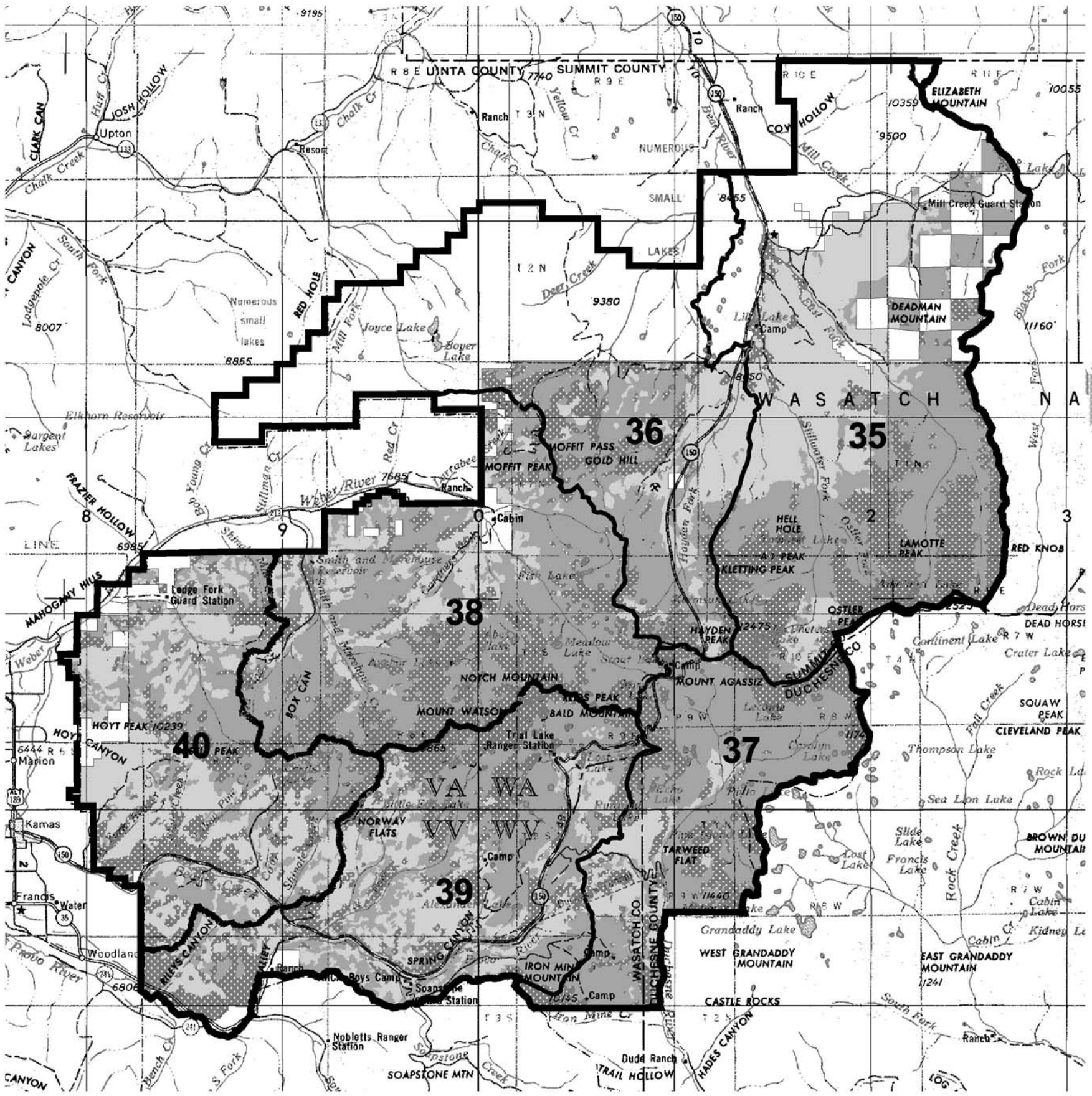
8236 Federal Building
125 South State
Salt Lake City, UT 84138
(801) 524-3900

February 2003

EASTERN UINTAS - LYNX





Lynx Analysis Units & Habitat
Western Uintas Management Area

Wasatch-Cache National Forest
Revised Forest Plan

- Primary Habitat
- Secondary Habitat
- Non-Habitat
- Analysis Units
- Land Not Managed by the National Forest within the Management Area
- Management Area Boundary

2 0 2 4 Miles

Scale 1:240,000

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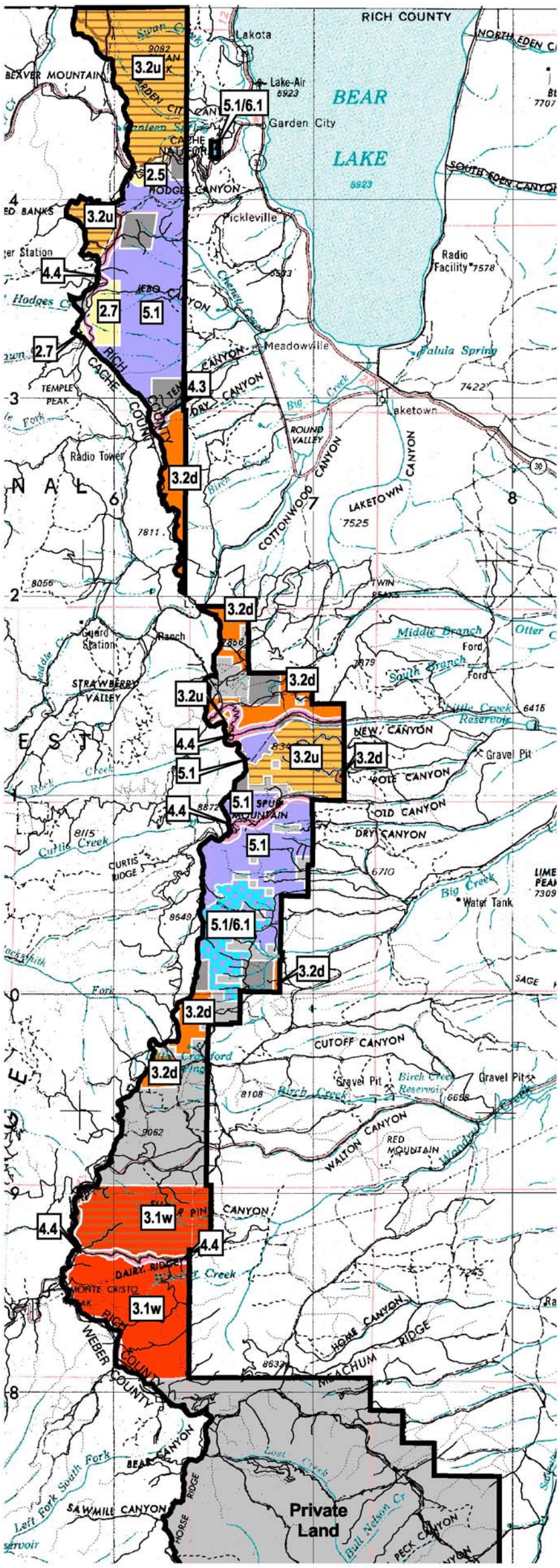
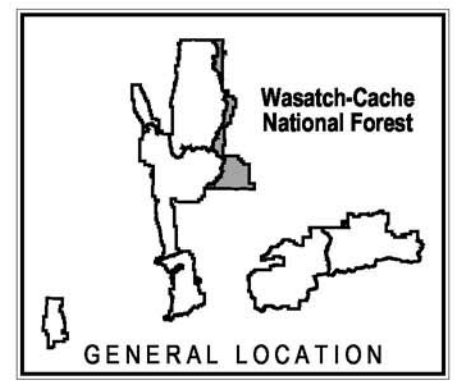
February 2003

WESTERN UINTAS - LYNX





Existing Wilderness
- 1.1 - Opportunity Class I
- 1.2 - Opportunity Class II
- 1.3 - Opportunity Class III
- 1.5 - Proposed Wilderness

Special Management Area
- 2.4 - Research Natural Areas
- 2.5 - Scenic Byways
- 2.6 - Undeveloped Areas
- 2.7 - Special Interest Areas

Protection, Maintenance or Restoration of Biophysical Resources
- 3.1a - Aquatic Habitat Emphasis
- 3.1w - Watershed Emphasis
- 3.2d - Terrestrial Habitat Emphasis - Developed
- 3.2u - Terrestrial Habitat Emphasis - Undeveloped

Multiple Resource Use, Recreation Emphasized
- 4.1 - Backcountry Non-Motorized Emphasis
- 4.2 - Dispersed Non-Motorized Emphasis
- 4.3 - Backcountry Motorized Emphasis
- 4.4 - Dispersed Motorized Emphasis
- 4.5 - Developed Recreation Areas Emphasis

Multiple Resource Use, Forested Vegetation Management Emphasized
- 5.1 - Maintaining/Restoring Forested Ecosystem Integrity
- 5.2 - Timber Growth & Yield Emphasized

Multiple Resource Use, Rangeland Vegetation Management Emphasized
- 6.1 - Maintaining/Restoring Non-Forested Ecosystem Integrity
- 6.2 - Livestock Forage Production Emphasis

Concentrated Development Areas
- 8.1 - Mineral Development Emphasis

- 2002 Roadless Inventory with Road Cherry-stems
- State & Department of Defense Lands
- Private Lands
- Roads
- Motorized Trails
- Trails
- Management Area Boundary

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2 0 2 4 Miles

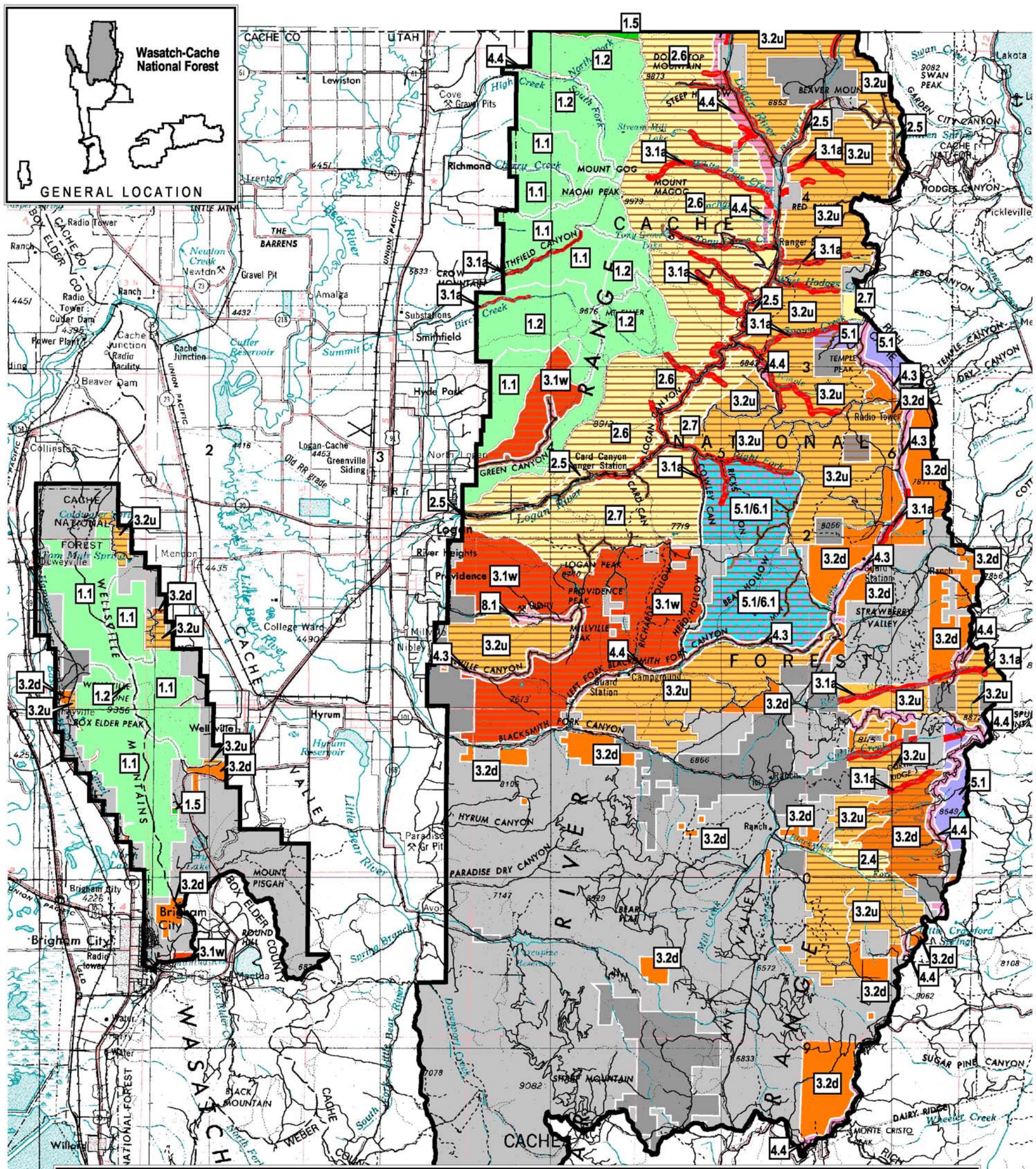
Scale 1:240,000

Management Prescriptions

Bear Management Area

Wasatch-Cache National Forest
Revised Forest Plan

February 2003



Management Prescriptions
Cache-Box Elder Management Area

Wasatch-Cache National Forest
Revised Forest Plan

Existing Wilderness
- 1.1 - Opportunity Class I
- 1.2 - Opportunity Class II
- 1.3 - Opportunity Class III
- 1.5 - Proposed Wilderness

Special Management Area
- 2.4 - Research Natural Areas
- 2.5 - Scenic Byways
- 2.6 - Undeveloped Areas
- 2.7 - Special Interest Areas

Protection, Maintenance or Restoration of Biophysical Resources
- 3.1a - Aquatic Habitat Emphasis
- 3.1w - Watershed Emphasis
- 3.2d - Terrestrial Habitat Emphasis - Developed
- 3.2u - Terrestrial Habitat Emphasis - Undeveloped

Multiple Resource Use, Recreation Emphasized
- 4.1 - Backcountry Non-Motorized Emphasis
- 4.2 - Dispersed Non-Motorized Emphasis
- 4.3 - Backcountry Motorized Emphasis
- 4.4 - Dispersed Motorized Emphasis
- 4.5 - Developed Recreation Areas Emphasis

Multiple Resource Use, Forested Vegetation Management Emphasized
- 5.1 - Maintaining/Restoring Forested Ecosystem Integrity
- 5.2 - Timber Growth & Yield Emphasized

Multiple Resource Use, Rangeland Vegetation Management Emphasized
- 6.1 - Maintaining/Restoring Non-Forested Ecosystem Integrity
- 6.2 - Livestock Forage Production Emphasis

Concentrated Development Areas
- 8.1 - Mineral Development Emphasis

- 2002 Roadless Inventory with Road Cherry-stems
- State & Department of Defense Lands
- Private Lands
- Roads
- Motorized Trails
- Trails
- Management Area Boundary

2 0 2 4 Miles

Scale 1:240,000

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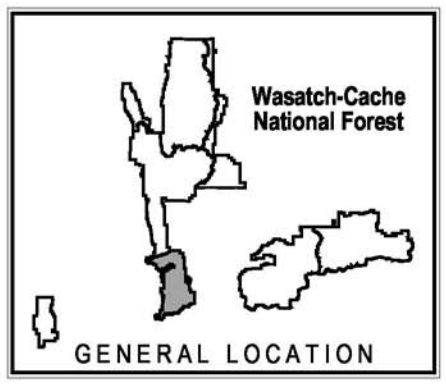
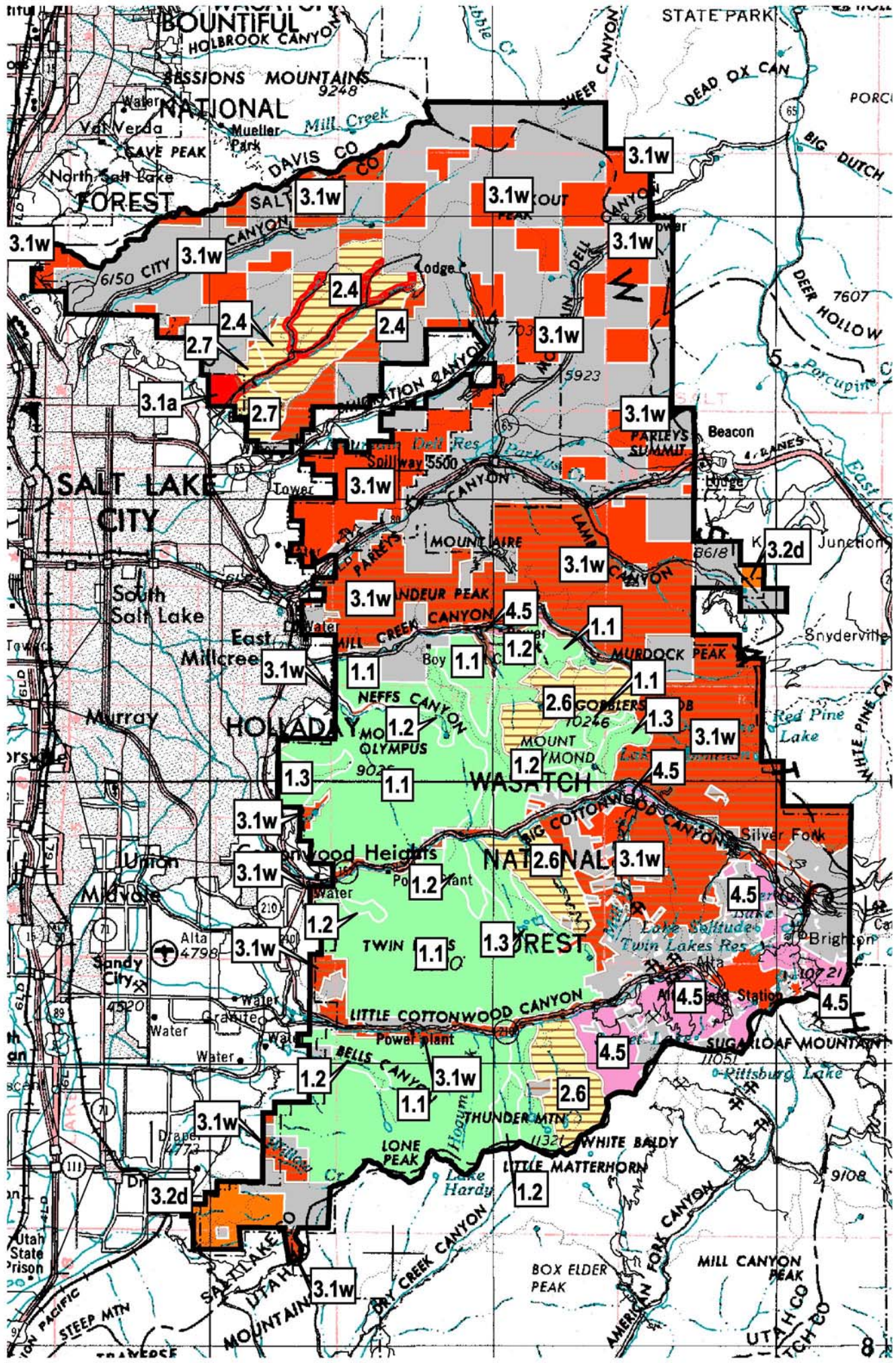
February 2003

CACHE - BOX ELDER - PRESCRIPTIONS





Management Prescriptions
Central Wasatch Management Area

Wasatch-Cache National Forest
Revised Forest Plan

Existing Wilderness
- 1.1 - Opportunity Class I
- 1.2 - Opportunity Class II
- 1.3 - Opportunity Class III
- 1.5 - Proposed Wilderness

Special Management Area
- 2.4 - Research Natural Areas
- 2.5 - Scenic Byways
- 2.6 - Undeveloped Areas
- 2.7 - Special Interest Areas

Protection, Maintenance or Restoration of Biophysical Resources
- 3.1a - Aquatic Habitat Emphasis
- 3.1w - Watershed Emphasis
- 3.2d - Terrestrial Habitat Emphasis - Developed
- 3.2u - Terrestrial Habitat Emphasis - Undeveloped

Multiple Resource Use, Recreation Emphasized
- 4.1 - Backcountry Non-Motorized Emphasis
- 4.2 - Dispersed Non-Motorized Emphasis
- 4.3 - Backcountry Motorized Emphasis
- 4.4 - Dispersed Motorized Emphasis
- 4.5 - Developed Recreation Areas Emphasis

Multiple Resource Use, Forested Vegetation Management Emphasized
- 5.1 - Maintaining/Restoring Forested Ecosystem Integrity
- 5.2 - Timber Growth & Yield Emphasized

Multiple Resource Use, Rangeland Vegetation Management Emphasized
- 6.1 - Maintaining/Restoring Non-Forested Ecosystem Integrity
- 6.2 - Livestock Forage Production Emphasis

Concentrated Development Areas
- 8.1 - Mineral Development Emphasis

- 2002 Roadless Inventory with Road Cherry-stems
- State & Department of Defense Lands
- Private Lands
- Roads
- Motorized Trails
- Trails
- Management Area Boundary

2 0 2 4 Miles

Scale 1:180,000

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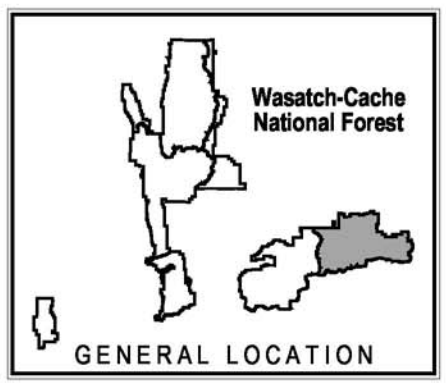
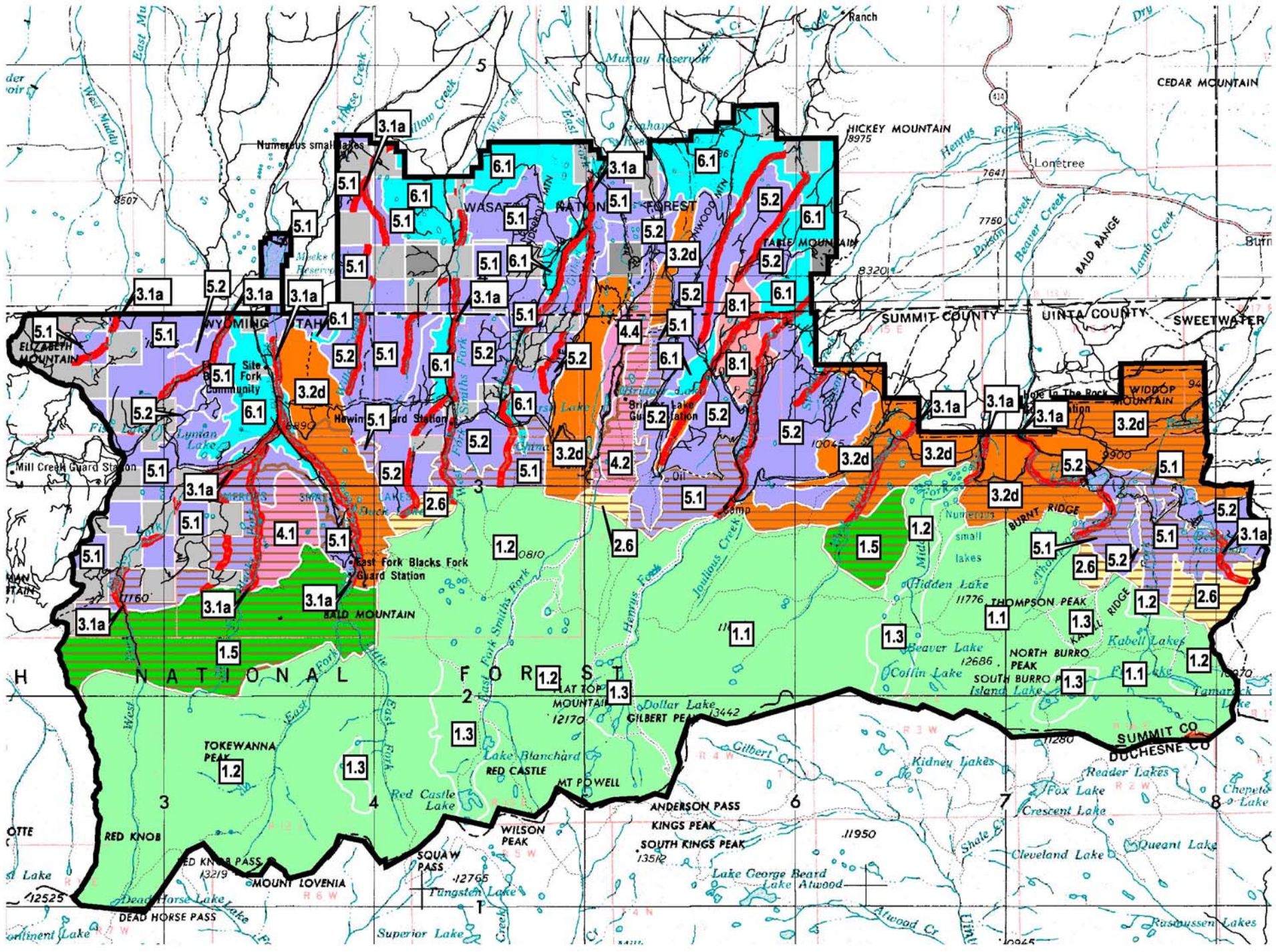
125 South State
Salt Lake City, UT 84138
(801) 524-3900

February 2003

CENTRAL WASATCH - PRESCRIPTIONS





Management Prescriptions
Eastern Uintas Management Area

Wasatch-Cache National Forest
Revised Forest Plan

Existing Wilderness
- 1.1 - Opportunity Class I
- 1.2 - Opportunity Class II
- 1.3 - Opportunity Class III
- 1.5 - Proposed Wilderness

Special Management Area
- 2.4 - Research Natural Areas
- 2.5 - Scenic Byways
- 2.6 - Undeveloped Areas
- 2.7 - Special Interest Areas

Protection, Maintenance or Restoration of Biophysical Resources
- 3.1a - Aquatic Habitat Emphasis
- 3.1w - Watershed Emphasis
- 3.2d - Terrestrial Habitat Emphasis - Developed
- 3.2u - Terrestrial Habitat Emphasis - Undeveloped

Multiple Resource Use, Recreation Emphasized
- 4.1 - Backcountry Non-Motorized Emphasis
- 4.2 - Dispersed Non-Motorized Emphasis
- 4.3 - Backcountry Motorized Emphasis
- 4.4 - Dispersed Motorized Emphasis
- 4.5 - Developed Recreation Areas Emphasis

Multiple Resource Use, Forested Vegetation Management Emphasized
- 5.1 - Maintaining/Restoring Forested Ecosystem Integrity
- 5.2 - Timber Growth & Yield Emphasized

Multiple Resource Use, Rangeland Vegetation Management Emphasized
- 6.1 - Maintaining/Restoring Non-Forested Ecosystem Integrity
- 6.2 - Livestock Forage Production Emphasis

Concentrated Development Areas
- 8.1 - Mineral Development Emphasis

- 2002 Roadless Inventory with Road Cherry-stems
- State & Department of Defense Lands
- Private Lands
- Roads
- Motorized Trails
- Trails
- Management Area Boundary

2 0 2 4 Miles

Scale 1:240,000

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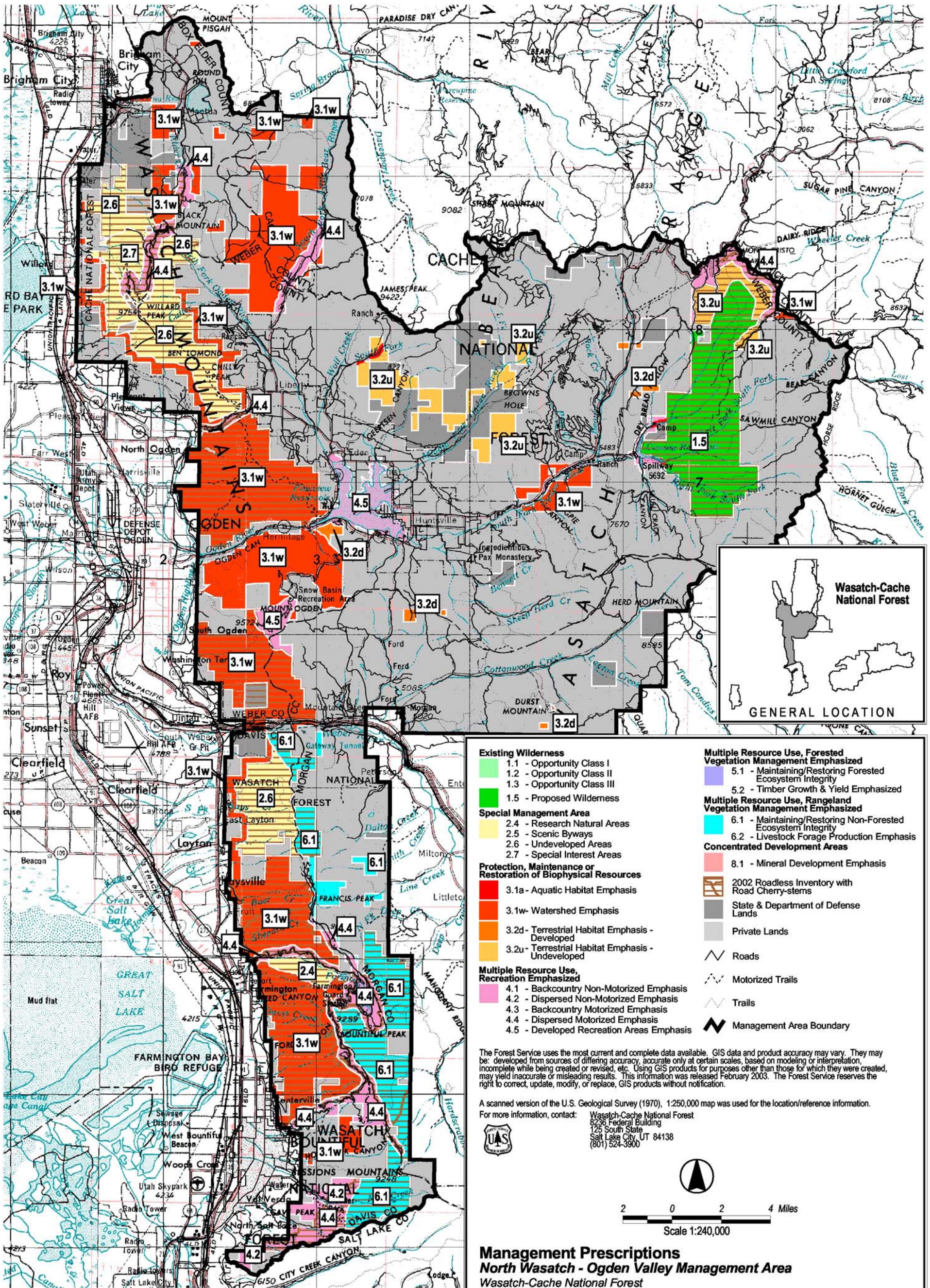
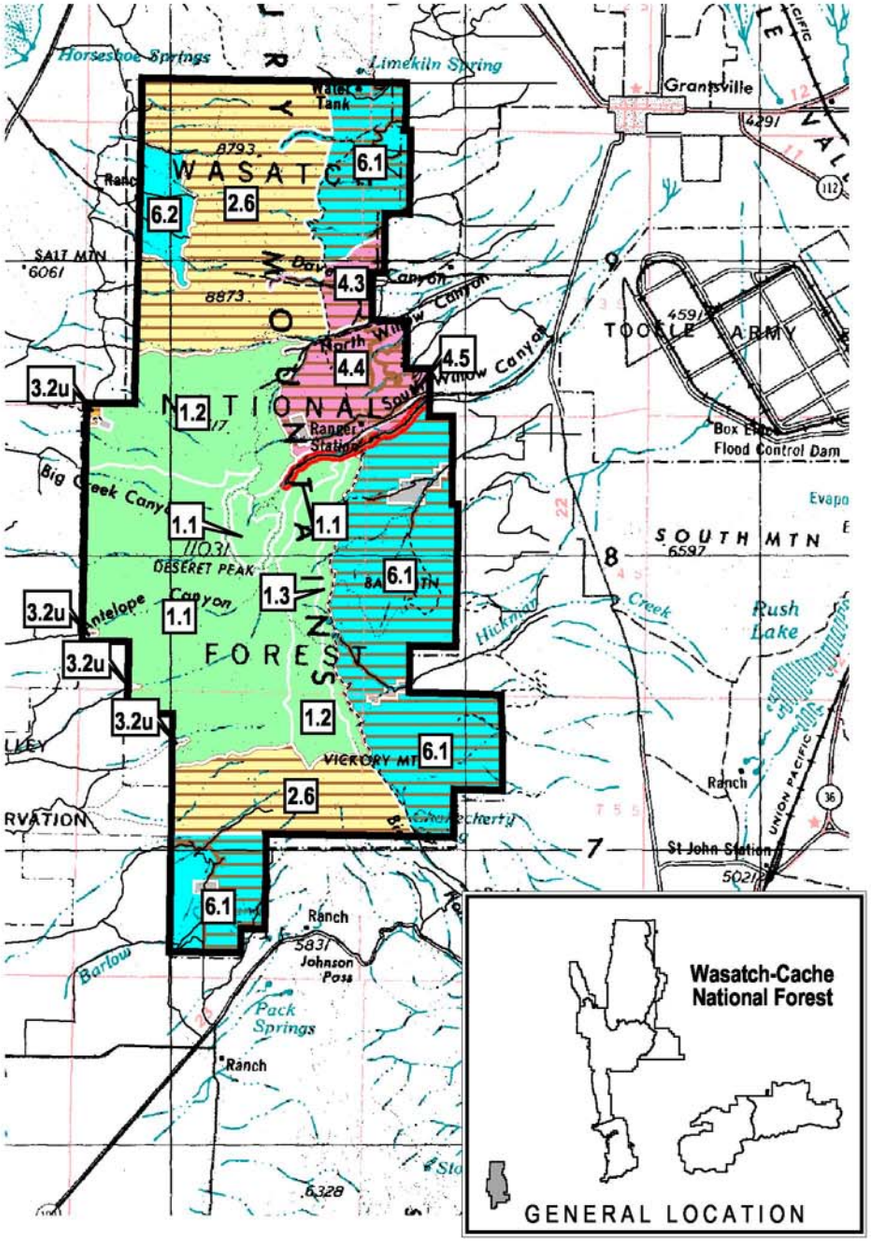


NORTH WASATCH / OGDEN VALLEY - PRESCRIPTIONS



Existing Wilderness
- 1.1 - Opportunity Class I
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- 1.3 - Opportunity Class III
- 1.5 - Proposed Wilderness

Special Management Area
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2 0 2 4 Miles

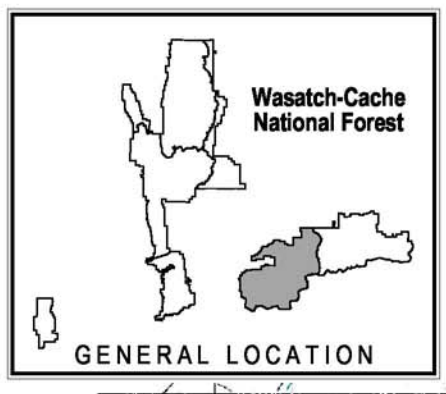
Scale 1:240,000

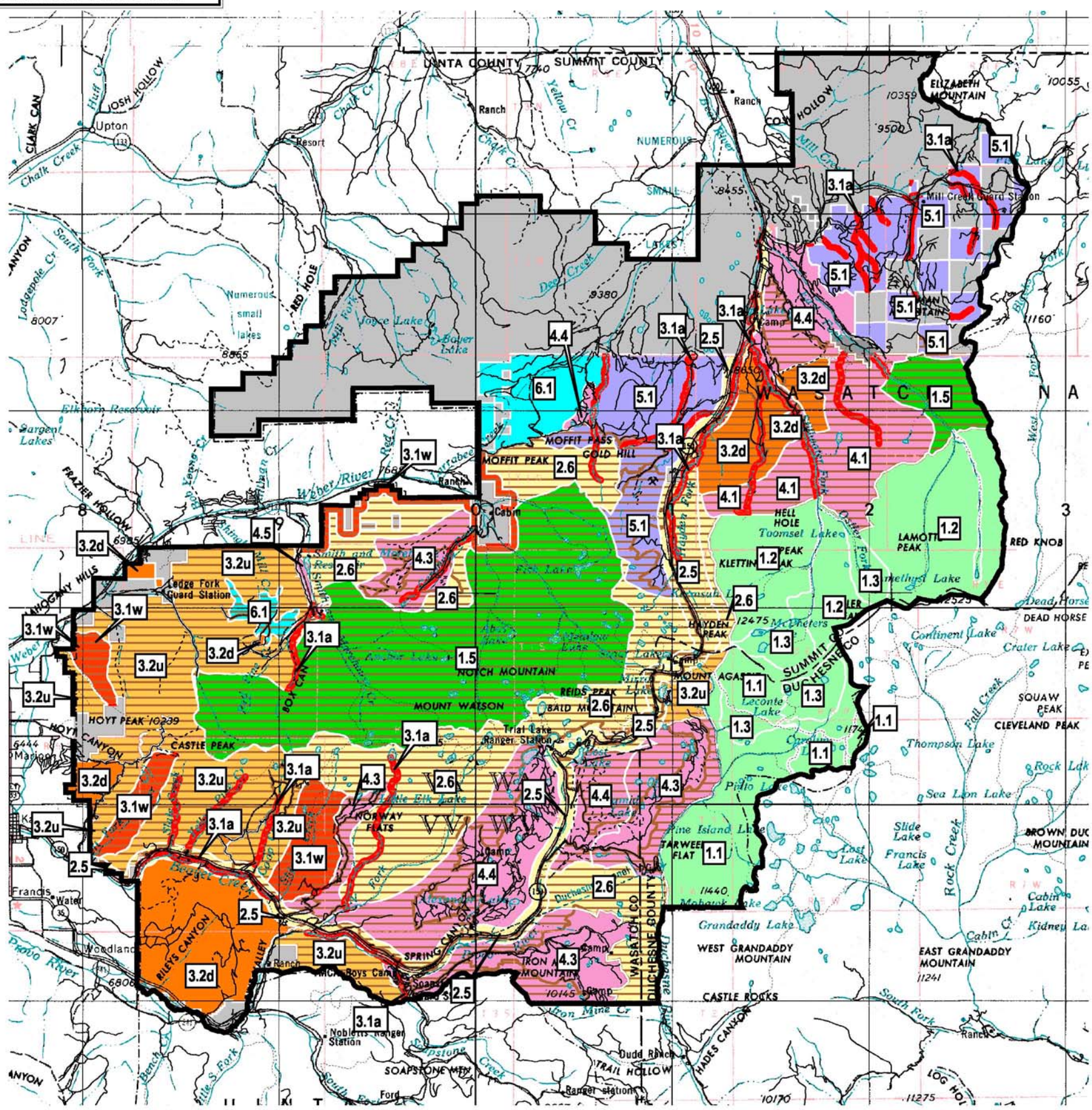
Management Prescriptions

Stansbury Management Area

Wasatch-Cache National Forest
Revised Forest Plan

February 2003





Management Prescriptions
Western Uintas Management Area

Wasatch-Cache National Forest
Revised Forest Plan

Existing Wilderness
- 1.1 - Opportunity Class I
- 1.2 - Opportunity Class II
- 1.3 - Opportunity Class III
- 1.5 - Proposed Wilderness

Special Management Area
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- 2.5 - Scenic Byways
- 2.6 - Undeveloped Areas
- 2.7 - Special Interest Areas

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- State & Department of Defense Lands
- Private Lands
- Roads
- Motorized Trails
- Trails
- Management Area Boundary

2 0 2 4 Miles

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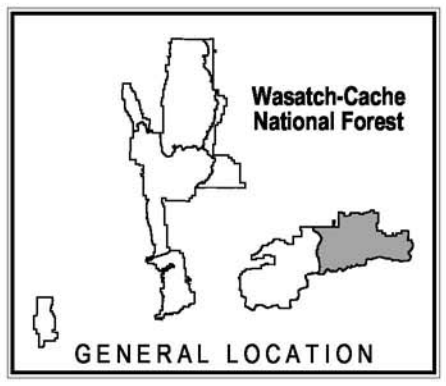

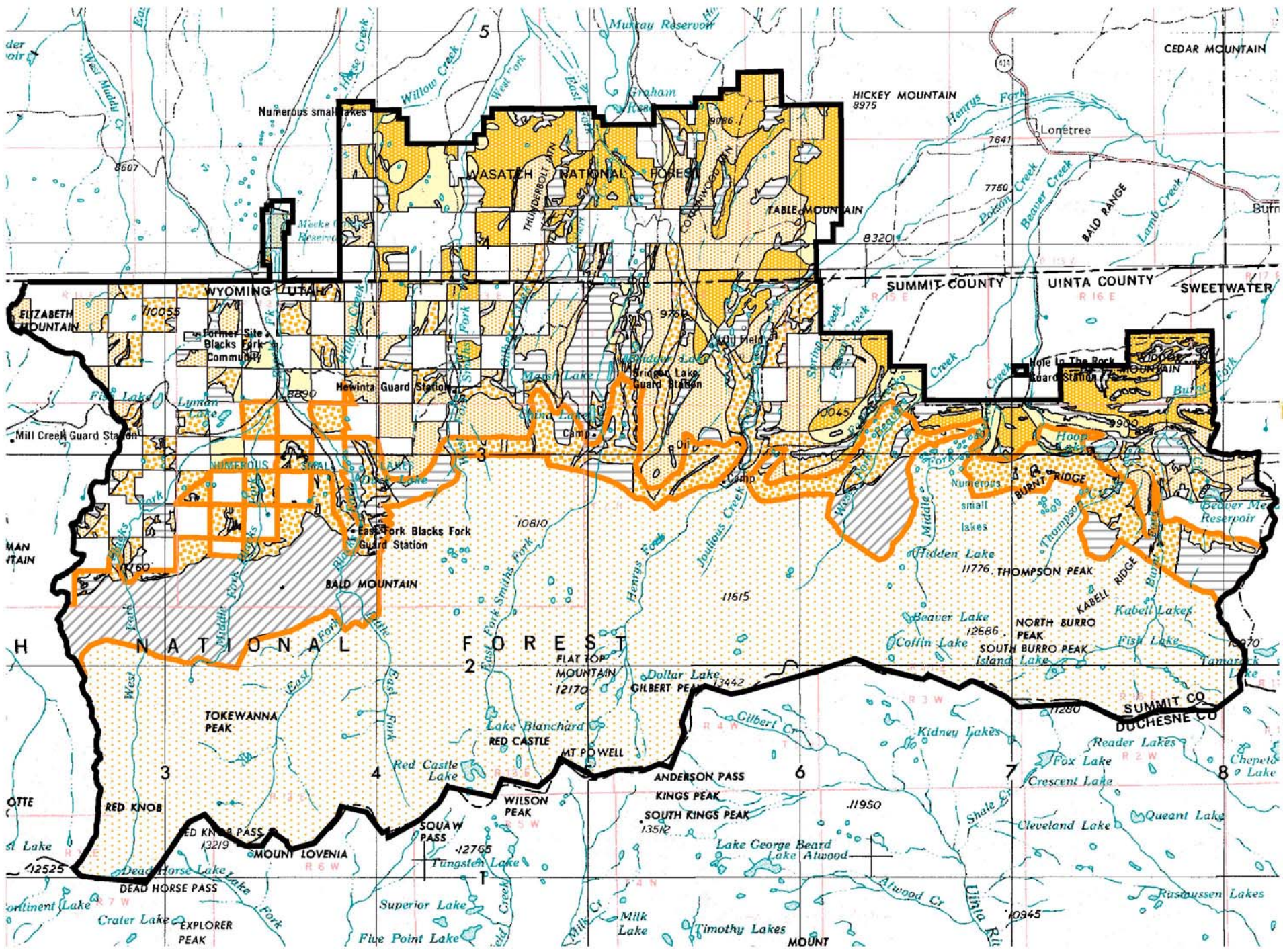

Oil and Gas Leasing for the Appeal Settlement Zone

Eastern Uintas Management Area

Wasatch-Cache National Forest
Revised Forest Plan

(Stipulations apply to new leases only)

- Controlled Surface Use
- No Lease
- No Surface Occupancy
- Standard Lease Term
- Timing Limitation
- Timing Limitation & Controlled Surface Use
- Appeal Settlement Zone Boundary
- High Uintas Wilderness
- Land Not Managed by the National Forest within the Proclaimed Boundary

2 0 2 4 Miles

Scale 1:240,000

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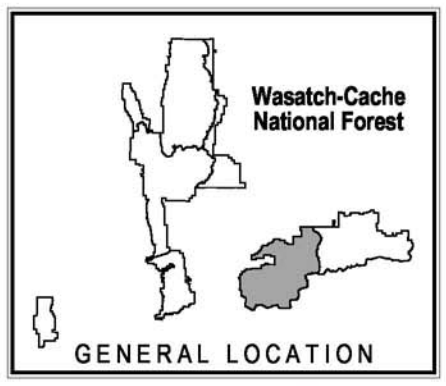
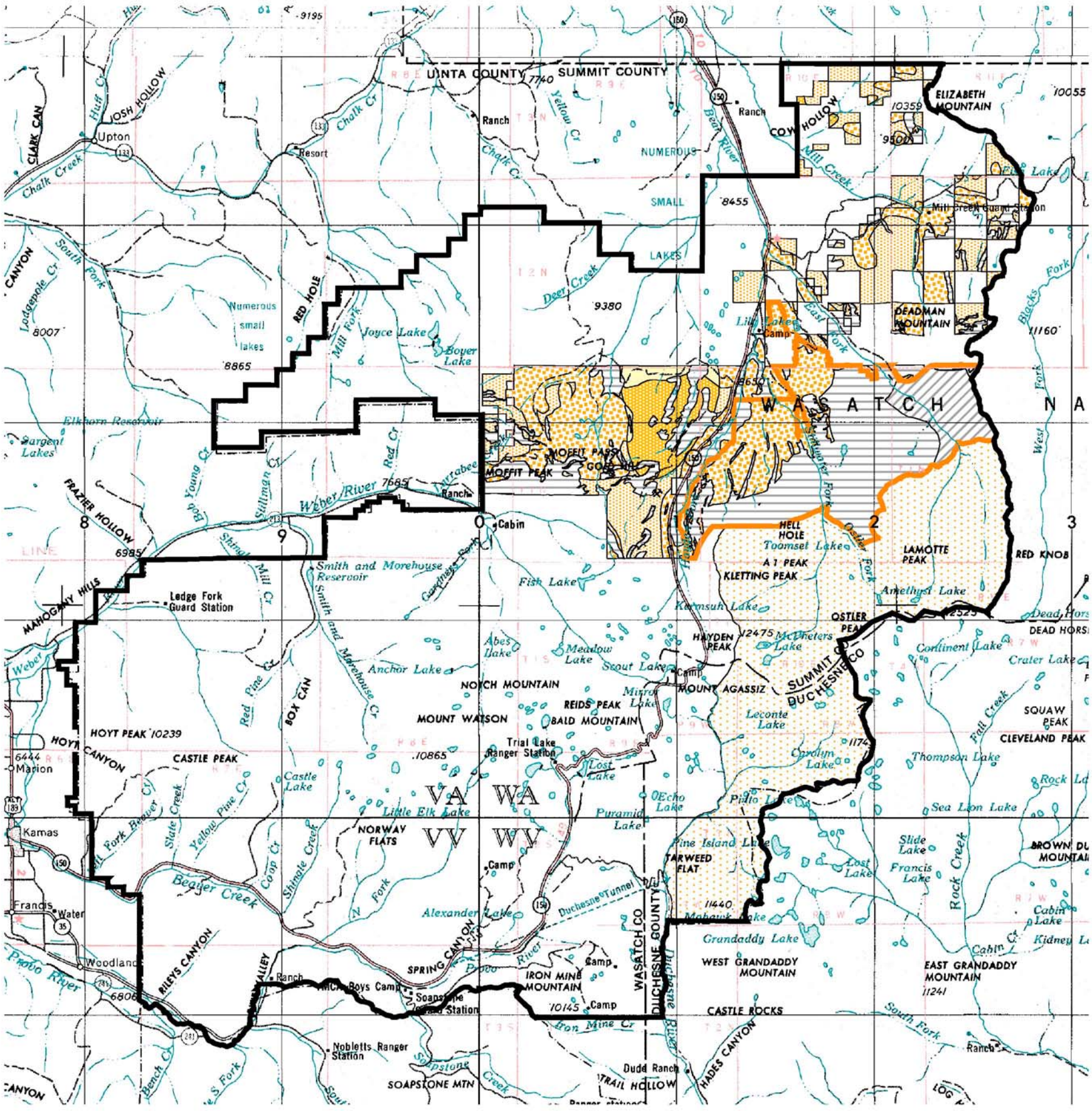
February 2003

EASTERN UINTAS - OIL & GAS





Oil and Gas Leasing for the Appeal Settlement Zone

Western Uintas Management Area

Wasatch-Cache National Forest
Revised Forest Plan

(Stipulations apply to new leases only)

- Controlled Surface Use
- No Lease
- No Surface Occupancy
- Standard Lease Term
- Timing Limitation
- Timing Limitation & Controlled Surface Use
- Appeal Settlement Zone Boundary
- High Uintas Wilderness
- Land Not Managed by the National Forest within the Proclaimed Boundary

2 0 2 4 Miles

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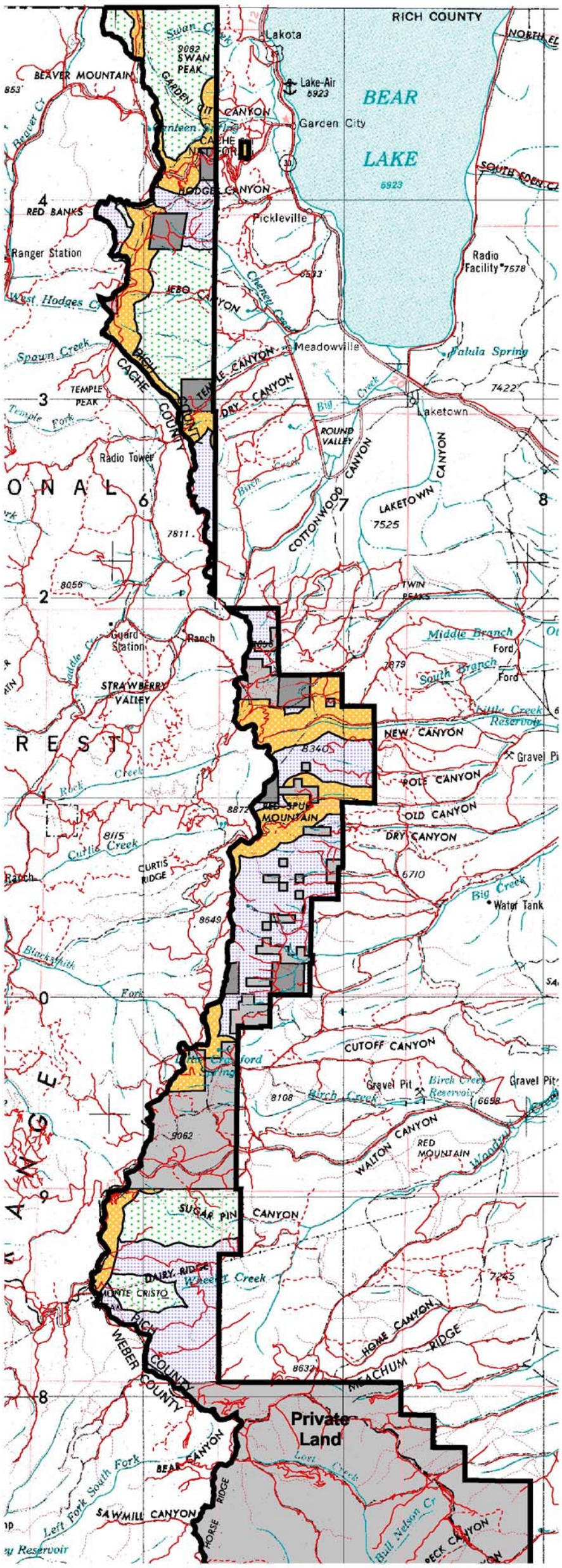
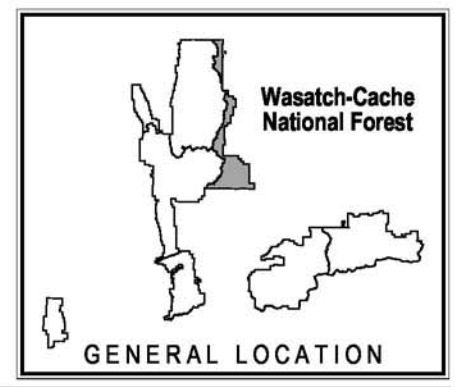
February 2003

WESTERN UINTAS - OIL & GAS





- Urban
- Rural
- Roaded Natural
- Semi-Primitive Motorized
- Semi-Primitive Non-Motorized
- Wilderness / Semi-Primitive Non-Motorized
- Wilderness / Primitive Non-Motorized
- Roads
- Motorized Trails
- Trails
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

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2 0 2 4 Miles

Scale 1:240,000

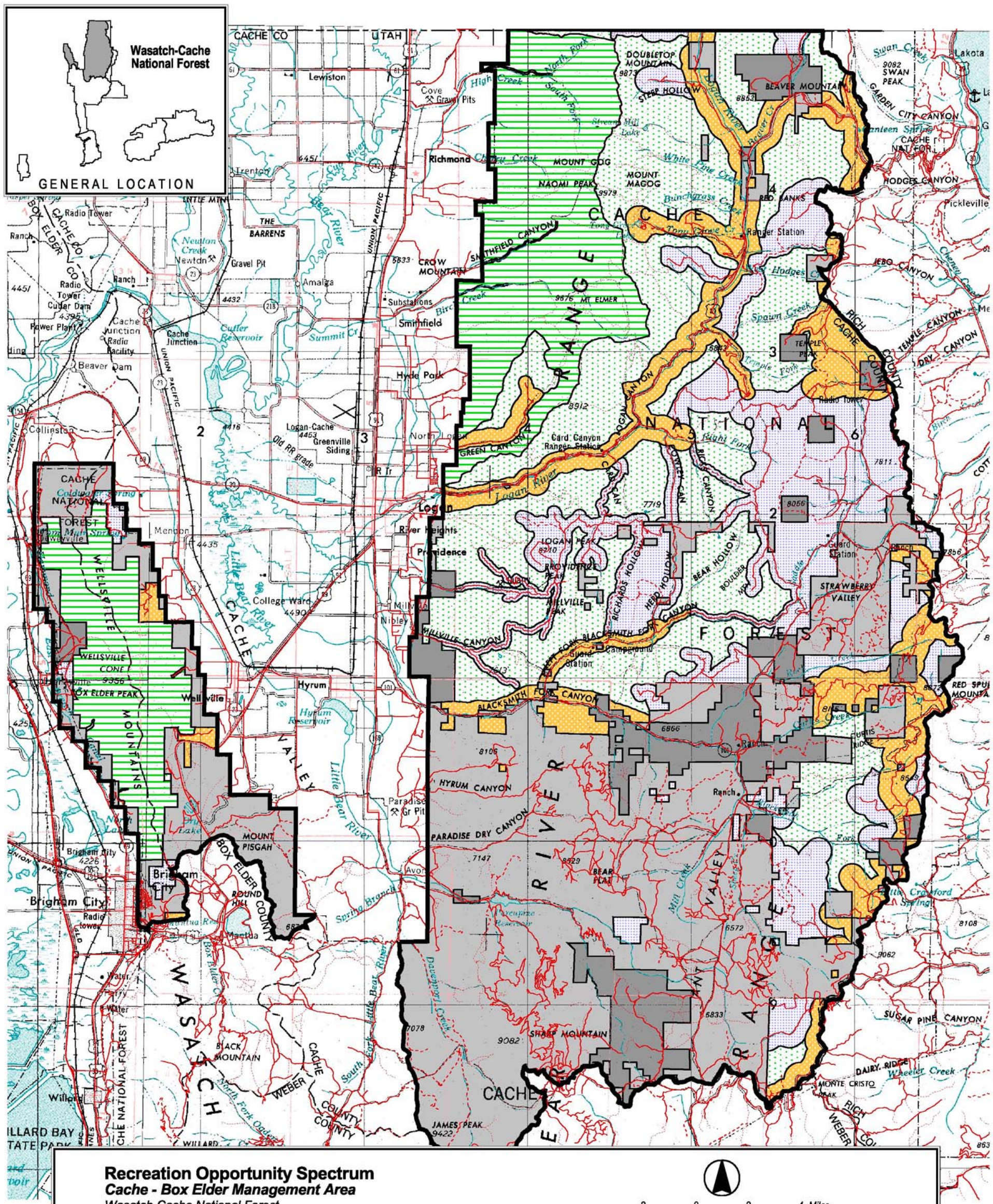
Recreation Opportunity Spectrum

Bear Management Area

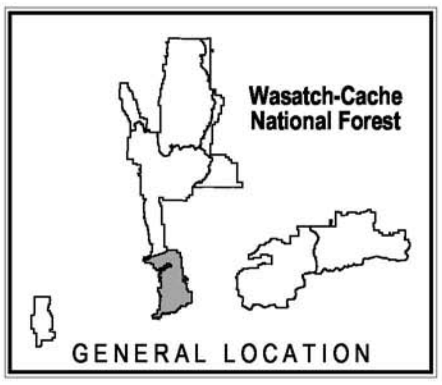
Wasatch-Cache National Forest
Revised Forest Plan

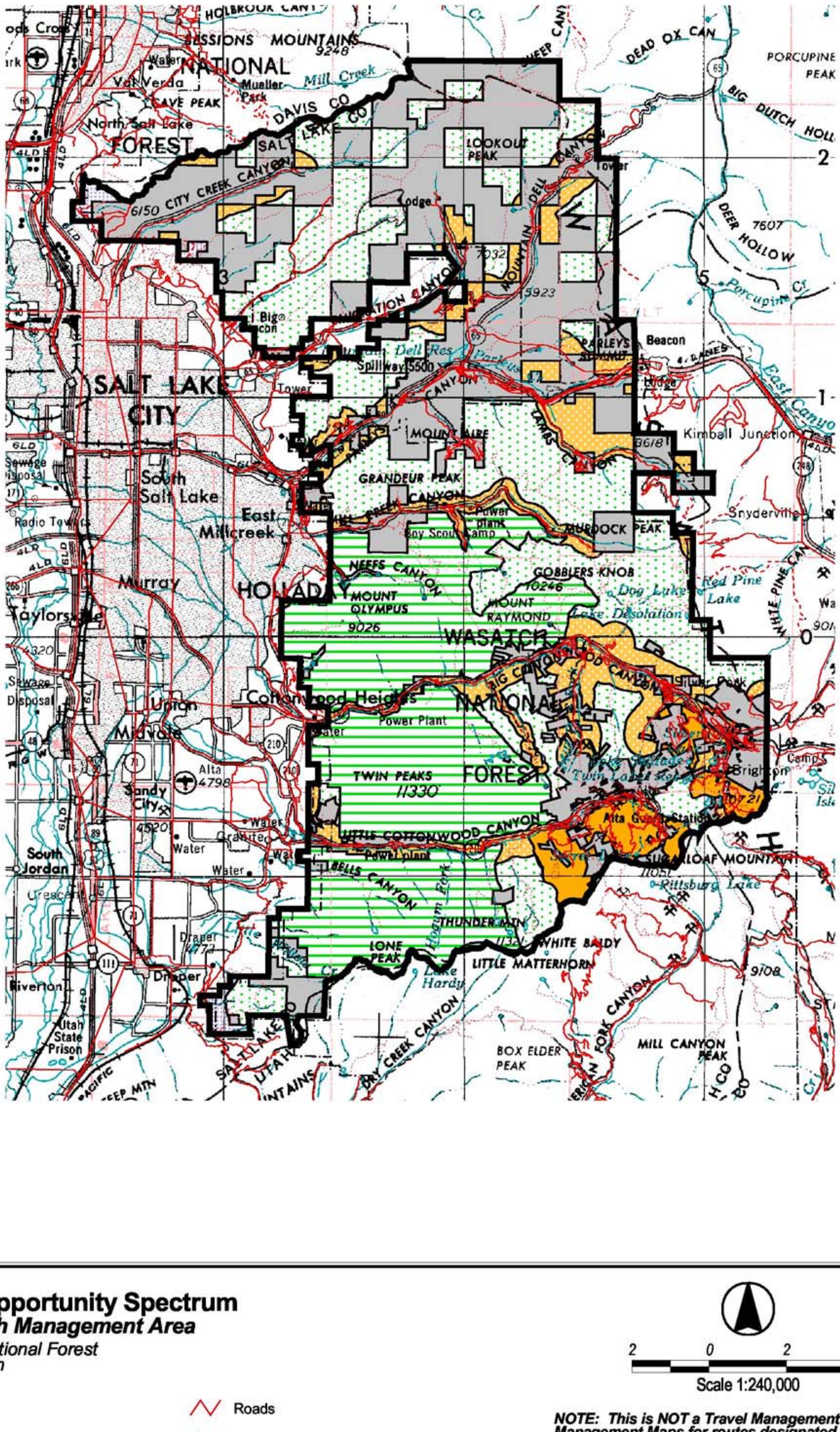
February 2003

BEAR - ROS



CACHE - BOX ELDER - ROS





Recreation Opportunity Spectrum

Central Wasatch Management Area

Wasatch-Cache National Forest
Revised Forest Plan

- 🟥 Urban
- 🟧 Rural
- ▨ Roaded Natural
- ▨ Semi-Primitive Motorized
- ▨ Semi-Primitive Non-Motorized
- ▤ Wilderness / Semi-Primitive Non-Motorized
- ▨ Wilderness / Primitive Non-Motorized
- Roads
- Motorized Trails
- Trails
- ■ State & Department of Defense Lands
- ■ Private Lands
- Management Area Boundary

2 0 2 4 Miles
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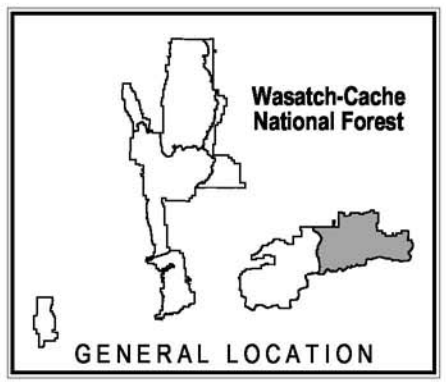

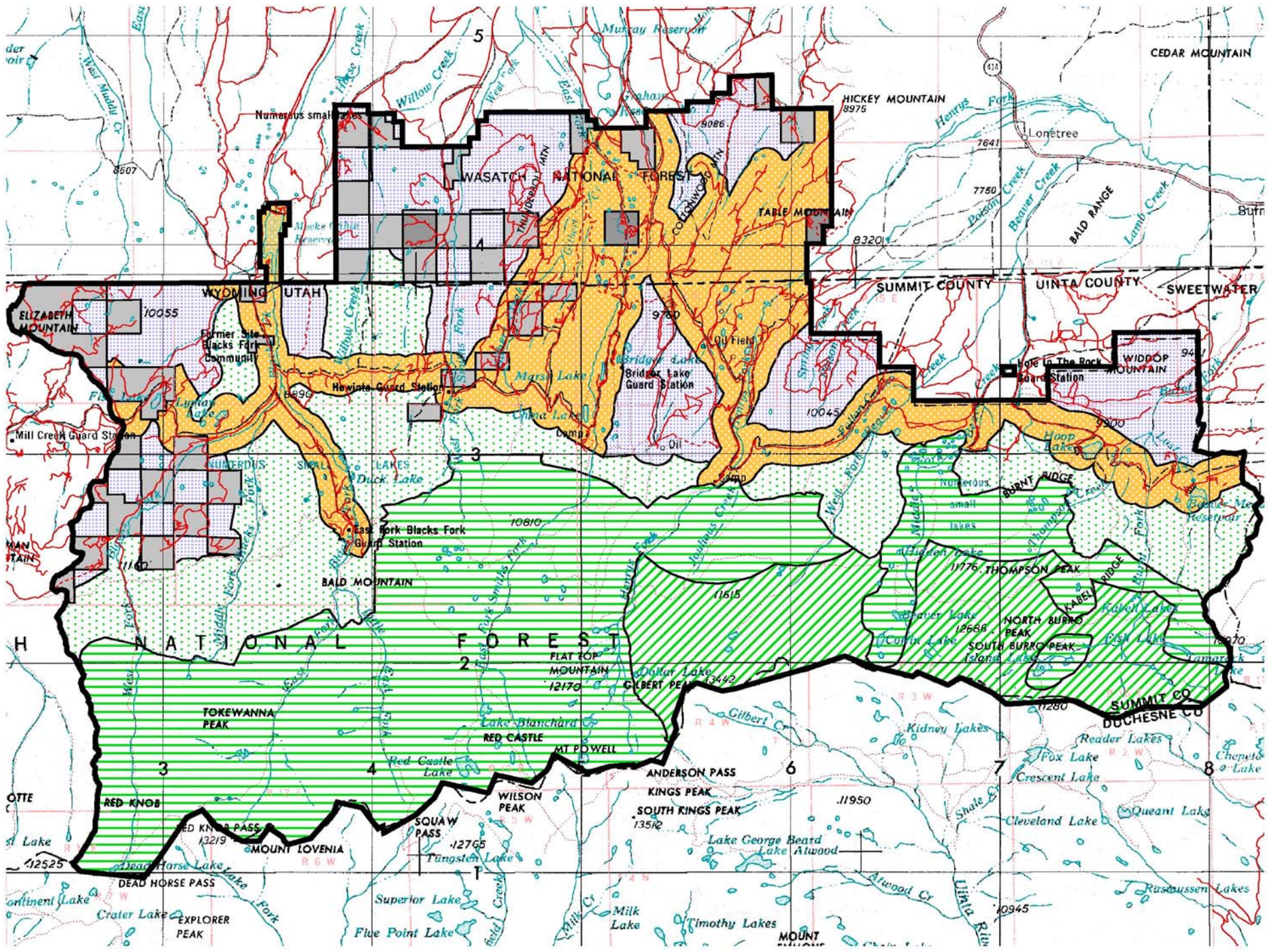

Recreation Opportunity Spectrum
Eastern Uintas Management Area

Wasatch-Cache National Forest
Revised Forest Plan

- Urban
- Rural
- Roaded Natural
- Semi-Primitive Motorized
- Semi-Primitive Non-Motorized
- Wilderness / Semi-Primitive Non-Motorized
- Wilderness / Primitive Non-Motorized
- Roads
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- State & Department of Defense Lands
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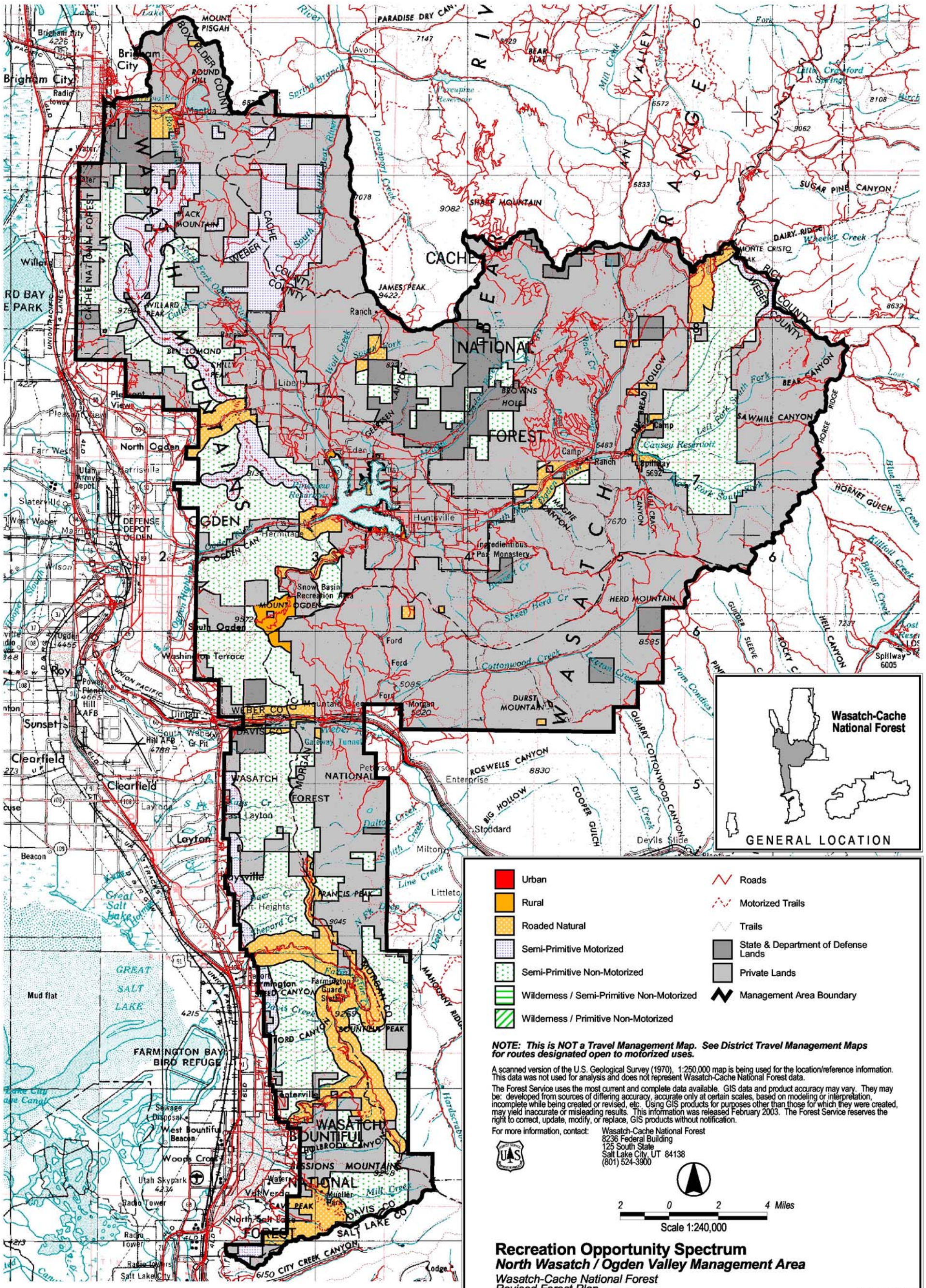
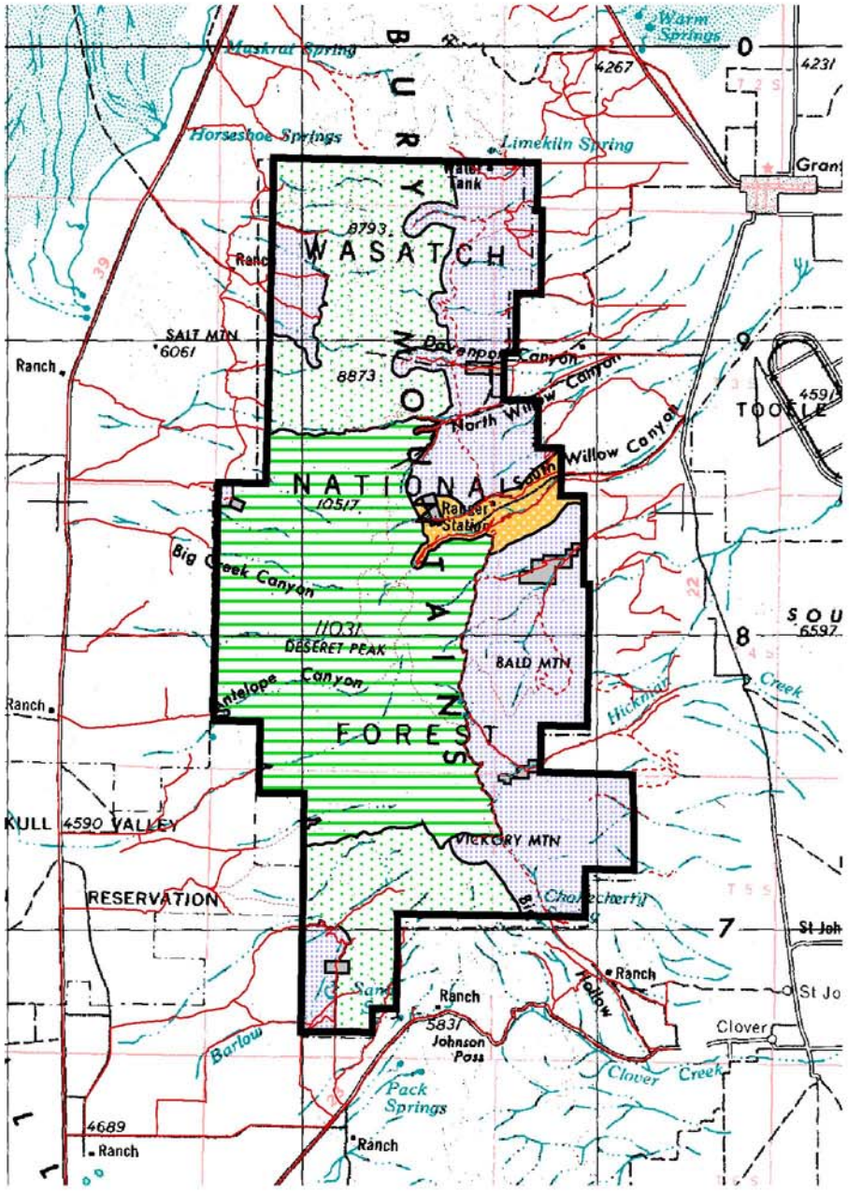
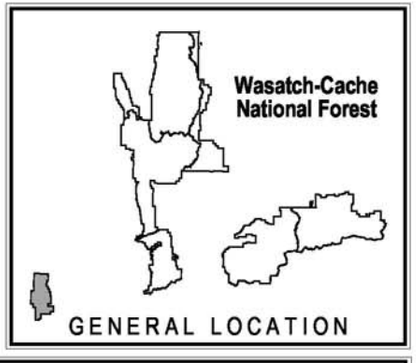
February 2003

EASTERN UINTAS - ROS



NORTH WASATCH / OGDEN VALLEY - ROS





- Urban
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2 0 2 4 Miles

Scale 1:240,000

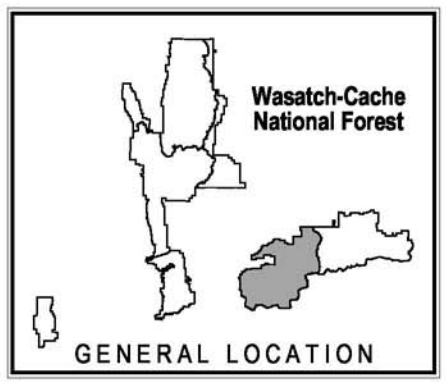
Recreation Opportunity Spectrum

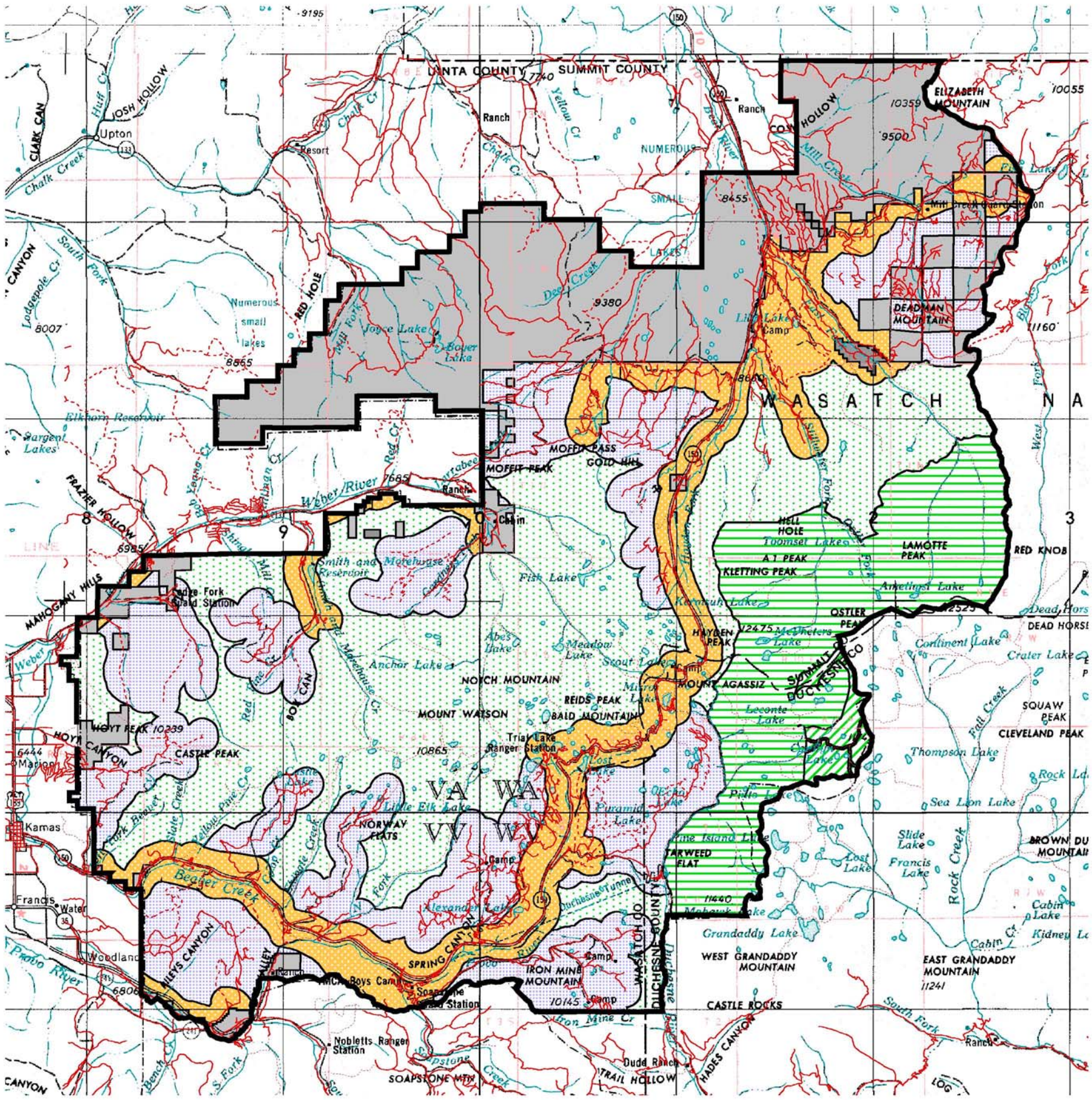
Stansbury Management Area

Wasatch-Cache National Forest
Revised Forest Plan

February 2003

STANSBURY - ROS





Recreation Opportunity Spectrum
Western Uintas Management Area

Wasatch-Cache National Forest
Revised Forest Plan

- Urban
- Rural
- Roaded Natural
- Semi-Primitive Motorized
- Semi-Primitive Non-Motorized
- Wilderness / Semi-Primitive Non-Motorized
- Wilderness / Primitive Non-Motorized
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- Trails
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2 0 2 4 Miles

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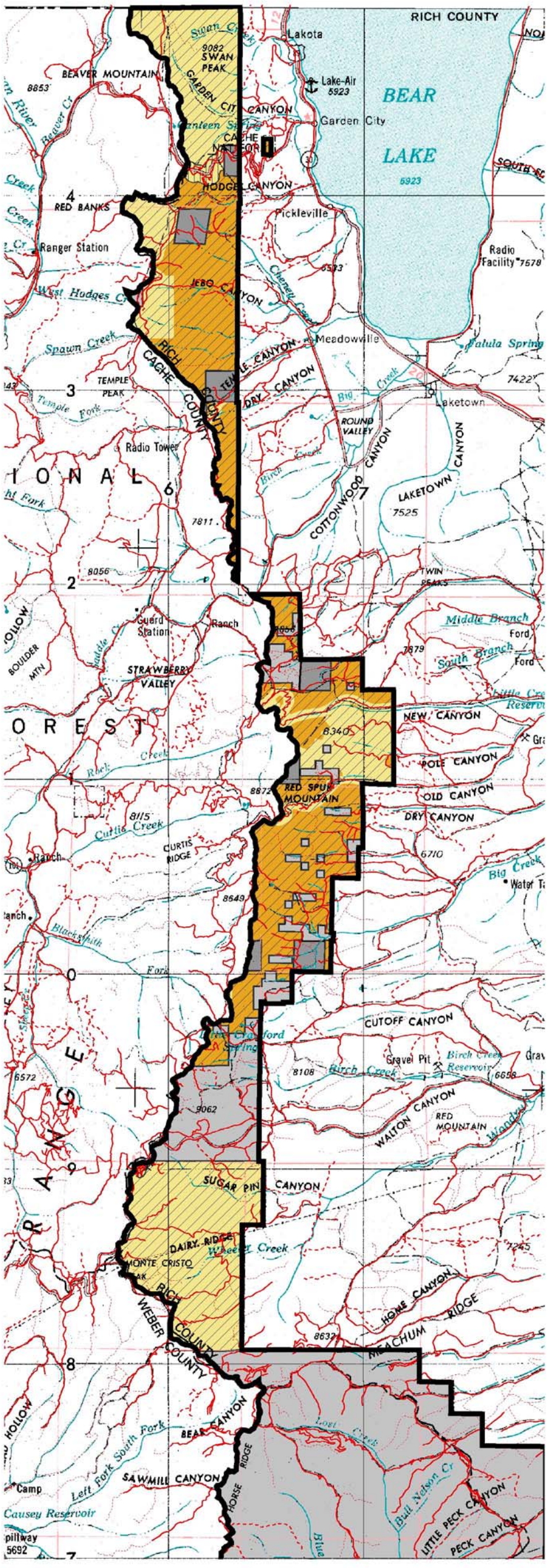
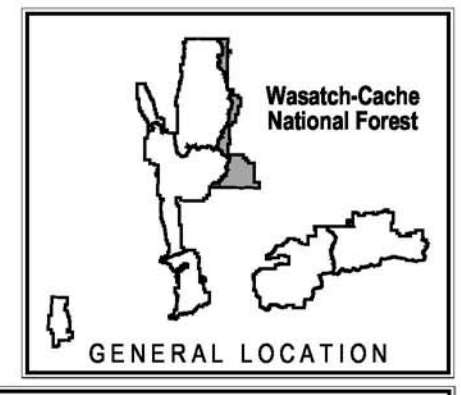
February 2003

WESTERN UINTAS - ROS





Landscape Character

- Natural Evolving
- Natural Appearing
- Developed Natural Appearing
- Resort Natural Setting
- Water Recreation Rural Appearing
- Roads
- Motorized Trails
- Trails

Scenic Integrity Objective

- Very High
- High
- Moderate
- Low
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

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2 0 2 4 Miles

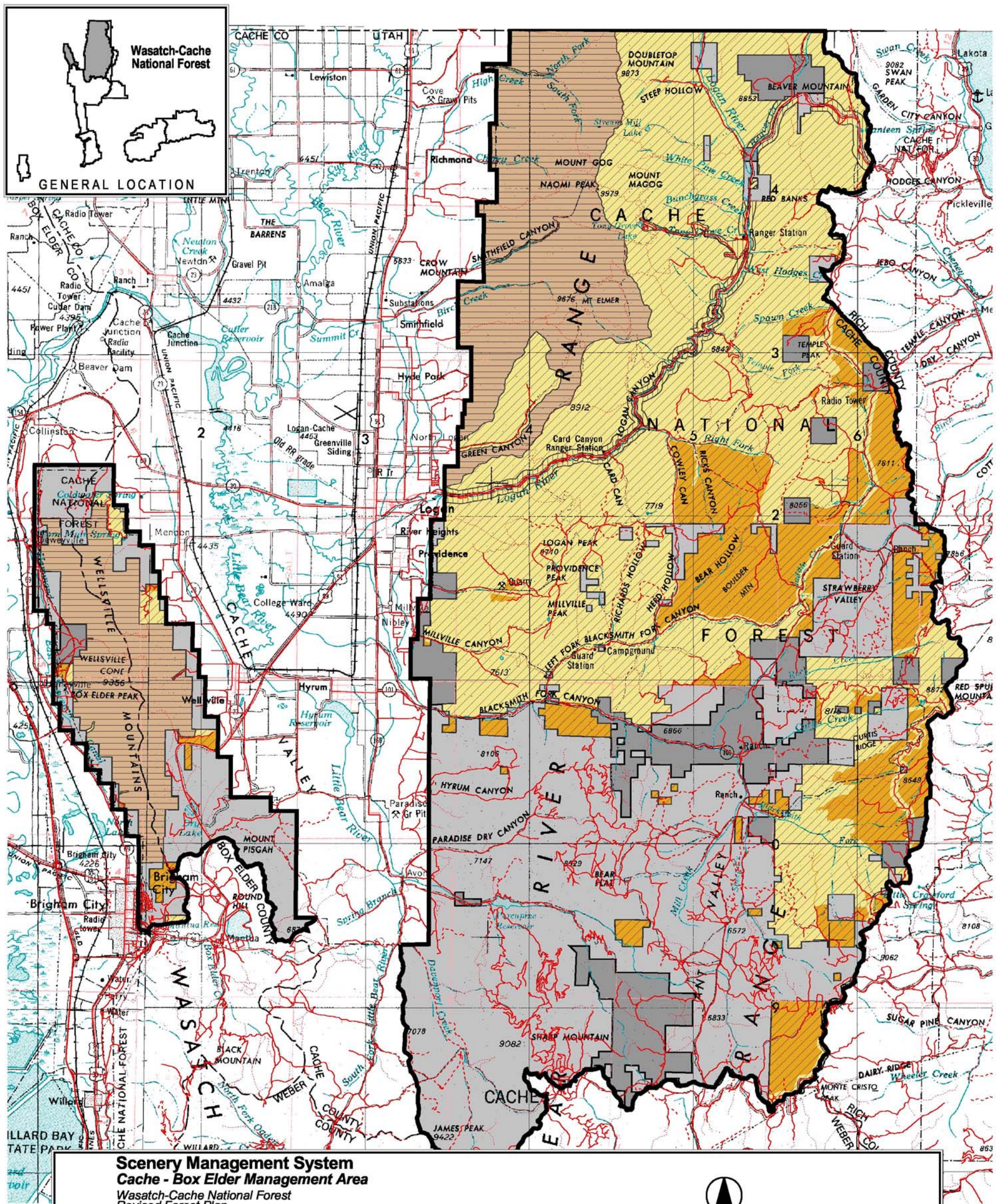
Scale 1:240,000

Scenery Management System

Bear Management Area

Wasatch-Cache National Forest
Revised Forest Plan

February 2003



Scenery Management System

Cache - Box Elder Management Area

Wasatch-Cache National Forest
Revised Forest Plan

Landscape Character

- Natural Evolving
- Natural Appearing
- Developed Natural Appearing
- Resort Natural Setting
- Water Recreation Rural Appearing
- Roads
- Motorized Trails
- Trails

Scenic Integrity Objective

- Very High
- High
- Moderate
- Low

- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

2 0 2 4 Miles

Scale 1:240,000

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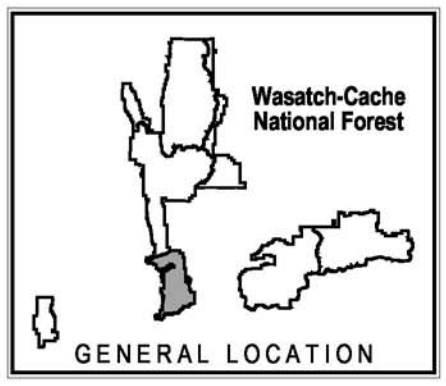
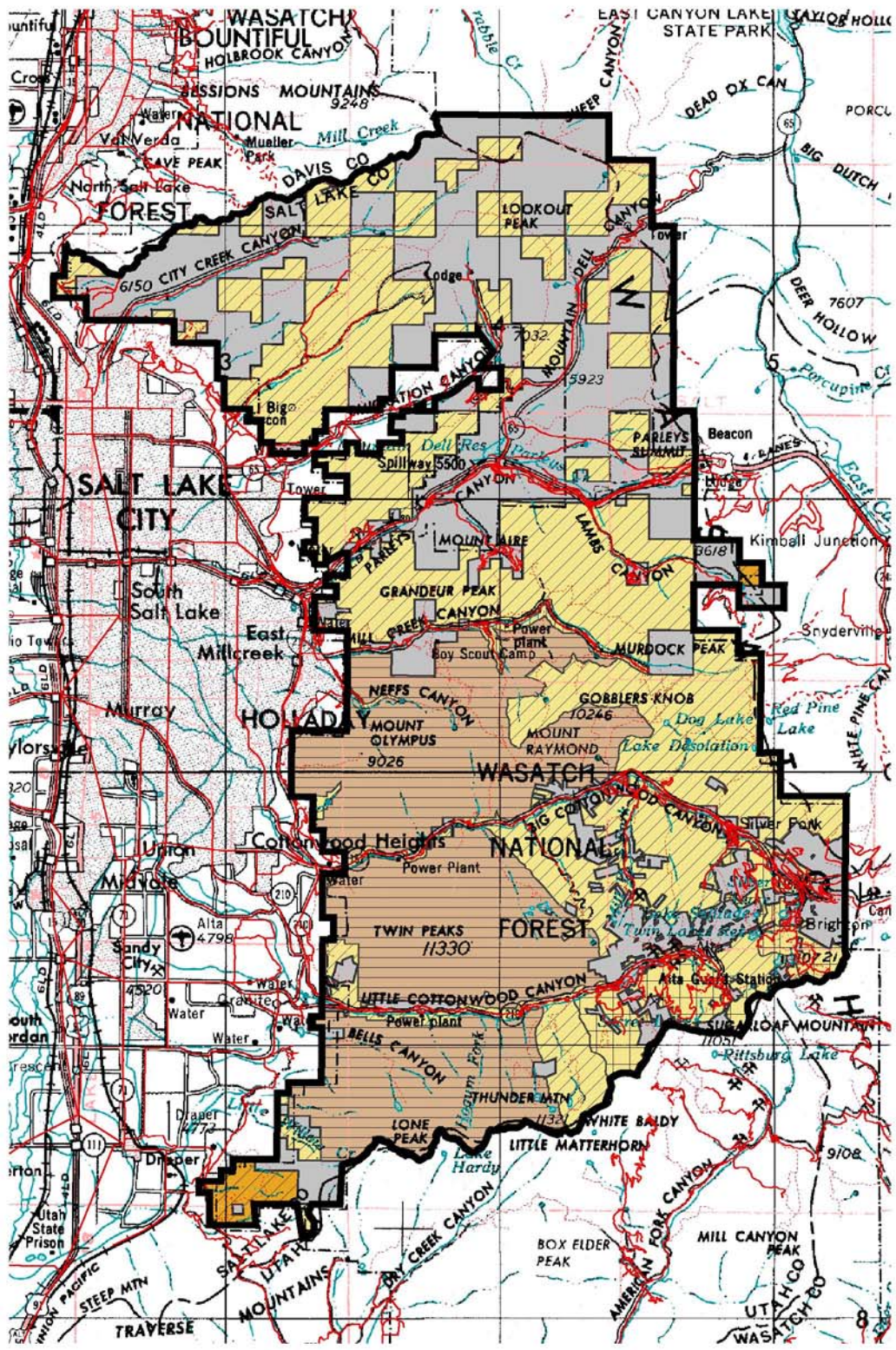
CACHE - BOX ELDER - SMS





Scenery Management System
Central Wasatch Management Area

Wasatch-Cache National Forest
Revised Forest Plan

Landscape Character

- Natural Evolving
- Natural Appearing
- Developed Natural Appearing
- Resort Natural Setting
- Water Recreation Rural Appearing
- Roads
- Motorized Trails
- Trails

Scenic Integrity Objective

- Very High
- High
- Moderate
- Low
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

2 0 2 4 *Miles*

Scale 1:240,000

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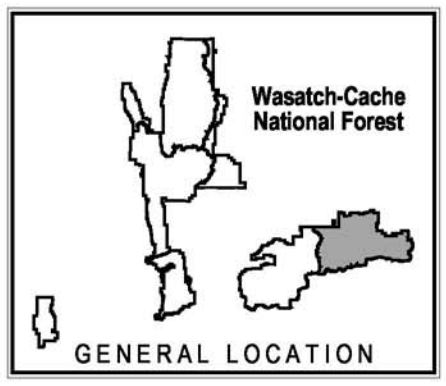
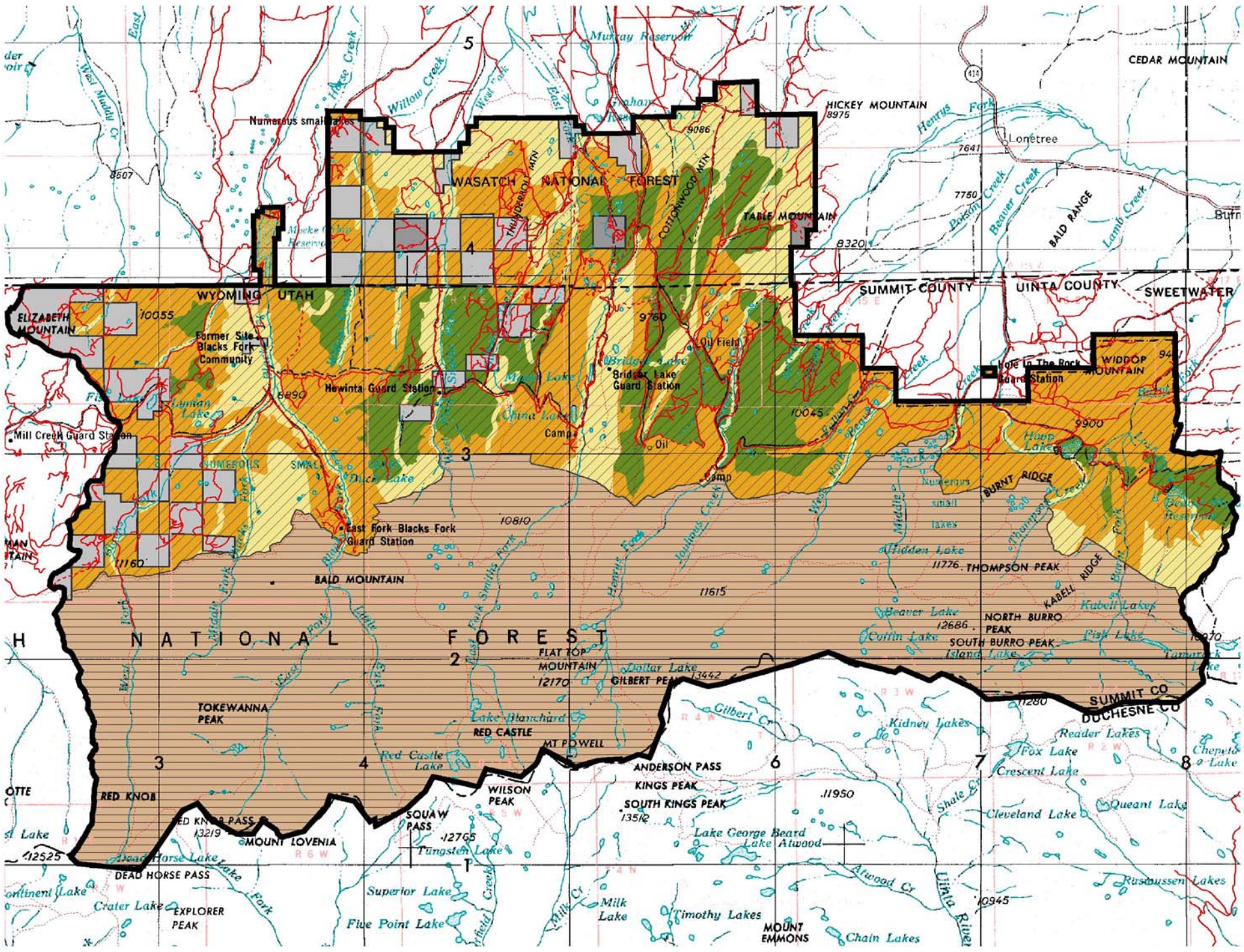
February 2003

CENTRAL WASATCH - SMS





Scenery Management System
Eastern Uintas Management Area

Wasatch-Cache National Forest
Revised Forest Plan

Landscape Character

- Natural Evolving
- Natural Appearing
- Developed Natural Appearing
- Resort Natural Setting
- Water Recreation Rural Appearing
- Roads
- Motorized Trails
- Trails

Scenic Integrity Objective

- Very High
- High
- Moderate
- Low
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

2 0 2 4 Miles

Scale 1:240,000

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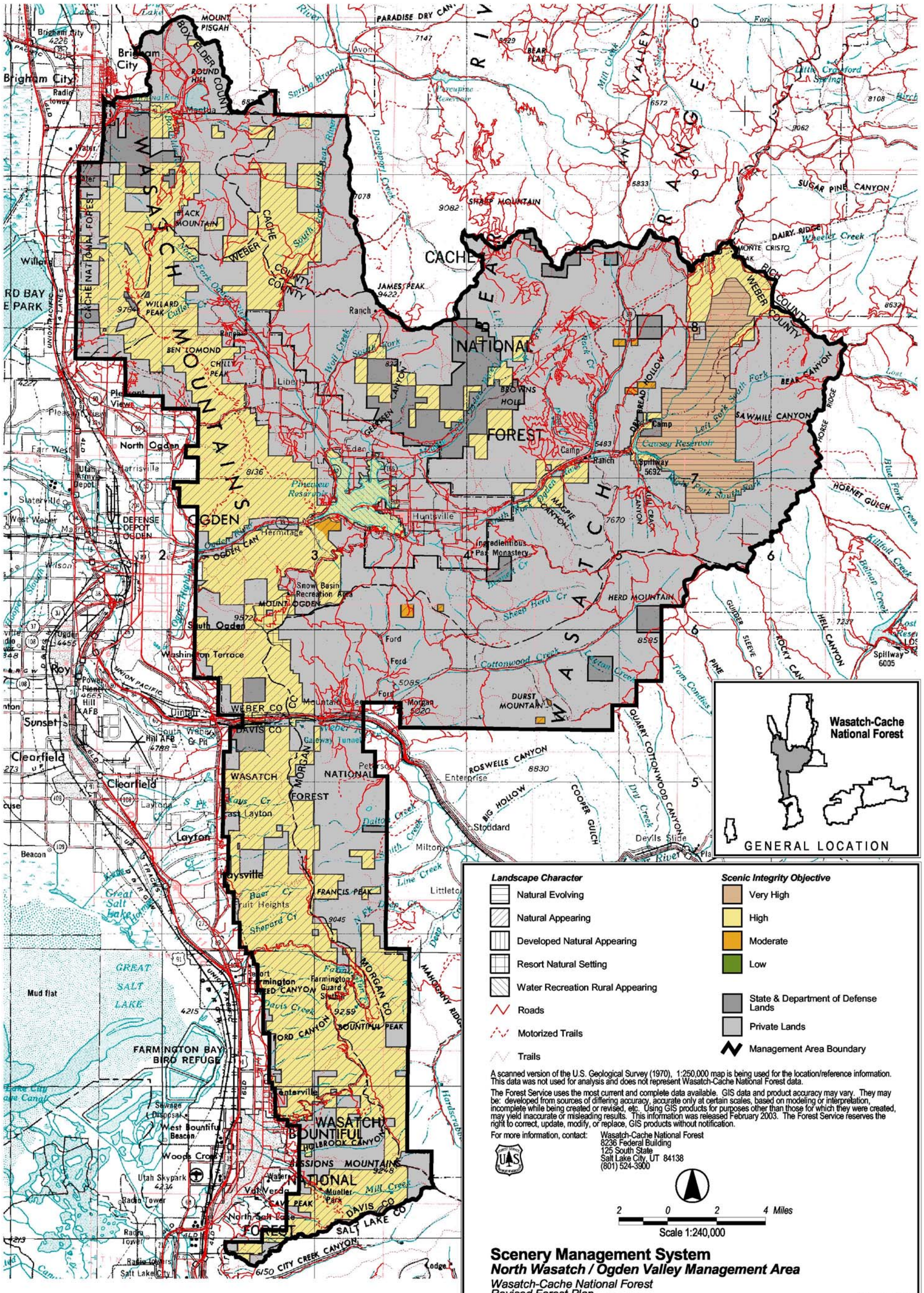
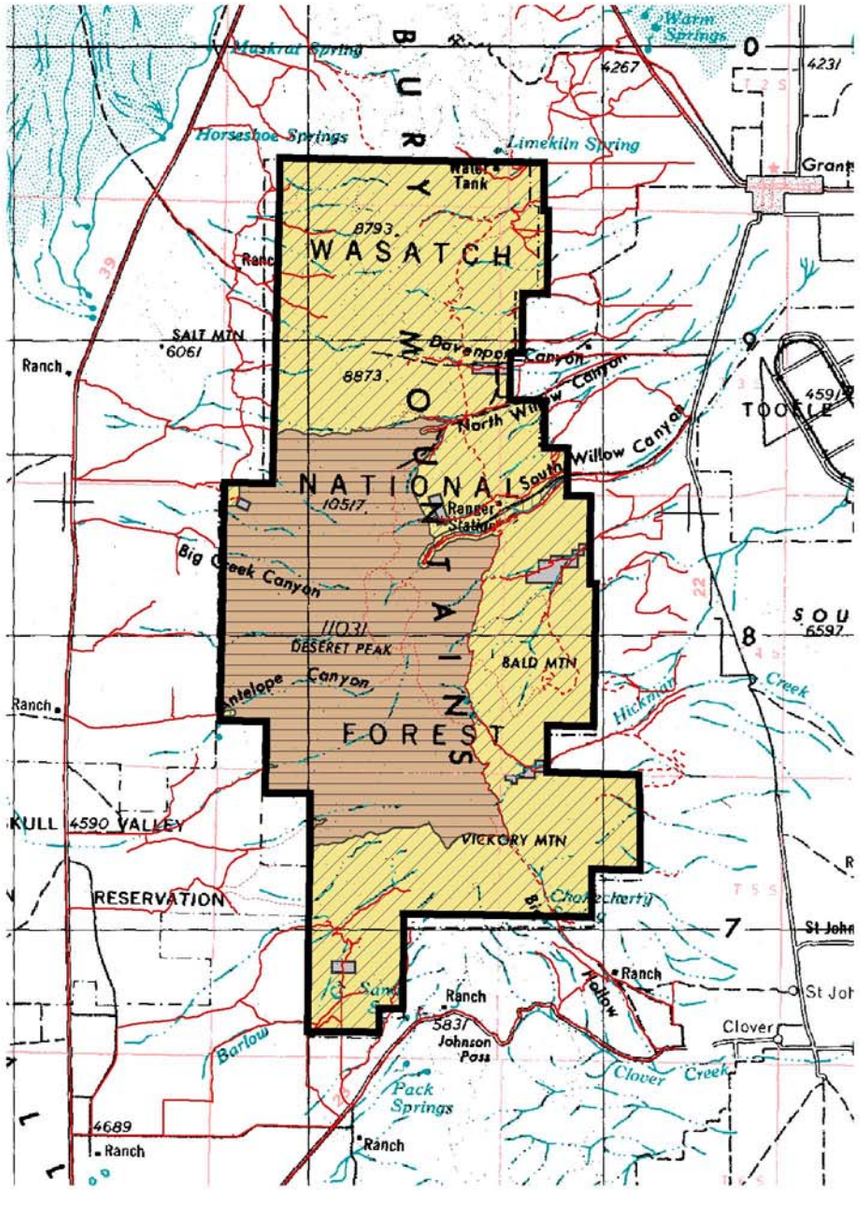
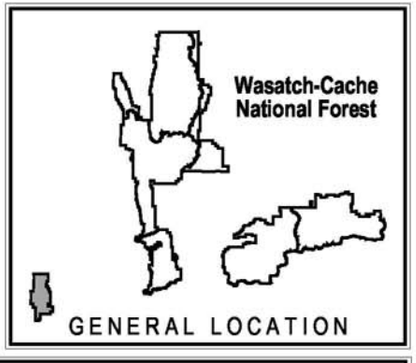
February 2003

EASTERN UINTAS - SMS



NORTH WASATCH / OGDEN VALLEY - SMS





Landscape Character

- Natural Evolving
- Natural Appearing
- Developed Natural Appearing
- Resort Natural Setting
- Water Recreation Rural Appearing
- Roads
- Motorized Trails
- Trails

Scenic Integrity Objective

- Very High
- High
- Moderate
- Low
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

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2 0 2 4 Miles

Scale 1:240,000

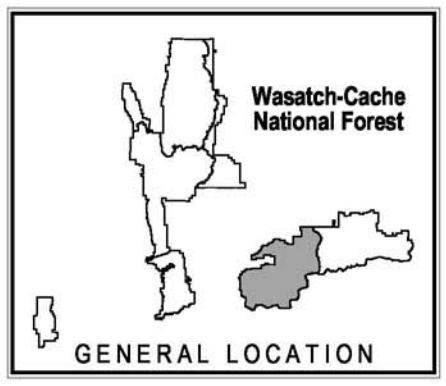
Scenery Management System

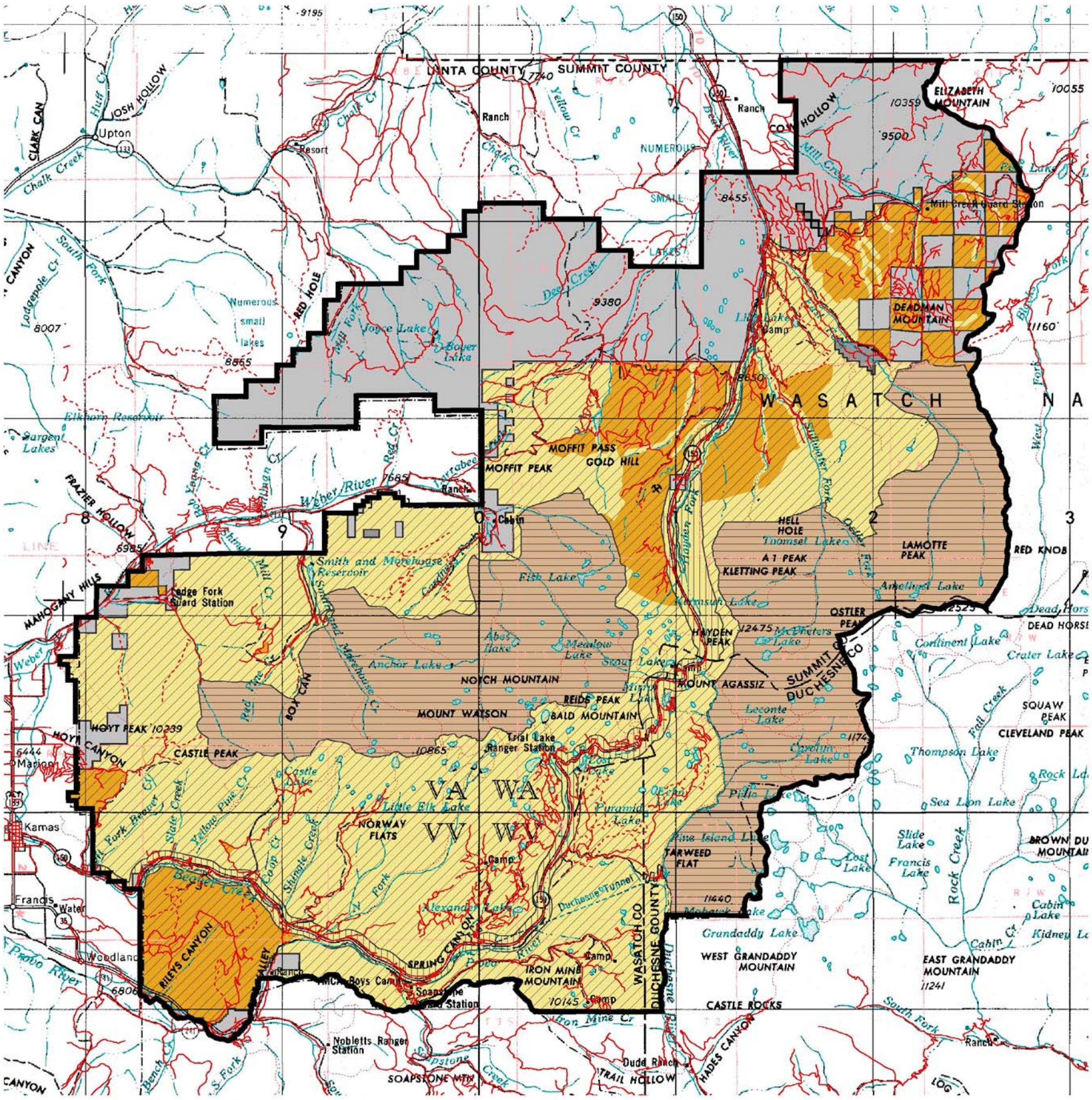
Stansbury Management Area

Wasatch-Cache National Forest
Revised Forest Plan

February 2003

STANSBURY - SMS





Scenery Management System
Eastern Uintas Management Area

Wasatch-Cache National Forest
Revised Forest Plan

Landscape Character

- Natural Evolving
- Natural Appearing
- Developed Natural Appearing
- Resort Natural Setting
- Water Recreation Rural Appearing
- Roads
- Motorized Trails
- Trails

Scenic Integrity Objective

- Very High
- High
- Moderate
- Low
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

2 0 2 4 Miles

Scale 1:240,000

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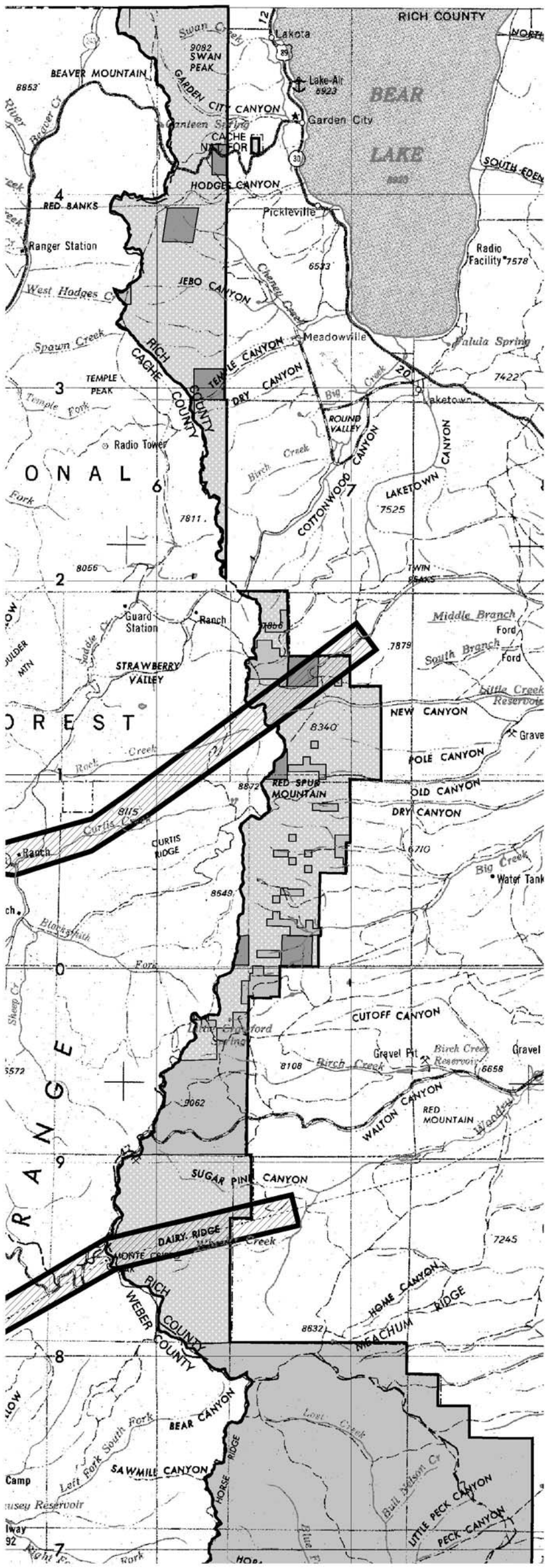
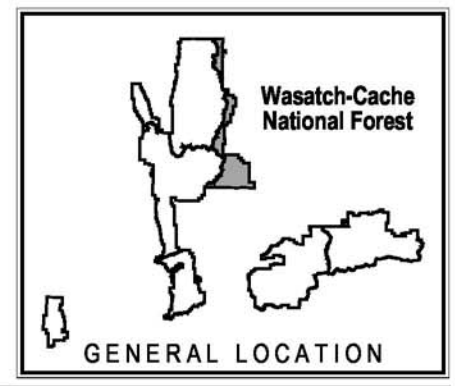
February 2003





Utility Corridor

Wasatch-Cache NF Administered Lands

State & Department of Defense Lands

Private Lands

Management Area Boundary

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2 0 2 4 Miles

Scale 1:240,000

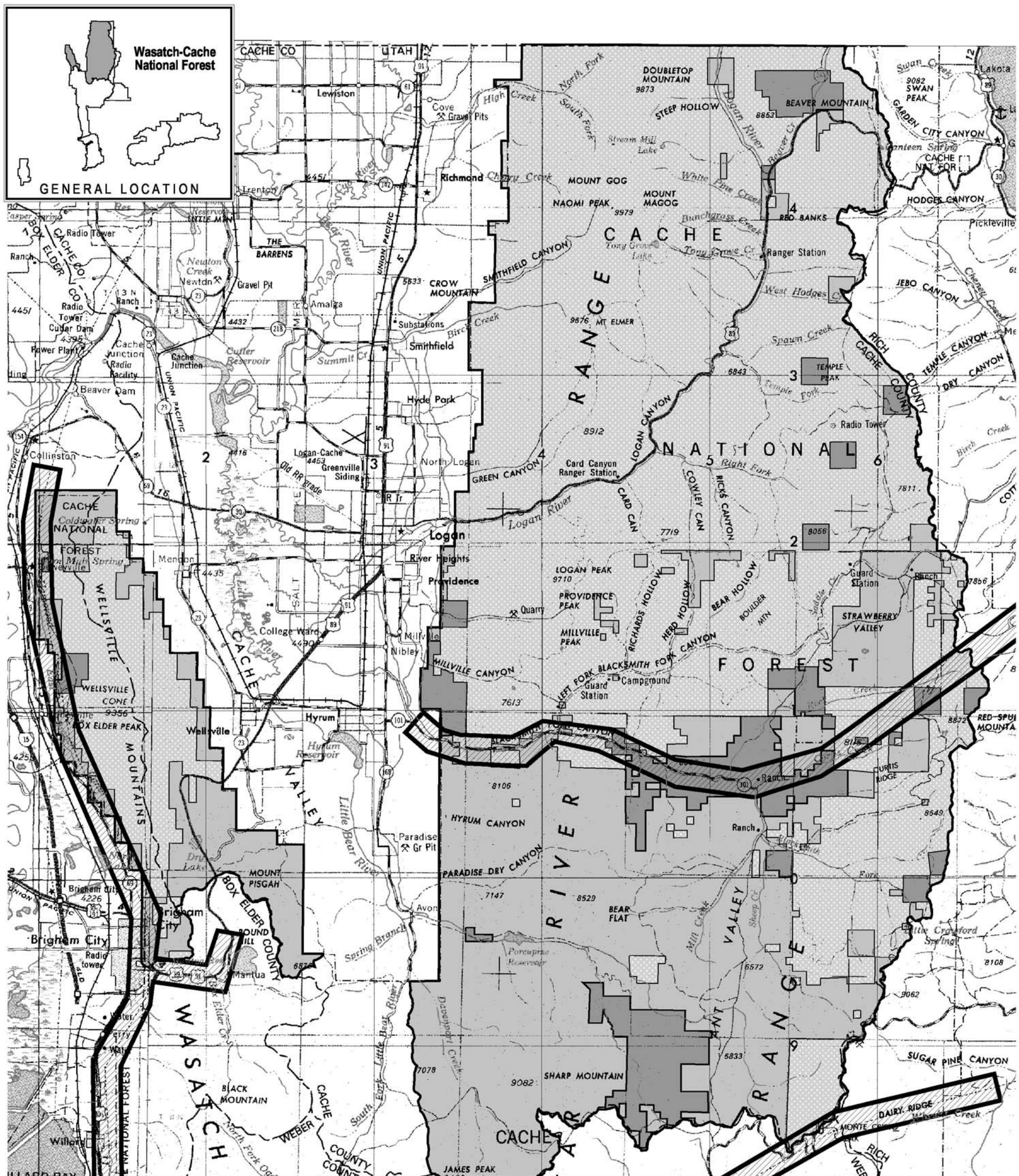
Utility Corridors

Bear Management Area

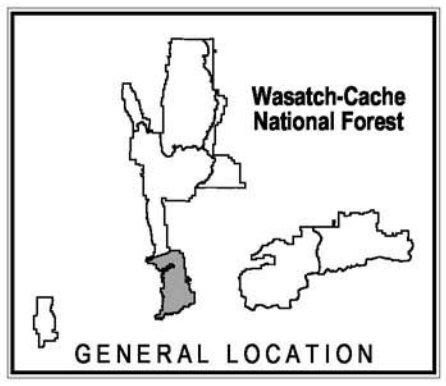
Wasatch-Cache National Forest
Revised Forest Plan

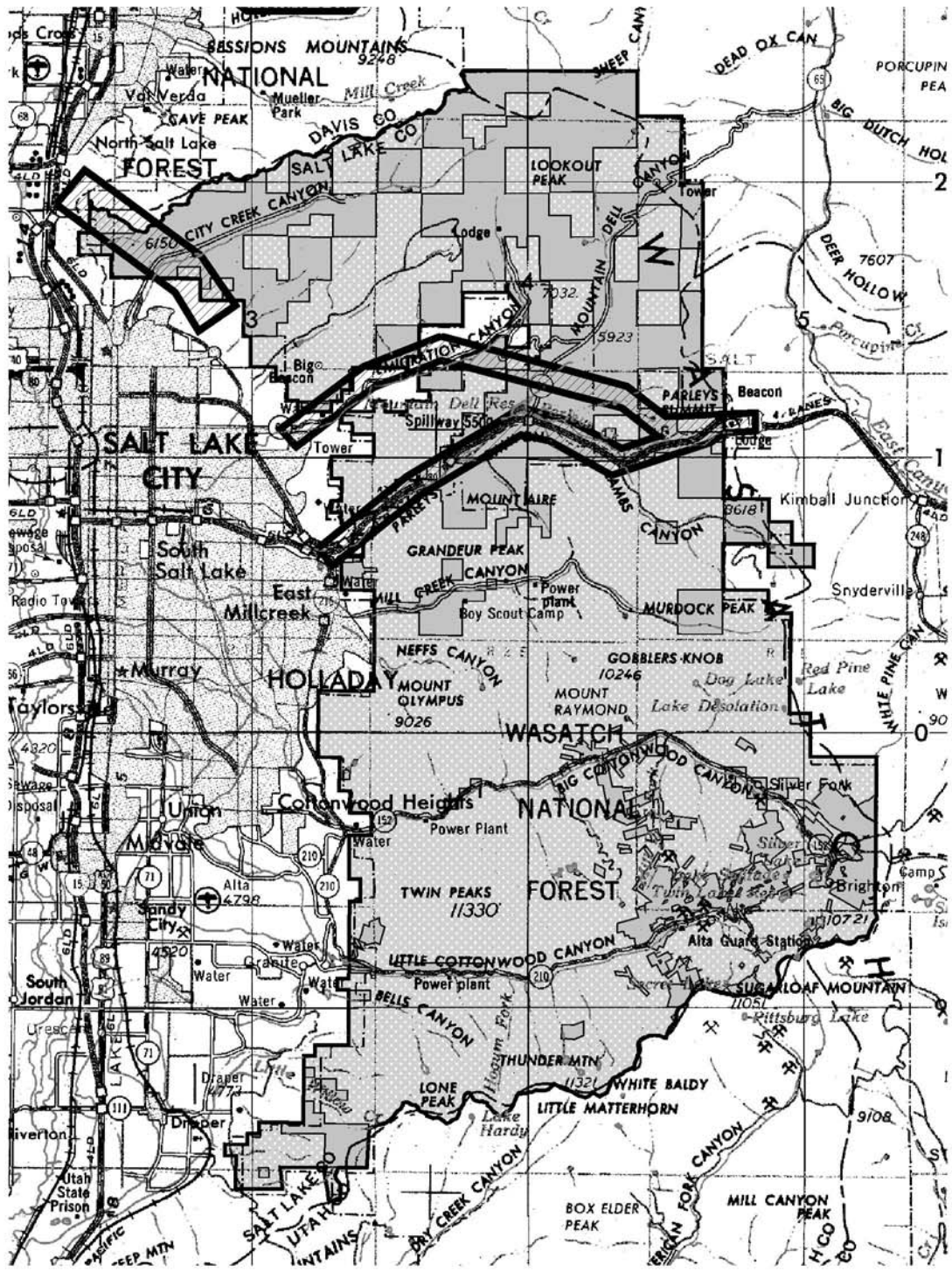
February 2003

BEAR - UTILITY CORRIDOR



CACHE - BOX ELDER - UTILITY CORRIDOR





Utility Corridors
Central Wasatch Management Area
Wasatch-Cache National Forest
Revised Forest Plan

- Utility Corridor
- Wasatch-Cache NF Administered Lands
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

2 0 2 4 *Miles*

Scale 1:240,000

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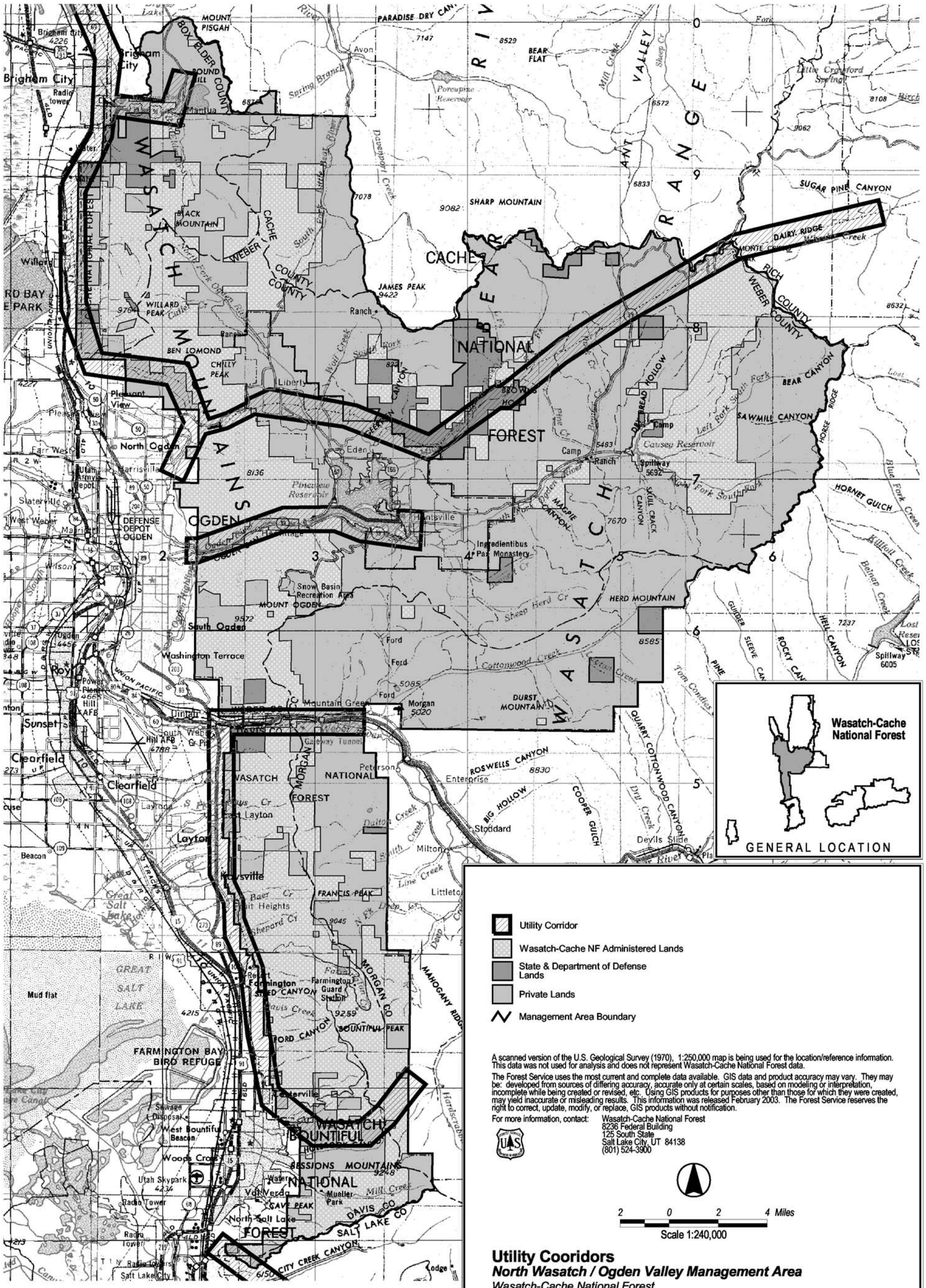
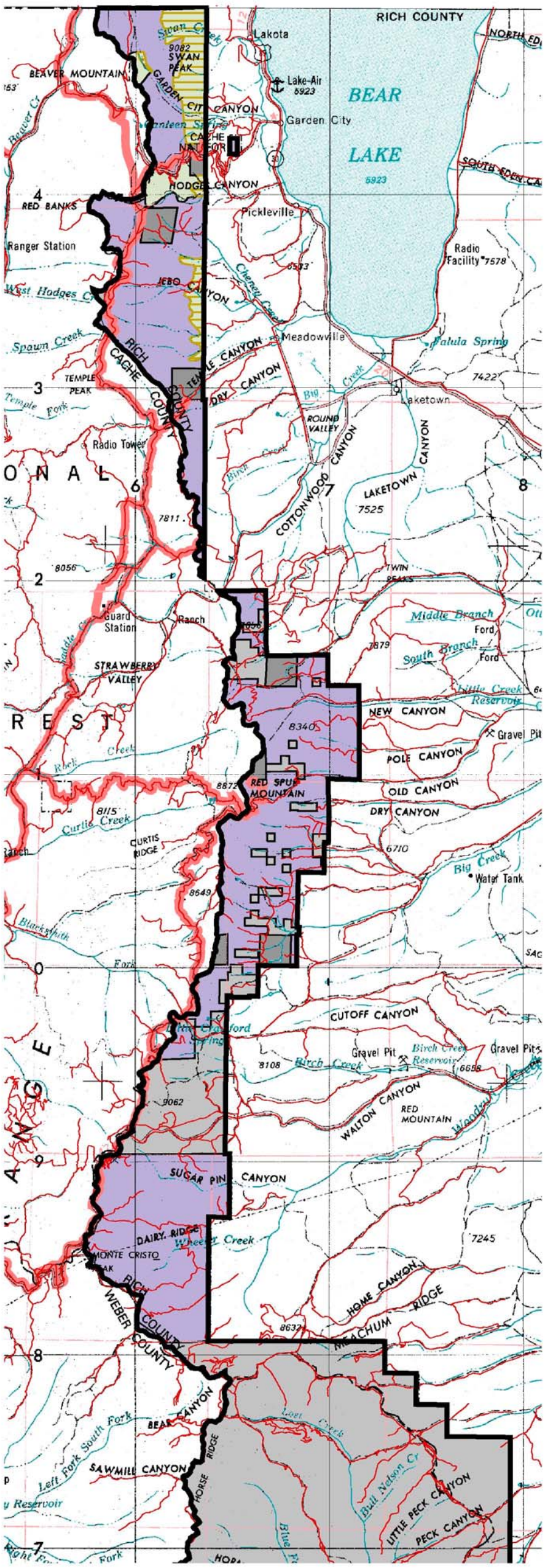
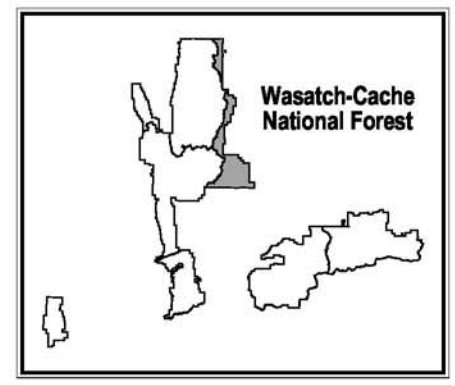
February 2003



NORTH WASATCH / OGDEN VALLEY - UTILITY CORRIDOR





- Motorized
- Non-Motorized
- Wilderness - Non-Motorized
- Big Game Winter Range
- Ski Resort
- Heliskiing
- Roads (roads are shown for reference only and are not open to winter motorized use unless otherwise indicated)
- Groomed Snowmobile Trail
- Motorized Access Route
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

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2 0 2 4 Miles

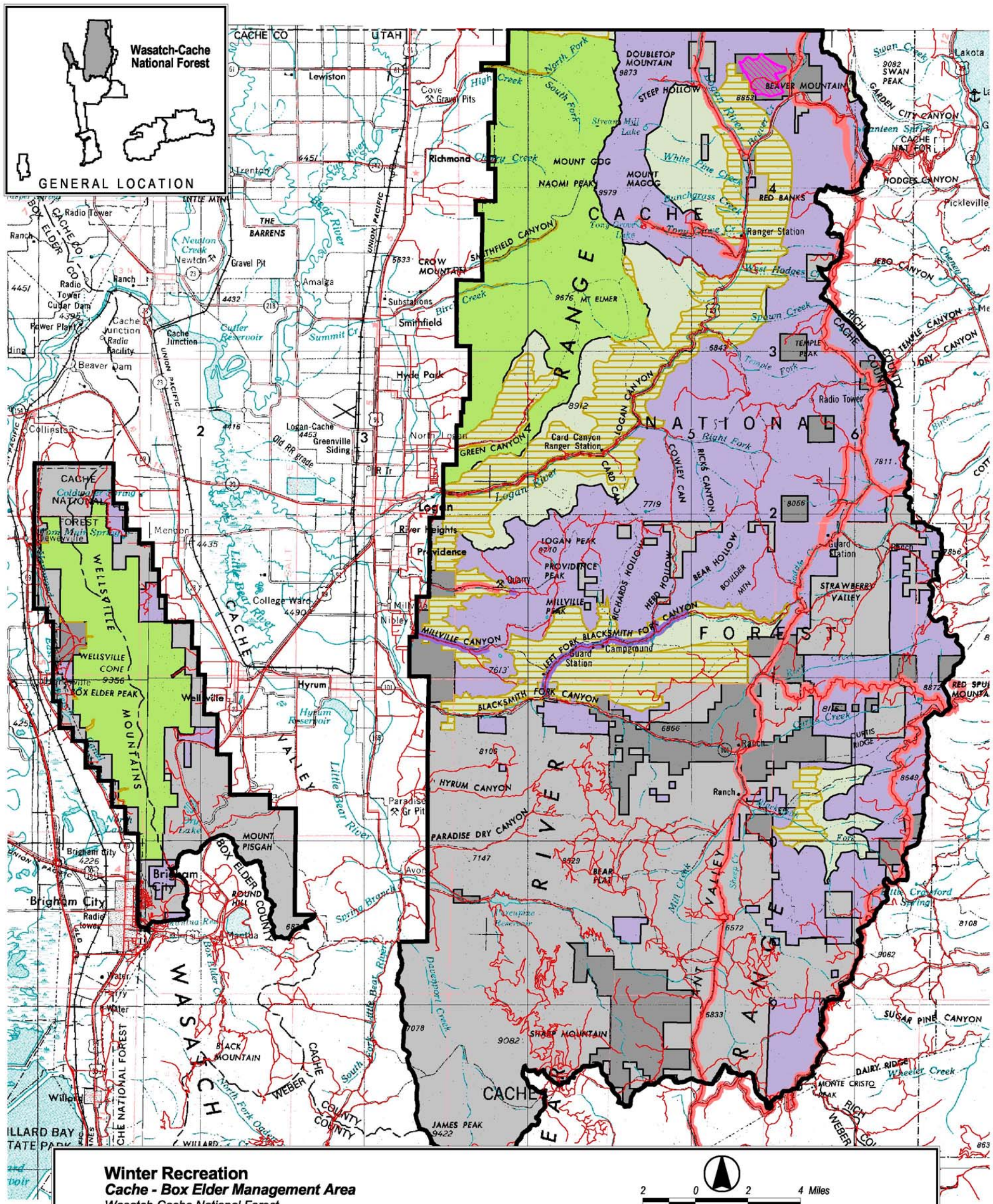
Scale 1:240,000

Winter Recreation
Bear Management Area

Wasatch-Cache National Forest
Revised Forest Plan

February 2003

BEAR - WINTER REC.



Winter Recreation

Cache - Box Elder Management Area

Wasatch-Cache National Forest
Revised Forest Plan

- Motorized
- Non-Motorized
- Wilderness - Non-Motorized
- Big Game Winter Range
- Ski Resort
- Heliskiing
- Roads (roads are shown for reference only and are not open to winter motorized use unless otherwise indicated)
- Groomed Snowmobile Trail
- Motorized Access Route
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

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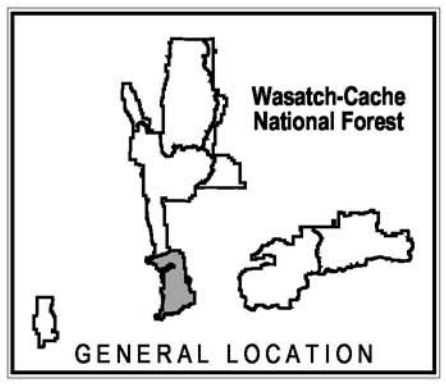
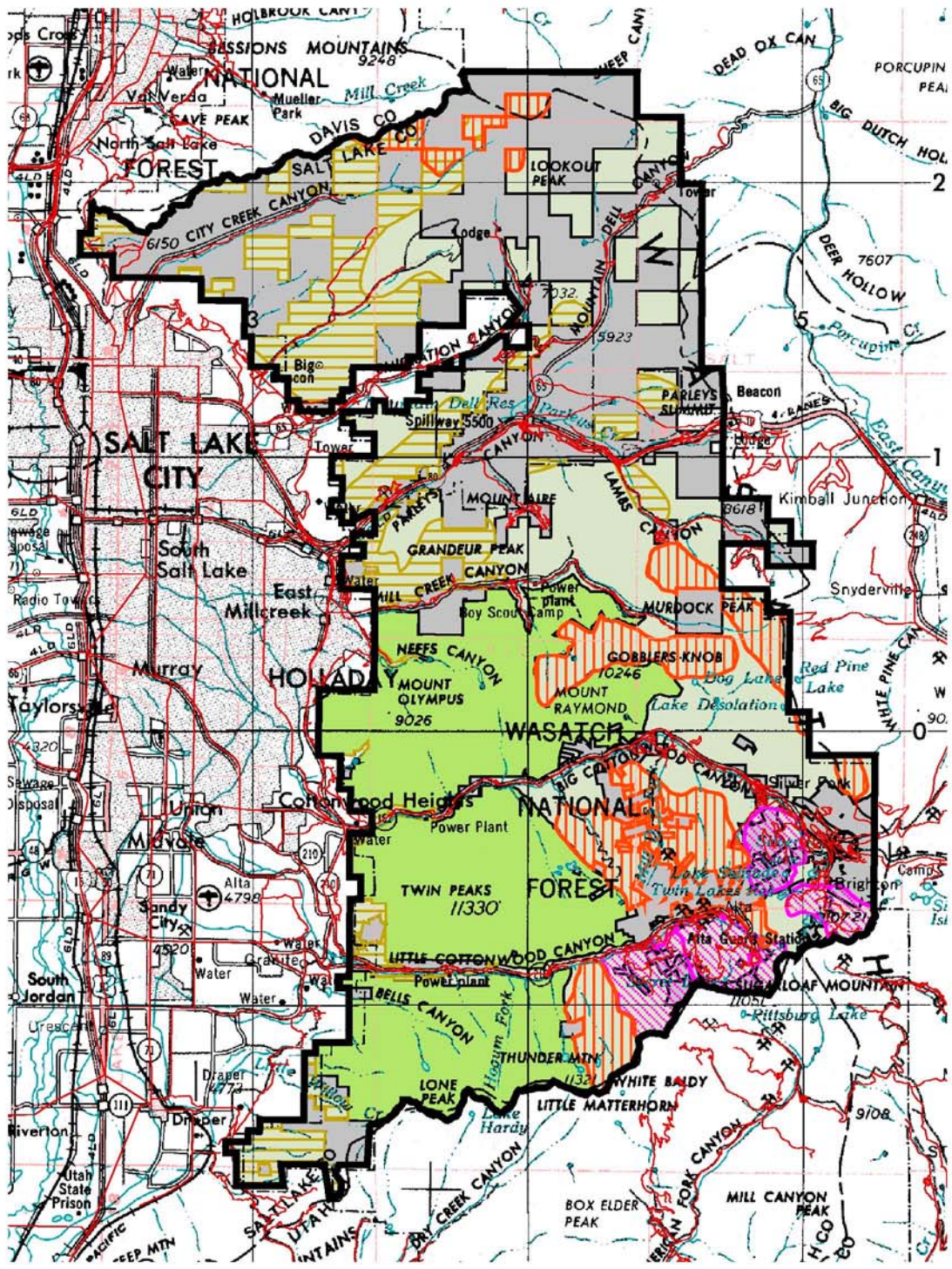
February 2003

CACHE - BOX ELDER - WINTER REC.





Winter Recreation

Central Wasatch Management Area

Wasatch-Cache National Forest
Revised Forest Plan

▨	Motorized
▨	Non-Motorized
🟩	Wilderness - Non-Motorized
▤	Big Game Winter Range
▨	Ski Resort
▥	Heliskiing
╱╲	Roads (roads are shown for reference only and are not open to winter motorized use unless otherwise indicated)
⩘	Groomed Snowmobile Trail
⩘	Motorized Access Route
■	State & Department of Defense Lands
■	Private Lands
⩘	Management Area Boundary

2 0 2 4 Miles

Scale 1:240,000

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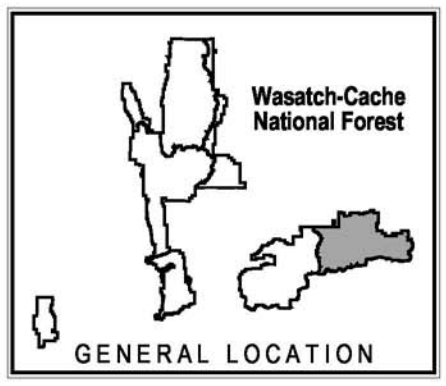

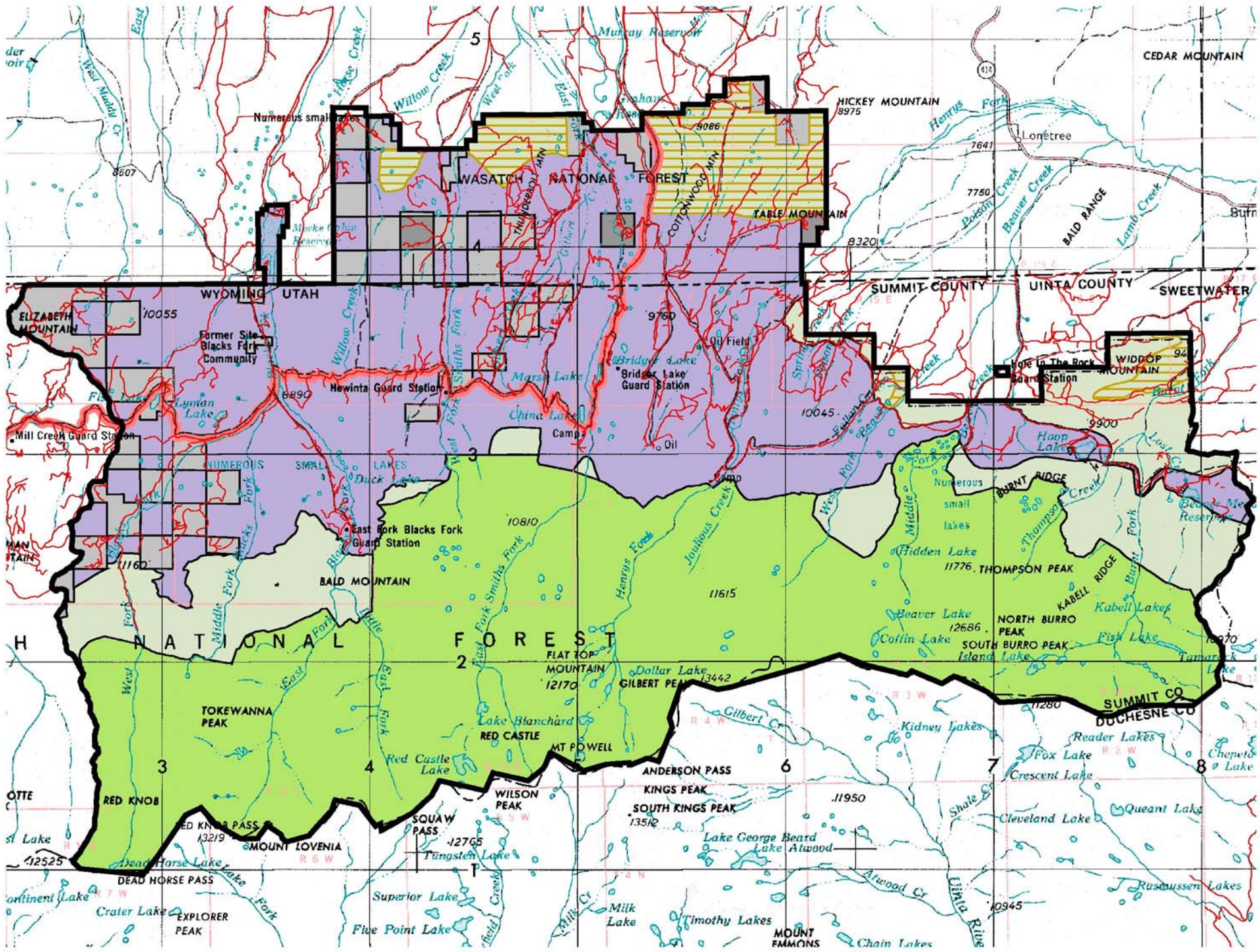

Winter Recreation
Eastern Uintas Management Area
Wasatch-Cache National Forest
Revised Forest Plan

- Motorized
- Non-Motorized
- Wilderness - Non-Motorized
- Big Game Winter Range
- Ski Resort
- Heliskiing
- Roads (roads are shown for reference only and are not open to winter motorized use unless otherwise indicated)
- Groomed Snowmobile Trail
- Motorized Access Route
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

2 0 2 4 Miles

Scale 1:240,000

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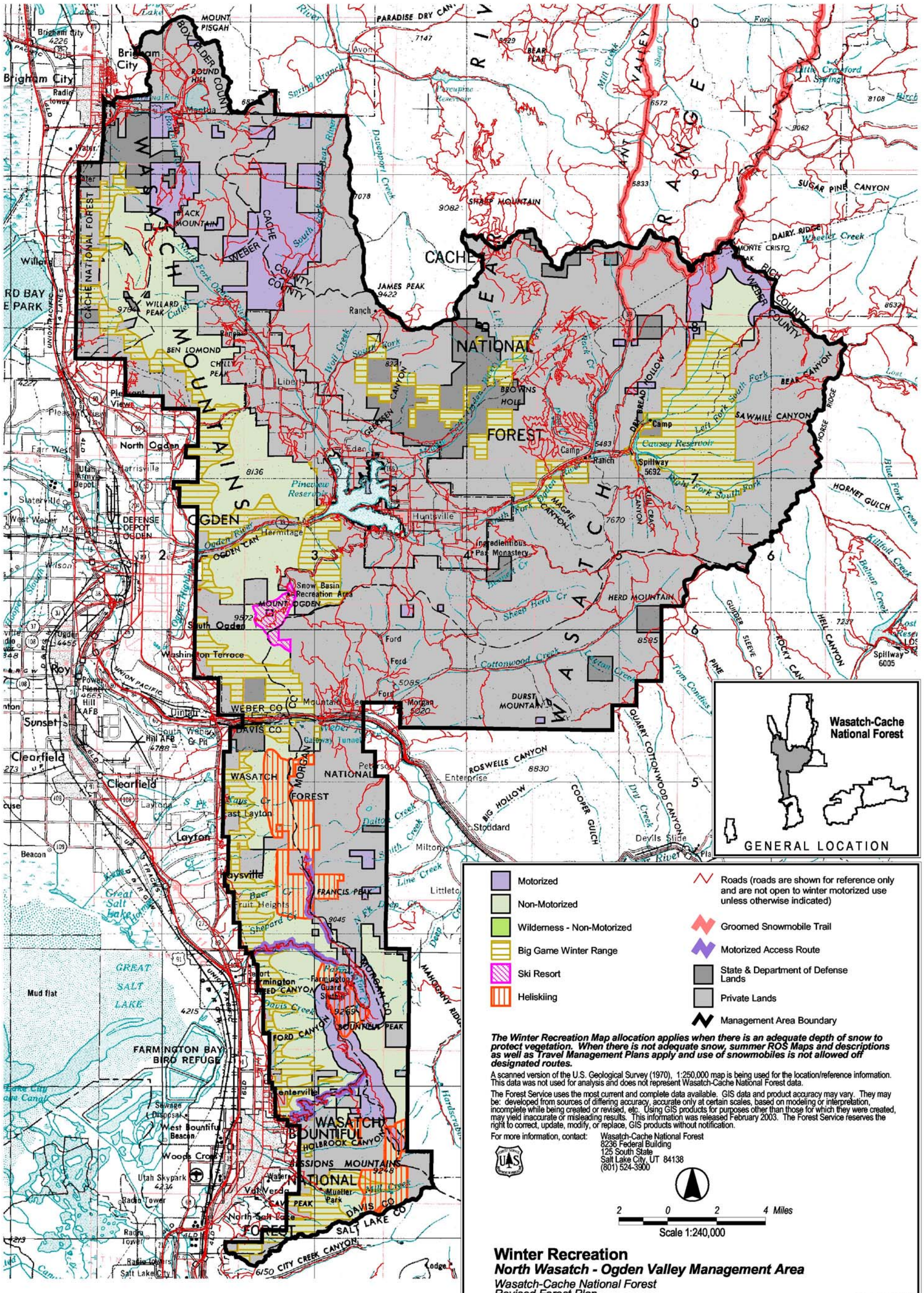
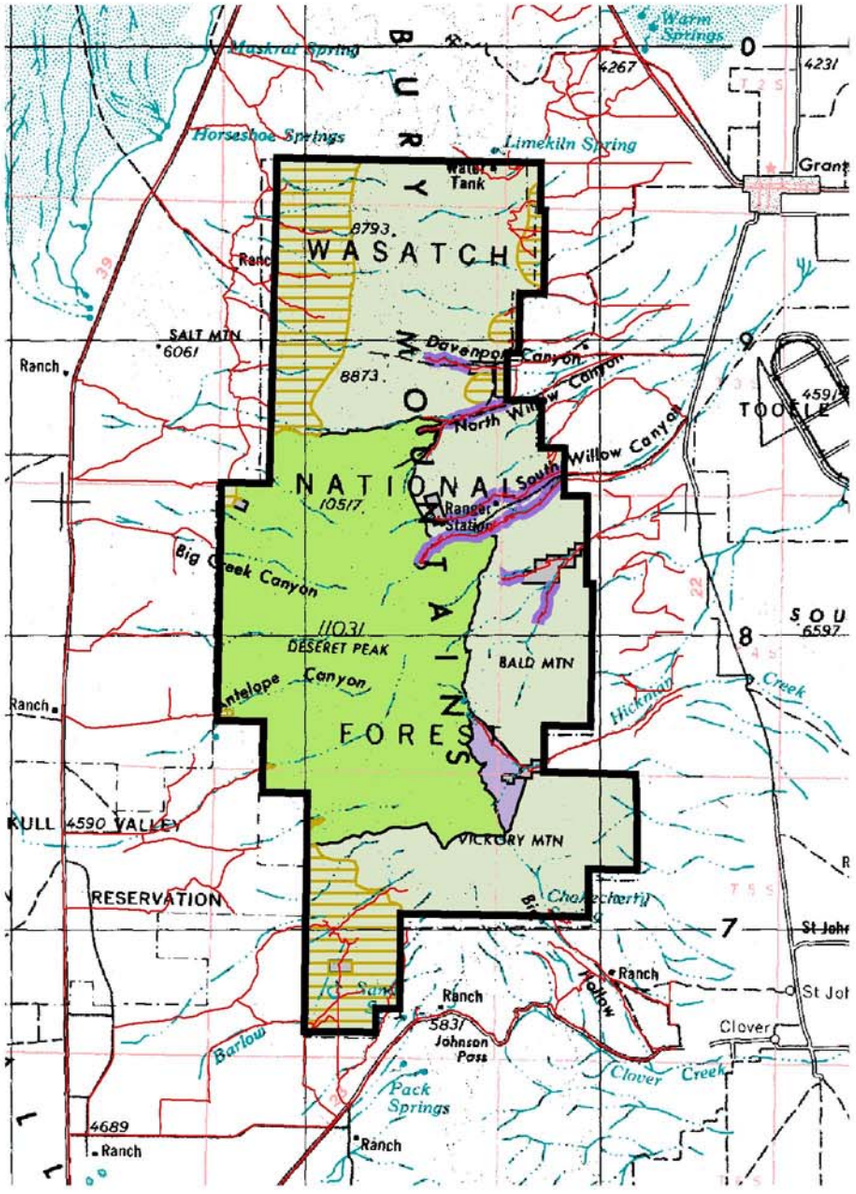
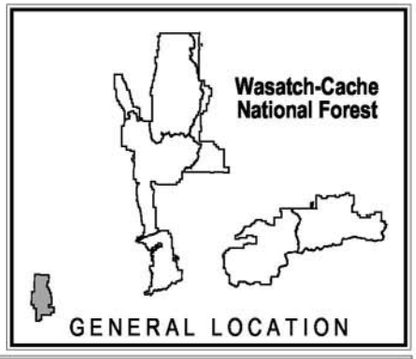
February 2003

EASTERN UINTAS - WINTER REC.



NORTH WASATCH - OGDEN VALLEY - WINTER REC.





- Motorized
- Non-Motorized
- Wilderness - Non-Motorized
- Big Game Winter Range
- Ski Resort
- Heliskiing
- Roads (roads are shown for reference only and are not open to winter motorized use unless otherwise indicated)
- Groomed Snowmobile Trail
- Motorized Access Route
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

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2 0 2 4 Miles

Scale 1:240,000

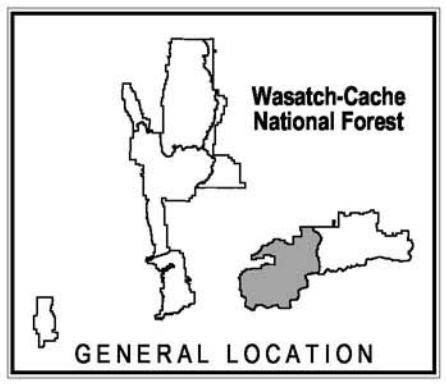
Winter Recreation

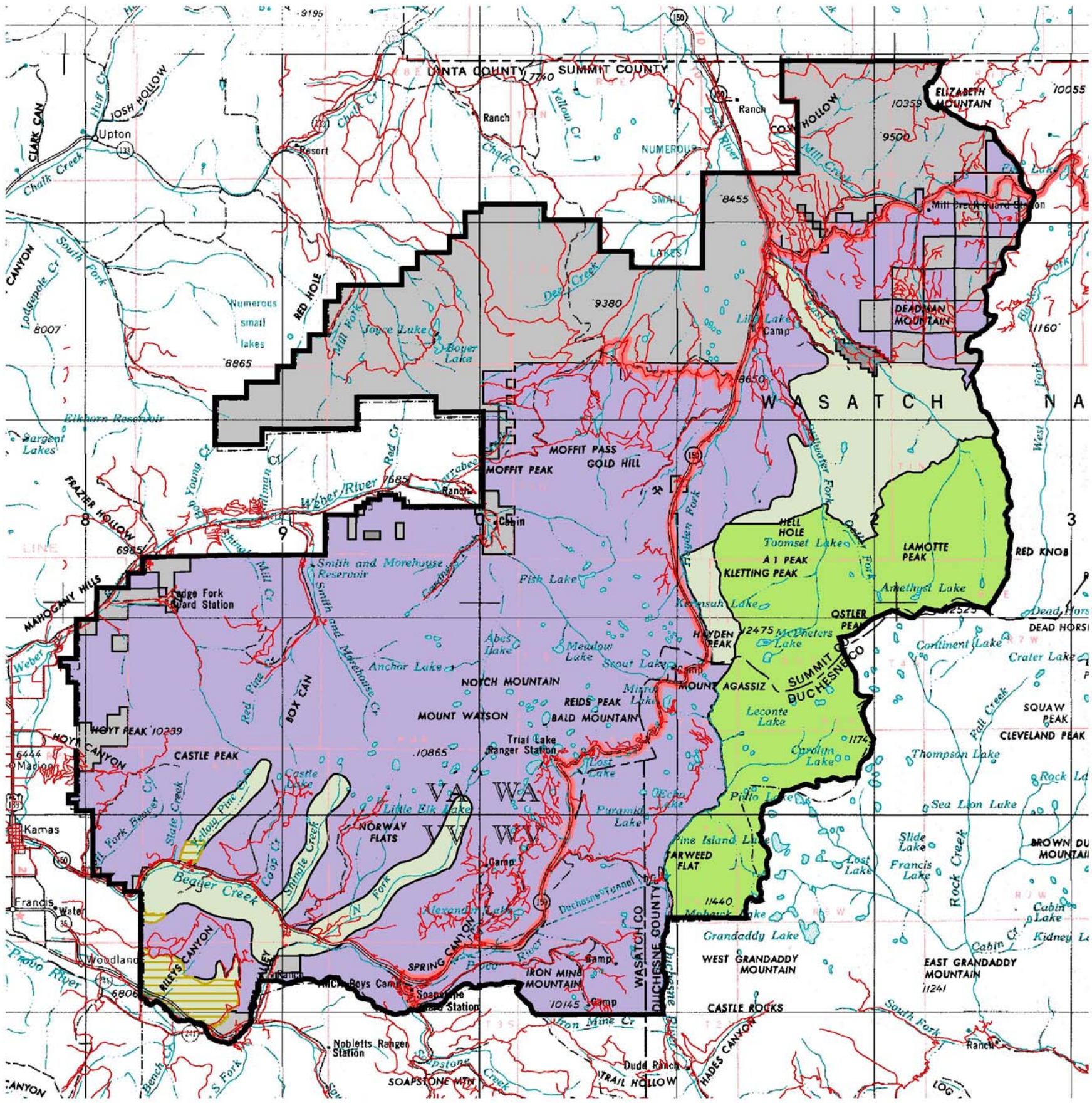
Stansbury Management Area

Wasatch-Cache National Forest
Revised Forest Plan

February 2003

STANSBURY - WINTER REC.





Winter Recreation

Western Uintas Management Area

Wasatch-Cache National Forest
Revised Forest Plan

- Motorized
- Non-Motorized
- Wilderness - Non-Motorized
- Big Game Winter Range
- Ski Resort
- Heliskiing
- Roads (roads are shown for reference only and are not open to winter motorized use unless otherwise indicated)
- Groomed Snowmobile Trail
- Motorized Access Route
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

2 0 2 4 Miles

Scale 1:240,000

The Winter Recreation Map allocation applies when there is an adequate depth of snow to protect vegetation. When there is not adequate snow, summer ROS Maps and descriptions as well as Travel Management Plans apply and use of snowmobiles is not allowed off designated routes.

A scanned version of the U.S. Geological Survey (1970), 1:250,000 map is being used for the location/reference information. This data was not used for analysis and does not represent Wasatch-Cache National Forest data.

The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. They may be: developed from sources of differing accuracy, accurate only at certain scales, based on modeling or interpretation, incomplete while being created or revised, etc. Using GIS products for purposes other than those for which they were created, may yield inaccurate or misleading results. This information was released February 2003. The Forest Service reserves the right to correct, update, modify, or replace, GIS products without notification.

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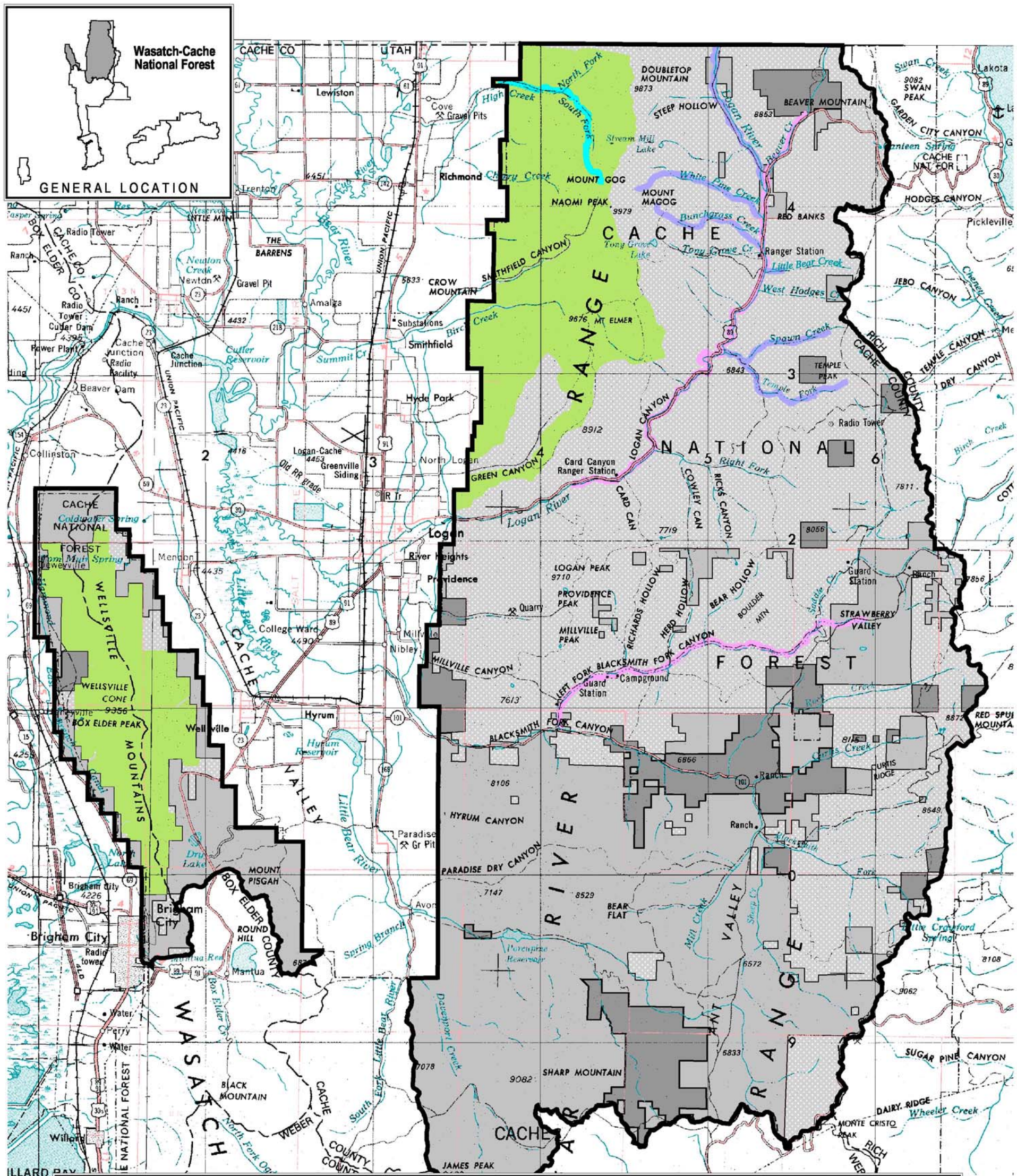
February 2003

WESTERN UINTAS - WINTER REC.



Eligible Wild & Scenic Rivers

Cache - Box Elder Management Area

Wasatch-Cache National Forest
Revised Forest Plan

Classification

- Wild
- Scenic
- Recreational
- Wasatch-Cache NF Administered Lands
- Wilderness
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

2 0 2 4 Miles

Scale 1:240,000

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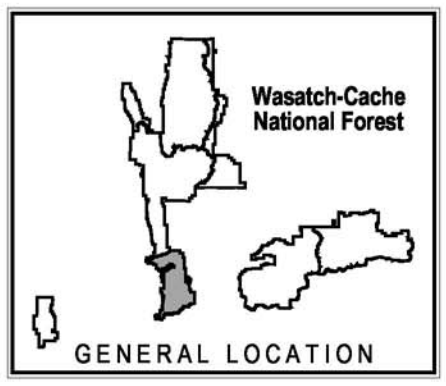
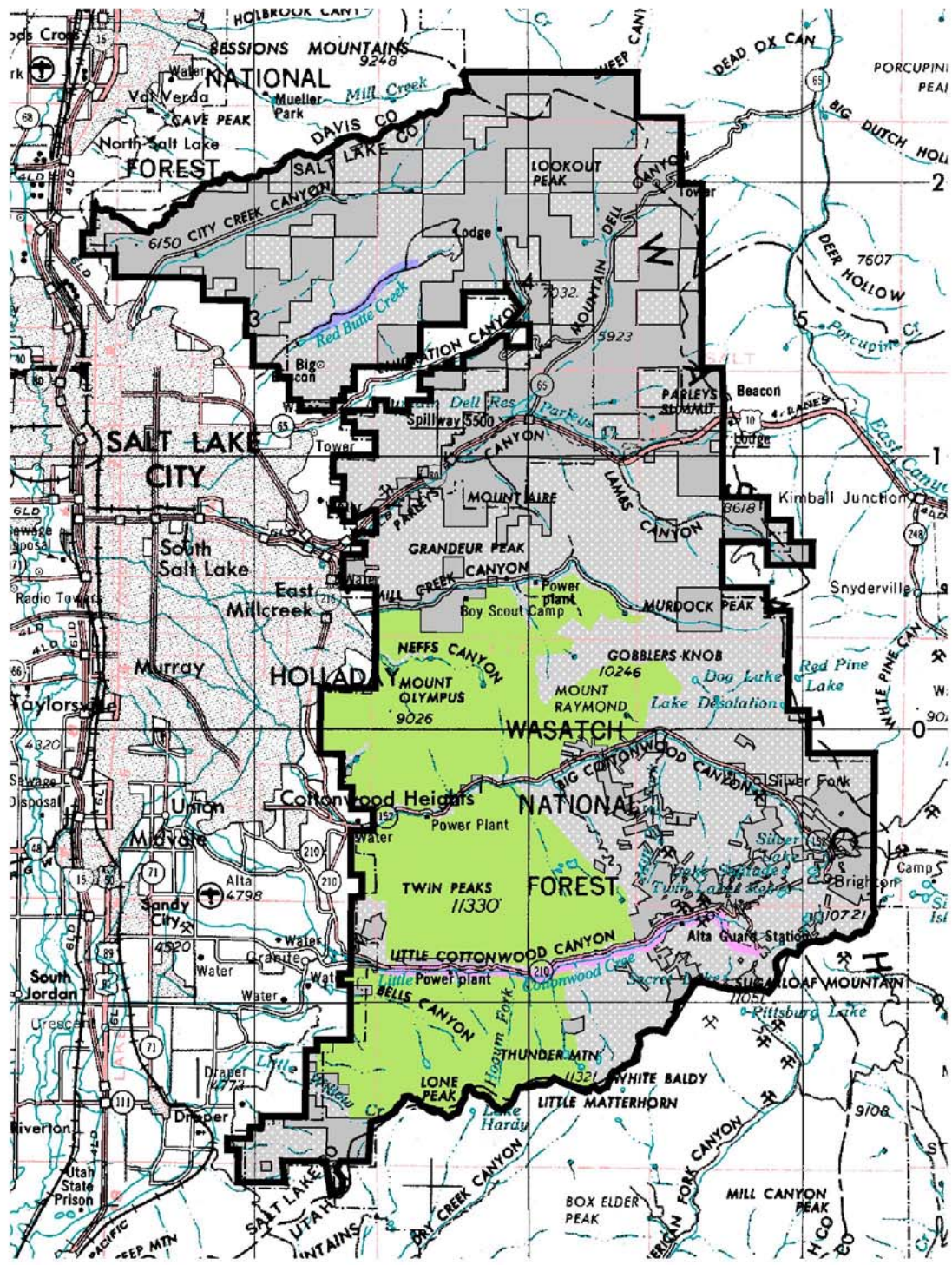
CACHE - BOX ELDER - ELIGIBLE WILD & SCENIC RIVERS





Eligible Wild & Scenic Rivers
Central Wasatch Management Area

Wasatch-Cache National Forest
Revised Forest Plan

Classification

- Wild
- Scenic
- Recreational
- Wasatch-Cache NF Administered Lands
- Wilderness
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

2 0 2 4 *Miles*

Scale 1:240,000

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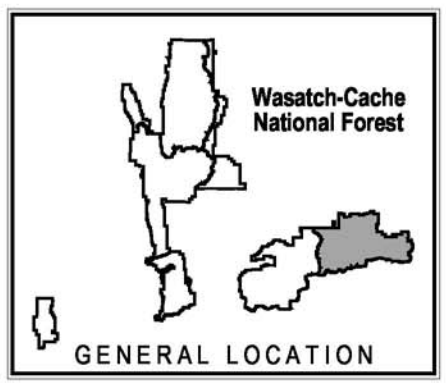

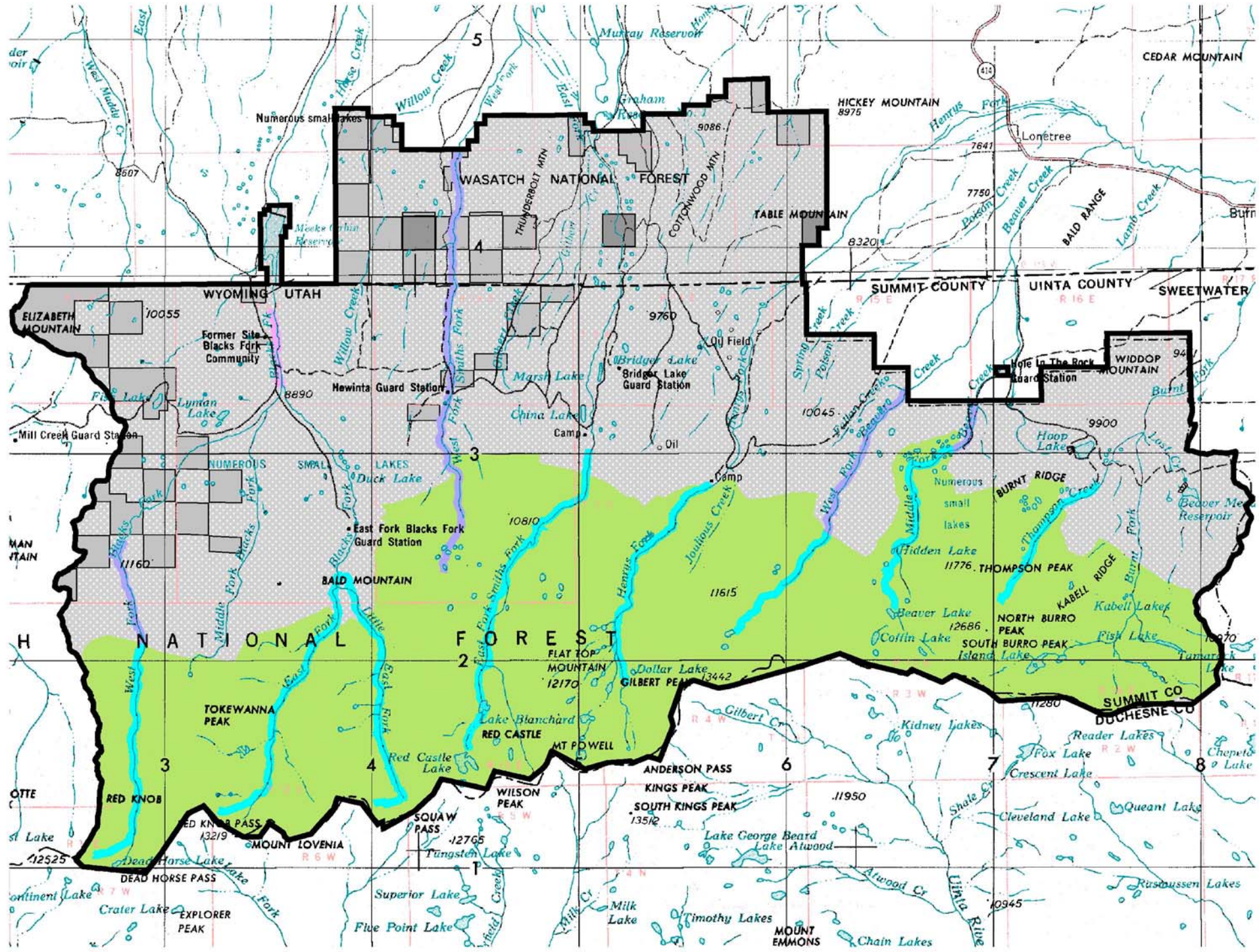

Eligible Wild & Scenic Rivers
Eastern Uintas Management Area

Wasatch-Cache National Forest
Revised Forest Plan

Classification

- Wild
- Scenic
- Recreational
- Wasatch-Cache NF Administered Lands
- Wilderness
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

2 0 2 4 Miles

Scale 1:240,000

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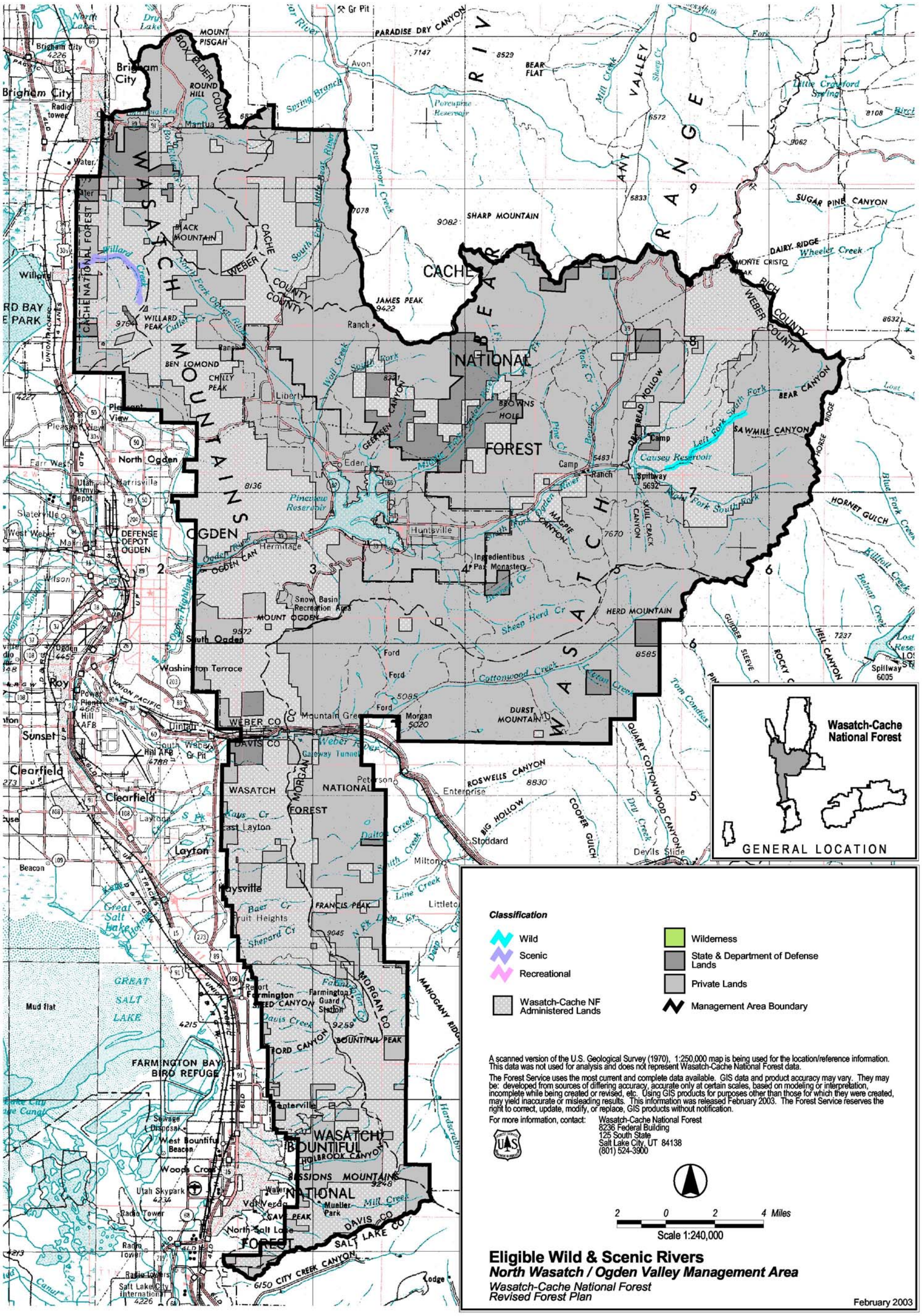
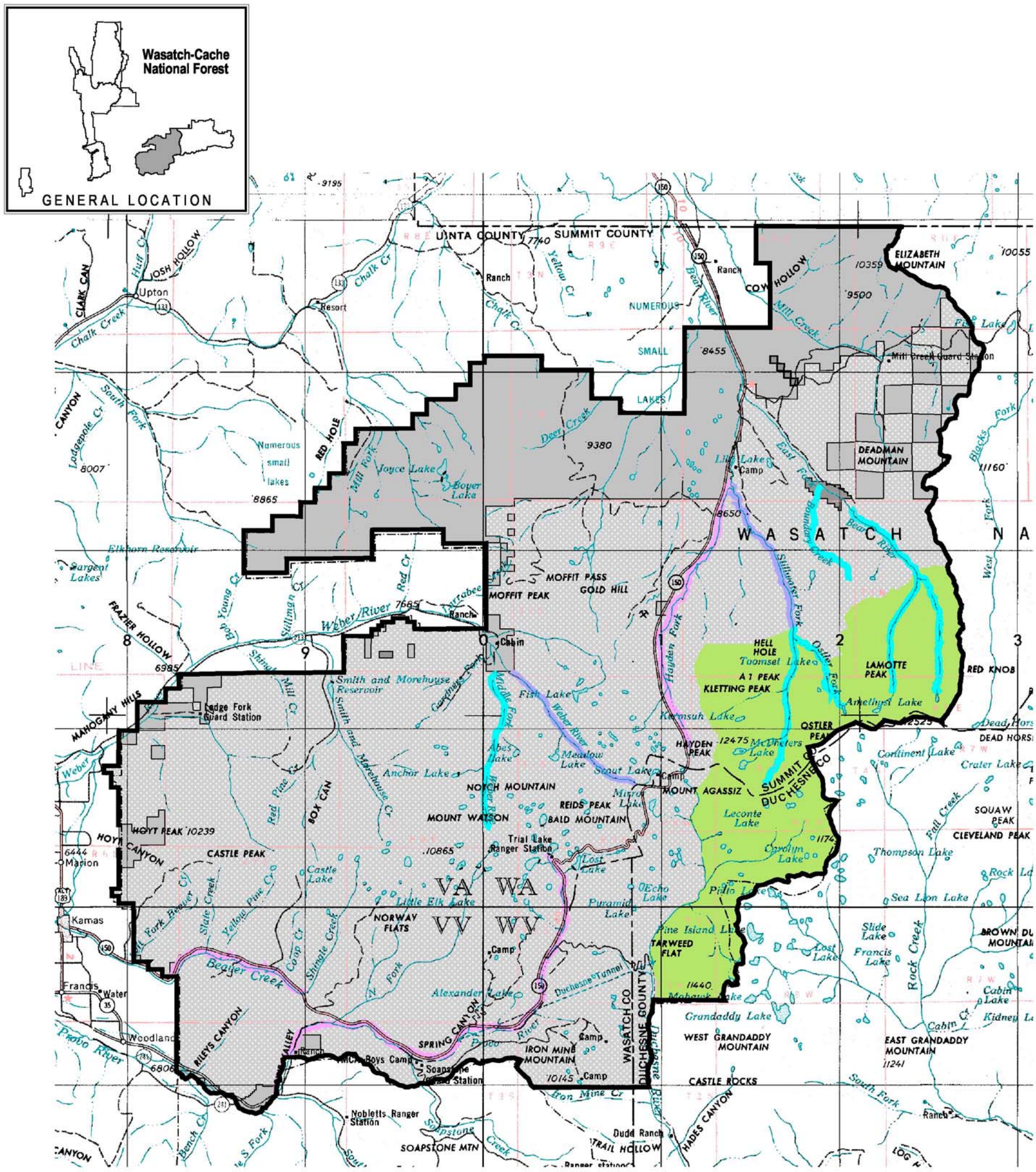
EASTERN UINTAS - ELIGIBLE WILD & SCENIC RIVERS



NORTH WASATCH - OGDEN VALLEY - ELIGIBLE WILD & SCENIC RIVERS



Eligible Wild & Scenic Rivers
Western Uintas Management Area

Wasatch-Cache National Forest
Revised Forest Plan

Classification

- Wild
- Scenic
- Recreational
- Wasatch-Cache NF Administered Lands
- Wilderness
- State & Department of Defense Lands
- Private Lands
- Management Area Boundary

2 0 2 4 Miles

Scale 1:240,000

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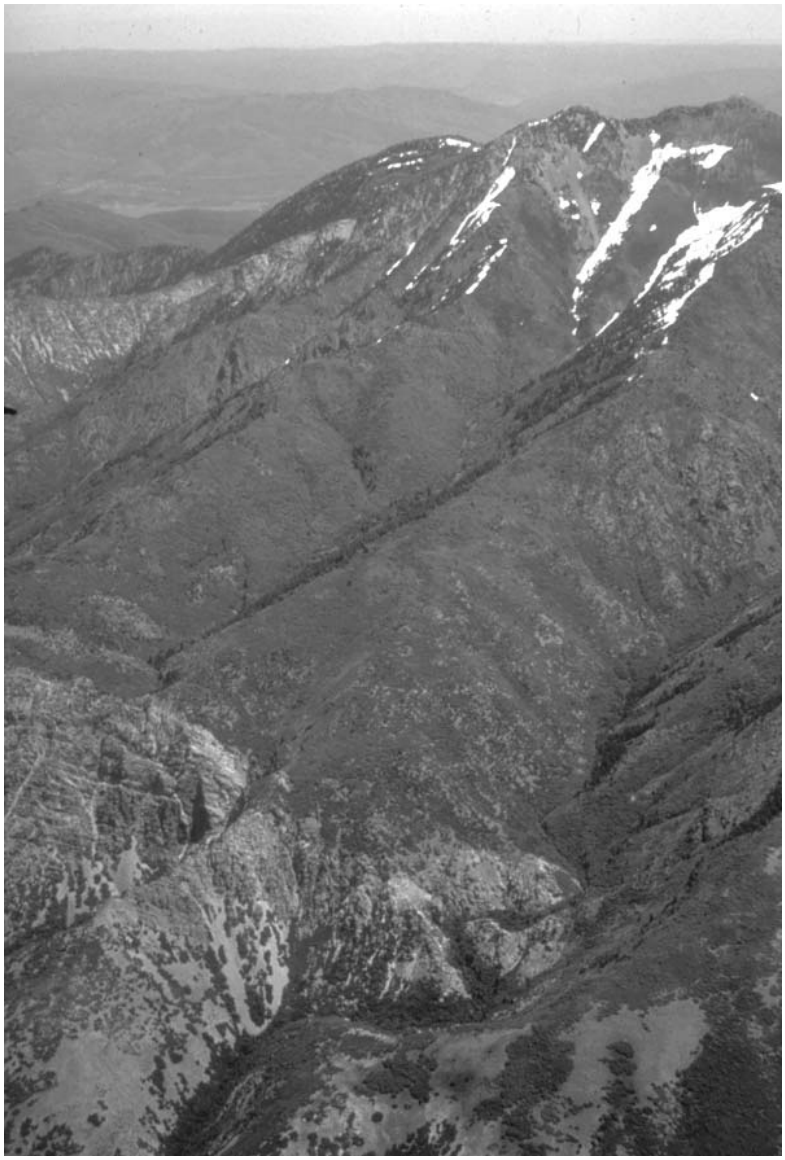
February 2003

WESTERN UINTAS - ELIGIBLE WILD & SCENIC RIVERS

Chapter Five

Implementation and Adaptation of the Forest Plan



Western side of Mount Ogden

CHAPTER 5

Implementation and Adaptation of the Forest Plan

Planning for Activities

Forest Service planning is a two-tiered process. The initial planning process established Forest-wide and management area goals, objectives, standards, and guidelines. This level of planning was programmatic in nature, and evaluated possible management activities across entire Forest. The initial analysis tested the feasibility of activities in arriving at a Forest Plan, but did not evaluate the site-specific effects of individual projects.

The second phase of the planning process is implementing site-specific activities designed to aid in achieving the goals, objectives, management direction, and desired future conditions established in the Plan.

Implementation of the Plan occurs at the project level, using site-specific analysis guided by the National Forest Management Act (NFMA) and the National Environmental Policy Act (NEPA), and other laws and regulations that may be involved in a specific proposal. Project-level compliance with NFMA is primarily concerned with consistency with the Plan and NFMA regulation. NEPA compliance involves the correct environmental analysis process for the specific proposal, and proper documentation and public disclosure of effects in an Environmental Assessment (EA), Environmental Impact Statement (EIS), or a Categorical Exclusion (CE).

Most proposed activities will be consistent with direction in the Plan. When specific proposals are found to be inconsistent with Plan direction, or site-specific analysis shows an error in the Plan, the Plan or the proposal must be adjusted according to the analysis. Most adjustments to the Plan can be accomplished through a non-significant amendment signed by the Forest Supervisor and documented in the appropriate environmental document. Significant amendments require documentation through an EIS/Record of Decision and must be signed by the Regional Forester. Although compliance with both NFMA and NEPA are related, they each require a separate analysis.

Valid outstanding rights

The 2002 Forest Plan was prepared with the understanding by the Forest Service that individuals and entities may have established valid rights, unknown to the Forest Service at this time, to occupy and use National Forest System lands under laws and authorities established by Congress. The courts have established that such valid outstanding rights may be subject to some federal regulation. See Sierra Club v. Hodel, 848 F 2d.1068 (10th Circuit, 1988). This plan recognizes that such valid outstanding rights may exist and the Forest Service will certainly honor such valid outstanding rights when it is subsequently determined that the specific facts surrounding any claim to such rights meet the criteria set forth in any respective statute granting such occupancy and use. See Washington County v. The United States, 903 F. Supp. 40 (D. Utah, 1995). Upon discovery of such valid outstanding rights, amendment or modification of the forest plan may be necessary. Resource plans and permits, contacts, cooperative agreements, and other instruments issued for the occupancy and use of National Forest System lands (hereafter "instruments") must be consistent with the Forest plan, subject to valid existing rights. All outstanding and future permits, contracts, cooperative agreements, and other instruments for use and occupancy will be brought into conformance within five years of Plan implementation.

Determinations of consistency are based on whether such instruments follow forest wide and management area standards and guidelines. If inconsistency is determined, the following alternatives are available to the Forest Supervisor: modify the proposal to be consistent with the plan, reject the proposal, or amend the plan to permit the proposal (FSH 1909.12, Ch. 5.31 (a)(1)).

Activities Allowed and Projected Outputs Under the Revised Forest Plan

The following listing of activities and projected outputs is based on *best estimates* of some of the types and amounts of work that could be completed to move toward desired conditions for the Forest during the planning period (10 years). A number of factors can affect whether and how much of any given activity actually can be implemented.

Budgets are determined annually based on what Congress appropriates for Forest Service projects and operations. Dollar amounts are allocated for specific "program areas" such as watershed, wildlife and fish, recreation, timber minerals, range, etc. at the national level. These funds are then allocated to each of the Regions of the Forest Service and subsequently divided among all of the National Forests within a given Region. The mix of funds at the individual National Forest level can vary based on how much and in what program areas Congress appropriated dollars as well as how these dollars are then allocated to each level of the Forest Service. In the case of activities such as oil and gas exploration and

development, implementation is dependent on private sector proposals and actions rather than Forest Service action.

Prior to implementation of most projects, there is required environmental analysis and planning that includes public review and comment as well as opportunities for appeals and litigation. Projects may be changed, delayed or even abandoned depending on the results of these processes. As new issues and new information arise, changes in priority and needs for action may change. Recent emphasis on fire management and wildland urban interface fuels reduction through the National Fire Plan is a good example of this.

Therefore, the following should be viewed as a set of estimates or projections subject to numerous adjustments based on the factors described above.

Revised Forest Plan Projected Activities and Outputs

Watershed Health (Total for 10 year planning period)	
Soil and Water Improvement Projects[1]	20
Aquatic Resources Improvement Projects[1]	25
Vegetation Treatments (Total acres for 10 year planning period)	
Prescribed Fire – Aspen and Aspen /Conifer Mixed[2]	32,000
Aspen/Conifer Vegetative Treatment[2]	5,000
Aspen/Conifer Commercial Harvest (acres) from MPC 5.2[2]	3,500
Prescribe Fire – Douglas-fir (non-lethal)[2]	2,000
Prescribed Fire – Sagebrush[2]	30,000
Mechanical Treatment – Oak[2]	20,000
Prescribed Fire – Oak[2]	8,000
ASQ/TSPQ Volume (MMBF)[3]	2.0/4.5
Range Livestock (annual)[4]	
Cattle Average AUMs	33,560
Sheep Average AUMs	24,300
Forest-wide Livestock Average AUMs	57,860
Roads (Total for 10 year planning period)	
New Timber Harvest Road Construction (miles)[1]	7
Projected New Oil and Gas Exploration roads (miles)[5]	7.5
Projected New Oil and Gas Development Roads (miles)[5]	4
Recreation	
Projected Number of New Developed Recreation Sites During Planning Period[1]	2
Projected Number of Recreation Facilities Maintained or Rehabilitated During Planning Period[1]	10
Oil and Gas Explorationand Development (Total for 10 year Planning Period	
Projected New Oil and Gas Exploration Well Pads [4]	5
Projected New Oil and Gas Fields Developed[5]	1

[1]Source of Information: WORD file "assumptions_by_resource_area_03082001.doc" in K:/pas/forest_plan/deis/alternatives/comparison.
[2]VDDT model was used to estimate how vegetation would change over time. For Alternatives 3,6 and 7 prescribed fire in aspen and aspen/conifer mixed is based on reaching PFC in 20 years. Estimated for prescribed fire, mechanical treatments, and harvest levels were based on budget constraints, mitigation requirements, standards and guidelines, and resources expected to be available to accomplish project planning.
[3]Source of information: ASQ/TSPQ values from Appendix B-1, Vegetation Modeling.
[4]Maximum and Minimum numbers are based on Actual Use Records for the Years 1990 to 2001. Note that these variations due to permittee operations, seasonal adjustments, and or non-compliance reductions, are of a magnitude far greater than any variation between FEIS Alternatives. See FEIS, Chapter 3, Table RN-2.
[5]WORD memo from Julie Hubbard titled "Oil and Gas Activities for Specialists While Estimating Effects 7/24/02".

Forest Plan Amendment and Revision

The Forest has adopted a Continuous Assessment and Planning (CAP) approach to its Forest Plan revision. Forest plans are normally revised on a 10-year cycle, with anticipated completion of the revision occurring 10-15 years after plan approval. One of the lessons learned from implementation of the current Forest Plan is that plans need to be dynamic to account for changed resource conditions (e.g. large scale wildfire) and changed regulations and policies (e.g. listing of the Canada Lynx as threatened under the Endangered Species Act). To keep plans current with changing conditions and issues, they often require amendment.

CAP recognizes the need to keep plans current and puts into place both procedures and an organization to conduct assessments and forest plan revisions.

The need to amend the plan may result from:

- Recommendations of an interdisciplinary team based on monitoring and evaluation results.
- Determinations by the Forest Supervisor that existing or proposed projects, permits, contracts, cooperative agreements, or other instruments authorizing occupancy and use are appropriate, but not consistent with elements of the Plan's management direction.
- Administrative appeal decisions.
- Planning errors found during forest plan implementation.
- Changes in physical, biological, social, or economic conditions.

The Forest Supervisor will determine whether the proposed changes in the Forest Plan are significant or non-significant. Significance here is defined by the National Forest Management Act regulations, and is different than significance as used under the National Environmental Policy Act.

Additional analysis in support of Plan implementation activities conducted at various scales above the project (site) level is also a form of CAP. Completing these analyses can improve our understanding of ecosystems and associated social and economic dimensions, and provide context information for project planning. Ecosystem analysis at the watershed scale, for example, is designed to help set the stage for project planning and NEPA analysis, focus ID team discussion on key watershed level management issues, and provide a basis for integrating project designs. This type of analysis is not a decision-making process in the context of NEPA.

Glossary

Alexander Lake, Uinta Mountains

GLOSSARY AND ACRONYMS

Sources for this glossary include: Forest Ecosystem Management: An Ecological, Economic, and Social Assessment; Report of the Forest Ecosystem Management Assessment Team (FEMAT); 1993; Region 4 Revision Desk Guide; Resource Planning Act Program Glossary 1995; and U.S.D.A. Forest Service Manual & Handbook, Executive Order 11987(Exotic Organisms); USDA Forest Service, People's Glossary of Ecosystem Management Terms (http://www.fs.fed.us/land/emterms.html)

Glossary

active nest
In regards to goshawk habitat, a goshawk nest known to have contained an egg. A nest need not have successfully produced fledglings (Utah Northern Goshawk Project Environmental Assessment, October 1999).

activity area
A land area impacted by a management activity, excluding specified transportation facilities, dedicated trails, and mining excavations and dumps. Activity areas include harvest units within timber sales, prescibed burn areas, and grazing areas within allotments. Riparian and other environmentally sensitive areas may be monitored and evaluated as individual activity areas within larger management areas.

adaptive management
A type of natural resource management in which decisions are made as part of an on-going process. Adaptive management involves testing, monitoring, evaluation, and incorporating new knowledge into management approaches based on scientific findings and the needs of society.

age class
An interval into which the age of species is divided for classification. An age grouping of trees according to an interval of years, usually 20 years. A single age class would have trees that are within 20 years of the same age, such as 1-20 years or 21-40 years.

air quality
The composition of air with respect to quantities of pollution therein; used most frequently in connection with "standards" of maximum acceptable pollutant concentrations.

allotment (grazing)
Area designated for the use of a certain number and kind of livestock for a prescribed period of time.

Allotment Management Plan (AMP)
A document prepared in consultation with the permittees(s) involved that specifies the program of action for implementation of the forest plan as related to livestock grazing activities. Each allotment on National Forest System lands is required to have an Allotment Management Plan. Each plan must be reviewed and updated every 10 years or if conditions deem necessary,

whichever comes first.

Allowable Sale Quantity (ASQ)
The quantity of timber on a forest that may be sold from a designated area for a specified time period. ASQ is determined in the Forest Plan.

alternate nest area
In regards to goshawk habitat, goshawk *home ranges* often contain two or more nest areas, only one of which will be active in a give year. Alternate nest areas are normally historical nest areas (Utah Northern Goshawk Project Environmental Assessment, October 1999).

Animal Unit Month (AUM)
The amount of *forage* required by a one thousand (1,000) pound cow, or its equivalent, for one month.

Appropriate Management Response
Specific actions taken in response to a wildland fire to implement protection and fire use objectives.

Appropriate Management Strategy
A plan or direction selected through a decision process to guide wildland fire management actions to meet protection and fire use objectives. The planned strategy for suppression action in terms of kind, amount, and timing on a wildland fire that most efficiently meets fire management direction under current and expected burning conditions.

aquatic ecosystem
40 CFR 230.3 - Waters of the United States that serve as habitat for interrelated and interacting communities and populations of plants and animals. FSM 2526.05 - The stream channel, lake or estuary bed, water, biotic communities and the habitat features that occur therein.

baseline
The first set of data collected at an established monitoring site, to be compared with subsequent monitoring data from the same location.

beneficial use
An actual or potential use that may be made of the waters of the state that is protected against quality degradation. Examples of beneficial uses include domestic, agricultural, and industrial water supplies, recreation, aquatic life, aesthetics, wildlife habitat, and salmon spawning.

Best Management Practice (BMP)
A practice or combinaton of practices, that is determined by a State after problem assessment, examination of alternative practices, and appropriate public participation to be the most effective and practical means of preventing or reducing the amount of pollution generated by non-point sources to a level compatible with water quality goals (40 CFR 130.2(q)).
Best Mangement Practices as defined by State of Utah-Division of Water Quality regulation or agreement between the State of Utah and Forest Service include the following (appendix A):

State of Utah Non Point Source Management Plan for Silvicultural Activitie.s
State of Utah Non Point Source Management Plan for Hydrologic Modifications.
Salt Lake County Water Quality and Pollution Control: Erosion and Sediment Control Handbook.

big game
Large mammals, such as deer, elk, and antelope that are hunted for sport.

biological diversity (or biodiversity)
The variety and abundance of life and it's processes. It includes all living organisms, the genetic differences among them, and the communities and ecosystems in which they occur. Biological diversity also refers to the compositions, structures, and functions of species and habitats and their interactions.

blowdown
Trees felled or broken off by wind.

board foot
A measurement of wood equivalent to a board one foot square and one inch thick. Usually expressed in terms of thousand board feet (MBF) or million board feet (MMBF).

browse
Twigs, leaves, and young shoots of trees and shrubs that animals eat. Browse is often used to refer to the shrubs eaten by big game, such as elk and deer.

candidate species
Plant and animal species being considered for listing as endangered or threatened, in the opinion of the U.S. Fish & Wildlife (FWS) or the National Marine Fisheries Service (NMFS). Category 1 candidate species are groups for which the FWS or NMFS has sufficient information to support listing proposals; category 2 candidate species are those for which available information indicates a possible problem but need further study to determine the need for listing.

canopy
The part of any stand of trees represented by the tree crowns. It usually refers to the uppermost layer of foliage, but it can be use to describe lower layers in a multi-storied forest.

capability
The potential of an area of land to produce resources, supply goods and services, and allow resource uses under an assumed set of management practices at a given level of management intensity. Capability depends upon current conditions and site conditions such as climate, slope, landform, soils, and geology, as well as the application of management practices, such as silviculture or protection from fire, insects, and disease.

cave
Any naturally formed void, cavity, recess, or system of interconnected passages that occur

beneath the surface of the earth or within a cliff or ledge, including natural subsurface water and drainage systems, that is large enough to permit a person to enter, whether or not the entrance is naturally formed or human-made. The term "cave" also includes any natural pit, sinkhole, or other feature that is an extension or component of a cave. See also *significant*.

cave life
All life forms, including plants and vertebrate or invertebrate animals, endemic (indigenous) to *caves* or that commonly use *caves* during the completion of their life cycles.

cavity
A hole in a tree often used by wildlife species, usually birds, for nesting, roosting, and reproduction.

chaining
The act of dragging of a heavy chain between two vehicles to reduce or clear shrubs or saplings from an area.

chemical control
The use of pesticides and herbicides to control pests and undesirable plant species.

clearcut
A harvest method removing all trees in a *stand* in one cutting.

composition
What an ecosystem is composed of. Composition could include water, minerals, trees, snags, wildlife, soil, microorganisms, and certain plant species,

composition (species)
The species that make up a plant or animal community, and their relative abundance.

concentrated use area
Concentrated Use Area (CUA) is where the Forest Service invest management time or dollars for the management of sites or areas of recreation activity that leave evident impacts, such as litter, vandalism, or soil compaction. Any constructed features or management activities are primarily for resource protection rather than user convenience. The primary management objective is to protect and stabilize natural resources.

concern level
Is a measure of the degree of public importance placed on how landscapes are viewed from travelways and use areas.

conifer
A tree that produces cones, such as a pine, spruce, or fir tree.

connectivity
The degree to which similar but separated vegetation components of a landscape are connected.

conservation agreement
A formal written agreement for implementing the conservation strategy. It describes specific actions and responsibilities of the participating agrencies.

conservation strategy
A written document describing specific actions required to reduce or eliminate threats to candidate species or species of special concern and to assure their long-term survival.

Controlled Surface Use (CSU)
See *leasing stipulations*.

corridor (landscape)
Landscape elements that connect similar patchers of habitat through an area with different characteristics. For example, streamside vegetation may create a corridor of willows and hardwoods between meadows or through a forest.

cover type
Stands of a particular vegetation type that are composed of similar species. The aspen cover type contains plants distinct from the pinyon-juniper cover type.

critical habitat
Areas designated for the survival and recovery of federally listed threatened or endangered species.

cultural element
Attributes in a human-altered landscape; scenically positive cultural elements, most of which have historical backgrounds or nostalgic connotations. Examples include split-rail fences, stone walls, barns, orchards, hedgerows, and cabins.

cultural landscape
Human-altered landscapes, especially those slowly evolving landscapes with scenic vegetation patterns or scenic structures. Addition of these elements creates a visually pleasing complement to the natural character of a landscape.

cultural resource
The remains of sites, structures, or objects used by people in the past; this can be historical or pre-historic. A synonym for heritage resource

cumulative effects
Impacts on the environment that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

CWD (coarse woody debris)
Pieces of woody material having a diameter of at least three inches and a length greater than

three feet (also referred to as large woody debris, or LWD).

decadent
Marked by decay or decline.

decommissioning
Various levels of treatment to stabilize and rehabilitate unneeded roads or trails, such as blocking the entrance, revegetating, water barring, removing fills and culverts, reestablishing drainage ways, removing unstable road shoulders, or full obliteration by recontouring and restoring natural slopes.

designated dispersed site
An area used as a campsite or recreation site that includes a hardened, barren area. Sites are hardened to encourage use in those areas, and reduce use in more fragile areas.

desired landscape character
Appearance of the landscape to be retained or created over time, recognizing that a landscape is a dynamic and constantly changing community of plants and animals. This is a combination of landscape design attributes and opportunities, as well as biological opportunities and constraints.

developed recreation
Primary management objective is to provide enhancement of recreation opportunities through site modification and providing various amenities. Example ski resorts, campgrounds, etc..

deviation
Departure from described landscape character or from landscape character goals. Deviation from described landscape character can be positive, negative, or have no effect.

DFC (Desired Future Condition)
A portrayal of the land, resource, or social and economic conditions that are expected to result in 50-100 years if objectives are achieved. A vision of the long-term conditions of the land.

Dispersed Recreation
Dispersed Recreation is where undeveloped recreation activities and their associated impacts are dispersed through out the Forest. Any constructed amenities or management are for resource protection rather than user convenience. Undeveloped Recreation and Concentrated Use Area are included in Dispersed Recreation.

distance zones
Landscape areas denoted by specified distances from the observer. Used as a frame of reference in which to discuss landscape attributes or the scenic effect of human activities in a landscape.

disturbance
Any event, such as wildfire or a timber sale, that alters the structure, composition, or function of an ecosystem.

disturbance regime
All known current and historical *disturbances* of a subject area.

down woody debris
Dead woody material, such as limbs and large roots, on the ground or in streams.

ecological integrity
The degree to which the elements of biodiversity and the functions that link them together and sustain the entire system are complete and capable of performing desired functions.

ecological function
The process through which the constituent living and nonliving elements of ecosystems change and interact, including biogeochemical processes and succession.

ecological processes
The actions or events that link organisms (including humans) and their environment such as disturbance, successional development, nutrient cycling, carbon sequestration, productivity, and decay.

ecosystem
An arrangement of living and non-living things and the forces that move among them. Living things include plants and animals. Non-living parts of ecosystems may be rocks and minerals. Weather and wildfire are two of the forces that act within ecosystems.

ecosystem health
A condition where the parts and functions of an ecosystem are sustained over time and where the system's capacity for self-repair is maintained, such that goals for uses, values, and services of the ecosystem are met.

ecosystem management
Scientifically based land and resource management that integrates ecological capabilities with social values and economic relationships, to produce, restore, or sustain ecosystem integrity and desired conditions, uses, products, values, and services over the long term.

eligibility (for Wild and Scenic Rivers)
A river is eligible for inclusion in the National Wild and Scenic River System if it is free-flowing and has at least one river-related value that is considered outstandingly remarkable.

endangered species
A plant or animal that is in danger of extinction throughout all or a significant portion of its range. The Secretary of the Interior in accordance with the Endangered Species Act of 1973 identifies endangered species.

endemic plant/organism- A plant or animal that occurs naturally in a certain region and whose distribution is relatively limited geographically. (see also: *indigenous, global distribution*)

erosion
The wearing away of the land surface by wind or water.

even-aged stand
A group of trees of a single *age class*.

even-aged silvicultural system
A method to regenerate and maintain a *stand* with a single *age class* of trees.

Existing Scenic Integrity ("Existing visual condition")
Current state of the landscape, considering previous human alterations.

exotic species
All species of plants and animals not naturally occurring, either presently or historically, in any ecosystem of the United States.

fire cycle
The average time between fires in a given area.

Fire Management Plan (FMP)
A strategic plan that defines a program to manage wildland and prescribed fires and documents the Fire Management Program in the approved land use plan. The plan is supplemented by operational plans such as preparedness plans, preplanned dispatch plans, prescribed fire plans, and prevention plans.

fire regime
The characteristics of fire in a given ecosystem, such as the frequency, predictability, intensity, and seasonality of fire.

fire use
The combination of wildland fire use and prescribed fire application to meet resource objectives.

fisheries habitat
Streams, lakes, and reservoirs that support fish, or have the potential to support fish.

flood plain
A lowland adjoining a watercourse. At a minimum, the area is subject to a 1% or greater chance of flooding in a given year.

forage
Plant material (usually grasses, forbs, and brush) that is available for animal consumption.

forbs
Broadleaf ground vegetation with little or no woody material.

forest health
A measure of the robustness of forest ecosystems. Aspects of forest health include biological diversity; soil, air, and water productivity; natural disturbances; and the capacity of the forest to provide a sustaining flow of goods and services for people.

forest road
As defined in Title 23, Section 101 of the United States Code (23 U.S.C. 101), any road wholly or partly within, or adjacent to, and serving the National Forest System and which is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources. (FSM 7705 - Transportation System)

Forest Service Manual (FSM)
The Forest Service Manual (FSM) contains legal authorities, objectives, policies, responsibilities, instructions, and guidance needed on a continuing basis by Forest Service line officers and primary staff in more than one unit to plan and execute assigned programs and activities. See also *Forest Service Handbook (FSH)* below.

Forest Service Handbook (FSH)
The Forest Service Handbooks (FSH) are the principal source of specialized guidance and instruction for carrying out the direction issued in the *Forest Service Manual (FSM)*. Specialists and technicians are the primary audience of handbook direction. Handbooks may also incorporate external directives (such as the Federal Property Management Regulations in FSH 6409.31) with related USDA and Forest Service directive supplements. See also *Forest Service Manual (FSM)* above.

forest transportation system management
The planning, inventory, analysis, classification, record keeping, scheduling, construction, reconstruction, maintenance, decommissioning, and other operations undertaken to achieve environmentally sound, safe, cost-effective, access for use, protection, administration, and management of National Forest System lands. (FSM 7705 - Transportation System)
fragmentation
The splitting or isolating of patches of similar habitat, typically forest cover, but including other types of habitat. Habitat can be fragmented naturally or from forest management activities.

free-flowing
A stream that exists or flows in a natural condition without impoundment, diversion, straightening, rip-rapping, or any other modification of the waterway.

fuels
Plants and woody vegetation, both living and dead, that are capable of burning.

fuels management
The treatment of fuels that would otherwise interfere with effective fire management or control. For instance, prescribed fire can reduce the amount of fuels that accumulate on the forest floor before the fuels become so heavy that a natural wildfire in the area would be explosive and

impossible to control.

fuelwood
Wood cut into short lengths for burning.

function
All the processes within an ecosystem through which the elements interact, such as succession, the food chain, fire, weather, and the hydrologic cycle.

GIS (Geographic Information System)
A computer system that stores and uses spatial (mappable) data.

global distribution
The occurrences of plant and animals over their range. Commonly refered to in terms of endemism including disjunct (seperated from the main population), local endemic (range of distribution is less than 100 square miles), regional endemic (global distribution is between 100 and 10,000 square miles), sparsely distributed (widespred but sporadic), peripheral (on the edge of its range), widespread, and circumboreal or circumpolar.

goal
A concise statement that describes a desired condition to be achieved some time in the future. It is normally expressed in broad, general terms, without any specific date for attainment.

ground cover
The percentage of material, other than bare ground (or pavement – rock less than ¾ inch in diameter), covering the land surface. It may include live vegetation, standing dead vegetation, litter, cobble, gravel, stones and bedrock. Ground cover plus bare ground and pavement would total 100 percent.

ground water
The supply of fresh water under the earth's surface in an aquifer or in the soil.

group selection
A method of tree harvest in which trees are removed periodically in small groups. This silvicultural treatment results in small openings that form mosaics of age class groups in the forest.

guideline
Statement describing a preferred or advisable course of action that is generally expected to be carried out. Deviation from compliance does not require Forest Plan amendment, but the rationale for such deviation shall be documented in the project decision document.

habitat
The place where a plant or animal lives and grows under natural conditions.

heritage resource
The remains of sites, structures, or objects used by people in the past - our cultural patrimony; this can be historical or pre-historic. Generally a synonym for cultural resource, although heritage resource may be more broadly inclusive.

historical range of variability (HRV)
The natural fluctuation of the components of a healthy ecosystem over time. Refers to the range of conditions and processes that are likely to have occurred prior to settlement of the project area by people of European descent (approximately the mid-1800s), which would have varied within certain limits over time.

home range
In regards to goshawk habitat, the area that a goshawk habitually uses during nesting, resting, bathing, foraging, and roosting. A nesting home range contains nest areas (*active nests* and historical nests), the *Post Fledgling Area (PFA)*, and the foraging area (Utah Northern Goshawk Project Environmental Assessment, October 1999).

HUC (Hydrologic Unit Codes)
A coding system developed by the U.S. Geological Service to map geographic boundaries of watersheds of various sizes.

hydrologic cycle
Also called the water cycle, this is the process of water evaporating, condensing, falling to the ground as precipitation, and returning to the ocean as run-off.

hydrology
The study of the properties, distribution, and circulation of water on the earth's surface, in the soil and rocks, and in the atmosphere.

immediate foreground
The detailed feature landscape found within the first few hundred feet of the observer, generally from the observer to 300 feet away. This distance zone is normally used in project level planning, not broad scale planning.

indigenous (species)
A species which originally inhabitated a particular National Forest or National Grassland.

instream flow
The quantity of water necessary to meet seasonal stream flow requirements to accomplish the purposes of the National Forests, including, but not limited to fisheries, visual quality, and recreational opportunities.

intermittent stream
A stream or portion of a stream that does not flow year-round but only when it receives base flow solely during wet periods, or receives groundwater discharge or protracted contributions from melting snow or other erratic surface and shallow subsurface sources.

introduction (species)
The release, escape, or establishment of an exotic species intoa natural ecosystem.

landscape
A large land area composed of interacting ecosystems that are repeated due to factors such as geology, soils, climate, and human impacts. Landscapes are often used for coarse grain analysis.

Landscape Character Theme (LCT)
A broad description of land use patterns, vegetation processes or patterns, or dominant characteristics found in a landscape.

Lease Notices (LN)
See *leasing stipulations*.

leasing stipulations
The stipulations applied to all new leasable mineral operations.

> **Controlled Surface Use (CSU)**
> Use and occupancy are allowed but are restricted to mitigate effects on particular resources, such as requiring operations to meet a *visual quality objective*.
>
> **Lease Notices (LN)**
> This notice may be used in addition to one of the stipulations listed above to identify specific concern(s) that may impact lease operations on a given lease. Lease Notices do not involve additional restrictions or requirements.
>
> **No Lease (NL)**
> No new leases are authorized or unavailable for lease.
>
> **No Surface Occupancy (NSO)**
> Well sites, tank batteries, or similar facilities are not allowed to occupy the surface of specified lands.
>
> **Standard Lease Terms (SLT)**
> No special stipulations are applied and current environmental protection laws and the Federal Onshore Oil and Gas Leasing Reform Act orders restrict the operation.
>
> **Timing Limitations (TL)**
> Activities are restricted or prohibited during certain time periods.

Limits of Acceptable Change (LAC)
A planning framework that establishes explicit measures of the acceptable and appropriate resource and social conditions in recreation settings, and establishes the appropriate management strategies for maintaining or achieving those conditions.

Lynx Analysis Unit (LAU)
An project analysis unit upon which direct, indirect, and cumulative effects analyses are performed. LAU boundaries remain constant to facilitate planning and allow effective monitoring of habitat changes over time. They are generally the size used by an individual lynx, about 25-50 square miles. These units were developed in conjunction with the U.S. Fish and Wildlife Service and the Utah Division of Wildlife Resources.

lynx habitat currently in unsuitable condition
Areas within identified/mapped lynx habitat that are in early successioinal stages as a result of recent fires or vegetation management, in which the vegetation has not developed sufficiently to support snowshoe hare populations during all seasons. Management-created openings would likely include clearcut and seed tree harvest units, and might include shelterwood and commercially-thinned stands depending on unit size and remaining stand composition and structure.

macroinvertebrate
An animal having no backbone or internal skeleton, large enough to be seen without magnification.

management activity
An activity humans imposed on a landscape for the purpose of managing natural resources.

management prescription
"Management practices and intensity selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives." 36 CFR 219.3. The categories provide a description of general direction for the management of a specific area based on the resource emphasis. Sometimes called "management prescription categories."

MCF (thousand cubic feet)
A cubic foot is a measurement of wood 1 x 1 x 1 ft (30.48 x 30.48 x 30.48 cm), in this case expressed in terms of a thousand cubic feet. Most measurements are now made in *CCF*, hundred cubic feet. See also *MMBF*.

metapopulation
A collection of localized populations that are geographically distinct yet are genetically interconnected through natural movement of individuals among conservation populations.

MIS (Management Indicator Species)
Representative species whose habitat conditions and population changes are used to assess the impacts of management activities on similar species in a particular area.

mitigation measures
Modifications of actions that (1) avoid impacts by not taking a certain action or parts of an action; (2) minimize impacts by limiting the degree or magnitude of the actions and it implementation; (3) rectify impacts by repairing, rehabilitating, or restoring the affected environment; (4) reduce or eliminate impacts over time by preservation and maintenance

operations during the life of the action; or (5) compensate for impacts by replacing or providing substitute resources or environments.

MMBF (million board feet)
A board foot is a measurement of wood 1 x 12 x 12 inches (2.54 x 30.5 x 30.5 cm), in this case expressed in terms of a million board feet. Most measurements are now made in *CCF*, hundred cubic feet.

monitoring
The process of collecting information to evaluate if objectives and anticipated results of a management plan are being realized, or if implementation is proceeding as planned.

monoculture
A single variety of a particular species growing in one area.

mosaic
Areas with a variety of plant communities over a landscape, such as areas with trees and areas without trees occurring over a landscape.

multiple-use
According to the Multiple-Use Sustained-Yield Act of 1960, the management of all the various renewable surface resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

National Forest Scenic Byway
A road on National Forest System Land that has been designated by the Chief of the Forest Service for its exceptional scenic, historic, cultural, recreational, or natural resources.

National Forest System Road
Any road under the jurisdiction of the Forest Service, including roads on the forest transportation system. National Forest System roads are not public roads, in that they are not funded through the Federal Highway Administration (FSM 7700). Previously called a Forest Development Road (FDR).

native species
All species of plants and animals naturally occurring, either presently or historically, in any ecosystem of the United States.

natural disturbance
Periodic impact or natural events such a fire, severe drought, insect or disease attack, or wind.

natural range of variability
See *range of variability*

No Lease (NL)
See *leasing stipulations*.

non-point source
A source of pollutants that flow into surface waters from agricultural run-off from fields, urban run-off from paved streets and parking areas, mining and forestry operations, and atmospheric deposition. See also *point source.*

No Surface Occupancy (NSO)
See *leasing stipulations.*

noxious weed
Those plant species designated as noxious weeds by the Secretary of Agriculture or by the responsible State official. Noxious weeds generally possess one or more of the following characteristics: aggressive and difficult to manage, poisonous, toxic, parasitic, a carrier or host of serious insects or disease, and being native or new to or not common to the United States or parts thereof (FSM 2080).

nutrient cycling
Circulation or exchange of elements such as nitrogen and carbon between non-living and living portions of the environment. Includes all mineral and nutrient cycles involving mammals and vegetation.

objective
A concise time-specific statement of measurable planned results that move toward pre-established *goals*. An objective helps define the precise steps to be taken and the resources to be used in achieving identified *goals.*

objective maintenance level
The maintenance level to be assigned at a future date considering future road management objectives, traffic needs, budget constraints, and environmental concerns. The objective maintenance level may be the same as, or higher or lower than, the operational maintenance level. (FSH 7709.58, Sec12.3 - Transportation System Maintenance Handbook)

OHV (Off Highway Vehicle)
See *ORV*

operational maintenance level
The maintenance level currently assigned to a road considering today's needs, road condition, budget constraints, and environmental concerns. It defines the level to which the road is currently being maintained. (FSH 7709.58, Sec 12.3 - Transportation System Maintenance Handbook)

ORV (Off-Road Vehicles)
Vehicles such as motor cycles, 4-wheel drive vehicles, and 4-wheelers.

outstandingly remarkable value
Characteristic of a river segment that is judged to be a rare, unique, or exemplary feature that is significant at a regional or natural scale. Values can be recreational, scenic, geological, historical, cultural, biological, botanical, ecological, heritage, hydrological, paleontological, scientific, or research-related.

overstory
In a forest with multiple layers of vegetation, the portion of the trees forming the uppermost (canopy) layer.

patch
An area of homogeneous vegetation, in structure and composition.

patch cut
A clearcut that creates small openings in a stand of trees, usually between 15 and 40 acres in size. Patch cuts are used to provide the disturbance needed to regenerate aspen.

pattern
The spatial arrangement of landscape elements (patches, corridors, matrix) that determines the function of a landscape as an ecological system.

People At One Time (PAOT)
A recreational capacity measurement term indicating the number of people who can use a facility or area at one time.

perennial
When referring to bodies of water, perennial waters are defined as waters that are present during all seasons of a year.

PFC (Properly Functioning Condition)
Ecosystems are in PFC when they function within their historic range of variability.

point source
A source of pollutants that is discernable and confined such as a pipe, ditch, channel, conduit, or tunnel. Point sources exclude agricultural discharges (see *non-point source*).

pole/sapling
The stage of forest succession in which trees are between 3 and 7 inches in diameter and are the dominant vegetation.

positive cultural element
Human alterations that are scenically positive attributes, most of which have historical backgrounds or nostalgic connotations. Examples include split-rail fences, stone walls, barns,

orchards, hedgerows, and cabins. There may be nodes, enclaves or constellations of positive cultural elements.

Post Fledgling Area (PFA)
In reference to goshawk habitat, an area of concentrated use by the goshawk family after the young leave the nest. (From the Utah Northern Goshawk Project Environmental Assessment, October 1999.) " Identify a Post-Fledgling Area (PFA) that encompasses the active, alternate, and replacement goshawk nest sites and additional habitat needed to raise fledglings. A PFA should be approximately 420 acres in size (in addition to the 180 nest area acres) when sufficient suitable habitat exists. If sufficient amounts of suitable habitat are not present, use existing suitable habitat that is available."

precommercial thinning
Removing some of the trees from a stand that are too small to be sold for lumber or house logs, so the remaining trees will grow faster.

prescribed fire
Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist, and NEPA requirements must be met before ignition

prescription
Management practices and intensity selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives.

Properly Functioning Condition (PFC)
Ecosystems are in PFC when they function within their historic range of variability.

private road
A road under private ownership authorized by easement to a private party, or a road which provides access pursuant to a reserved or private right. (FS-643, Roads Analysis; Informing Decisions About Managing the National Forest Transportation System, August 1999.).

rangeland
Land on which the principle natural plant cover is composed of native grasses, forbs, and shrubs that are valuable as forage for livestock and big game.

rangeland condition

> **Satisfactory.** When the desired rangeland condition is being met or short-term objectives are being achieved to move the rangeland toward desired conditions; either meeting or moving toward desired conditions.
>
> **Unsatisfactory.** When the desired rangeland condition is not being met and short-term objectives are not being achieved to move the rangeland toward desired conditions; not meeting or moving toward desired condition.

rare

Taxa with small populations that are not at present "Threatened" or "Endangered" but are at risk. These taxa are usually localized within restricted geographical areas or habitats (e.g. narrow endemics) or are more widespread and thinly scattered (i.e. numerically rare) over a more extensive range.

rare plant communities
Plant communities that may be globally rare, or that may be common globally, but rare on the Wasatch-Cache National Forest, or portions of the Wasatch-Cache National Forest.

reconstruction (or realignment of a road)
Activity that results in improvement or realignment of an existing *classified road* as defined below:

> **road improvement**
> Activity that results in an increase of an existing road's *traffic service level*, expands its capacity, or changes its original design function.
>
> **road realignment**
> Activity that results in a new location of an existing *road* or portions of an existing *road* and treatment of the old roadway." (36 CFR 212.1)

recommended sensitive plant
Those plants that meet the criteria for the regional sensitive species list, but have not been formally placed on the list.

Recreation Opportunity Spectrum (ROS)
A framework for stratifying and defining classes of outdoor recreation environments, activities, and experience opportunities. The settings, activities, and opportunities for obtaining experiences are arranged along a continuum or spectrum divided into six classes--primitive, semiprimitive non-motorized, semiprimitive motorized, roaded natural, rural, and urban.

Recreation Visitor Day (RVD)
Twelve hours of recreation use in any combination of persons and hours (one person for 12 hours, three persons for four hours, etc.).

Research Natural Area (RNA)
An area in or as near a natural condition as possible that is set aside to preserve a representative sample of an ecological community, primarily for scientific and educational purposes.

resilient, resiliency
The ability of a system to respond to disturbances. Resiliency is one of the properties that enable the system to persist in many different states of successional stages. In human communities, refers to the ability of a community to respond to externally induced changes such as larger economic or social forces.

riparian (riparian ecosystem)
Land areas that are directly influenced by water. They usually have visible vegetative or physical characteristics showing this water influence. Steamsides, lake borders, or marshes are typical of riparian areas. The ecosystems around or next to water areas that support unique vegetation and animal communities as a result of the influence of water.

Riparian Habitat Conservation Area (RHCA)
Riparian Habitat Conservation Areas include traditional riparian corridors, wetlands, intermittent streams, and other areas that help maintain the integrity of aquatic ecosystems by (1) influencing the delivery of coarse sediment, organic matter, and woody debris to streams, (2) providing root strength for channel stability, (3) shading the stream, and (4) protecting water quality. This designation still allows for a full range of activities but it emphasis the achievement of riparian management objectives that are identified on a site-by-site basis. These objectives should include riparian vegetation and instream habitat condition. The RHCAs, by condition, are defined below.

Category 1. FISH-BEARING STREAM: RHCAs consist of the stream and the area on either side of the stream extending from the edges of the active stream channel to 300 feet slope distance (600 feet, including both sides of the stream channel).

Category 2 - PERMANENTLY FLOWING NON-FISH-BEARING STREAMS: RHCAs consist of the stream and the area on either side of the stream extending from the edges of the active stream channel to 150 feet slope distance (300 feet, including both sides of the stream channel)

Category 3 - PONDS, LAKES, RESERVOIRS, AND WETLANDS GREATER THAN 1 ACRE: RHCAs consist of the body of water or wetland and the area to 150 feet slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond or lake,.

Category 4 - SEASONALLY FLOWING OR INTERMITTENT STREAMS, WETLANDS LESS THAN 1 ACRE, LANDSLIDES, AND LANDSLIDE-PRONE AREAS: This category includes features with high variability in size and site-specific characteristics. At a minimum the interim RHCAs must include, landslides and landslide-prone areas, 100 feet slope distance in watersheds containing Bonneville or Colorado River cutthroat trout, and 50 feet slope distance for watersheds not containing Bonneville or Colorado River cutthroat trout.

riparian zone
Those terrestrial areas where the vegetation complex and microclimate conditions are products of the combined present and influx of perennial and/or intermittent water, associated high water table, and soils that exhibit some wetness characteristics. Normally used to refer to the zone within which plants grow rooted in the water table of these rivers, streams, lakes, ponds, reservoirs, springs, marshes, seeps, bogs, and wet meadows.

road
"A motor vehicle travelway over 50 inches wide, unless designated and managed as a trail. A road may be classified, unclassified, or temporary." (36 CFR 212.1)

classified roads
"Roads wholly or partially within or adjacent to National Forest System lands that are determined to be needed for long-term motor vehicle access, including State roads, county roads, privately owned roads, National Forest System roads, and other roads authorized by the Forest Service." (36 CFR 212.1)

temporary roads
"Roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the forest transportation system and not necessary for long-term resource management." (36 CFR 212.1)

unclassified roads
"Roads on National Forest System lands that are not managed as part of the forest transportation system, such as unplanned roads, abandoned travelways, and off-road vehicle tracks that have not been designated and managed as a trail; and those roads that were once under permit or other authorization and were not decommissioned upon the termination of the authorization." (36 CFR 212.1)

roadless area
Areas that do not have developed and maintained roads, and that are substantially natural.

ROS
See *Recreation Opportunity Spectrum*

R.S. 2477
A provision originally part of the 1866 Mining Act that states in its entirety, "The right-of-way for the construction of highways over public lands, not reserved for public uses, is hereby granted." In 1873, the provision was separated from the Mining Act and reenacted as Revised Statute (R.S.) 2477. In 1938, it was recodified as 43 U.S.C. Section 932. The Federal Land Policy and Management Act of 1976 repealed both the 1866 Mining Act and R.S. 2477, but all rights-of-way that existed on the date of the repeal (October 21, 1976) were preserved under 43 U.S.C. Section 1769 (Armstrong).

run-off
The portion of precipitation that flows over the land surface or in open channels.

salvage cutting
Cutting dead or damaged trees to recover economic value that would otherwise be lost.

sapling
A loose term for a young tree more than a few feet tall and an inch or so in diameter that is typically growing vigorously.

satisfactory rangeland condition
See *rangeland condition.*

scale
The degree of resolution at which ecosystems are observed and measured. The geographic extent; for example, region, sub-regional, or landscape scale.

scenery management
The art and science of arranging, planning, and designing landscape attributes relative to the appearance of places and expanses in outdoor settings.

scenic integrity
State of naturalness or, conversely, the state of disturbance created by human activities or alteration. Integrity is stated in degrees of deviation from the existing landscape character in a national forest.

Scenic Integrity Objective (SIO)
Objectives established in a Forest Plan that define the acceptable degrees of deviation from a landscape character.

> **very high (SIO)**
> A Scenic Integrity Objective that generally provides for ecological change only.
> high (SIO). In high scenic integrity areas, activities may only repeat attributes of form, line, color, and texture found in the described landscape character.
>
> **moderate (SIO)**
> A Scenic Integrity Objective refers to landscapes where the described landscape character "appears slightly altered." Noticeable deviations must remain visually subordinated to the landscape character being viewed.
>
> **low (SIO)**
> A Scenic Integrity Objective meaning activities must remain visually subordinate to the attributes of the described landscape character. Activities may repeat form, line, color, or texture common to the landscape character, but changes in quality of size, number, intensity, direction, pattern, and so on, must remain visually subordinate to the described landscape character.
>
> **very low (SIO)**
> A Scenic Integrity Objective meaning activities of vegetative and landform alterations may dominate the described landscape character but should appear as valued occurrences when viewed at background distances.

scenic quality
The essential attributes of landscape that when viewed by people, elicit psychological and physiological benefits to individuals and, therefore, the society in general.

scenic resource
Attributes, characteristics, and features of landscapes that provide varying responses from, and

varying degrees of benefits to, humans.

seen area
The total landscape area observed based upon landform screening. Seen-areas may be divided into zones of immediate foreground, foreground, middleground, and background. Some landscapes are seldom seen by the public.

sensitive species
Plant and animal species, selected by the Regional Forester, for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or density, and significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution. Sensitive species are not covered in the Endangered Species Act.

sensitive watershed
watersheds having geologic formations are defined as watersheds having geologic formations highly prone to mass wasting and/or large flood events which pose an increased risk to people, water supplies and infrastructure, and other property located within them

selection harvest
An uneven-aged timber harvest system in which trees may be chosen singly or by criteria used to identify groups of trees to achieve a full range of size/age classes.

shelterwood method
The cutting of most trees, leaving those shelter trees needed to produce sufficient shade to produce a new *age class* in a moderated microenvironment.

sidecasting
The moving of excess excavated material onto the downslope side of a road, trail, landing, or other structure during its construction.

snag
A standing dead tree.

Soil and Water Conservation Practices (SWCP)
The set of practices which, when applied during implementation of a project, ensures that soil productivity is maintained, soil loss and water quality impacts are minimized, and water-related beneficial uses are protected. Some SWCP's are defined by Forest interdisciplinary teams or described in Forest Service Manuals (FSM) and Handbooks (FSH). These practices are included or incorporated by reference in Forest Plans as either Forest wide or management area specific standards and guidelines.

Forest wide or Management Area specific SWCP's can be found in the following references (Forest Plan – Apppendix B):

R1/R4 Soil and Water Conservation Practices Handbook (FSH 2509.22).

R4 Technical Guide for Erosion Prevention and Control on Timber Sale Areas (11/79)
UDOT Temporary Erosion and Sediment Control Manual (2/99)
Applied Storm Water Pollution Prevention for Highway Design and Construction
R4/R5/R6 Winter Sports Guidebook (6/92).
R4 Winter Sports Monitoring Plan, Appendix N

Other SWCP's are based upon site- specific level evaluations and are intended to supplement the Forest Plan for specific projects.

Species At Risk (SAR)
Federally listed endangered, threatened, candidate, and proposed species and other species for which loss of viability, including reduction in distribution or abundance, is a concern within the plan area. Other species-at-risk include sensitive species and may include state listed species. A species-at-risk also may be selected as a focal species.

For the Wasatch-Cache Plan revision, the term "species-at-risk" includes:
-Fish and Wildlife Service endangered, threatened, candidate, proposed species.
-Regional Forester designated sensitive species.
-Wasatch-Cache National Forest recommended sensitve species, which are other species that meet the definition of sensitive, but have not been officially listed as sensitive

Also considered for inclusion as species-at-risk are species identified by:
-The Nature Conservancy as G1, G2,G3, T1, T2, and T3.
-State Natural Heritage programs as S1, and S2
-Partners in Flight species of concern.
-The Forest that do not appear on any other lists.

The SAR list is dynamic and species will be added as deemed necessary or removed as recovery occurs or new information indicates they are not at risk.

stand
A contiguous group of trees sufficiently uniform in *age class* distribution, *composition*, and *structure*, and growing on a site of sufficiently uniform quality to be a distinguishable unit.

standard
Binding limitations to be placed on management activities within the Plan area; they are within the authority and ability of the Forest Service to enforce. Adherence is mandatory. A project that varies from a relevant standard may not be authorized unless the Forest Plan is amended to modify, remove, or waive application of the standard.
Standard Lease Terms (SLT)
See *leasing stipulations*.

structure
The size and arrangement, both vertically and horizontally, of vegetation.

subordinate

Landscape features that are inferior to, or placed below, another in size, importance, brightness, and so on. Features that are secondary in visual impact or importance.

succession
The replacement in time of one plant community with another. The prior plant community (or successional stage) creates conditions that are favorable for the establishment of the next stage.

suitability (for Wild and Scenic Rivers)
Evaluation of eligible rivers for inclusion into the National Wild and Scenic River System by determining the best use of the river corridor and the best method to protect the outstandingly remarkable values within the river corridor.

suited land
Forest land designated in the Forest Plan to be managed for timber production on a regulated basis.

sustainability
The ability to meet the needs of current generations without compromising the ability of future generations to meet their own needs.

sustained-yield
According to the Multiple-Use Sustained-Yield Act of 1960, the achievement and maintenance in perpetuity of a high-level annual or regular output of the various renewable resources of the national forests without impairment of the productivity of the land.

temporary road
See *road*.

theme
The general focus or subject of variations on landscape character settings. Themes range from a naturally evolving landscape to an urban landscape.

threatened species
Designated by the U.S. Fish and Wildlife Service, a plant or animal species likely to become endangered throughout all or a specific portion of its range within the foreseeable future.

Timing Limitations (TL)
See *leasing stipulations*.

TMDL (Total Maximum Daily Load)
TMDL is the sum of waste load allocations for point sources, non-point sources, natural background, and a margin of safety. A TMDL specifies the amount of a pollutant that needs to be reduced to meet water quality standards set by the state. TMDL is used in a process to attain water quality standards that 1) identifies water quality problems and contributing pollutant sources, 2) allocates pollution control responsibilities among sources in the watershed, and 3) provides a basis for taking actions needed to restore a water body.

travel map (travel plan)
A map which shows the transportation network and seasonal motorized or non-motorized access opportunities and limitations. This map is usually developed at a scale smaller than the whole national forest, and is readily available to the public to assist in personal recreation and planning other uses.

travelway
Represent linear concentrations of public-viewing including freeways, highways, roads, railroads, trails, commercial flight paths, rivers, canals and other waterways.

unclassified road
See *road*.

uneven-aged stand
A group of trees with three or more distinct age classes.

uneven-aged method
To regenerate and maintain a multi-aged stand by removing some trees in all age classes.

undeveloped recreation
Undeveloped recreation is that recreation activity that occurs without supporting facilities, often leaving evident impacts.

unsatisfactory rangeland condition
See ra*ngeland condition.*

unwanted wildland fire
Any wildland fire not covered by a Fire Management Plan. This includes: all fires occurring outside approved wildland fire use areas; all non-lightning caused wildland fires; and fires occurring in wildland fire use areas that are not managed for wildland fire use.

use areas
Represent spots that receive concentrated public-viewing use. They include visitor centers, vista points, trailheads, campgrounds, picnic areas, swim beaches, marinas, resorts, ski areas, and other recreation sites. Use areas also include urban and suburban areas, towns and villages, subdivisions, parks and public and private golf courses, or public lands within or adjacent to national forests.

viable populations
A population which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area (36 CFR 219.19).

viewshed
Total visible area from a single observer position or the total visible area from multiple observer positions. Viewsheds are accumulated seen-areas from highways, trails, campgrounds, towns,

cities, or other viewer locations. Examples are corridor, feature, or basin viewsheds.

watch list plants
The Wasatch-Cache National Forest designates watch list plant species. These species do not meet the definition of Species At Risk, but their populations may be on the edge of their range, disjunct, local endemics, or regional endemics, or are rare throughout their distribution but, through analysis, are found to be relatively unaffected by activities that occur on the Forest. These plants have stable population numbers, density, and habitat capability, and are predicted to remain stable. Should populations of these plants be negatively effected by allowed activities, a review of impacts may result in plants being recommended as Threatened, Endangered, or Sensitive.

watershed
A land area that contributes all its water to one drainage system, basin, stream, or river. Watersheds can be described at multiple scales. For example, the entire area draining to the Green River, above its confluence with the Colorado River, is a watershed. Likewise, the area draining to the Duchesne River above its confluence with the Green River is also a watershed, as is the drainage of Wolf Creek above its confluence with the West Fork of the Duchesne River. In this *DEIS* and Draft Forest Plan, "watershed" specifically refers to a drainage area of approximately 50,000 to 100,000 acres, which is equivalent to a 5th order *Hydrologic Unit Code*. See *Hydrologic Unit Code (HUC)* for more information on watershed classifications.

wetland
An area that is either permanently inundated with water or has seasonally high water tables that support vegetation requiring these conditions for growth and reproduction.

wildland fire
Any nonstructural fire, other than prescribed fire, that occurs in the wildland. This includes wildland fire use and unwanted wildland fire.

wildland fire use
The management of naturally ignited wildland fires to accomplish specific prestated resource management objectives in predefined geographic areas outlined in Fire Management Plans. Operational management is described in the Wildland Fire Implementation Plan. Wildland fire use is not to be confused with "fire use", which is a broader term encompassing more than just wildland fires.

Wildland Fire Implementation Plan (WFIP)
A progressively developed assessment and operational management plan that documents the analysis and selection of strategies and describes the appropriate management response for a fire managed as wildland fire use.

wildland setting
Places which are largely undeveloped in character and generally natural appearing, especially when compared to nearby privately owned lands where more development is present (towns, cities, industrial, commerical, agricultural and modified rural landscapes.)

Acronyms and Symbols

ASQ	Allowable Sale Quantity
AUM	Animal Unit Month
BLM	Bureau of Land Management
BMP	Best Management Practice
CFR	Code of Federal Regulations
DEIS	Draft Environment Impact Statement
DFC	Desired Future Condition
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FSH	Forest Service Handbook
FSM	Forest Service Manual
GIS	Geographical Information System
HRV	Historical Range of Variability
HUC	Hydrologic Unit Code
IWM	Integrated Weed Management
MIS	Management Indicator Species
MMBF	Million Board Feet
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
PFC	Properly Functioning Condition
RACR	Roadless Area Conservation Rule
RNA	Research Natural Area
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
RVD	Recreation Visitor Day
TES	Threatened, Endangered, and Sensitive (species)
TMDL	Total Maximum Daily Load
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
WSR	Wild and Scenic River

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Fire fighter on the Wasatch-Cache National Forest

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Utah, State of. 1995. Nonpoint Source Management Plan for Silvicultural Activities. Silvicultural Addendum Subcommittee. Prepared for the NPS Taskforce.

Utah, State of. 1997. Utah State Water Plan, Jordan River Basin. Utah Division of Water Resources.

Utah, State of. 1999. UDOT Temporary Erosion and Sediment Control Manual, A Guide for the Design, Installation, Inspection, and Maintenance of Temporary Erosion and Sediment Control Measures. Utah Department of Transportation.

Appendices

Beaver, a Management Indicator Species, on the Wasastch-Cache National Forest

Appendix I
Species Conservation Guidance Sources

A number of conservation agreements and/or strategies and/or recovery plans have been developed for species residing on the Wasatch-Cache National Forest. Included is a list of these agreements, a brief description on how direction in these documents may affect land management activities and a web site or locations where these documents may be viewed.

Bonneville Cutthroat Trout:

Lentsch, L.D., C. A. Toline, J. Kershner, J.M. Hudson, J.Mizzi. 2000. Range-Wide Conservation Agreement and strategy for Bonneville cutthroat trout. Utah Division of Wildlife Resources. Salt Lake City. Publication 00-19. 90pp. http://www.nr.state.ut.us/dwr/cacs7.pdf

The U.S. Forest Service will "Cooperate and assist in range-wide habitat enhancement, re-introductions, non-indigenous species control, and monitoring projects. Assist in obtaining and/or securing water rights and land within historic Bonneville cutthroat trout range. Assist in funding range-wide enhancement project on NFS lands where appropriate." Land management activities are to consider using the guidelines listed in the Inland Native Fish Strategy (USFS 1995)

UDWR. 1997. Conservation agreement and strategy for Bonneville cutthroat trout *(Oncorhynchus clarki utah*) in the State of Utah. Division of Wildlife Resources, Salt Lake City. Publication Number 97-19. 80pp. http://www.nr.state.ut.us/dwr/bnvlcutt.pdf

This documents is a statewide review of threats and actions to eliminate the threats to the Bonneville cutthroat trout within Utah. It directs agencies to work cooperatively to resolve these threats and minimize impacts to the species.

Colorado River Cutthroat Trout

CRCT Task Force. 2001. Conservation agreement and strategy for Colorado River cutthroat trout (Oncorhynchus clarki pleuriticus) in the States of Colorado, Utah, and Wyoming. Colorado Division of Wildlife. Fort Collins. 40pp.

This documents is a broad base review of threats and actions to eliminate the threats to the Colorado River cutthroat trout. It directs agencies to work cooperatively to resolve these threats and minimize impacts to the species. This document is currently in the process of being signed.

UDWR. 1997. CONSERVATION AGREEMENT AND STRATEGY FOR COLORADO RIVER CUTTHROAT TROUT *(Oncorhynchus clarki pleuriticu*s) in the State of Utah. Division of Wildlife Resources, Salt Lake City. Publication Number 97-20. 68pp. http://www.nr.state.ut.us/dwr/cocutt.pdf

This documents is a statewide review of threats and actions to eliminate the threats to the Colorado River cutthroat trout within Utah. It directs agencies to work cooperatively to resolve these threats and minimize impacts to the species.

Spotted Frog

Perkins, M.J. and L.D. Lentsch. 1998. Conservation agreement and strategy for spotted frog *(Rana pretiosa)*. Division of Wildlife Resources, Salt Lake City. 77pp. http://www.nr.state.ut.us/dwr/spotfrog.pdf

Although not identified as a primary signatory we continue to cooperate with the State and other agencies in the preservation of this species. Surveys conducted on National Forest Lands over the past few yeas have been unsuccessful in locating this species on the Forest.

June Sucker

U.S. Fish and Wildlife Services. 1999. (DRAFT) June sucker (Chasmistes liorus) Recovery Plan. U.S. Fish and Wildlife Service, Denver, CO. 62 pp.

This document identifies Red Butte Reservoir as a holding area for June sucker establish in 1992. Monitoring the population size it the primary action for this species.

Canada Lynx:

Ruediger, Bill, Jim Claar, Steve Gniadek, Bryon Holt, Lyle Lewis, Steve Mighton, Bob Naney, Gary Patton, Tony Rinaldi, Joel Trick, Anne Vandehey, Fred Wahl, Nancy Warren, Dick Wenger, and Al Williamson. 2000. Canada Lynx Conservation Assessment and Strategy. USDA Forest Service, USDI Fish and Wildlife Service, USDI Bureau of Land Management, and USDI National Park Service. Forest Service Publication #R1-00-53, Missoula, MT. 142 pp.
http://www.fs.fed.us/r1/planning/lynx

"The Lynx Conservation Assessment and Strategy (LCAS) was developed to provide a consistent and effective approach to conserve Canada lynx (*Lynx canadensis*) on federal lands in the conterminous United States." The assessment covers lynx ecology and risk factors, and the strategy covers conservation measures, inventory, monitoring, and research needs.

On March 1, 2000, the "Canada Lynx Conservation Agreement" (CA) between the five Regions of the Forest Service that contain lynx habitat and the US Fish and Wildlife Service was signed, in which both agencies agreed that the assessment and strategy was acceptable and would be followed.

In accordance with the CA the Wasatch-Cache will manage lynx and lynx habitat consistent with the LCAS and the lynx Science Report. Some standards and guidelines from the LCAS have been adopted as itemized standards and guidelines for this Forest Plan. Other LCAS standards and guidelines are not necessarily itemized in the plan because they are covered by other management and planning direction or would be

evaluated at the project level in coordination with the Fish and Wildlife Service. However, the Plan conclusively adopts the entire CA and LCAS wherever applicable to Forest planning processes.

Northern Goshawk

USDA Forest Service. 2000. Utah Northern Goshawk Project, Decision Notice, Finding of No Significant Impact, Finding of Non-Significant Amendment. Intermountain Region, Forest Service, Ogden, Utah. 12 pp. plus appendices.
http://www.fs.fed.us/r4/uinta
The Utah Northern Goshawk (*Accipiter gentiles*) project amended present Forest Plans to incorporate management recommendations made in, "The Northern Goshawk in Utah: Habitat Assessment and Management Recommendations" (Graham et al. 1999).

Maguire Primrose

Anonymous. 1990. Maguire Primrose, Recovery Plan. Region 6, U.S. Fish and Wildlife Service, Denver, Colorado. 13 pp.

Recovery plans delineate reasonable actions that are believed to be required to recover and/or protect the species. This plan discusses the biology of the Maguire primrose, identifies risks, and outlines protection measures for the species.

Bear River Range Endemics

Glisson, Bruce. 1995. Conservation Strategy and Action Plan, Bear River Range Endemics. USDA Forest, Wasatch-Cache National Forest, Salt Lake City, Utah. 36 pp plus appendices.

This publication discusses biological and geographical information, and presents a conservation strategy for six species of plants endemic to the Bear River Range. The plants include Maguire primrose (*Primula maguirei*), Franksmith's violet (*Viola frank-smithii*), Cronquist's daisy (*Ergeron cronquistii*), Cache beardtongue (*Penstemon compactus*), Logan buckwheat (*Eriogonum brevicaule, var. loganum*), and Maguire's whitlow-grass (*Draba maguirei*).

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Appendix II
Watershed Health Guidance Sources

Appendix II is intended to function as a guide to the content and availability of reference documents used to support the watershed health standards and guidelines incorporated into the Forest Land Management Plan, 2001 revision.

Practices used on the Forest are referred to as Best Management Practices (BMP) and Soil and Water Conservation Practices (SWCP). This abstract contains information about management practices used on the Wasatch-Cache National Forest that will, when properly implemented, help achieve the following goals:

- Prevent or reduce the amount of pollution generated by non-point sources, such as silviculture or stream channel modifications, to levels compatible with State of Utah water quality goals.
- Protect water related beneficial uses.
- Minimize soil losses and maintain soil productivity.

Best Management Practices

BMP's are determined solely by a State from a process that includes problem assessment, examination of alternative practices, and appropriate public participation. Best Management Practices as defined by State of Utah-Division of Water Quality regulation, or agreement between the State of Utah and Forest Service, include the following:

1. State of Utah. 1995. Non-point Source Management Plan for Hydrologic Modifications, and addendum to the Utah Non-point Source Management Plan. Utah Division of Water Quality, Salt Lake City, Utah.
2. State of Utah. 1998. Non—point Source Management Plan for Silvicultural Activities. Silvicultural Addendum Subcommittee of the NPS Taskforce. Utah Division of Water Quality, Salt Lake City, Utah.
3. Salt Lake County. 1981. Salt Lake County Water Quality and Pollution Control, Erosion Control Handbook. Salt Lake County Department of Environmental Health, Salt Lake City, Utah.

These documents are available from the agencies listed in the individual citations. Electronic copies of documents (1) and (2) and other water quality protection related documents are available on the World Wide Web at:

http://www.eq.state.ut.us/eqwq/doc_rule.html

Soil and Water Conservation Practices

General SWCP's are described in Forest Service Manuals and Handbooks (FSM and FSH). Site-specific practices can be defined, or adapted from any credible source, by Forest ID teams. The following references are sources of soil and water conservation practices adopted for use at the Forest wide, management area wide, or site-specific scales of management:

1. USDA-Forest Service. 1988. R1/R4 Soil and Water Conservation Practices Handbook. FSM 2509.22. Intermountain Region Office, Ogden, Utah.
2. USDA-Forest Service. 1979. Technical Guide for Erosion Prevention and Control on Timber Sale Areas. Prepared by John Potyandy with major contributions from Walter F. Megahan and Pete Bengeyfield. Region 4 Soil and Water Management. Intermountain Region Office, Ogden, Utah.
3. USDA-Forest Service. 1992. Winter Sports Guidebook. Prepared by Rocky Mountain Region with assistance from Regions Four, Five, and Six. Wasatch-Cache National Forest, Salt Lake City, Utah.
4. USDA-Forest Service. 1999. Winter Sports Monitoring Plan, Appendix N. Wasatch-Cache National Forest, Salt Lake City, Utah.
5. Utah Department of Transportation. 1999. Temporary Erosion and Sediment Control Manual. UDOT-Region 2, West Salt Lake City, Utah.
6. Bio-West Consultants. 1999. Applied Storm Water Pollution Prevention for Highway Design and Construction. Bio-West Environmental Consulting, Logan, Utah.

These documents are available from the agencies listed in the individual citations. Electronic copies of document (1) are available on the World Wide Web at:

http://www.fs.fed.us/im/directives/html/fsh2000.html

Electronic copies of document (5) are available on the World Wide Web at:

http://www.dot.state.ut.us/esd.html

Implementation direction for Watershed Health:

When determining the sufficient quality, quantity and timing of flows, use the following four factors in the determination: (1) maintenance and enhancement of habitat for fish, wildlife, and riparian plant communities; (2) maintenance of channel stability and capacity for passing floods; (3) maintenance of recreational opportunities such as fishing, swimming, boating, and aesthetic enjoyment; and (4) maintenance of water quality and natural temperature regimes.

When determining instream flows, mimic the natural stream discharge as much as possible, incorporating: (1) summer and winter base flows to sustain and enhance habitat for fish species and riparian plants, (2) a peak flow component to maintain fish habitat, channel capacity, and riparian plant regeneration, and (3) a gradual rising and falling hydrograph limb during spring runoff to protect bank stability, fish habitat, and trigger fish behavioral patterns. Flood flows should be allowed for maintenance of floodplains.

To protect present and future riparian, aquatic and hydrologic resources: sufficient quality, quantity and timing of flows will be quantified where it is deemed that diminishing or otherwise altering existing instream flows would result in impairment to these resources.

During project planning or watershed assessment, develop site specific Riparian Management Objectives for the purpose of refining riparian management direction to better reflect conditions that are attainable in specific watersheds or stream reaches based on local geology, topography, climate, and potential vegetation.

As part of any proposed project, identify landslide areas and potentially unstable areas prior to conducting land-disturbing activities that have a likelihood of triggering landslides. Design management activities within identified landslide areas to retain the dominant hydrologic functions and processes.

303d Guidance

Cooperate with the State, Tribes, other agencies and organizations to develop and implement (Total Daily Maximum Load) TMDL's and their Implementation Plans for 303d impaired waterbodies influenced by National Forest System management. Work with the State, Tribes, other agencies and organizations to prioritize restoration needs and to bring 303d impaired waterbodies into compliance with State water quality standards in a reasonable time frame. Work within the State's timelines to assist the State in the identification of 303d impaired waterbodies, development of TMDL's, and development of TMDL Implementation Plans.

This 303d Guidance to be applied with S6.

Some management activities may cause small additions of pollutants in the short-term, yet the progress toward attainment of beneficial use standards is not affected, or may even be improved by the project in the long-term. Assessment models do not provide a precise linear projection of progress toward attainment, but instead project progress within a range of variation. Also, in natural systems the progression toward recovery is not linear, but fluctuates as a result of natural factors. This standard is intended to allow for small short-term additions of pollutants if it can be demonstrated that the progress toward attainment is maintained or improved by the project, and such additions will not cause unacceptable adverse environmental effects.

Questions and Answers for Standard:

Q: What defines a "new proposed management activity?"

A: A "new proposed management activity" is any project that is proposed for NEPA analysis and usually resulting in a Record of Decision, a Decision Notice, or a Decision Memo.

Q: How can we both "improve OR maintain progress toward beneficial use attainment?" Don't impaired waterbodies have to be simply improved?

A: While it's true that all 303d impaired waterbodies must eventually be improved this standard is worded this way to recognize that not every NEPA decision within a watershed containing an impaired waterbody may have a strong tie to the pollutant of concern for which the water body is listed. For example, a NEPA decision may install a vault toilet upstream of a waterbody that is impaired for sediment. The sediment sources may have been identified as coming from roads within the watershed. While the installation of the vault toilet could in theory add sediment to the waterbody, it's incumbent on the affects analysis for the NEPA document to describe the level of Best Management Practices (BMP) used that would not compromise long-term recovery of the downstream waterbody, therby "maintaining" the existing progress toward eventual recovery.

Another example might include an activity within the watershed that is located downstream of the listed waterbody. In this case the NEPA documentation should note the location of the impaired waterbody with respect to the action, and state that the impaired waterbody will not be affected by the action – again thereby "maintaining" the existing progress toward eventual recovery. Also, in this case, State "antidegredation policy" would still apply since the activity is downstream of the 303d listed waterbody.

The standard also intends to recognize that not every NEPA decision will arise out of a purpose and need to improve the impaired waterbody. Since watershed restoration dollars are limited by annual appropriations, forests should strive to improve the conditions of 303d listed waterbodies by implementing restoration activities and/or adjusting management activities on a priority basis. Forest deciding officials need to respond to multiple needs. A deciding officer may be responding to a purpose and need to address a particular forest health issue in an area that for one reason or another is not a high priority for appropriated restoration dollars. The selected alternative should address the forest health purpose and need and may wind up not improving an existing 303d listed waterbody with respect to the pollutant for which it is listed. In such a case the NEPA documentation should ensure that, as a minimum, the overall progress toward beneficial use attainment for that listed waterbody is maintained.

In summary, for project level NEPA it is critically important that Affected Environment and Environmental Consequences discussion of a NEPA document articulate the location of a listed waterbody, the pollutants for which it's listed, the watershed processes and pollutant sources that likely led to the listing, and the effects of the selected alternative on that waterbody with respect to the pollutant of concern and the eventual attainment of beneficial use support.

Q: What if a deciding officer chooses an alternative with a Record of Decision that does not "maintain or improve progress toward beneficial use attainment?"

A: A Record of Decision (EIS) is the appropriate document used to disclose significant impacts that would result from a selected alternative. However, the responsible official must still abide by other existing laws. Rarely would we expect a Record of Decision that would not improve or maintain the progress toward beneficial use attainment of a 303d listed waterbody, yet the possibility is conceivable. Usually this type of project proposal will be generated from social

and economic issues outside of the agency. An example might include a hydropower development site on top of or above a waterbody listed for temperature. Such a decision would likely require a change in the beneficial use designation of the waterbody by the State as well as a Forest Plan amendment, and would more than likely involve significant intergovernmental coordination at the local, Tribal, State, and Federal levels.

Q: The last phrase in the standard seems to allow additional degradation of impaired waters, is that the intent?

A: The last phrase of the standard should not be interpreted separately from the rest of the standard. The conjunctive "and" joins this phrase to the first half of the standard which states that proposed management activities ensure the overall progress toward beneficial use attainment is improved or maintained. Furthermore, the first three words of the standard "Within legal authorities" imply that the project must meet the law. There are two issues the last phrase of this standard attempts to address.

First, most water quality regulators generally recognize that projects aimed at restoration of impaired waters over the long term may result in short-term increases in the pollutant of concern. A road-decommissioning project, for example, may increase the risk of short-term sedimentation in order to fix a long-term problem. In such a case the environmental consequences discussion should ensure the overall (long-term) progress toward beneficial use attainment even with a short-term sediment increase "and" that the increase doesn't have an unacceptable adverse effect to a local beneficial use (such as the viability of an endangered species).

Second, the last phrase in the standard is intended to recognize the fact that sediment estimates derived from empirical models do not necessarily translate into real sediment increases in the waterbody. Sediment models are best used to (a) depict "relative differences between various alternatives" given a set of assumptions about conditions on the ground or (b) to identify potential hotspots for sediment production within any one alternative that may require more site specific mitigation or a change in design. Therefore, just because a sediment model may depict a given quantity of sediment production does not mean that any real on-the-ground effect may occur. The output of the model needs to be interpreted in light of the chance for real sediment production.

Q: What constitutes an "unacceptable adverse effect?"

A: It is incumbent on the NEPA documentation to fully disclose the processes ongoing in the watershed with respect to the impaired waterbody and the pollutant of concern for which it is listed, and the effects of the alternatives on those processes, in determining whether or not an unacceptable adverse effect is likely to occur with the implementation of a given alternative. The determination that this is an unacceptable adverse effect is a subjective decision made by the responsible official.

Q: Why does this standard apply to "watersheds containing 303d listed waterbodies" instead of simply projects that may affect the specific waterbody?

A: The reference to watersheds is to identify those areas where NEPA documentation must be thorough in documenting both the existing condition of water quality and the effects of any proposed activity on that water quality. Whether or not a specific 303d listed segment may be affected by the proposed activity should be disclosed in the effects analysis. For some activities, this effects analysis would require more detail than others. For instance, a road construction project on landtypes susceptible to erosion located just upstream of a 303d listed waterbody for sediment would require more detail to disclose the effects on that waterbody than lower risk activities located downstream of the 303d listed waterbody. Applying the standard to the entire watershed simply identifies potential areas where project level NEPA analysis should be careful to fully disclose the existing condition, the processes involved leading to the existing condition, and the likelihood of effects to the listed waterbody in question.

Q: How can we in fact "ensure that new or proposed management activities will maintain or improve progress toward beneficial use attainment?"

A: The term "ensure" is used to "make certain or sure" that the "project level NEPA documentation" (including accompanying records in the project file) discloses and articulates the direct, indirect, and cumulative effects of past, present, and reasonably foreseeable actions on the listed waterbody within the watershed, with respect to the specific pollutant for which that water body is listed, and in sufficient detail to support the decision to be made as reasonable and prudent. The term "ensure" does NOT refer to an absolute knowing or absolute quantification of on-the-ground effects.

Appendix II
Watershed Health Guidance Sources

Appendix II is intended to function as a guide to the content and availability of reference documents used to support the watershed health standards and guidelines incorporated into the Forest Land Management Plan, 2001 revision.

Practices used on the Forest are referred to as Best Management Practices (BMP) and Soil and Water Conservation Practices (SWCP). This abstract contains information about management practices used on the Wasatch-Cache National Forest that will, when properly implemented, help achieve the following goals:

- Prevent or reduce the amount of pollution generated by non-point sources, such as silviculture or stream channel modifications, to levels compatible with State of Utah water quality goals.
- Protect water related beneficial uses.
- Minimize soil losses and maintain soil productivity.

Best Management Practices

BMP's are determined solely by a State from a process that includes problem assessment, examination of alternative practices, and appropriate public participation. Best Management Practices as defined by State of Utah-Division of Water Quality regulation, or agreement between the State of Utah and Forest Service, include the following:

1. State of Utah. 1995. Non-point Source Management Plan for Hydrologic Modifications, and addendum to the Utah Non-point Source Management Plan. Utah Division of Water Quality, Salt Lake City, Utah.
2. State of Utah. 1998. Non—point Source Management Plan for Silvicultural Activities. Silvicultural Addendum Subcommittee of the NPS Taskforce. Utah Division of Water Quality, Salt Lake City, Utah.
3. Salt Lake County. 1981. Salt Lake County Water Quality and Pollution Control, Erosion Control Handbook. Salt Lake County Department of Environmental Health, Salt Lake City, Utah.

These documents are available from the agencies listed in the individual citations. Electronic copies of documents (1) and (2) and other water quality protection related documents are available on the World Wide Web at:

http://www.eq.state.ut.us/eqwq/doc_rule.html

Soil and Water Conservation Practices

General SWCP's are described in Forest Service Manuals and Handbooks (FSM and FSH). Site-specific practices can be defined, or adapted from any credible source, by Forest ID teams. The following references are sources of soil and water conservation practices adopted for use at the Forest wide, management area wide, or site-specific scales of management:

1. USDA-Forest Service. 1988. R1/R4 Soil and Water Conservation Practices Handbook. FSM 2509.22. Intermountain Region Office, Ogden, Utah.
2. USDA-Forest Service. 1979. Technical Guide for Erosion Prevention and Control on Timber Sale Areas. Prepared by John Potyandy with major contributions from Walter F. Megahan and Pete Bengeyfield. Region 4 Soil and Water Management. Intermountain Region Office, Ogden, Utah.
3. USDA-Forest Service. 1992. Winter Sports Guidebook. Prepared by Rocky Mountain Region with assistance from Regions Four, Five, and Six. Wasatch-Cache National Forest, Salt Lake City, Utah.
4. USDA-Forest Service. 1999. Winter Sports Monitoring Plan, Appendix N. Wasatch-Cache National Forest, Salt Lake City, Utah.
5. Utah Department of Transportation. 1999. Temporary Erosion and Sediment Control Manual. UDOT-Region 2, West Salt Lake City, Utah.
6. Bio-West Consultants. 1999. Applied Storm Water Pollution Prevention for Highway Design and Construction. Bio-West Environmental Consulting, Logan, Utah.

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http://www.fs.fed.us/im/directives/html/fsh2000.html

Electronic copies of document (5) are available on the World Wide Web at:

http://www.dot.state.ut.us/esd.html

Implementation direction for Watershed Health:

When determining the sufficient quality, quantity and timing of flows, use the following four factors in the determination: (1) maintenance and enhancement of habitat for fish, wildlife, and riparian plant communities; (2) maintenance of channel stability and capacity for passing floods; (3) maintenance of recreational opportunities such as fishing, swimming, boating, and aesthetic enjoyment; and (4) maintenance of water quality and natural temperature regimes.

When determining instream flows, mimic the natural stream discharge as much as possible, incorporating: (1) summer and winter base flows to sustain and enhance habitat for fish species and riparian plants, (2) a peak flow component to maintain fish habitat, channel capacity, and riparian plant regeneration, and (3) a gradual rising and falling hydrograph limb during spring runoff to protect bank stability, fish habitat, and trigger fish behavioral patterns. Flood flows should be allowed for maintenance of floodplains.

To protect present and future riparian, aquatic and hydrologic resources: sufficient quality, quantity and timing of flows will be quantified where it is deemed that diminishing or otherwise altering existing instream flows would result in impairment to these resources.

During project planning or watershed assessment, develop site specific Riparian Management Objectives for the purpose of refining riparian management direction to better reflect conditions that are attainable in specific watersheds or stream reaches based on local geology, topography, climate, and potential vegetation.

As part of any proposed project, identify landslide areas and potentially unstable areas prior to conducting land-disturbing activities that have a likelihood of triggering landslides. Design management activities within identified landslide areas to retain the dominant hydrologic functions and processes.

303d Guidance

Cooperate with the State, Tribes, other agencies and organizations to develop and implement (Total Daily Maximum Load) TMDL's and their Implementation Plans for 303d impaired waterbodies influenced by National Forest System management. Work with the State, Tribes, other agencies and organizations to prioritize restoration needs and to bring 303d impaired waterbodies into compliance with State water quality standards in a reasonable time frame. Work within the State's timelines to assist the State in the identification of 303d impaired waterbodies, development of TMDL's, and development of TMDL Implementation Plans.

This 303d Guidance to be applied with S6.

Some management activities may cause small additions of pollutants in the short-term, yet the progress toward attainment of beneficial use standards is not affected, or may even be improved by the project in the long-term. Assessment models do not provide a precise linear projection of progress toward attainment, but instead project progress within a range of variation. Also, in natural systems the progression toward recovery is not linear, but fluctuates as a result of natural factors. This standard is intended to allow for small short-term additions of pollutants if it can be demonstrated that the progress toward attainment is maintained or improved by the project, and such additions will not cause unacceptable adverse environmental effects.

Questions and Answers for Standard:

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Appendix III
Noxious Weed Management Guidance

FOREST SERVICE MANUAL
INTERMOUNTAIN REGION (REGION 4)
OGDEN, UT

FSM 2000 – NATIONAL FOREST RESOURCE MANAGEMENT

ZERO CODE 2080 – NOXIOUS WEED MANAGEMENT

Supplement No.: R4 2000-2001-1

Effective Date: May 07, 2001

Duration: Effective until superseded or removed

Approved: JACK A. BLACKWELL
Regional Forester

Date Approved: 04/24/2001

Posting Instructions: Supplements are numbered consecutively by Title and calendar year. Post by document name. Remove entire document and replace with this supplement. Retain this transmittal as the first page of this document.

New Document(s):	2080	10 Pages
Superseded Document(s): (Last supplement was 2000-97-1 to 2080.)	2080 (Supplement 2000-97-1)	3 Pages

Digest:

2080.5	Adds Noxious Weed definitions for infested, gross, treated acres, and biological releases.
2081.2	Removes priorities that are now listed in parent text. Adds Noxious Weed prevention and mitigation measures.

2080.5 - DEFINITIONS

Biocontrol Release. The dispersal or release of biocontrol agents on a noxious weed infestation (see definition of infested acre), with the intent of establishing a population of a biological control agents. An agent can be an insect, fungus, bacterium, or any other life form that preys on the weed of concern. The release of agents can occur at a single location or scattered over a site. The release can be a few individuals, a container of many individuals, or several containers with thousands of individual agents. Releases at different locations, with the intent of establishing separate populations (at least 1/4 mile apart), constitute separate releases. Release of two species of biological control agents, at the same location, in the same year, is a single release.

Gross Area. An area of land occupied by one or more noxious weed species. The area is defined by drawing a line around the general perimeter of the infestation, not the canopy cover of the plants. The gross area may contain significant parcels of land that are not occupied by weeds.

Infested Acre. (Occupied Area, Net Area). A contiguous area of land occupied by one or more weed species. The infested area is defined by drawing a line around the actual perimeter of area occupied by the canopy of the weed plants.

Treated Acre. An infested area (see definition of infested acre) where weeds have been treated or retreated by an acceptable method (chemical, biological, mechanical, cultural, manual) for the specific objective of controlling their spread and/or reducing their density (generally reported in increments of not less than 0.1 acre for chemical and mechanical treatment).

2081.2 - Prevention and Control Measures

1. Recommended Practices. Stop the spread of existing noxious weeds and prevent invasion of new sites or new noxious weeds by applying prevention and control mitigation measures where applicable and appropriate. Potential practices to consider:

a. Project Design and NEPA. Incorporate noxious weed prevention into all project layout, design, and alternative evaluation.

Environmental analyses should consider noxious weed risk in evaluating project location and design, and in the development of alternatives and mitigating measures, including any or all of the following, as determined to be appropriate by the Forest Officer in charge:

(1) The presence of existing noxious weeds within the project site by species and magnitude.

(2) The susceptibility of the habitat type to noxious weed invasion.

(3) The risk for invasion or spread of noxious weeds that could be caused by the project.

(4) The evaluation of alternative sites, which are noxious weed-free and/or low risk, for project implementation.

(5) The evaluation of alternative implementation methods where they exist, which would reduce risk of invasion or spread of noxious weeds.

(6) The inclusion of other mitigation measures (practices) designed to minimize risk of invasion or spread of noxious weeds.

(7) The evaluation of direct, indirect, and cumulative effects of the project to noxious weed species and populations.

b. Ground Disturbing Activities. Project implementation for ground-disturbing operations within noxious weed infested areas, as deemed appropriate, should include provisions for monitoring and inspecting as determined through the analysis process.

(1) Comply with mitigation measures for ground disturbing operations within noxious weed infested areas which are generally recommended by the Forest or District Weed Management Specialist and approved by the responsible Forest Officer.

(2) Select noxious weed-free project construction staging areas.

(3) Maintain as much microhabitat for desirable vegetation as feasible in areas that will have ground disturbance to help suppress noxious weeds. Minimize the removal of trees and other roadside vegetation during construction, reconstruction, and maintenance, particularly on southerly aspects, except when removal is required for public safety.

(4) Re-establish vegetation (native where practical) on bare ground caused by ground-disturbing activities to minimize noxious weed spread. Guidelines to consider include:

(a) Revegetate disturbed soil in a manner that optimizes plant establishment for that specific site, unless ongoing disturbance at the site will prevent noxious weed establishment or spread. Monitor and re-treat as needed until site is successfully revegetated according to project standards.

Exceptions to this mitigation measure should require monitoring and treatment of invading noxious weeds. Exceptions include:

Grading and blading of travel ways, borrow ditches, rights-of-way, and drainage ways on system roads that are routinely maintained.

Areas where management objectives would be adversely affected by seeding grass species, that is: reforestation plantations.

(b) Weed seed free topsoil should be stockpiled and replaced on disturbed areas such as road embankments, cuts, fills, and shoulders; gravel pits; skid trails; landings; staging areas; and so forth, where practical.

(c) Replant as soon as practical after the disturbance activity to take advantage of the seedbed and to establish desirable species before the arrival of invading noxious weeds. Use local seeding recommendations. To avoid weed contaminated seed, each lot shall be tested by a certified seed laboratory against the State Noxious Weed List and documentation of seed inspection test provided for.

(d) Use local seeding guidelines for detailed procedures and appropriate mixes. If the risk for invasion by noxious weeds is high, use aggressive, early season species. If the risk is low, use a more diverse mixture of native species that may take longer to establish. Include natives, pioneer species, and/or nurse crops. Select for low nutrient demanding species to reduce the need for fertilization. Monitor seeded sites. Spot re-seed as needed.

(5) Restoration practices for disturbed areas should be based on local prescriptions.

(6) Use certified weed-seed free straw and mulch on road stabilization and erosion control projects.

(7) Eliminate the movement of existing and new noxious weed species caused by moving infested gravel and fill material.

(a) Consider the potential for moving noxious weeds when establishing new material sources on sites where noxious weeds are present, and take necessary corrective action.

(b) Active gravel and borrow sources should be inspected and determined to be noxious weed free before use. A source supporting noxious weeds should be considered for closure until it is weed free.

c. Roads and Road Work. Minimize roadside sources of noxious weed seed that could be transported to other areas, and maximize effectiveness of weed control.

(1) Ranger District noxious weed prevention and control programs should include a monitoring plan for annual inspection of system roads and rights-of-way for invasion of noxious weeds. If noxious weeds become established, inventory and schedule for treatment.

(2) Schedule and coordinate blading or pulling of noxious weed-infested roadsides or ditches with the Forest or District Weed Management Specialist to ensure that appropriate mitigation measures are applied. Coordinate with a weed management specialist before blading or pulling roadsides and ditches infested with noxious weeds that are on the routine maintenance schedule.

(3) When necessary to blade noxious weed infested roadsides or ditches, schedule work for spring or early summer prior to the seed-set stage or later in the fall after seeds have fallen. Minimize surface disturbance and isolate bladed material to the infested site. (Also see item b. Ground Disturbing Activities above).

d. Reclamation/Restoration. Reduce noxious weed establishment in obliteration/reclamation projects. Treat noxious weeds in obliteration and reclamation projects before roads are made undriveable. Monitor and retreat as necessary. (Also see item b. Ground Disturbing Activities above).

e. Public Use. Minimize transport and establishment of noxious weeds on National Forest System lands by considering these preventive measures:

(1) Treat noxious weeds at trailheads, boat launches, outfitter and public campsites, airstrips, and roads leading to trailheads.

(2) Close infestations of noxious weeds to camping until noxious weeds have been eradicated.

(3) Inspect campgrounds, trailheads, and similar areas that are open to public vehicle use and consider as high-risk areas. Inspected annually for invasion of noxious weeds. Include established infestations in strategies for eradication.

(4) Remove seed sources that could be picked up by passing vehicles to limit seed transport. (Also see item b. Ground Disturbing Activities above).

f. Noxious weed awareness and prevention efforts.

(1) Use education programs to increase noxious weed awareness and prevent noxious weed spread by Forest users.

(2) Post and enforce the statewide Noxious Weed Hay, Straw, and Mulch Closure Order.

(3) Post pictures and descriptions of noxious weeds at National Forest System trailheads and at roadsides in noxious weed areas to inform recreationists of noxious weed presence and dangers of spreading.

(4) Post prevention practices at National Forest System trailheads and at roadsides in noxious weed areas. Recommended prevention practices include:

(a) Pack and saddle stock should be fed only weed-seed free feed for several days prior to traveling off roads in the Forest and should be brushed to remove any noxious weed seed.

(b) Stock should be tied and held in the backcountry in such a way as to minimize soil disturbance and avoid loss of native/desirable vegetation.

(c) Motorized trail users should inspect and clean their vehicles of noxious weeds and their seeds prior to using National Forest System lands.

(5) Post notices in publicly accessible noxious weed treatment areas where and when there is a likelihood of contact with herbicide-treated- vegetation.

g. Archeological Excavations. Reduce noxious weed establishment and spread at archeological excavations. Archeological excavation areas are considered as high-risk ground disturbing areas and should be inspected for invasion of noxious weeds. If noxious weeds become established, they should be inventoried and scheduled for treatment. (Also see item b. Ground Disturbing Activities above).

h. Wildlife and Fisheries. Ensure noxious weed prevention and control are considered in management of wildlife and fisheries. Forest noxious weed prevention and control programs should include a monitoring plan for inventory and annual inspection of areas where wildlife concentrate in the winter and spring, which results in overuse and/or soil scarification. Inventory and schedule for treatment noxious weeds when found. (Also see item b. Ground Disturbing Activities above).

i. Domestic Grazing Activities. Ensure noxious weed prevention and control are considered in management of all grazing allotments. Consider the following:

(1) Annual Operating Instructions for every grazing allotment should include noxious weed prevention monitoring and reporting direction, and provisions for annual inspection of areas where livestock concentrate, which results in overuse and/or soil scarification. If noxious weeds become established, they should be inventoried and scheduled for treatment.

(2) For each grazing allotment containing noxious weed infestations, include direction in the Annual Operating Instructions (AOI) for prevention and control of noxious weeds. Items to be addressed in the AOI might include: season of use, exclusion, minimizing ground disturbance, noxious weed seed transportation, maintaining healthy vegetation, control methods, revegetation, monitoring, reporting, and education.

Include ways to minimize ground disturbance and bare soil caused by livestock operations (for example: salt licks, watering sites, yarding/loafing areas, corrals, and other heavy use areas) in Allotment Management Plans (AMPs) and/or Annual Operating Instructions.

Minimize transport of noxious weed seed into and within allotments by considering the following:

(a) Avoid driving, walking, riding, and/or herding through noxious weed infestations.

(b) Entry units grazed by livestock transported onto the Forest from noxious weed-infested areas should be inspected annually for new noxious weeds. If noxious weeds become established, they should be inventoried and scheduled for treatment.

(5) Maintain healthy desirable vegetation that is resistant to noxious weed establishment by considering the following:

(a) Manage forage utilization to maintain the vigor of desirable plant species as described in the Allotment Management Plan.

(b) Minimize and/or exclude grazing on restoration areas until vegetation is well established.

(6) Promote noxious weed awareness and prevention efforts among livestock permittees by considering the following:

(a) Use education programs and/or Annual Operating Instruction direction to increase noxious weed awareness and prevent noxious weed spread by permittees' livestock and/or management activities.

(b) Encourage permittees who are certified herbicide applicators to participate in allotment and Cooperative Weed Management Area noxious weed control programs. (Also see item b. Ground Disturbing Activities above).

j. Forest Management. Minimize the creation of sites suitable for noxious weed establishment during timber harvest by considering the following:

(1) Avoid driving, walking, skidding, landing, and/or hauling through noxious weeds.

(2) Minimize soil disturbance during forest management operations by considering winter skidding; broadcast burning over pile burning; smaller slash piles and burning under conditions that minimize heat transfer to the soil; minimizing fire line construction; seeding skid trails, landings, and other disturbed sites.

(3) Monitor for noxious weeds after sale activity and treat noxious weeds as needed.

(4) Where logging activity on planned or existing timber sales may contribute to the encroachment of noxious weeds, use Sale Area Improvement and K-V collections to control or prevent the encroachment of noxious weeds within sale areas as provided for in FSM 2477. Enter planned expenditure of K-V funds for noxious weed control on Development and Budget System Plan. (Also see item b. Ground Disturbing Activities above).

k. Mining, Mineral, Oil and Gas. Minimize noxious weed establishment in mining operations and reclamation by considering the following:

(1) Retain sufficient bonding until an appropriate percent of the potential vegetation ground cover, as determined by the responsible Forest Officer, for the site is reestablished.

(2) Mining and mineral exploration areas are considered as high-risk areas and should be inspected for invasion of noxious weeds. If noxious weeds become established, they should be inventoried and scheduled for treatment. (Also see item b. Ground Disturbing Activities above).

l. Soil and Watershed Improvement. Integrate noxious weed prevention and management in all soil and watershed, and stream restoration projects. Forest noxious weed prevention and control programs should include a monitoring plan for early detection of noxious weed spread or establishment in riparian areas, particularly from existing infestations and previously eradicated sites. New infestations should be treated for eradication before they become well established. (Also see item b. Ground Disturbing Activities above).

m. Special Use Permits and Easements. Reduce noxious weed establishment and spread in special use permits and easements by considering the following:

(1) Holders of special use permits and easements are responsible for the prevention and control of noxious weeds on the area authorized when prescribed by the Forest Service.

(2) Require noxious weed prevention and control requirements in Operating and Maintenance Plans when authorized activities present a high risk for invasion by noxious weeds or the location of the activity is vulnerable to invasion by noxious weeds.

n. Wildfire and Prescribed Fire Operations. Mitigate and reduce noxious weed spread during wildfire and prescribed fire operations by considering the following:

(1) Increase noxious weed awareness among fire personnel. Include noxious weed risk factors and noxious weed prevention considerations in the Resource Coordinator duties on Incident Overhead Teams and Fire Rehabilitation Teams.

(2) Where practical and timely, establish fire camps, vehicle and crew staging areas, helibases, helispots, cargo and net loading areas, and airstrips in noxious weed-free areas.

(3) Assign a local Weed Specialist Resource Advisor to the Incident Command Team when the wildfire or control operation occurs in or near a noxious weed area.

(4) When noxious weed infested areas are used for fire operations, implement appropriate mitigation measures, as determined by the Weed Specialist Resource Advisor. Identify high-risk noxious weed infestations in areas of fire operations, and avoid when possible.

(5) All vehicles sent off Forest for fire assistance in noxious weed areas should be cleaned before returning to home units.

(6) Emphasize Minimal Impact Suppression Tactics (MIST) to reduce soil and vegetation disturbance. Minimize fire and dozer line.

(7) Avoid or minimize all types of travel through noxious weed areas.

(8) Avoid ignition and burning in noxious weed areas, unless it is part of a noxious weed control strategy.

(9) Avoid ignition and burning in areas with a high risk for invasion of noxious weeds.

(10) Unplanned burning of noxious weed areas might require post treatment of noxious weed infestations.

(11) Utilize noxious weed-free helibases and helispots for aerial ignition projects.

(12) Minimize fireline and soil disturbance and:

(a) Encourage desirable vegetation during fire rehabilitation activities.

(b) Seed the entire burn, all cat lines, and severely disturbed areas when there is a high risk of noxious weed spread or invasion, and such action is recommended by the local Weed Specialist Resource Advisor and approved by the Responsible Forest Officer. Hand seed catlines and severely disturbed areas.

(c) Prioritize treatment of noxious weeds on fire access roads as part of rehabilitation plan to reduce noxious weed spread into burned areas.

(13) Apply for restoration funding for noxious weed infestations as determined by Burned Area Rehabilitation teams. (Also see item b. Ground Disturbing Activities above).

o. Noxious Weed Program Continuity. Ensure continuity in noxious weed management programs. Each Forest should have access to a Weed Specialist who is trained and proficient in noxious weed management.

2. Closure Orders. Product certification shall be accepted from any State Department of Agriculture, County Agriculture Officer, or their authorized agents, on National Forest System lands for the certified hay, feed, straw, and mulch closure orders. Pelletized feed does not fall under the hay products closure orders.

2083 - INFORMATION COLLECTION AND REPORTING

Inventory noxious weeds and plot their location on a map(s). Update the inventory as needed. Coordinate information with local/county weed boards. Inventory information can be supplemental to post-treatment evaluation as described in FSM 2155.1. The inventory and summary shall be by weed species and acreage infested. Do not duplicate the acreage count where more than one weed species occurs on the same site.

Appendix III
Noxious Weed Management Guidance

FOREST SERVICE MANUAL
INTERMOUNTAIN REGION (REGION 4)
OGDEN, UT

FSM 2000 – NATIONAL FOREST RESOURCE MANAGEMENT

ZERO CODE 2080 – NOXIOUS WEED MANAGEMENT

Supplement No.: R4 2000-2001-1

Effective Date: May 07, 2001

Duration: Effective until superseded or removed

Approved: JACK A. BLACKWELL
Regional Forester

Date Approved: 04/24/2001

Posting Instructions: Supplements are numbered consecutively by Title and calendar year. Post by document name. Remove entire document and replace with this supplement. Retain this transmittal as the first page of this document.

New Document(s):	2080	10 Pages
Superseded Document(s): (Last supplement was 2000-97-1 to 2080.)	2080 (Supplement 2000-97-1)	3 Pages

Digest:

2080.5	Adds Noxious Weed definitions for infested, gross, treated acres, and biological releases.
2081.2	Removes priorities that are now listed in parent text. Adds Noxious Weed prevention and mitigation measures.

2080.5 - DEFINITIONS

Biocontrol Release. The dispersal or release of biocontrol agents on a noxious weed infestation (see definition of infested acre), with the intent of establishing a population of a biological control agents. An agent can be an insect, fungus, bacterium, or any other life form that preys on the weed of concern. The release of agents can occur at a single location or scattered over a site. The release can be a few individuals, a container of many individuals, or several containers with thousands of individual agents. Releases at different locations, with the intent of establishing separate populations (at least 1/4 mile apart), constitute separate releases. Release of two species of biological control agents, at the same location, in the same year, is a single release.

Gross Area. An area of land occupied by one or more noxious weed species. The area is defined by drawing a line around the general perimeter of the infestation, not the canopy cover of the plants. The gross area may contain significant parcels of land that are not occupied by weeds.

Infested Acre. (Occupied Area, Net Area). A contiguous area of land occupied by one or more weed species. The infested area is defined by drawing a line around the actual perimeter of area occupied by the canopy of the weed plants.

Treated Acre. An infested area (see definition of infested acre) where weeds have been treated or retreated by an acceptable method (chemical, biological, mechanical, cultural, manual) for the specific objective of controlling their spread and/or reducing their density (generally reported in increments of not less than 0.1 acre for chemical and mechanical treatment).

2081.2 - Prevention and Control Measures

1. Recommended Practices. Stop the spread of existing noxious weeds and prevent invasion of new sites or new noxious weeds by applying prevention and control mitigation measures where applicable and appropriate. Potential practices to consider:

a. Project Design and NEPA. Incorporate noxious weed prevention into all project layout, design, and alternative evaluation.

Environmental analyses should consider noxious weed risk in evaluating project location and design, and in the development of alternatives and mitigating measures, including any or all of the following, as determined to be appropriate by the Forest Officer in charge:

(1) The presence of existing noxious weeds within the project site by species and magnitude.

(2) The susceptibility of the habitat type to noxious weed invasion.

(3) The risk for invasion or spread of noxious weeds that could be caused by the project.

(4) The evaluation of alternative sites, which are noxious weed-free and/or low risk, for project implementation.

(5) The evaluation of alternative implementation methods where they exist, which would reduce risk of invasion or spread of noxious weeds.

(6) The inclusion of other mitigation measures (practices) designed to minimize risk of invasion or spread of noxious weeds.

(7) The evaluation of direct, indirect, and cumulative effects of the project to noxious weed species and populations.

b. Ground Disturbing Activities. Project implementation for ground-disturbing operations within noxious weed infested areas, as deemed appropriate, should include provisions for monitoring and inspecting as determined through the analysis process.

(1) Comply with mitigation measures for ground disturbing operations within noxious weed infested areas which are generally recommended by the Forest or District Weed Management Specialist and approved by the responsible Forest Officer.

(2) Select noxious weed-free project construction staging areas.

(3) Maintain as much microhabitat for desirable vegetation as feasible in areas that will have ground disturbance to help suppress noxious weeds. Minimize the removal of trees and other roadside vegetation during construction, reconstruction, and maintenance, particularly on southerly aspects, except when removal is required for public safety.

(4) Re-establish vegetation (native where practical) on bare ground caused by ground-disturbing activities to minimize noxious weed spread. Guidelines to consider include:

(a) Revegetate disturbed soil in a manner that optimizes plant establishment for that specific site, unless ongoing disturbance at the site will prevent noxious weed establishment or spread. Monitor and re-treat as needed until site is successfully revegetated according to project standards.

Exceptions to this mitigation measure should require monitoring and treatment of invading noxious weeds. Exceptions include:

Grading and blading of travel ways, borrow ditches, rights-of-way, and drainage ways on system roads that are routinely maintained.

Areas where management objectives would be adversely affected by seeding grass species, that is: reforestation plantations.

(b) Weed seed free topsoil should be stockpiled and replaced on disturbed areas such as road embankments, cuts, fills, and shoulders; gravel pits; skid trails; landings; staging areas; and so forth, where practical.

(c) Replant as soon as practical after the disturbance activity to take advantage of the seedbed and to establish desirable species before the arrival of invading noxious weeds. Use local seeding recommendations. To avoid weed contaminated seed, each lot shall be tested by a certified seed laboratory against the State Noxious Weed List and documentation of seed inspection test provided for.

(d) Use local seeding guidelines for detailed procedures and appropriate mixes. If the risk for invasion by noxious weeds is high, use aggressive, early season species. If the risk is low, use a more diverse mixture of native species that may take longer to establish. Include natives, pioneer species, and/or nurse crops. Select for low nutrient demanding species to reduce the need for fertilization. Monitor seeded sites. Spot re-seed as needed.

(5) Restoration practices for disturbed areas should be based on local prescriptions.

(6) Use certified weed-seed free straw and mulch on road stabilization and erosion control projects.

(7) Eliminate the movement of existing and new noxious weed species caused by moving infested gravel and fill material.

(a) Consider the potential for moving noxious weeds when establishing new material sources on sites where noxious weeds are present, and take necessary corrective action.

(b) Active gravel and borrow sources should be inspected and determined to be noxious weed free before use. A source supporting noxious weeds should be considered for closure until it is weed free.

c. Roads and Road Work. Minimize roadside sources of noxious weed seed that could be transported to other areas, and maximize effectiveness of weed control.

(1) Ranger District noxious weed prevention and control programs should include a monitoring plan for annual inspection of system roads and rights-of-way for invasion of noxious weeds. If noxious weeds become established, inventory and schedule for treatment.

(2) Schedule and coordinate blading or pulling of noxious weed-infested roadsides or ditches with the Forest or District Weed Management Specialist to ensure that appropriate mitigation measures are applied. Coordinate with a weed management specialist before blading or pulling roadsides and ditches infested with noxious weeds that are on the routine maintenance schedule.

(3) When necessary to blade noxious weed infested roadsides or ditches, schedule work for spring or early summer prior to the seed-set stage or later in the fall after seeds have fallen. Minimize surface disturbance and isolate bladed material to the infested site. (Also see item b. Ground Disturbing Activities above).

d. Reclamation/Restoration. Reduce noxious weed establishment in obliteration/reclamation projects. Treat noxious weeds in obliteration and reclamation projects before roads are made undriveable. Monitor and retreat as necessary. (Also see item b. Ground Disturbing Activities above).

e. Public Use. Minimize transport and establishment of noxious weeds on National Forest System lands by considering these preventive measures:

(1) Treat noxious weeds at trailheads, boat launches, outfitter and public campsites, airstrips, and roads leading to trailheads.

(2) Close infestations of noxious weeds to camping until noxious weeds have been eradicated.

(3) Inspect campgrounds, trailheads, and similar areas that are open to public vehicle use and consider as high-risk areas. Inspected annually for invasion of noxious weeds. Include established infestations in strategies for eradication.

(4) Remove seed sources that could be picked up by passing vehicles to limit seed transport. (Also see item b. Ground Disturbing Activities above).

f. Noxious weed awareness and prevention efforts.

(1) Use education programs to increase noxious weed awareness and prevent noxious weed spread by Forest users.

(2) Post and enforce the statewide Noxious Weed Hay, Straw, and Mulch Closure Order.

(3) Post pictures and descriptions of noxious weeds at National Forest System trailheads and at roadsides in noxious weed areas to inform recreationists of noxious weed presence and dangers of spreading.

(4) Post prevention practices at National Forest System trailheads and at roadsides in noxious weed areas. Recommended prevention practices include:

(a) Pack and saddle stock should be fed only weed-seed free feed for several days prior to traveling off roads in the Forest and should be brushed to remove any noxious weed seed.

(b) Stock should be tied and held in the backcountry in such a way as to minimize soil disturbance and avoid loss of native/desirable vegetation.

(c) Motorized trail users should inspect and clean their vehicles of noxious weeds and their seeds prior to using National Forest System lands.

(5) Post notices in publicly accessible noxious weed treatment areas where and when there is a likelihood of contact with herbicide-treated- vegetation.

g. Archeological Excavations. Reduce noxious weed establishment and spread at archeological excavations. Archeological excavation areas are considered as high-risk ground disturbing areas and should be inspected for invasion of noxious weeds. If noxious weeds become established, they should be inventoried and scheduled for treatment. (Also see item b. Ground Disturbing Activities above).

h. Wildlife and Fisheries. Ensure noxious weed prevention and control are considered in management of wildlife and fisheries. Forest noxious weed prevention and control programs should include a monitoring plan for inventory and annual inspection of areas where wildlife concentrate in the winter and spring, which results in overuse and/or soil scarification. Inventory and schedule for treatment noxious weeds when found. (Also see item b. Ground Disturbing Activities above).

i. Domestic Grazing Activities. Ensure noxious weed prevention and control are considered in management of all grazing allotments. Consider the following:

(1) Annual Operating Instructions for every grazing allotment should include noxious weed prevention monitoring and reporting direction, and provisions for annual inspection of areas where livestock concentrate, which results in overuse and/or soil scarification. If noxious weeds become established, they should be inventoried and scheduled for treatment.

(2) For each grazing allotment containing noxious weed infestations, include direction in the Annual Operating Instructions (AOI) for prevention and control of noxious weeds. Items to be addressed in the AOI might include: season of use, exclusion, minimizing ground disturbance, noxious weed seed transportation, maintaining healthy vegetation, control methods, revegetation, monitoring, reporting, and education.

Include ways to minimize ground disturbance and bare soil caused by livestock operations (for example: salt licks, watering sites, yarding/loafing areas, corrals, and other heavy use areas) in Allotment Management Plans (AMPs) and/or Annual Operating Instructions.

Minimize transport of noxious weed seed into and within allotments by considering the following:

(a) Avoid driving, walking, riding, and/or herding through noxious weed infestations.

(b) Entry units grazed by livestock transported onto the Forest from noxious weed-infested areas should be inspected annually for new noxious weeds. If noxious weeds become established, they should be inventoried and scheduled for treatment.

(5) Maintain healthy desirable vegetation that is resistant to noxious weed establishment by considering the following:

(a) Manage forage utilization to maintain the vigor of desirable plant species as described in the Allotment Management Plan.

(b) Minimize and/or exclude grazing on restoration areas until vegetation is well established.

(6) Promote noxious weed awareness and prevention efforts among livestock permittees by considering the following:

(a) Use education programs and/or Annual Operating Instruction direction to increase noxious weed awareness and prevent noxious weed spread by permittees' livestock and/or management activities.

(b) Encourage permittees who are certified herbicide applicators to participate in allotment and Cooperative Weed Management Area noxious weed control programs. (Also see item b. Ground Disturbing Activities above).

j. Forest Management. Minimize the creation of sites suitable for noxious weed establishment during timber harvest by considering the following:

(1) Avoid driving, walking, skidding, landing, and/or hauling through noxious weeds.

(2) Minimize soil disturbance during forest management operations by considering winter skidding; broadcast burning over pile burning; smaller slash piles and burning under conditions that minimize heat transfer to the soil; minimizing fire line construction; seeding skid trails, landings, and other disturbed sites.

(3) Monitor for noxious weeds after sale activity and treat noxious weeds as needed.

(4) Where logging activity on planned or existing timber sales may contribute to the encroachment of noxious weeds, use Sale Area Improvement and K-V collections to control or prevent the encroachment of noxious weeds within sale areas as provided for in FSM 2477. Enter planned expenditure of K-V funds for noxious weed control on Development and Budget System Plan. (Also see item b. Ground Disturbing Activities above).

k. Mining, Mineral, Oil and Gas. Minimize noxious weed establishment in mining operations and reclamation by considering the following:

(1) Retain sufficient bonding until an appropriate percent of the potential vegetation ground cover, as determined by the responsible Forest Officer, for the site is reestablished.

(2) Mining and mineral exploration areas are considered as high-risk areas and should be inspected for invasion of noxious weeds. If noxious weeds become established, they should be inventoried and scheduled for treatment. (Also see item b. Ground Disturbing Activities above).

l. Soil and Watershed Improvement. Integrate noxious weed prevention and management in all soil and watershed, and stream restoration projects. Forest noxious weed prevention and control programs should include a monitoring plan for early detection of noxious weed spread or establishment in riparian areas, particularly from existing infestations and previously eradicated sites. New infestations should be treated for eradication before they become well established. (Also see item b. Ground Disturbing Activities above).

m. Special Use Permits and Easements. Reduce noxious weed establishment and spread in special use permits and easements by considering the following:

(1) Holders of special use permits and easements are responsible for the prevention and control of noxious weeds on the area authorized when prescribed by the Forest Service.

(2) Require noxious weed prevention and control requirements in Operating and Maintenance Plans when authorized activities present a high risk for invasion by noxious weeds or the location of the activity is vulnerable to invasion by noxious weeds.

n. Wildfire and Prescribed Fire Operations. Mitigate and reduce noxious weed spread during wildfire and prescribed fire operations by considering the following:

(1) Increase noxious weed awareness among fire personnel. Include noxious weed risk factors and noxious weed prevention considerations in the Resource Coordinator duties on Incident Overhead Teams and Fire Rehabilitation Teams.

(2) Where practical and timely, establish fire camps, vehicle and crew staging areas, helibases, helispots, cargo and net loading areas, and airstrips in noxious weed-free areas.

(3) Assign a local Weed Specialist Resource Advisor to the Incident Command Team when the wildfire or control operation occurs in or near a noxious weed area.

(4) When noxious weed infested areas are used for fire operations, implement appropriate mitigation measures, as determined by the Weed Specialist Resource Advisor. Identify high-risk noxious weed infestations in areas of fire operations, and avoid when possible.

(5) All vehicles sent off Forest for fire assistance in noxious weed areas should be cleaned before returning to home units.

(6) Emphasize Minimal Impact Suppression Tactics (MIST) to reduce soil and vegetation disturbance. Minimize fire and dozer line.

(7) Avoid or minimize all types of travel through noxious weed areas.

(8) Avoid ignition and burning in noxious weed areas, unless it is part of a noxious weed control strategy.

(9) Avoid ignition and burning in areas with a high risk for invasion of noxious weeds.

(10) Unplanned burning of noxious weed areas might require post treatment of noxious weed infestations.

(11) Utilize noxious weed-free helibases and helispots for aerial ignition projects.

(12) Minimize fireline and soil disturbance and:

(a) Encourage desirable vegetation during fire rehabilitation activities.

(b) Seed the entire burn, all cat lines, and severely disturbed areas when there is a high risk of noxious weed spread or invasion, and such action is recommended by the local Weed Specialist Resource Advisor and approved by the Responsible Forest Officer. Hand seed catlines and severely disturbed areas.

(c) Prioritize treatment of noxious weeds on fire access roads as part of rehabilitation plan to reduce noxious weed spread into burned areas.

(13) Apply for restoration funding for noxious weed infestations as determined by Burned Area Rehabilitation teams. (Also see item b. Ground Disturbing Activities above).

o. Noxious Weed Program Continuity. Ensure continuity in noxious weed management programs. Each Forest should have access to a Weed Specialist who is trained and proficient in noxious weed management.

2. Closure Orders. Product certification shall be accepted from any State Department of Agriculture, County Agriculture Officer, or their authorized agents, on National Forest System lands for the certified hay, feed, straw, and mulch closure orders. Pelletized feed does not fall under the hay products closure orders.

2083 - INFORMATION COLLECTION AND REPORTING

Inventory noxious weeds and plot their location on a map(s). Update the inventory as needed. Coordinate information with local/county weed boards. Inventory information can be supplemental to post-treatment evaluation as described in FSM 2155.1. The inventory and summary shall be by weed species and acreage infested. Do not duplicate the acreage count where more than one weed species occurs on the same site.

Appendix IV
Forest Vegetation Management

Vegetation Management Practices
A number of silvicultural systems and management practices may be used, depending upon the management objectives for a particular area. The three systems that will be applied on the Wasatch-Cache are even-aged, two-aged, and uneven-aged.

Even-aged Systems: This system is designed to produce stands where trees of the same approximate age are growing together. Even-aged stands are developed or maintained through the use of clearcutting or shelterwood harvest methods.

Clearcutting is appropriate for early seral species that do not require shade to grow, including aspen and lodgepole pine. It is also appropriate to prevent spread of insects and disease, where windthrow will result in significant loss of residual trees, or to create desirable landscape patterns of vegetation. Clearcutting with reserves (trees that are retained to provide future snags and down woody material) is an appropriate practice in lodgepole pine, aspen, mixed stands dominated by lodgepole pine or aspen, and in stands of aspen undergoing succession to conifers through encroachment.

Shelterwood removes most of the stand, allowing room for new trees to grow beneath the remaining older trees, which provide seed and protect the young trees from sun and wind damage. Leave trees tend to be fairly uniformly spaced throughout the stand. It is appropriate for those species that require some degree of protection to insure growth of seedlings. The removal of the overstory after establishment of regeneration will create conditions similar to those of a regenerated clearcut.

Two-Aged Systems: Stands with two distinct layers or age classes are desirable for a variety of reasons. An irregular shelterwood treatment can be used to create such a structure. In this method, the protecting overstory trees are not uniformly spaced, but scattered over the harvest area as single trees or small groups of leave trees. The overstory trees would not be removed after regeneration, but would function as the overstory age class, eventually providing snags and down woody material.

Uneven-Aged Systems: Uneven-aged systems attempt to provide a full range of size/age classes within the stand, from seedlings to mature trees. This management system is appropriate for mid to late seral species, such as Englemann spruce, that require or tolerate relatively heavy shade to regenerate. This system is applied through either group selection, in which trees are harvested in small (< 1 ac) groups, or single tree selection, in which individual trees are removed. This system is appropriate where windthrow is a concern, in mixed stands where insect and disease problems are less of a concern, and where multiple canopy layers are desired.

Timber Management on Unsuitable Lands.
All lands within Management Prescriptions that do not emphasize managing timber for growth and yield are considered unsuitable lands. Within the unsuitable lands definition are those lands which are tentatively suitable, but received management prescriptions that emphasize resource management other than timber. Timber management (including commercial harvest, reforestation, and commercial and precommercial thinning) may occur on those lands, if analysis determines it is an acceptable way to achieve the management direction for the area (for example, harvest may be used to develop wildlife habitat on prescription 3.2 lands, if the analysis shows that it can be accomplished while still meeting the objectives for the MPC). Where appropriate, timber harvest will be used to achieve desired future condition on unsuitable lands. It is anticipated that most of the activity occurring on unsuitable lands will take place within Management Prescription 5.1, which emphasizes maintaining or restoring forested ecosystem integrity while meeting multiple resource objectives. Any volume produced from these prescription categories is not considered part of the Allowable Sale Quantity (ASQ), but is included in the Total Sale Program Quantity (TSPQ).

Timber harvest may be used to salvage trees or stands substantially damaged by wind, fire, or other significant disturbance; reduce susceptibility to insects and disease; or to develop stand structures that meet the desired future conditions, provided such activities can be done in harmony with the management emphasis for the area. Any volume resulting from such a treatment is not part of the Plan ASQ, and is not scheduled on a regular basis.

Some lands have been removed from the suitable due to steep slopes. Harvesting may occur on these lands to test logging systems, to conduct experiments, etc.

Harvesting of fuelwood and Christmas trees may occur on unsuitable lands to provide for public use provided such use is compatible with the overall management direction for the MPC.

Tables 1, and 2 and Figure 1 present the vegetation management practices, ASQ and LTSYC expected within the first decade of the planning period.

Table 1. Vegetation Management Practices (Annual average in first decade for suitable lands)

Vegetation Mgt Practice	Acres
Regeneration harvest:	
Clearcut	150
Shelterwood and Seed Tree:	
Preparatory cut	
Seed cut	30
Removal cut	
Selection	70
Intermediate Harvest:	
Commercial thinning	50
Salvage/sanitation	50
Timber Stand Improvement	300
Reforestation	250

Table 2. Allowable Sale Quantity and Timber Sale Program Quantity (Annual Average for First Decade).

Harvest Method	Allowable Sale Quantity	
	Sawtimber (MMCF)	Other Products (MMCF)
Regeneration Harvest:		
Clearcut	.20	
Shelterwood and Seed Tree:		
Preparatory Cut		
Seed Tree	.05	
Removal Cut		
Selection	.05	
Intermediate Harvest:		
Commercial Thinning	.04	.01
Salvage/Sanitation	.04	.01
Totals	.38	.02
	Additional Sales (Unsuitable Lands)	
	Sawtimber (MMCF)	Other Products (MMCF)
Total for all harvest methods	.5	
	Allowable Sale Quantity	Timber Sale Program
MMCF	.4	.9
MMBF	2.0	4.5

Figure 1. LTSYC and ASQ

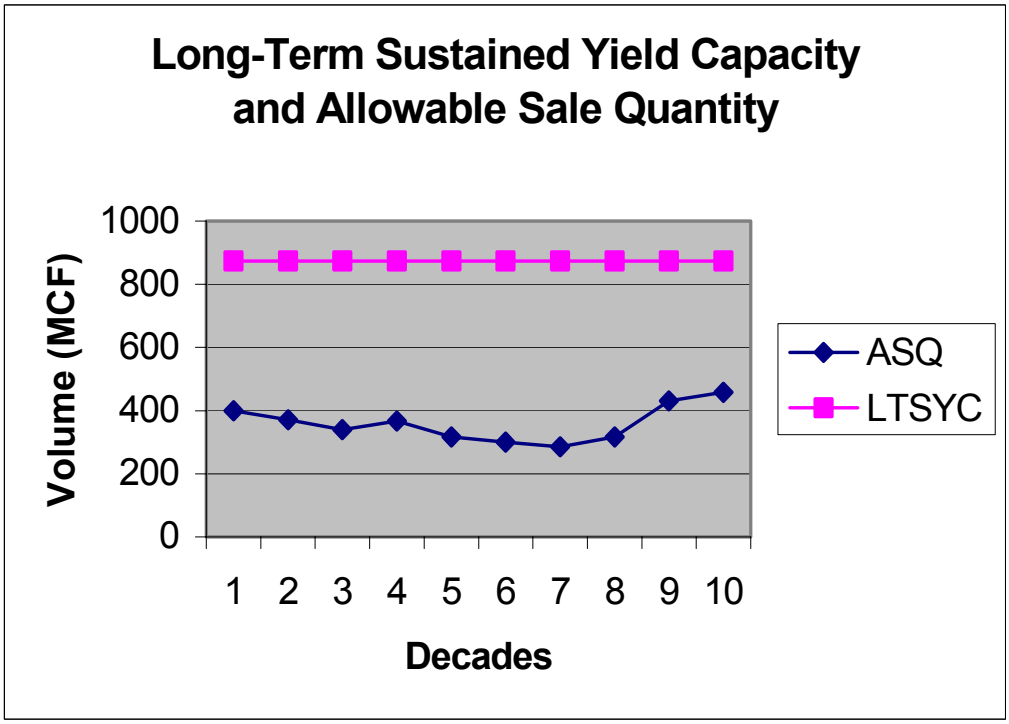

Table 3.

Land Classification (Acres Rounded to Nearest 100)

Classification	Acres
1. Non-Forest land (includes water)	567,900
2. Forest land	671,500
3. Forest land withdrawn from timber production	152,500
(Wilderness, RNA, Utility Corridors, Developed	
Rec. Areas, Roads, Special Use Areas)	
4. Forest land not capable of producing crops of industrial wood	0
5. Forest land physically unsuitable	177,300
--irreversible damage likely to occur	
--not restockable within 5 years	
6. Forest land – inadequate information	0
7. Tentatively suitable forest land	341,700
(item 2 minus items 3, 4, 5, and 6)	
8. Forest land not appropriate for timber production	
--minimum management requirements	0
--multiple-use objectives	311,000
--cost efficiency	0
9. Unsuitable forest land	642,600
(items 3, 4, 5, 6 and 8)	
10. Total suitable forest land	28,900
(item 2 minus item 7)	
11. Total national forest land	1,239,400
(items 1 and 2)	

Table 4. Timber Productivity Classification

Potential Growth (cu. ft./acre/year)	Suitable Lands (acres)	Unsuitable Lands (acres)
Less than 20	307	134,500
20-49	17,848	346,000
50-84	9,517	134,500
85-119	1,228	25,600
120-164		
165-224		
225+		

Table 5. Present and Future Forest Conditions

	Suitable Land (MMCF)	Unsuitable Land (MMCF)
Present Forest:		
Growing Stock	40	705
Salvable Dead	5	79
Annual Mortality	0.8	14.5
Annual Net Growth	0.6	10.7
Future Forest:		
Growing Stock	32	
Rotation Age[1]	80 to 120 years	
Age Class Distribution – Suitable Lands (M Acres)		
	Present Forest	Future Forest
0-30	8	7
30-80	2	12
80+	21	10

1Average rotation age for regenerated stands on lands with timber emphasis by major forest types.

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A number of silvicultural systems and management practices may be used, depending upon the management objectives for a particular area. The three systems that will be applied on the Wasatch-Cache are even-aged, two-aged, and uneven-aged.

Even-aged Systems: This system is designed to produce stands where trees of the same approximate age are growing together. Even-aged stands are developed or maintained through the use of clearcutting or shelterwood harvest methods.

Clearcutting is appropriate for early seral species that do not require shade to grow, including aspen and lodgepole pine. It is also appropriate to prevent spread of insects and disease, where windthrow will result in significant loss of residual trees, or to create desirable landscape patterns of vegetation. Clearcutting with reserves (trees that are retained to provide future snags and down woody material) is an appropriate practice in lodgepole pine, aspen, mixed stands dominated by lodgepole pine or aspen, and in stands of aspen undergoing succession to conifers through encroachment.

Shelterwood removes most of the stand, allowing room for new trees to grow beneath the remaining older trees, which provide seed and protect the young trees from sun and wind damage. Leave trees tend to be fairly uniformly spaced throughout the stand. It is appropriate for those species that require some degree of protection to insure growth of seedlings. The removal of the overstory after establishment of regeneration will create conditions similar to those of a regenerated clearcut.

Two-Aged Systems: Stands with two distinct layers or age classes are desirable for a variety of reasons. An irregular shelterwood treatment can be used to create such a structure. In this method, the protecting overstory trees are not uniformly spaced, but scattered over the harvest area as single trees or small groups of leave trees. The overstory trees would not be removed after regeneration, but would function as the overstory age class, eventually providing snags and down woody material.

Uneven-Aged Systems: Uneven-aged systems attempt to provide a full range of size/age classes within the stand, from seedlings to mature trees. This management system is appropriate for mid to late seral species, such as Englemann spruce, that require or tolerate relatively heavy shade to regenerate. This system is applied through either group selection, in which trees are harvested in small (< 1 ac) groups, or single tree selection, in which individual trees are removed. This system is appropriate where windthrow is a concern, in mixed stands where insect and disease problems are less of a concern, and where multiple canopy layers are desired.

Timber Management on Unsuitable Lands.
All lands within Management Prescriptions that do not emphasize managing timber for growth and yield are considered unsuitable lands. Within the unsuitable lands definition are those lands which are tentatively suitable, but received management prescriptions that emphasize resource management other than timber. Timber management (including commercial harvest, reforestation, and commercial and precommercial thinning) may occur on those lands, if analysis determines it is an acceptable way to achieve the management direction for the area (for example, harvest may be used to develop wildlife habitat on prescription 3.2 lands, if the analysis shows that it can be accomplished while still meeting the objectives for the MPC). Where appropriate, timber harvest will be used to achieve desired future condition on unsuitable lands. It is anticipated that most of the activity occurring on unsuitable lands will take place within Management Prescription 5.1, which emphasizes maintaining or restoring forested ecosystem integrity while meeting multiple resource objectives. Any volume produced from these prescription categories is not considered part of the Allowable Sale Quantity (ASQ), but is included in the Total Sale Program Quantity (TSPQ).

Timber harvest may be used to salvage trees or stands substantially damaged by wind, fire, or other significant disturbance; reduce susceptibility to insects and disease; or to develop stand structures that meet the desired future conditions, provided such activities can be done in harmony with the management emphasis for the area. Any volume resulting from such a treatment is not part of the Plan ASQ, and is not scheduled on a regular basis.

Some lands have been removed from the suitable due to steep slopes. Harvesting may occur on these lands to test logging systems, to conduct experiments, etc.

Harvesting of fuelwood and Christmas trees may occur on unsuitable lands to provide for public use provided such use is compatible with the overall management direction for the MPC.

Tables 1, and 2 and Figure 1 present the vegetation management practices, ASQ and LTSYC expected within the first decade of the planning period.

Table 1. Vegetation Management Practices (Annual average in first decade for suitable lands)

Vegetation Mgt Practice	Acres
Regeneration harvest:	
Clearcut	150
Shelterwood and Seed Tree:	
Preparatory cut	
Seed cut	30
Removal cut	
Selection	70
Intermediate Harvest:	
Commercial thinning	50
Salvage/sanitation	50
Timber Stand Improvement	300
Reforestation	250

Table 2. Allowable Sale Quantity and Timber Sale Program Quantity (Annual Average for First Decade).

Harvest Method	Allowable Sale Quantity	
	Sawtimber (MMCF)	Other Products (MMCF)
Regeneration Harvest:		
Clearcut	.20	
Shelterwood and Seed Tree:		
Preparatory Cut		
Seed Tree	.05	
Removal Cut		
Selection	.05	
Intermediate Harvest:		
Commercial Thinning	.04	.01
Salvage/Sanitation	.04	.01
Totals	.38	.02
	Additional Sales (Unsuitable Lands)	
	Sawtimber (MMCF)	Other Products (MMCF)
Total for all harvest methods	.5	
	Allowable Sale Quantity	Timber Sale Program
MMCF	.4	.9
MMBF	2.0	4.5

Figure 1. LTSYC and ASQ

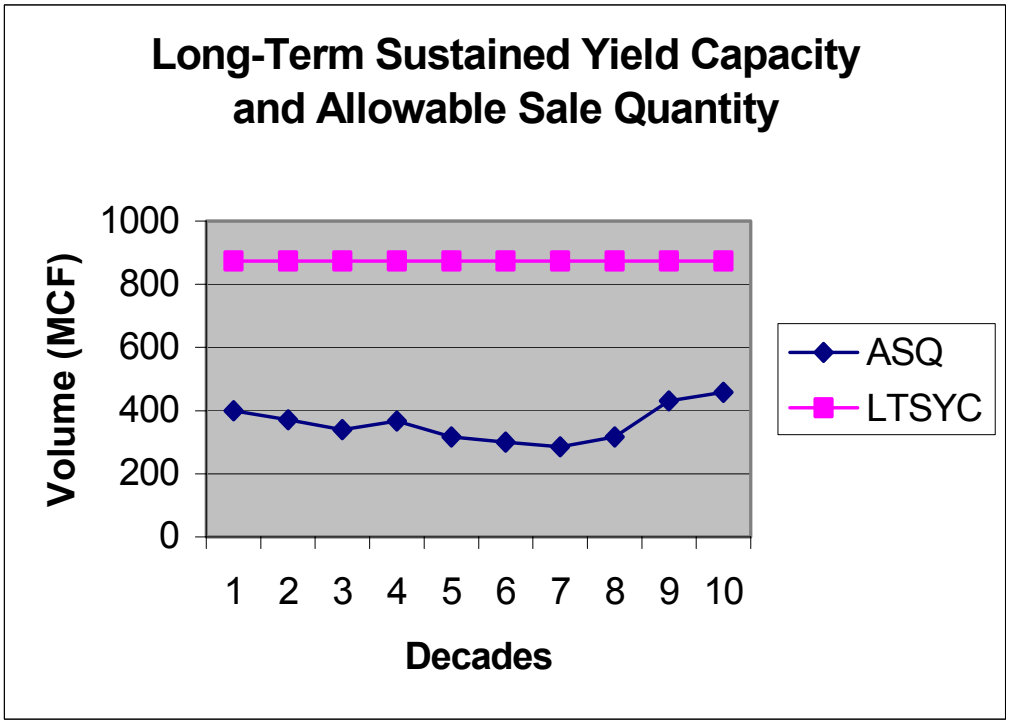

Table 3.

Land Classification (Acres Rounded to Nearest 100)

Classification	Acres
1. Non-Forest land (includes water)	567,900
2. Forest land	671,500
3. Forest land withdrawn from timber production	152,500
(Wilderness, RNA, Utility Corridors, Developed	
Rec. Areas, Roads, Special Use Areas)	
4. Forest land not capable of producing crops of industrial wood	0
5. Forest land physically unsuitable	177,300
--irreversible damage likely to occur	
--not restockable within 5 years	
6. Forest land – inadequate information	0
7. Tentatively suitable forest land	341,700
(item 2 minus items 3, 4, 5, and 6)	
8. Forest land not appropriate for timber production	
--minimum management requirements	0
--multiple-use objectives	311,000
--cost efficiency	0
9. Unsuitable forest land	642,600
(items 3, 4, 5, 6 and 8)	
10. Total suitable forest land	28,900
(item 2 minus item 7)	
11. Total national forest land	1,239,400
(items 1 and 2)	

Table 4. Timber Productivity Classification

Potential Growth (cu. ft./acre/year)	Suitable Lands (acres)	Unsuitable Lands (acres)
Less than 20	307	134,500
20-49	17,848	346,000
50-84	9,517	134,500
85-119	1,228	25,600
120-164		
165-224		
225+		

Table 5. Present and Future Forest Conditions

	Suitable Land (MMCF)	Unsuitable Land (MMCF)
Present Forest:		
Growing Stock	40	705
Salvable Dead	5	79
Annual Mortality	0.8	14.5
Annual Net Growth	0.6	10.7
Future Forest:		
Growing Stock	32	
Rotation Age[1]	80 to 120 years	
Age Class Distribution – Suitable Lands (M Acres)		
	Present Forest	Future Forest
0-30	8	7
30-80	2	12
80+	21	10

1Average rotation age for regenerated stands on lands with timber emphasis by major forest types.

Appendix IX
Stipulations for Oil and Gas Leasing

The Standard Lease Terms can be modified by special or supplemental stipulations attached to the lease (43 CFR 3101.I-2 through 3101.I4). Additional special stipulations can be developed specifically to meet resource concerns that cannot be mitigated by existing stipulations. The following supplemental stipulations have been developed for the Wasatch-Cache National Forest. Applicable stipulations will be applied as shown on the leasing alternative maps.

The list of stipulations applies to certain resources within the Appeal Settlement Zone. Most are identical to those identified in the 1994 Leasing Decision. Those that have been newly identified as a result of the forest plan revision are shown in italics.

RESOURCE: Elk Calving Areas
Stipulation: Timing Limitation
Objective: To preclude the commencement of surface disturbing activities within the elk calving area that could cause increased stress and/or displacement of animals during the critical time period (May 1 to June 30).

RESOURCE: Elk Winter Range
Stipulation: Timing Limitation
Objective: To preclude the commencement of surface disturbing activities within the elk winter range that could cause increased stress and/or displacement of animals during the critical time period (November 15 to April 30).

RESOURCE: Elk Spring Use Area
Stipulation: Timing Limitation
Objective: To preclude the commencement of surface disturbing activities within the elk Spring use area that could cause increased stress and/or displacement during the critical time period (May 1 to June 30).

RESOURCE: Moose Winter Range
Stipulation: Timing Limitation
Objective: To preclude the commencement of surface disturbing activities within the moose winter range that could cause increased stress and/or displacement of animals during the critical time period (November 15 to April 30).

RESOURCE: Bighorn Sheep Lambing Area
Stipulation: Timing Limitation
Objective: To preclude the commencement of surface disturbing activities within the bighorn sheep lambing area that could cause increased stress and/or displacement of animals during the critical time period (May 1 to June 30).

RESOURCE: Sensitive Wildlife Species
Stipulation: Controlled Surface Use – a survey would be required prior to surface disturbing activities to determine the possible presence of any sensitive wildlife species and operations be designed and/or located so as to not adversely affect the viability of the species. (A Controlled Surface Use stipulation requiring surveys for sensitive wildlife species will be included in all leases since the specific location of sensitive wildlife is not known or can change over time.)
Objective: To ensure that proposed activities do not adversely affect the viability of a wildlife species.

RESOURCE: Sensitive Plants
Stipulation: Controlled Surface Use – a survey would be required prior to surface disturbing activities to determine the possible presence of any sensitive plant species and operations be designed or located so as to not adversely affect the viability of the plant species. (A Controlled Surface Use stipulation requiring surveys for sensitive plant species will be included in all leases since the specific location of sensitive plants is not known or can change over time.)
Objective: To ensure that proposed activities do not adversely affect the viability of a plant species.

RESOURCE: Geologic Hazards and Unstable Soils
Stipulation: Controlled surface Use
Objective: To require that activities be located and or designed to avoid or minimize the potential for adverse effects to unstable areas and to ensure that the area can be reclaimed.

RESOURCE: Slopes >40%
Stipulation: No Surface Occupancy
Objective: To preclude construction of well sites and related facilities such as tank batteries on slopes over 40% that would involve relatively large cut and fill slopes and would be difficult to rehabilitate.

RESOURCE: Riparian Areas >40 acres
Stipulation: No Surface Occupancy
Objective: To preclude surface disturbing activities and protect riparian areas.

RESOURCE: Wetland Areas >40 acres
Stipulation: No Surface Occupancy
Objective: To preclude surface disturbing activities and protect jurisdictional wetlands relative to Executive Order 11990.

RESOURCE: Developed Campgrounds and Trailheads
Stipulation: No Surface Occupancy
Objective: To preclude surface occupancy and new surface disturbing activities within developed recreation sites.

RESOURCE: Administrative Sites and Summer Home Area
Stipulation: No Surface Occupancy
Objective: To preclude surface occupancy and new surface disturbing activities within administrative sites and the Christmas Meadows summer home area.

RESOURCE: Backcountry Recreation (Management Prescription 4.1 in areas of high quality backcountry recreation values)
Stipulation: No Surface Occupancy
Objective: To maintain backcountry non-motorized recreation opportunities in remote and isolated settings with the environment in a near-natural state.

RESOURCE: Backcountry Recreation (Management Prescription 4.1 and 4.2)
Stipulation: Controlled Surface Use – This stipulation would be required in areas where there is a desire to provide nonmotorized recreation opportunities yet allow industry more flexibility in developing oil and gas reserves. Proposed activities would be required to be located and/or screened away from concentrated use areas and trails and important viewpoints. Restoration of any site-disturbing activities is required after operations have ceased.
Objective: To maintain nonmotorized recreation opportunities in remote settings.

RESOURCE: Undeveloped Lands (Management Prescription 2.6)
Stipulation: No Surface Occupancy
Objective: To protect undeveloped landscapes and assure that the unique qualities associated with these areas are recognized and preserved.

RESOURCE: Scenery Management System
Stipulation: Controlled Surface Use – proposed activities would be required to be located and/or designed to meet Naturally Appearing landscape character theme and high scenic integrity objective.
Objective: To maintain the highly valued scenic quality of the area.

RESOURCE: Scenery Management System
Stipulation: Controlled Surface Use – proposed activities would be required to be located and/or designed to meet Naturally Appearing landscape character theme and moderate scenic integrity objective.
Objective: To maintain the highly valued scenic quality of the area.

RESOURCE: Eligible Wild and Scenic River Corridor
Stipulation: Controlled Surface Use – proposed activities would be required to protect identified outstandingly remarkable value(s) until such time the Suitability is determined.
Objective: To maintain identified outstandingly remarkable value(s)

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Appendix V
Roads Analysis Reference Book

The following Table of Contents is provided to show the compilation of information expected to result from a variety of efforts related to transportation management on the Forest. As inventories and planning efforts are completed, the information will be compiled in a three-ring binder. This "Reference Book" will serve as a centralized location for roads and access-related information developed at various scales. It can be used for background, status, issue identification and/or context and priority setting during future planning efforts.

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Appendix VI
Management Direction for Individual Wildernesses

High Uintas Wilderness

The following management direction for the High Uintas Wilderness was developed as amendments to the 1985 Wasatch-Cache and Ashley National Forest Plans through and EIS done in 1997, or it was brought forward from the 1985 Wasatch-Cache Forest Plan.

MANAGEMENT GOALS

Wilderness:	Manage the wilderness in accordance with the Wilderness Act of 1964 and the Utah Wilderness Act of 1984. Allow ecosystems to function naturally.
Air:	Protect air quality to wilderness standards.
Water and Soil:	Protect soil and water resources. Allow development, protection, and monitoring of water resources as provided for in Title III of the Utah Wilderness Act.
Wildlife and Fish habitats:	Allow natural processes to shape terrestrial and aquatic habitats. Cooperate with Utah DWR in managing fish and wildlife resources. (FSM 2323.3)
Vegetation:	Protect the wilderness resource while allowing established livestock grazing to continue, including maintenance of improvements and predator control, as provided for in Title III of the Utah Wilderness Act. Allow fire to play, as nearly as possible, its natural role in maintaining wilderness values and natural processes.
Recreation:	Manage recreation to sustain the wilderness resource.
Minerals:	Protect the wilderness resource by limiting mineral development and exploration activities to that necessary to exercise valid existing rights.

STANDARDS (S) and GUIDELINES (G)

Air Quality

MA-01-001 (S) All classes: Nitrate loading will not exceed 3-5 kg/hectare/yr. Sulphate loading will not exceed 3-5 kg/hectare/yr.

MA-01-002 (S) All classes: Long-term visibility impairment from human activities will not impair long term baseline visual range more than 10% of the 90th percentile in Class II wilderness airsheds. Short-term (14 day) visual range impairment from human activities outside the wilderness will not reduce visual range more than 20% in Class ll wilderness airsheds.

MA-01-003 (S) All classes: Alkalinity will not be reduced more than 10% of the baseline in all surface waters.

Water and Soil Management

MA-01-004 (S) All classes: State of Utah water quality standard will be met for acceptable amounts of coliform bacteria in waters for their specific beneficial uses as defined by the State Standards of Quality of the Waters of the State.

MA-01-005 (S) Class I: no more than 15% of all use areas have erosion class I characteristics, 0% erosion classes 2 and 3.

MA-01-006 (S) Class Il: no more than 25% of all use areas have erosion class I characteristics, no more than 15% have erosion class 2 characteristics, 0% erosion class 3.

MA-01-007 (S) Class III: no more than 50% of all use areas have erosion class I characteristics, no more than 25% have erosion class 2 characteristics, 0% erosion class 3.

MA-01-008 (S) Resource activities are not allowed where damage cannot be mitigated to meet Federal, State, and local water quality.

MA-01-009 (G) Cloud seeding projects which produce only occasional, incidental, or temporary changes to the weather with carry over effects on the ground lasting only a few days beyond the actual cloud seeding may be allowed if approved by the Chief of the Forest Service. (FSM 2323.45.3)

MA-01-010 (G) Apply for State water rights to meet area needs when not covered by reservation doctrines.

Fish and Wildlife Management

MA-01-011 (G) Fish stocking activities meet wilderness resource objectives and provide for a range of wilderness dependent recreation opportunities.

MA-01-012 (S) Re-introduction of species is considered appropriate only if species is indigenous and was extirpated by human induced events. Transplants are limited to indigenous species as determined by UDWR. (FSM 2323.33a) Indigenous species, which are classified as threatened, endangered or sensitive receive priority for transplant.

Vegetation Management

MA-01-013 (G) Maintain natural vegetative composition and diversity.

MA-01-014 (G) Harvest no timber.

MA-01-015 (G) Use minimum tool to control noxious weeds to protect wilderness and downstream values.

MA-01-016 (S) Permit no more than 10% of the habitat for sensitive plant species to be adversely altered by human uses.

MA-01-017 (S) Alpine vegetation types - 85% of potential ground cover. Aspen vegetation types - 85% of potential ground cover. Riparian vegetation types - 85% of potential ground cover.

Fire Management

MA-01-018 (S) In all Classes of Wilderness: Prescribed fires and wildland fire use are managed so fire can play, as nearly as possible, its natural role in the ecosystem. Prescribed fires are managed according to direction originally developed in the High Uintas Wilderness Plan Amendment FEIS 1997. (See FSM 2324.2 and Appendix IV of this Forest Plan.)

MA-01-019 (G) Suppression of wildfires and management of prescribed fires protect wilderness values and adhere to minimum tool philosophies. (FSM 2324.2)

MA-01-020 (G) When a wildland fire situation analysis is needed for wildfire suppression efforts, it mitigates effects on wilderness resource values. (FSM 2324.2)

MA-01-021 (S) Damage from fire suppression and prescribed fire management activities are stabilized and rehabilitated. (FSM 2324.2)

Range Management

MA-01-022 (G) Grazing of livestock established prior to September 1984 shall be permitted to continue, subject to regulations. Manage allotments to protect the wilderness resources. (FSM 2323.22)

MA-01-023 (G) As wilderness AMPS are revised, include wilderness resource objectives.

MA-01-024 (G) Design new range improvements to be rustic in appearance and construct only where needed to protect the wilderness resource. (FSM 2323.26a)

MA-01-025 (S) Existing range improvements are maintained to protect wilderness resource values or are removed.

MA-01-026 (G) Sheep salt and bed grounds are temporary and are located away from springs, streams, and lakes. Locate sheepherder camps on hardened sites where there is little or no conflict with recreation uses.

MA-O1-027 (G) Issue no new sheep and cattle grazing permits in areas currently unobligated.

MA-01-028 (G) Coordinate management of livestock and recreation use to protect the wilderness character of the area.

MA-O1-029 (G) Regulate grazing use on and adjacent to heavily used recreation areas to prevent deterioration of the wilderness resource and minimize user conflicts.

MA-O1-030 (S) Allow predator control only when necessary to protect threatened or endangered species or to prevent special and serious losses of domestic livestock.

MA-01-031 (S) Direct predator control at eliminating the offending animal(s) while presenting the least possible hazard to other animals or people.

MA-O1-032 (S) Allow no aerial predator control in the High Uintas Wilderness.

Recreation Use

MA-01-033 (G) Manage for the Recreation Opportunity Spectrum (ROS) category of Primitive.

MA-O1-034 (G) Use indirect management techniques to disperse wilderness visitors and reduce impacts. Use direct management techniques when necessary to protect the wilderness resource. (FSM 2323.12.1)

MA-01-035 (S) Campsite density: Class I - campsites should be 1 mile apart. Class II -campsites should be 1/4 mile apart. Class 111- campsites are 200 feet apart.

MA-O 1-036 (S) Campsite condition: Class 1- No campsites have a SII rating greater than 40. Class II - 10% or fewer campsites have an SII rating greater than or equal to 50. Class III - 20% or fewer campsites have an SII rating greater than or equal to 50.

MA-O1-037 (G) Terrain permitting, campsites must be at least 200 feet from water.

MA-O1-038 (S) Group size: Class I - 7 people/7 stock. Class II and III – 14 people/5 stock.

MA-O1-039 (S) Length of stay at campsite: Class I - I-2 nights recommended overnight stay. Class II and III -14 nights at an individual site.

MA-O1-040 (G) All classes: Stock may be tethered to a tree for 2 hours or less if damage is occurring to tree or vegetation at base of tree.

MA-O1-041 (G) All classes: Stock cannot be tethered within 200 feet of water sources for more than 2 hours.

MA-01-042 (S) No overnight use or grazing by recreational stock in Chain Lakes basin (Uinta Drainage).

MA-O1-043 (G) Litter or waste will be disposed of in an appropriate manner.

MA-01-044 (S) Prohibit campfires where the firewood supply is depleted and continued fire building threatens the wilderness qualities of the area.

MA-O1-045 (S) In Naturalist Basin (Duchesne drainage): building, maintaining, attending or using a fire or campfire unless in a designated campfire location is prohibited.

MA-O1-046 (S) Require that all feed packed in for recreational stock is incapable of germination.

Outfitted Recreation Use

MA-O1-047 (G) Administer outfitting/guiding permits to protect the wilderness resources and minimize conflicts with other uses.

MA-O1-048 (S) Class I - drop camps only, no spike or assigned camps. Overnight group size limited to 7 people 7 stock. Class II -1 assigned site per drainage. Class III -drop camps only, no spike or assigned camps.

MA-O1-049 (S) Based on outfitting needs analysis for the HUW, permit no more than 7 special-use stock outfitters and no more than 4 special-use non-stock outfitters.

MA-O1-050 (S) Maximum available service days for outfitted use by drainage are:

	Stock	Non-Stock
Duchesne	0	0
Rock Creek	300	200
Lake Fork	350	600
Yellowstone	300	550
Uinta	300	450
Burnt Fork	150	0
Beaver Creek	150	0
Henry's Fork	0	150
Smiths Fork	0	300
E/M/W Blacks Fork	250	300
E/Stillwater Fork Bear	50	0

MA-O1-051 (S) Permit no camping at trailheads.

MA-01-052 (G) Administer and issue outfitter guide permits to meet the following needs criteria:

Criteria A: Ability to accomplish environmental and land stewardship education and interpretation goals.

Criteria B: Ability to accomplish resource protection and other National Forest goals (i.e. trail maintenance/construction and rehabilitation, and campsite rehabilitation and re-location).

Criteria C: Service Days actually used as compared to service days authorized. This may reflect either an increase or decrease in authorized service days, but cannot exceed service day ceiling for the wilderness.

Criteria D: Documented citizen requests over time for particular commercial services.

Criteria E: Ability of the agency to monitor existing permits for compliance with the forest plan and special use permit requirements.

Criteria F: Lakes and trail corridors in Duchesne River, Henrys Fork, Smiths Fork and East/Stillwater Forks of the Bear River drainages are least appropriate for outfitting operations because the current public use meets or exceeds the desired conditions for that area.

Criteria G: Outfitter knowledge of area, safety, equipment and quality of business and customer service.

Structures and Improvements

MA-O1-053 (G) Construct, reconstruct and maintain trails and bridges to prevent resource damage and provide for public safety, not for user convenience. (FSM 2323.13f)

MA-O1-054 (G) Re-route trails away from ecologically fragile areas and areas where people and livestock congregate. Discourage use, stabilize and obliterate abandoned and redundant trail segments.

MA-O 1-055 (S) Class I - no system trails. Class II and III - Trails avoid wetlands. Trails avoid stream crossings where bank gradients are greater than 30%. Trails are designed and maintained so water does not run down the trail.

MA-O1-056 (S) Class II and III - Trail switchbacks do not show signs of shortcutting.

MA-O1-057 (S) Construct no new trails to access new areas.

MA-01-058 (G) Corduroy or puncheon may be used for trail surfacing when needed for resource protection and user safety. Use native materials for barriers to prevent traffic from widening the tread.

MA-O1-059 (G) Where vegetation exists, and terrain permits maintain a vegetative strip or screen between the trail and lake or stream. Generally, a buffer of at least 100 feet is desirable.

MA-O1-060 (G) Maintain only those cairns necessary to guide users across long, open, or rocky slopes or through meadows. Existing blazes on trees along well established heavily used routes will not be maintained.

MA-01-061 (G) Use trail signs only for boundary control, public safety, resource protection, and direction at trail junction.

MA-O1-062 (S) Design signs as follows:
1. Rustic design, blend with wilderness setting.
2. Construct signs of wood with routed lettering and leave unfinished. 3. Show direction but not mileage on junction signs. 4. Mount signs on snags, natural posts, or rocks. 5. Each sign will have no more than three lines.

MA-O1-063 (S) Place signs as follows:
1. Directional signs at system trail junctions only.
2. No more than two signs at any junction.
3. Sign the Wilderness boundary as necessary to prevent unauthorized use.
4. "Closed to mechanized vehicles" signs at trailheads or where trails enter the wilderness.
5. Administrative signs, such as "closed to camping", only where necessary for resource protection.
6. Interpretive signs, showing key natural features, travel routes and other information at major trailheads outside of the wilderness.

MA-O1-064 (G) Allow current primitive wilderness ranger camps if necessary to meet wilderness objectives, not for user or employee convenience. Remove and rehabilitate those that do not meet the above criteria. Construct no new permanent camps.

MA-01-065 (G) As a last resort, construct and maintain sanitary facilities to protect wilderness resources. Use a minimum tool analysis to determine project parameters. (FSM 2323.13.3)

Visitor Information and Education

MA-O1-066 (G) Use Leave No Trace and wilderness ethics education to meet wilderness objectives and deter the use of visitor regulation.

MA-O1-067 (G) Inform the public of backcountry opportunities outside the wilderness and encourage the use of other areas.

Heritage Resources

MA-01-068 (G) Protect cultural resources from human activities and public vandalism. (FSM 2323.8)

MA-O1-069 (S) Allow historic cabins to deteriorate naturally. Take no action to preserve them. (FSM 2323.8)

Motorized/Mechanical Use

MA-O1-070 (G) Use Minimum Tool Analysis to determine most appropriate methods for implementation of projects and proposals. Minimum tool may include mechanized and motorized means.

MA-O1-071 (S) Allow use of helicopters for emergencies only when approved by the Forest Supervisor. (FSM 2326.1.1)

Minerals Management

MA-O1-072 (S) Allow no prospecting for locatable minerals and no permits for removal of common variety minerals.

MA-O1-073 (S) Recommend to BLM to issue no new leases for leasable minerals and to not renew existing leases when they expire.

Lands

MA-O1-074 (S) Approve no new non-recreation special uses except those provided for in the 1984 Utah Wilderness Act. (FSM 2323.43)

MA-O1-075 (G) Stabilize and rehabilitate decommissioned reservoirs at a level that more naturally reflects the preconstruction conditions, allows natural streamflow processes to re-occur and at a level that poses no hazard, requires no maintenance or inspection, and requires no permit.

MA-O1-076 (G) Installation and maintenance of hydrologic, meteorologic, climatological, or telecommunications facilities are permitted where they are essential to flood warning, flood control, and water reservoir operation purposes as provided in the Utah Wilderness Act. Limited motorized access may be permitted subject to conditions imposed by the Secretaries of Agriculture and Interior.

MA-O1-077 (S) Retain Island Lake dam and spillway on Mountain View District at existing water level.

MA-01-078 (G) Cooperate with the Natural Resource Conservation Service on removal of telemetry stations in the High Uintas Wilderness.

Mt. Naomi, Wellsville Mountain, Mt. Olympus, Twin Peaks, Lone Peak, and Deseret Peak Wildernesses

General

Wild-1 (G) Do not allow the designated opportunity class for an area to deteriorate to a less pristine opportunity class. Limits must be established or management action taken where biological and physical resource capability cannot support the level of use.

Water and Soil Management

Wild-2 (G) Opportunity Class I: no more than 15% of all use areas have erosion class 1characteristics, 0% erosion classes 2 and 3.
Opportunity Class II: no more than 25% of all use areas have erosion class 1 characteristics, no more than 15% have erosion class 2 characteristics, 0% erosion class 3.
Opportunity Class III: no more than 50% of all use areas have erosion class 1 characteristics, no more than 25% have erosion class 2 characteristics, 0% erosion class 3.

Recreation Use

Wild-3 (S) Maximum group size: All Classes – People: [Mt Olympus, Twin Peaks, Lone Peak (Wasatch-Cache portion), Deseret Peak, Wellsville Mountain, Mt. Naomi] - 10 people. Recreation stock: Deseret Peak, Mt. Naomi, and Mill Creek side of Mt. Olympus – 14 stock.

Wild-4 (S) Maximum length of stay at campsite: All Classes: Mt Olympus, Twin Peaks, Lone Peak (Wasatch-Cache portion), Deseret Peak, Wellsville Mountain - 3 consecutive nights at an individual site. Mt. Naomi – 14 nights.

Wild- 5 (S) Prohibit campfires where the firewood supply is depleted, or when continued fire building threatens the wilderness qualities of the area, or for public safety.

Wild-6 (S) No domestic animals (stock or dogs) are allowed in portions of the Mt. Olympus, Twin Peaks, and Lone Peak (Wasatch-Cache portion) that are in the Big and Little Cottonwood Canyons municipal watersheds.

Wild-7 (S) Recreation stock must not be tethered to a tree if damage to the tree, soil, or vegetation at the base of the tree is occurring.

Wild-8 (S) All recreation stock feed must be incapable of germination.

Wild-9 (G) Recreation stock should not be restrained for more than one hour within 200 feet of any water source or tied to a tree for more than one hour.

Wild-10 (G) Campsite density: Opportunity Class I - campsites should be ½ mile apart. Class II -campsites should be ¼ mile apart. Class III- campsites should be 100 feet apart.

Wild-11 (G) Campsite conditions should have no sustained observable downward trend in condition and should be improved when possible.

Wild-12 (G) Terrain permitting, campsites should be at least 200 feet from water and/or trails.

Recreation Special Uses

Wild-13 (G) Allow no additional commercial outfitting and guiding permits.

Wild-14 (G) Allow no recreation event special use permits.

Visitor Information and Education

Wild-15 (G) Inform the public of backcountry opportunities outside of wilderness and encourage the use of these areas.

Wild-16 (G) Manage Wilderness use according to current Leave No Trace principles which now include: (1) plan ahead and prepare, (2) travel and camp on durable resources, (3) dispose of waste properly, (4) leave no trace of human presence, (5) minimize campfire impacts, (6) respect wildlife, (7) be considerate of other users, and (8) leave cultural artifacts.

Lands

Wild-17 (S) Approve no new non-recreation special uses, including commercial filming, except those provided for in designating legislation.

Wild-18 (S) Installation and maintenance of hydrologic, meteorological, climatological, or telecommunications facilities are permitted where they are essential to flood warning, flood control, and water reservoir operation purposes as provided in establishment legislation. Limited motorized access may be permitted subject to conditions imposed by the Secretaries of Agriculture and Interior.

Appendix VI
Management Direction for Individual Wildernesses

High Uintas Wilderness

The following management direction for the High Uintas Wilderness was developed as amendments to the 1985 Wasatch-Cache and Ashley National Forest Plans through and EIS done in 1997, or it was brought forward from the 1985 Wasatch-Cache Forest Plan.

MANAGEMENT GOALS

Wilderness:	Manage the wilderness in accordance with the Wilderness Act of 1964 and the Utah Wilderness Act of 1984. Allow ecosystems to function naturally.
Air:	Protect air quality to wilderness standards.
Water and Soil:	Protect soil and water resources. Allow development, protection, and monitoring of water resources as provided for in Title III of the Utah Wilderness Act.
Wildlife and Fish habitats:	Allow natural processes to shape terrestrial and aquatic habitats. Cooperate with Utah DWR in managing fish and wildlife resources. (FSM 2323.3)
Vegetation:	Protect the wilderness resource while allowing established livestock grazing to continue, including maintenance of improvements and predator control, as provided for in Title III of the Utah Wilderness Act. Allow fire to play, as nearly as possible, its natural role in maintaining wilderness values and natural processes.
Recreation:	Manage recreation to sustain the wilderness resource.
Minerals:	Protect the wilderness resource by limiting mineral development and exploration activities to that necessary to exercise valid existing rights.

STANDARDS (S) and GUIDELINES (G)

Air Quality

MA-01-001 (S) All classes: Nitrate loading will not exceed 3-5 kg/hectare/yr. Sulphate loading will not exceed 3-5 kg/hectare/yr.

MA-01-002 (S) All classes: Long-term visibility impairment from human activities will not impair long term baseline visual range more than 10% of the 90th percentile in Class II wilderness airsheds. Short-term (14 day) visual range impairment from human activities outside the wilderness will not reduce visual range more than 20% in Class ll wilderness airsheds.

MA-01-003 (S) All classes: Alkalinity will not be reduced more than 10% of the baseline in all surface waters.

Water and Soil Management

MA-01-004 (S) All classes: State of Utah water quality standard will be met for acceptable amounts of coliform bacteria in waters for their specific beneficial uses as defined by the State Standards of Quality of the Waters of the State.

MA-01-005 (S) Class I: no more than 15% of all use areas have erosion class I characteristics, 0% erosion classes 2 and 3.

MA-01-006 (S) Class Il: no more than 25% of all use areas have erosion class I characteristics, no more than 15% have erosion class 2 characteristics, 0% erosion class 3.

MA-01-007 (S) Class III: no more than 50% of all use areas have erosion class I characteristics, no more than 25% have erosion class 2 characteristics, 0% erosion class 3.

MA-01-008 (S) Resource activities are not allowed where damage cannot be mitigated to meet Federal, State, and local water quality.

MA-01-009 (G) Cloud seeding projects which produce only occasional, incidental, or temporary changes to the weather with carry over effects on the ground lasting only a few days beyond the actual cloud seeding may be allowed if approved by the Chief of the Forest Service. (FSM 2323.45.3)

MA-01-010 (G) Apply for State water rights to meet area needs when not covered by reservation doctrines.

Fish and Wildlife Management

MA-01-011 (G) Fish stocking activities meet wilderness resource objectives and provide for a range of wilderness dependent recreation opportunities.

MA-01-012 (S) Re-introduction of species is considered appropriate only if species is indigenous and was extirpated by human induced events. Transplants are limited to indigenous species as determined by UDWR. (FSM 2323.33a) Indigenous species, which are classified as threatened, endangered or sensitive receive priority for transplant.

Vegetation Management

MA-01-013 (G) Maintain natural vegetative composition and diversity.

MA-01-014 (G) Harvest no timber.

MA-01-015 (G) Use minimum tool to control noxious weeds to protect wilderness and downstream values.

MA-01-016 (S) Permit no more than 10% of the habitat for sensitive plant species to be adversely altered by human uses.

MA-01-017 (S) Alpine vegetation types - 85% of potential ground cover. Aspen vegetation types - 85% of potential ground cover. Riparian vegetation types - 85% of potential ground cover.

Fire Management

MA-01-018 (S) In all Classes of Wilderness: Prescribed fires and wildland fire use are managed so fire can play, as nearly as possible, its natural role in the ecosystem. Prescribed fires are managed according to direction originally developed in the High Uintas Wilderness Plan Amendment FEIS 1997. (See FSM 2324.2 and Appendix IV of this Forest Plan.)

MA-01-019 (G) Suppression of wildfires and management of prescribed fires protect wilderness values and adhere to minimum tool philosophies. (FSM 2324.2)

MA-01-020 (G) When a wildland fire situation analysis is needed for wildfire suppression efforts, it mitigates effects on wilderness resource values. (FSM 2324.2)

MA-01-021 (S) Damage from fire suppression and prescribed fire management activities are stabilized and rehabilitated. (FSM 2324.2)

Range Management

MA-01-022 (G) Grazing of livestock established prior to September 1984 shall be permitted to continue, subject to regulations. Manage allotments to protect the wilderness resources. (FSM 2323.22)

MA-01-023 (G) As wilderness AMPS are revised, include wilderness resource objectives.

MA-01-024 (G) Design new range improvements to be rustic in appearance and construct only where needed to protect the wilderness resource. (FSM 2323.26a)

MA-01-025 (S) Existing range improvements are maintained to protect wilderness resource values or are removed.

MA-01-026 (G) Sheep salt and bed grounds are temporary and are located away from springs, streams, and lakes. Locate sheepherder camps on hardened sites where there is little or no conflict with recreation uses.

MA-O1-027 (G) Issue no new sheep and cattle grazing permits in areas currently unobligated.

MA-01-028 (G) Coordinate management of livestock and recreation use to protect the wilderness character of the area.

MA-O1-029 (G) Regulate grazing use on and adjacent to heavily used recreation areas to prevent deterioration of the wilderness resource and minimize user conflicts.

MA-O1-030 (S) Allow predator control only when necessary to protect threatened or endangered species or to prevent special and serious losses of domestic livestock.

MA-01-031 (S) Direct predator control at eliminating the offending animal(s) while presenting the least possible hazard to other animals or people.

MA-O1-032 (S) Allow no aerial predator control in the High Uintas Wilderness.

Recreation Use

MA-01-033 (G) Manage for the Recreation Opportunity Spectrum (ROS) category of Primitive.

MA-O1-034 (G) Use indirect management techniques to disperse wilderness visitors and reduce impacts. Use direct management techniques when necessary to protect the wilderness resource. (FSM 2323.12.1)

MA-01-035 (S) Campsite density: Class I - campsites should be 1 mile apart. Class II -campsites should be 1/4 mile apart. Class 111- campsites are 200 feet apart.

MA-O 1-036 (S) Campsite condition: Class 1- No campsites have a SII rating greater than 40. Class II - 10% or fewer campsites have an SII rating greater than or equal to 50. Class III - 20% or fewer campsites have an SII rating greater than or equal to 50.

MA-O1-037 (G) Terrain permitting, campsites must be at least 200 feet from water.

MA-O1-038 (S) Group size: Class I - 7 people/7 stock. Class II and III – 14 people/5 stock.

MA-O1-039 (S) Length of stay at campsite: Class I - I-2 nights recommended overnight stay. Class II and III -14 nights at an individual site.

MA-O1-040 (G) All classes: Stock may be tethered to a tree for 2 hours or less if damage is occurring to tree or vegetation at base of tree.

MA-O1-041 (G) All classes: Stock cannot be tethered within 200 feet of water sources for more than 2 hours.

MA-01-042 (S) No overnight use or grazing by recreational stock in Chain Lakes basin (Uinta Drainage).

MA-O1-043 (G) Litter or waste will be disposed of in an appropriate manner.

MA-01-044 (S) Prohibit campfires where the firewood supply is depleted and continued fire building threatens the wilderness qualities of the area.

MA-O1-045 (S) In Naturalist Basin (Duchesne drainage): building, maintaining, attending or using a fire or campfire unless in a designated campfire location is prohibited.

MA-O1-046 (S) Require that all feed packed in for recreational stock is incapable of germination.

Outfitted Recreation Use

MA-O1-047 (G) Administer outfitting/guiding permits to protect the wilderness resources and minimize conflicts with other uses.

MA-O1-048 (S) Class I - drop camps only, no spike or assigned camps. Overnight group size limited to 7 people 7 stock. Class II -1 assigned site per drainage. Class III -drop camps only, no spike or assigned camps.

MA-O1-049 (S) Based on outfitting needs analysis for the HUW, permit no more than 7 special-use stock outfitters and no more than 4 special-use non-stock outfitters.

MA-O1-050 (S) Maximum available service days for outfitted use by drainage are:

	Stock	Non-Stock
Duchesne	0	0
Rock Creek	300	200
Lake Fork	350	600
Yellowstone	300	550
Uinta	300	450
Burnt Fork	150	0
Beaver Creek	150	0
Henry's Fork	0	150
Smiths Fork	0	300
E/M/W Blacks Fork	250	300
E/Stillwater Fork Bear	50	0

MA-O1-051 (S) Permit no camping at trailheads.

MA-01-052 (G) Administer and issue outfitter guide permits to meet the following needs criteria:

Criteria A: Ability to accomplish environmental and land stewardship education and interpretation goals.

Criteria B: Ability to accomplish resource protection and other National Forest goals (i.e. trail maintenance/construction and rehabilitation, and campsite rehabilitation and re-location).

Criteria C: Service Days actually used as compared to service days authorized. This may reflect either an increase or decrease in authorized service days, but cannot exceed service day ceiling for the wilderness.

Criteria D: Documented citizen requests over time for particular commercial services.

Criteria E: Ability of the agency to monitor existing permits for compliance with the forest plan and special use permit requirements.

Criteria F: Lakes and trail corridors in Duchesne River, Henrys Fork, Smiths Fork and East/Stillwater Forks of the Bear River drainages are least appropriate for outfitting operations because the current public use meets or exceeds the desired conditions for that area.

Criteria G: Outfitter knowledge of area, safety, equipment and quality of business and customer service.

Structures and Improvements

MA-O1-053 (G) Construct, reconstruct and maintain trails and bridges to prevent resource damage and provide for public safety, not for user convenience. (FSM 2323.13f)

MA-O1-054 (G) Re-route trails away from ecologically fragile areas and areas where people and livestock congregate. Discourage use, stabilize and obliterate abandoned and redundant trail segments.

MA-O 1-055 (S) Class I - no system trails. Class II and III - Trails avoid wetlands. Trails avoid stream crossings where bank gradients are greater than 30%. Trails are designed and maintained so water does not run down the trail.

MA-O1-056 (S) Class II and III - Trail switchbacks do not show signs of shortcutting.

MA-O1-057 (S) Construct no new trails to access new areas.

MA-01-058 (G) Corduroy or puncheon may be used for trail surfacing when needed for resource protection and user safety. Use native materials for barriers to prevent traffic from widening the tread.

MA-O1-059 (G) Where vegetation exists, and terrain permits maintain a vegetative strip or screen between the trail and lake or stream. Generally, a buffer of at least 100 feet is desirable.

MA-O1-060 (G) Maintain only those cairns necessary to guide users across long, open, or rocky slopes or through meadows. Existing blazes on trees along well established heavily used routes will not be maintained.

MA-01-061 (G) Use trail signs only for boundary control, public safety, resource protection, and direction at trail junction.

MA-O1-062 (S) Design signs as follows:
1. Rustic design, blend with wilderness setting.
2. Construct signs of wood with routed lettering and leave unfinished. 3. Show direction but not mileage on junction signs. 4. Mount signs on snags, natural posts, or rocks. 5. Each sign will have no more than three lines.

MA-O1-063 (S) Place signs as follows:
1. Directional signs at system trail junctions only.
2. No more than two signs at any junction.
3. Sign the Wilderness boundary as necessary to prevent unauthorized use.
4. "Closed to mechanized vehicles" signs at trailheads or where trails enter the wilderness.
5. Administrative signs, such as "closed to camping", only where necessary for resource protection.
6. Interpretive signs, showing key natural features, travel routes and other information at major trailheads outside of the wilderness.

MA-O1-064 (G) Allow current primitive wilderness ranger camps if necessary to meet wilderness objectives, not for user or employee convenience. Remove and rehabilitate those that do not meet the above criteria. Construct no new permanent camps.

MA-01-065 (G) As a last resort, construct and maintain sanitary facilities to protect wilderness resources. Use a minimum tool analysis to determine project parameters. (FSM 2323.13.3)

Visitor Information and Education

MA-O1-066 (G) Use Leave No Trace and wilderness ethics education to meet wilderness objectives and deter the use of visitor regulation.

MA-O1-067 (G) Inform the public of backcountry opportunities outside the wilderness and encourage the use of other areas.

Heritage Resources

MA-01-068 (G) Protect cultural resources from human activities and public vandalism. (FSM 2323.8)

MA-O1-069 (S) Allow historic cabins to deteriorate naturally. Take no action to preserve them. (FSM 2323.8)

Motorized/Mechanical Use

MA-O1-070 (G) Use Minimum Tool Analysis to determine most appropriate methods for implementation of projects and proposals. Minimum tool may include mechanized and motorized means.

MA-O1-071 (S) Allow use of helicopters for emergencies only when approved by the Forest Supervisor. (FSM 2326.1.1)

Minerals Management

MA-O1-072 (S) Allow no prospecting for locatable minerals and no permits for removal of common variety minerals.

MA-O1-073 (S) Recommend to BLM to issue no new leases for leasable minerals and to not renew existing leases when they expire.

Lands

MA-O1-074 (S) Approve no new non-recreation special uses except those provided for in the 1984 Utah Wilderness Act. (FSM 2323.43)

MA-O1-075 (G) Stabilize and rehabilitate decommissioned reservoirs at a level that more naturally reflects the preconstruction conditions, allows natural streamflow processes to re-occur and at a level that poses no hazard, requires no maintenance or inspection, and requires no permit.

MA-O1-076 (G) Installation and maintenance of hydrologic, meteorologic, climatological, or telecommunications facilities are permitted where they are essential to flood warning, flood control, and water reservoir operation purposes as provided in the Utah Wilderness Act. Limited motorized access may be permitted subject to conditions imposed by the Secretaries of Agriculture and Interior.

MA-O1-077 (S) Retain Island Lake dam and spillway on Mountain View District at existing water level.

MA-01-078 (G) Cooperate with the Natural Resource Conservation Service on removal of telemetry stations in the High Uintas Wilderness.

Mt. Naomi, Wellsville Mountain, Mt. Olympus, Twin Peaks, Lone Peak, and Deseret Peak Wildernesses

General

Wild-1 (G) Do not allow the designated opportunity class for an area to deteriorate to a less pristine opportunity class. Limits must be established or management action taken where biological and physical resource capability cannot support the level of use.

Water and Soil Management

Wild-2 (G) Opportunity Class I: no more than 15% of all use areas have erosion class 1characteristics, 0% erosion classes 2 and 3.
Opportunity Class II: no more than 25% of all use areas have erosion class 1 characteristics, no more than 15% have erosion class 2 characteristics, 0% erosion class 3.
Opportunity Class III: no more than 50% of all use areas have erosion class 1 characteristics, no more than 25% have erosion class 2 characteristics, 0% erosion class 3.

Recreation Use

Wild-3 (S) Maximum group size: All Classes – People: [Mt Olympus, Twin Peaks, Lone Peak (Wasatch-Cache portion), Deseret Peak, Wellsville Mountain, Mt. Naomi] - 10 people. Recreation stock: Deseret Peak, Mt. Naomi, and Mill Creek side of Mt. Olympus – 14 stock.

Wild-4 (S) Maximum length of stay at campsite: All Classes: Mt Olympus, Twin Peaks, Lone Peak (Wasatch-Cache portion), Deseret Peak, Wellsville Mountain - 3 consecutive nights at an individual site. Mt. Naomi – 14 nights.

Wild- 5 (S) Prohibit campfires where the firewood supply is depleted, or when continued fire building threatens the wilderness qualities of the area, or for public safety.

Wild-6 (S) No domestic animals (stock or dogs) are allowed in portions of the Mt. Olympus, Twin Peaks, and Lone Peak (Wasatch-Cache portion) that are in the Big and Little Cottonwood Canyons municipal watersheds.

Wild-7 (S) Recreation stock must not be tethered to a tree if damage to the tree, soil, or vegetation at the base of the tree is occurring.

Wild-8 (S) All recreation stock feed must be incapable of germination.

Wild-9 (G) Recreation stock should not be restrained for more than one hour within 200 feet of any water source or tied to a tree for more than one hour.

Wild-10 (G) Campsite density: Opportunity Class I - campsites should be ½ mile apart. Class II -campsites should be ¼ mile apart. Class III- campsites should be 100 feet apart.

Wild-11 (G) Campsite conditions should have no sustained observable downward trend in condition and should be improved when possible.

Wild-12 (G) Terrain permitting, campsites should be at least 200 feet from water and/or trails.

Recreation Special Uses

Wild-13 (G) Allow no additional commercial outfitting and guiding permits.

Wild-14 (G) Allow no recreation event special use permits.

Visitor Information and Education

Wild-15 (G) Inform the public of backcountry opportunities outside of wilderness and encourage the use of these areas.

Wild-16 (G) Manage Wilderness use according to current Leave No Trace principles which now include: (1) plan ahead and prepare, (2) travel and camp on durable resources, (3) dispose of waste properly, (4) leave no trace of human presence, (5) minimize campfire impacts, (6) respect wildlife, (7) be considerate of other users, and (8) leave cultural artifacts.

Lands

Wild-17 (S) Approve no new non-recreation special uses, including commercial filming, except those provided for in designating legislation.

Wild-18 (S) Installation and maintenance of hydrologic, meteorological, climatological, or telecommunications facilities are permitted where they are essential to flood warning, flood control, and water reservoir operation purposes as provided in establishment legislation. Limited motorized access may be permitted subject to conditions imposed by the Secretaries of Agriculture and Interior.

Appendix VII
Ground Cover Potentials and Riparian Classification

Ground Cover Potential Table to be applied with Standard (S7).

GROUND COVER POTENTIALS for S7

Potential Ground Cover Values for Various Rangeland Cover Types (at Potential) of Northern Utah National Forests (Wasatch-Cache, Uinta, and Ashley National Forests) as percentages. Displayed in parentheses are

Vegetation Type	Ground Cover Range at Potential[1]	Information Source(s)
Silver Sagebrush *Artemisia cana*	89 – 96 (85%=76-82)	Ashley N.F.
Few-flowered Sagebrush *Artemisia tridentata* ssp. *vaseyana* var. *pauciflora*	81 – 96 (85%=69-82)	Ashley N.F.
Low Sagebrush *Artemisia arbuscula*	69 (85%=59)	WCNF, Guardsman Pass
Snowberry *Symphoricarpos oreophilus*	92 (85%=78)	Salt Lake R.D. (Big Cottonwood Canyon), WCNF
Birchleaf Mt Mahogany *Cercocarpus montanus*	86 – 95 (85%=73-81)	Ashley N.F.
Curlleaf Mt Mahogany *Cercocarpus ledifolius*	70 – 82 (85%=60-70)	Logan R.D. (Mollens Hollow Research Natural Area); Salt Lake R.D. (Big Cottonwood Canyon – with Oak), WCNF
Aspen *Populus tremuloides*	90 – 98 (85%=77-83)	Brush Creek Allotment, Ashley N.F.
Uinta Alpine Grassland	97 – 100 (85%=82-85)	Mt View R.D. (Bald Mt), WCNF
Tall Forb	49 – 75 (85%=42-64)	Ogden R.D. (Willard Peak); Kamas R.D. (Hoyt Peak), WCNF
Oak *Quercus gambellii*	92 – 100 (85%=78-85)	Kamas R.D. (Beaver Creek); Salt Lake R.D. (Red Butte Research Natural Area), WCNF
Bigtooth Maple *Acer grandidentatum*	99 (85%=84)	Salt Lake R.D. (Red Butte Canyon RNA), WCNF
Wasatch P-J and Juniper		
Bonneville P-J and Juniper		

[1] Ground cover potential based on percent vegetation, litter, moss, and rock cover as measured using nested frequency methods except where otherwise noted.

CLASSIFICATION GUIDE FOR RIPARIAN AREAS (BASED ON RELATIVE RESOURCE VALUES AND SPECIAL CONSIDERATIONS)

The Wasatch-Cache National Forest agrees with the Utah Riparian Management Coalition (URMC) in recognizing that not all riparian areas are of equal value and importance. Some areas are critical to such resource values as water quality, "endangered" species, and "threatened" species or fish habitat while other areas may be of relative minor importance to these and other values. The guide they developed was to assist resource managers and planners in assessing the relative values and importance of riparian areas in Utah and set management priorities. We have adopted their guide with modification. These modifications for the Wasatch-Cache National Forest include: (1) the rating system will be used to determine the value of the riparian area and not used to set management objectives; and (2) riparian areas that provide habitat for "endangered", "threatened", proposed, candidate or forest service sensitive species are automatically identified as "high value" which will emphasis the importance of these areas and the Forest desire to meet our obligation under the Endangered Species Act (native species populations which have been established through reintroduced will not receive the automatic designation as high value but will go through the standard rating system); Management objectives for riparian areas are set in the Forest Plan or the Final Environmental Impact Statement for Rangeland Health for the Wasatch-Cache National Forest.

It is recommended that this riparian value rating system be used in conjunction with a riparian classification system such as the Utah Riparian Classification System developed for the URMC by Mark Petersen and others (1994). The riparian area to be evaluated should be classified to at least the riparian complex level. The riparian complex is then evaluated using this guide to determine the relative resource values and priority rating for the complex.

The relative ratings are suggestive of the existing or potential value of a riparian area for different resources. These are described as follows:

Class I - Riparian areas with a high rating should be given special management considerations to protect or enhance the high resource value(s) of the area. This might include exclusion or intensive management of activities such as livestock grazing, concentrated recreation, road construction, dam construction, etc., as appropriate, to maintain or enhance the area for the identified resource values. Any stream with riparian-dependent Threatened, Endangered, or Sensitive species is classified as a Class I riparian area.

Class II - Riparian areas with a medium rating should be given special management considerations to maintain or enhance the area for the identified resource values or to mitigate adverse impacts. This might include planned grazing systems, special placement or design of road, dams, trails, recreation facilities, etc., as appropriate.

Class III - Riparian areas with a low rating may not need special management considerations except to protect the basic soil, water, and vegetation resources and hydrologic functions of the area.

Each category is given a numeric value range as follows:

Category	Value Range		
	High	Medium	Low
Resource Values	10-8	7-4	3-1
Special Considerations	5-4	3-2	1

Numerical ratings are to classify different riparian areas according to relative resource values.

An interdisciplinary team must be utilized to complete the rating worksheet and reach consensus regarding the overall value of the riparian area. Certain high resource values such as Water Quality, Wildlife Habitat, or special administrative Designations my result in an overall High Rating for the riparian area being evaluated, even though the total numerical rating fall into a lower category.

RIPARIAN RATING WORKSHEET

Stream Name_____ Hydro Unit Code_____

Allotment Name_____ Ranger District_____

RATING CRITERIA FOR RIPARIAN RESOURCE VALUES			
Resource Value	High (10-8)	Medium (7-4)	Low (3-1)
Water Quality	Use and Condition of the riparian area has potential to affect the quality of downstream water for designated beneficial uses of culinary water, cold water fishery, warm water fishery, or contact recreation.	Use and condition of the riparian area has potential to affect the quality of downstream water for designated beneficial uses other than those listed for the high category.	Use and condition of the riparian area has minimal to no potential to affect the quality of downstream water for designated beneficial uses.
RATING			
Wildlife Habitat	Critical value habitat: The area provides for sensitive biological or behavioral requisites necessary to sustain the existence or perpetuation of one or more wildlife species. (This can include periods of time during which protection from human activity is essential to the population's survival, such as nesting or calving areas.)	High or substantial value habitat: The area provides for intensive or frequent use by one or more wildlife species.	Limited value habitat: The area provides for only occasional use by one or more wildlife species.
RATING			
Fish Habitat	High sport fishery productivity (rearing and spawning). No or low flow depletion from diversion of water.	Medium sport fishery productivity and/or nongame fish resource. Moderate flow depletion from diversion of water.	No fishery. Total dewatering occurs from diversion of water.
RATING			
Forage Resource	Low gradient (<2%); wide valley (>100m); high water table, but seasonally dry at the surface. No physical restrictions to grazing. Potential forage yield <1 AUM/acre	Moderate gradient (2-4%); moderate valley width (30-100m), water table 20-40" during growing season. Physical restrictions such as boulders and stones (>10' diameter) on 15 to 50% of the surface. Potential forage yield, 25-1 AUM/acre.	High gradient (>4%); narrow V-shaped valley (< 30m); Surface too wet during grazing season or water table below 40'. Physical restrictions such as boulders and stones (>10" diameter) on >50% of the surface. Potential forage yield **<.25** AUM/acre.
RATING			
Recreation	Close proximity to population or popular attraction or is an outstanding local recreation resource. Physically accessible. Vegetation is highly diverse in species and structure. Would be a destination site.	Considerable recreation value, but may be considered 'standard' for what is available. Most users typically would not travel long distances to use.	Long distance to population or popular attraction. Not easily accessible. Low vegetation diversity.
RATING			
Threatened, Endangered or Sensitive Species[2]	T&E species present or associated with the riparian area. Habitat is essential to threatened and/or endangered species survival.	Sensitive or category 2 T&E species present or associated with the riparian area. Habitat is (or potentially is) important for preventing further population losses.	No threatened, endangered, candidate or sensitive species present or associated with the riparian area. Habitat is not present or has limited value.
RATING			

[2] Any stream with riparian-dependent species, such as Colorado or Bonneville Cutthroat Trout, Riparian Class I is automatically applied.

RATING CRITERIA FOR SPECIAL RIPARIAN CONSIDERATIONS			
Special Considerations	High (5-4)	Medium (3-2)	Low (1-0)
Sensitivity to Use	Fragile soils which are highly susceptible to erosion: -Soil "K" factor >.4 -Sandy or silty -Low organic matter -Compactable soils -Shallow rooted vegetation Valley gradient low (<2%) Valley width >100m	Soils are moderately susceptible to erosion: -Soil -K' factor .2-.4 -Moderate texture Moderate organic matter Valley gradient mod (<2-4%) Valley width 30-100m	Soils are highly resistant to erosion: -Soil "K* factor <. 2 •bouldery, bedrock, or clay substrate high organic matter -Deep rooted vegetation Valley gradient high (>4%) Valley width <30m
RATING			
Special Administrative Designations	Riparian based designation -Municipal watershed -Research Natural Area -Wild & scenic river	Other designations National park or monument wilderness area state park national recreation area	No special designation
RATING			

FINAL RIPARIAN RATING

Stream Name_____ Hydro Unit Code (6th)_____

Numerical Rating: Total Numerical Score:

40 pts or more = Class I

20 pts to 39 pts = Class II

19 pts or less = Class III

Overall Team Rating: _____

Rationale supporting overall team rating if different than numerical rating:

_____

_____

_____

_____

_____

_____

Wasatch-Cache National Forest Streams With Riparian Classes To-Date

The following table displays Riparian Classes determined to-date through an interdisciplinary process for streams and rivers. Additional Classifications will be added as they are completed.

River Name	Riparian Class
Riparian Class I	
Beaver Creek: South Boundary of State Land to Mouth	Class I
Big Cottonwood Creek	Class I
Birch Creek	Class I
Blacks fork	Class I
Boulder Creek	Class I
Boundary Creek	Class I
Carter Creek	Class I
Curtis Creek	Class I
Deaf Smith Canyon	Class I
Duchesne River	Class I
East Fork Bear River	Class I
East Fork Blacks Fork	Class I
East Fork Smiths Fork	Class I
Farmington Creek	Class I
Gilbert Creek	Class I
Hayden Fork	Class I
Henry's Fork	Class I
High Creek	Class I
Left Fork South Fork Ogden River	Class I
Left, Right, and East Forks Bear River	Class I
Lefthand Fork Blacksmiths Fork	Class I
Little Cottonwood Creek above Murray City Diversion	Class I
Little East Fork	Class I
Logan River	Class I
Main Fork Bear River	Class I
McKenzie Creek	Class I
Meadow Creek	Class I
Mill Creek (Salt Lake City)	Class I
Moffit Creek	Class I
North Fork Provo River	Class I
North Fork Willow Creek	Class I
Ostler Fork	Class I
Provo River	Class I
Red Butte Creek above Red Butte Reservoir	Class I
Right Hand Fork Logan River	Class I
Rock Creek	Class I
Shingle Creek	Class I
Smith-Morehouse	Class I
South Fork Little Bear	Class I
South Willow	Class I
Spawn Creek	Class I
Stillwater Fork	Class I
Sugar Pine	Class I
Temple Fork	Class I
West Fork Bear River	Class I
West Fork Blacks Fork	Class I

River Name	Riparian Class
West Fork Smiths Fork	Class I
Wheat Grass	Class I
Wheeler Creek (Snowbasin)	Class I
White Pine Creek: Source to Mouth	Class I
Riparian Class II Streams	
Archie Creek	Class II
Blacksmiths Fork	Class II
Brush Creek	Class II
Burnt Fork	Class II
Dry Fork	Class II
East Fork Beaver Creek	Class II
Holbrook Creek	Class II
Joulious Creek	Class II
Kabell Creek	Class II
Main Fork Stillwater Fork	Class II
Middle Fork Beaver Creek	Class II
Middle Fork Blacks Fork	Class II
Middle Fork Ogden River	Class II
Middle Fork Weber River	Class II
Mill Creek (Bountiful)	Class II
Right Fork South Fork Ogden River	Class II
South Fork Weber River	Class II
Stone Creek	Class II
Summit Creek	Class II
Thompson Creek	Class II
Weber River	Class II
West Fork Beaver Creek	Class II
Willard Creek	Class II
Willow Creek	Class II

Appendix VII
Ground Cover Potentials and Riparian Classification

Ground Cover Potential Table to be applied with Standard (S7).

GROUND COVER POTENTIALS for S7

Potential Ground Cover Values for Various Rangeland Cover Types (at Potential) of Northern Utah National Forests (Wasatch-Cache, Uinta, and Ashley National Forests) as percentages. Displayed in parentheses are

Vegetation Type	Ground Cover Range at Potential[1]	Information Source(s)
Silver Sagebrush *Artemisia cana*	89 – 96 (85%=76-82)	Ashley N.F.
Few-flowered Sagebrush *Artemisia tridentata* ssp. *vaseyana* var. *pauciflora*	81 – 96 (85%=69-82)	Ashley N.F.
Low Sagebrush *Artemisia arbuscula*	69 (85%=59)	WCNF, Guardsman Pass
Snowberry *Symphoricarpos oreophilus*	92 (85%=78)	Salt Lake R.D. (Big Cottonwood Canyon), WCNF
Birchleaf Mt Mahogany *Cercocarpus montanus*	86 – 95 (85%=73-81)	Ashley N.F.
Curlleaf Mt Mahogany *Cercocarpus ledifolius*	70 – 82 (85%=60-70)	Logan R.D. (Mollens Hollow Research Natural Area); Salt Lake R.D. (Big Cottonwood Canyon – with Oak), WCNF
Aspen *Populus tremuloides*	90 – 98 (85%=77-83)	Brush Creek Allotment, Ashley N.F.
Uinta Alpine Grassland	97 – 100 (85%=82-85)	Mt View R.D. (Bald Mt), WCNF
Tall Forb	49 – 75 (85%=42-64)	Ogden R.D. (Willard Peak); Kamas R.D. (Hoyt Peak), WCNF
Oak *Quercus gambellii*	92 – 100 (85%=78-85)	Kamas R.D. (Beaver Creek); Salt Lake R.D. (Red Butte Research Natural Area), WCNF
Bigtooth Maple *Acer grandidentatum*	99 (85%=84)	Salt Lake R.D. (Red Butte Canyon RNA), WCNF
Wasatch P-J and Juniper		
Bonneville P-J and Juniper		

[1] Ground cover potential based on percent vegetation, litter, moss, and rock cover as measured using nested frequency methods except where otherwise noted.

CLASSIFICATION GUIDE FOR RIPARIAN AREAS (BASED ON RELATIVE RESOURCE VALUES AND SPECIAL CONSIDERATIONS)

The Wasatch-Cache National Forest agrees with the Utah Riparian Management Coalition (URMC) in recognizing that not all riparian areas are of equal value and importance. Some areas are critical to such resource values as water quality, "endangered" species, and "threatened" species or fish habitat while other areas may be of relative minor importance to these and other values. The guide they developed was to assist resource managers and planners in assessing the relative values and importance of riparian areas in Utah and set management priorities. We have adopted their guide with modification. These modifications for the Wasatch-Cache National Forest include: (1) the rating system will be used to determine the value of the riparian area and not used to set management objectives; and (2) riparian areas that provide habitat for "endangered", "threatened", proposed, candidate or forest service sensitive species are automatically identified as "high value" which will emphasis the importance of these areas and the Forest desire to meet our obligation under the Endangered Species Act (native species populations which have been established through reintroduced will not receive the automatic designation as high value but will go through the standard rating system); Management objectives for riparian areas are set in the Forest Plan or the Final Environmental Impact Statement for Rangeland Health for the Wasatch-Cache National Forest.

It is recommended that this riparian value rating system be used in conjunction with a riparian classification system such as the Utah Riparian Classification System developed for the URMC by Mark Petersen and others (1994). The riparian area to be evaluated should be classified to at least the riparian complex level. The riparian complex is then evaluated using this guide to determine the relative resource values and priority rating for the complex.

The relative ratings are suggestive of the existing or potential value of a riparian area for different resources. These are described as follows:

Class I - Riparian areas with a high rating should be given special management considerations to protect or enhance the high resource value(s) of the area. This might include exclusion or intensive management of activities such as livestock grazing, concentrated recreation, road construction, dam construction, etc., as appropriate, to maintain or enhance the area for the identified resource values. Any stream with riparian-dependent Threatened, Endangered, or Sensitive species is classified as a Class I riparian area.

Class II - Riparian areas with a medium rating should be given special management considerations to maintain or enhance the area for the identified resource values or to mitigate adverse impacts. This might include planned grazing systems, special placement or design of road, dams, trails, recreation facilities, etc., as appropriate.

Class III - Riparian areas with a low rating may not need special management considerations except to protect the basic soil, water, and vegetation resources and hydrologic functions of the area.

Each category is given a numeric value range as follows:

Category	Value Range		
	High	Medium	Low
Resource Values	10-8	7-4	3-1
Special Considerations	5-4	3-2	1

Numerical ratings are to classify different riparian areas according to relative resource values.

An interdisciplinary team must be utilized to complete the rating worksheet and reach consensus regarding the overall value of the riparian area. Certain high resource values such as Water Quality, Wildlife Habitat, or special administrative Designations my result in an overall High Rating for the riparian area being evaluated, even though the total numerical rating fall into a lower category.

RIPARIAN RATING WORKSHEET

Stream Name_____ Hydro Unit Code_____

Allotment Name_____ Ranger District_____

RATING CRITERIA FOR RIPARIAN RESOURCE VALUES			
Resource Value	High (10-8)	Medium (7-4)	Low (3-1)
Water Quality	Use and Condition of the riparian area has potential to affect the quality of downstream water for designated beneficial uses of culinary water, cold water fishery, warm water fishery, or contact recreation.	Use and condition of the riparian area has potential to affect the quality of downstream water for designated beneficial uses other than those listed for the high category.	Use and condition of the riparian area has minimal to no potential to affect the quality of downstream water for designated beneficial uses.
RATING			
Wildlife Habitat	Critical value habitat: The area provides for sensitive biological or behavioral requisites necessary to sustain the existence or perpetuation of one or more wildlife species. (This can include periods of time during which protection from human activity is essential to the population's survival, such as nesting or calving areas.)	High or substantial value habitat: The area provides for intensive or frequent use by one or more wildlife species.	Limited value habitat: The area provides for only occasional use by one or more wildlife species.
RATING			
Fish Habitat	High sport fishery productivity (rearing and spawning). No or low flow depletion from diversion of water.	Medium sport fishery productivity and/or nongame fish resource. Moderate flow depletion from diversion of water.	No fishery. Total dewatering occurs from diversion of water.
RATING			
Forage Resource	Low gradient (<2%); wide valley (>100m); high water table, but seasonally dry at the surface. No physical restrictions to grazing. Potential forage yield <1 AUM/acre	Moderate gradient (2-4%); moderate valley width (30-100m), water table 20-40" during growing season. Physical restrictions such as boulders and stones (>10' diameter) on 15 to 50% of the surface. Potential forage yield, 25-1 AUM/acre.	High gradient (>4%); narrow V-shaped valley (< 30m); Surface too wet during grazing season or water table below 40'. Physical restrictions such as boulders and stones (>10" diameter) on >50% of the surface. Potential forage yield **<.25** AUM/acre.
RATING			
Recreation	Close proximity to population or popular attraction or is an outstanding local recreation resource. Physically accessible. Vegetation is highly diverse in species and structure. Would be a destination site.	Considerable recreation value, but may be considered 'standard' for what is available. Most users typically would not travel long distances to use.	Long distance to population or popular attraction. Not easily accessible. Low vegetation diversity.
RATING			
Threatened, Endangered or Sensitive Species[2]	T&E species present or associated with the riparian area. Habitat is essential to threatened and/or endangered species survival.	Sensitive or category 2 T&E species present or associated with the riparian area. Habitat is (or potentially is) important for preventing further population losses.	No threatened, endangered, candidate or sensitive species present or associated with the riparian area. Habitat is not present or has limited value.
RATING			

[2] Any stream with riparian-dependent species, such as Colorado or Bonneville Cutthroat Trout, Riparian Class I is automatically applied.

RATING CRITERIA FOR SPECIAL RIPARIAN CONSIDERATIONS			
Special Considerations	High (5-4)	Medium (3-2)	Low (1-0)
Sensitivity to Use	Fragile soils which are highly susceptible to erosion: -Soil "K" factor >.4 -Sandy or silty -Low organic matter -Compactable soils -Shallow rooted vegetation Valley gradient low (<2%) Valley width >100m	Soils are moderately susceptible to erosion: -Soil -K' factor .2-.4 -Moderate texture Moderate organic matter Valley gradient mod (<2-4%) Valley width 30-100m	Soils are highly resistant to erosion: -Soil "K* factor <. 2 •bouldery, bedrock, or clay substrate high organic matter -Deep rooted vegetation Valley gradient high (>4%) Valley width <30m
RATING			
Special Administrative Designations	Riparian based designation -Municipal watershed -Research Natural Area -Wild & scenic river	Other designations National park or monument wilderness area state park national recreation area	No special designation
RATING			

FINAL RIPARIAN RATING

Stream Name_____ Hydro Unit Code (6th)_____

Numerical Rating: Total Numerical Score:

40 pts or more = Class I

20 pts to 39 pts = Class II

19 pts or less = Class III

Overall Team Rating: _____

Rationale supporting overall team rating if different than numerical rating:

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Wasatch-Cache National Forest Streams With Riparian Classes To-Date

The following table displays Riparian Classes determined to-date through an interdisciplinary process for streams and rivers. Additional Classifications will be added as they are completed.

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Birch Creek	Class I
Blacks fork	Class I
Boulder Creek	Class I
Boundary Creek	Class I
Carter Creek	Class I
Curtis Creek	Class I
Deaf Smith Canyon	Class I
Duchesne River	Class I
East Fork Bear River	Class I
East Fork Blacks Fork	Class I
East Fork Smiths Fork	Class I
Farmington Creek	Class I
Gilbert Creek	Class I
Hayden Fork	Class I
Henry's Fork	Class I
High Creek	Class I
Left Fork South Fork Ogden River	Class I
Left, Right, and East Forks Bear River	Class I
Lefthand Fork Blacksmiths Fork	Class I
Little Cottonwood Creek above Murray City Diversion	Class I
Little East Fork	Class I
Logan River	Class I
Main Fork Bear River	Class I
McKenzie Creek	Class I
Meadow Creek	Class I
Mill Creek (Salt Lake City)	Class I
Moffit Creek	Class I
North Fork Provo River	Class I
North Fork Willow Creek	Class I
Ostler Fork	Class I
Provo River	Class I
Red Butte Creek above Red Butte Reservoir	Class I
Right Hand Fork Logan River	Class I
Rock Creek	Class I
Shingle Creek	Class I
Smith-Morehouse	Class I
South Fork Little Bear	Class I
South Willow	Class I
Spawn Creek	Class I
Stillwater Fork	Class I
Sugar Pine	Class I
Temple Fork	Class I
West Fork Bear River	Class I
West Fork Blacks Fork	Class I

River Name	Riparian Class
West Fork Smiths Fork	Class I
Wheat Grass	Class I
Wheeler Creek (Snowbasin)	Class I
White Pine Creek: Source to Mouth	Class I
Riparian Class II Streams	
Archie Creek	Class II
Blacksmiths Fork	Class II
Brush Creek	Class II
Burnt Fork	Class II
Dry Fork	Class II
East Fork Beaver Creek	Class II
Holbrook Creek	Class II
Joulious Creek	Class II
Kabell Creek	Class II
Main Fork Stillwater Fork	Class II
Middle Fork Beaver Creek	Class II
Middle Fork Blacks Fork	Class II
Middle Fork Ogden River	Class II
Middle Fork Weber River	Class II
Mill Creek (Bountiful)	Class II
Right Fork South Fork Ogden River	Class II
South Fork Weber River	Class II
Stone Creek	Class II
Summit Creek	Class II
Thompson Creek	Class II
Weber River	Class II
West Fork Beaver Creek	Class II
Willard Creek	Class II
Willow Creek	Class II

Appendix VIII
Protection Standards for Eligible Wild & Scenic River Segments

The following interim management direction for study rivers found eligible for the Wild and Scenic Rivers System is provided in Chapter 8 of Forest Service Handbook 1909.12. These guidelines should be applied to the extent of the Forest Service's jurisdiction over Federal lands, Federal scenic or access easements, and other interests. They do not apply to privately owned lands. These guidelines are to be used in conjunction with the USDA-USDI Interagency Guidelines (Vol. 47 No. 173, Fed. Reg. 9/7/82). The protection requirements must be documented in the forest plan and continued until a decision is made as to the future use of the river and adjacent lands.

A list of the eligible river segments requiring interim protection is included at the end of this appendix. The Forest Service is required to protect identified values and free flowing character until a suitability study determines whether a river is suitable or not. Suitable rivers are protected until designated by Congress, or otherwise directed by other legal means.

Interim Management Direction

1. To the extent the Forest Service is authorized under law to control stream impoundments and diversions, the free flowing characteristics of the identified river cannot be modified.

2. Outstandingly remarkable values of the identified river area must be protected and, to the extent practicable, enhanced.

3. Management and development of the identified river areas and its corridor cannot be modified to the degree that eligibility or classification would be affected (i.e., classification cannot be changed from wild to scenic or scenic to recreational.)

Standards for Wild Rivers.

a. Timber Production: Cutting of trees will not be permitted except when needed in association with a primitive recreation experience (such as clearing for trails and protection of users) or to protect the environment (such as control of fire). Timber outside the boundary but within the visual corridors, will be managed and harvested in a manner to provide special emphasis to visual quality.

b. Water Supply: All water supply dams and major diversions are prohibited.

c. Hydroelectric Power: No development of hydroelectric power facilities would be permitted.

d. Flood Control: No flood control dams, levees, or other works are allowed in the channel or river corridor. The natural appearance and essentially primitive character of the river area must be maintained.

e. Mining: New mining claims and mineral leases are prohibited within 1/4 mile of the river. Valid claims would not be abrogated. Subject to regulations (36 CFR 228) that the Secretaries of Agriculture and Interior may prescribe to protect the rivers included in the National System, other existing mining activity would be allowed to continue. Existing mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation, and visual impairment. Reasonable access will be permitted.

f. Road Construction: No roads or other provisions for overland motorized travel would be permitted within a narrow incised river valley or, if the river valley is broad, within 1/4 mile of the river bank. A few inconspicuous roads leading to the boundary of the river area at the time of study will not disqualify wild river classification. Also, unobtrusive trail bridges could be allowed.

g. Agriculture: Agricultural use is restricted to a limited amount of domestic livestock grazing and hay production to the extent currently practiced. Row crops are prohibited.

h. Recreation Development: Major public-use areas, such as large campgrounds, interpretive centers, or administrative headquarters are located outside the wild river area. Simple comfort and convenience facilities, such as fireplaces or shelters may be provided as necessary within the river area. These should harmonize with the surroundings.

i. Structures: A few minor existing structures could be allowed assuming such structures are not incompatible with the essentially primitive and natural values of the viewshed. New structures would not be allowed except in rare instances to achieve management objectives (i.e. structures and activities associated with fisheries enhancement programs could be allowed).

j. Utilities: New transmission lines, gas lines, water lines, etc. are discouraged. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, the scenic, recreational, and fish and wildlife values must be evaluated in the selection of the site.

k. Motorized travel: Motorized travel on land or water could be permitted, but is generally not compatible with this classification.

<u>Standards for Scenic Rivers.</u>

a. Timber Production: A wide range of silvicultural practices could be allowed provided that such practices are carried on in such a way that there is no substantial adverse effect on the river and its immediate environment. The river area should be maintained in its near natural environment. Timber outside the boundary but within the visual scene area should be managed and harvested in a manner which provides special emphasis on visual quality.

b. Water Supply: All water supply dams and major diversions are prohibited.

c. Hydroelectric Power: No development of hydroelectric power facilities would be allowed.

d. Flood Control: Flood control dams and levees would be prohibited.

e. Mining: Subject to regulations at 36 CFR 228 that the Secretaries of Agriculture and the Interior may prescribe to protect the values of rivers included in the National System, new mining claims and mineral leases could be allowed and existing operations allowed to continue. However, mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.

f. Road Construction: Roads may occasionally bridge the river area and short stretches of conspicuous or longer stretches of inconspicuous and well-screened roads or screened railroads could be allowed. Consideration will be given to the type of use for which roads are constructed and the type of use that will occur in the river area.

g. Agriculture: A wider range of agricultural uses is permitted to the extent currently practiced. Row crops are not considered as an intrusion of the "largely primitive" nature of scenic corridors as long as there is not a substantial adverse effect on the natural-like appearance of the river area.

h. Recreation Development: Larger scale public use facilities, such as moderate size campgrounds, public information centers, and administrative headquarters are allowed if such structures are screened from the river. Modest and unobtrusive marinas also can be allowed.

i. Structures: Any concentrations of habitations are limited to relatively short reaches of the rivercorridor. New structures that would have a direct and adverse effect on river values would not be allowed.

j. Utilities: This is the same as for wild river classifications.

k. Motorized Travel: Motorized travel on land or water may be permitted, prohibited or restricted to protect the river values.

<u>Standards for Recreational Rivers.</u>

a. Timber Production: Timber harvesting would be allowed under standard restrictions to protect the immediate river environment, water quality, scenic, fish and wildlife, and other values.

b. Water Supply: Existing low dams, diversion works, rip rap and other minor structures are allowed provided the waterway remains generally natural in appearance. New structures are prohibited.

c. Hydroelectric Power: No development of hydroelectric power facilities is allowed.

d. Flood Control: Existing flood control works may be maintained. New structures are prohibited.

e. Mining: Subject to regulations (36 CFR 228) that the Secretaries of Agriculture and the Interior may prescribe to protect values of rivers included in the National System, new mining claims and mineral leases are allowed and existing operations are allowed to continue. Mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.

f. Road Construction: Paralleling roads or railroads could be constructed on one or both river banks. There can be several bridge crossings and numerous river access points.

g. Agriculture: Lands may be managed for a full range of agricultural uses, to the extent currently practiced.

h. Recreation Development: Campgrounds and picnic areas may be established in close proximity to the river. However, recreational classification does not require extensive recreation development.

i. Structures: Small Communities as well as dispersed or cluster residential developments are allowed. New structures are allowed for both habitation and for intensive recreation use.

j. Utilities: This is the same as for wild and scenic river classifications.

k. Motorized Travel: Motorized travel on land or water may be permitted, prohibited or restricted. Controls will usually be similar to surrounding lands and waters.

Names, Classification and Outstanding Values of Eligible River Segments Requiring Interim Protection

Wasatch-Cache National Forest Eligible Wild & Scenic Rivers			
	River Name and Eligible Segment	Classification	Outstanding Values
1	Henry's Fork: Henry's Fork Lake to Trailhead	Wild	Scenery Recreation Wildlife Ecology
2	West Fork Beaver Creek: Source to Forest Boundary	Wild within Wilderness Scenic below Wilderness	Wildlife Ecology
3	Middle Fork Beaver Creek: Beaver Lake to Confluence with East Fork Beaver Creek	Wild within Wilderness Scenic below Wilderness	Wildlife Ecology
4	Thompson Creek: Source to Hoop Lake Diversion	Wild	Wildlife
5	West Fork Blacks Fork: Source to trailhead	Wild within Wilderness Scenic below Wilderness	Scenery Ecology
6	East Fork Blacks Fork: Headwaters to confluence with Little East Fork	Wild	Ecology
7	Little East Fork: Source to Mouth	Wild	Ecology
8	Blacks Fork: Confluence of West Fork and East Fork to Meeks Cabin Reservoir	Recreational	History
9	West Fork Smiths Fork: Source to Forest boundary	Scenic	History
10	East Fork Smiths Fork: Red Castle Lake to trailhead	Wild	Scenery Recreation Wildlife Ecology
11	Hayden Fork: Source to Mouth	Recreational	Scenery Ecology
12	Stillwater Fork: Source to Mouth	Wild within Wilderness Scenic below Wilderness	Scenery Ecology
13	Ostler Fork: Source to Mouth	Wild	Ecology
14	Left, Right, and East Forks Bear River: Alsop Lk and Norice Lk to near Trailhead	Wild	Scenery Geology/hydrology Ecology
15	Boundary Creek: Source to confluence with East Fork Bear	Wild	Ecology
16	High Creek: High Creek Lake to Forest Boundary	Wild	Ecology
17	Lefthand Fork Blacksmiths Fork: Source to Mouth	Recreational	Scenery
18	Logan River: Idaho state line to confluence with Beaver Creek	Scenic	Fish
19	Logan River: Confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground	Recreational	Scenery Recreation Geologyhydrology Fish Ecology
20	Beaver Creek: South Boundary of State	Recreational	Fish

	Land to Mouth		
21	White Pine Creek: Source to Mouth	Scenic	Fish
22	Temple Fork: Source to Mouth	Scenic	Fish
23	Spawn Creek: Source to Mouth	Scenic	Fish
24	Bunchgrass Creek: Source to Mouth	Scenic	Fish
25	Little Bear Creek: Little Bear Spring to Mouth	Scenic	Fish
26	Main Fork Weber River: Source to Forest Boundary	Scenic	Scenery
27	Middle Fork Weber River: Source to Forest Boundary	Wild	Scenery
28	Beaver Creek: Source to Forest boundary	Recreational	Recreation
29	Provo River: Trial Lake to U35 Bridge	Recreational	Scenery Recreation
30	Left Fork South Fork Ogden River: Frost Canyon/Bear Canyon Confluence to Causey	Wild	Scenery
31	Willard Creek: Source to Forest boundary	Scenic	Scenery Wildlife
32	Red Butte Creek: Source to Red Butte Reservoir	Scenic	Ecological
33	Little Cottonwood Creek: Source to Murray City Diversion	Recreational	Scenery Geology/hydrology Ecology

Appendix VIII
Protection Standards for Eligible Wild & Scenic River Segments

The following interim management direction for study rivers found eligible for the Wild and Scenic Rivers System is provided in Chapter 8 of Forest Service Handbook 1909.12. These guidelines should be applied to the extent of the Forest Service's jurisdiction over Federal lands, Federal scenic or access easements, and other interests. They do not apply to privately owned lands. These guidelines are to be used in conjunction with the USDA-USDI Interagency Guidelines (Vol. 47 No. 173, Fed. Reg. 9/7/82). The protection requirements must be documented in the forest plan and continued until a decision is made as to the future use of the river and adjacent lands.

A list of the eligible river segments requiring interim protection is included at the end of this appendix. The Forest Service is required to protect identified values and free flowing character until a suitability study determines whether a river is suitable or not. Suitable rivers are protected until designated by Congress, or otherwise directed by other legal means.

Interim Management Direction

1. To the extent the Forest Service is authorized under law to control stream impoundments and diversions, the free flowing characteristics of the identified river cannot be modified.

2. Outstandingly remarkable values of the identified river area must be protected and, to the extent practicable, enhanced.

3. Management and development of the identified river areas and its corridor cannot be modified to the degree that eligibility or classification would be affected (i.e., classification cannot be changed from wild to scenic or scenic to recreational.)

Standards for Wild Rivers.

a. Timber Production: Cutting of trees will not be permitted except when needed in association with a primitive recreation experience (such as clearing for trails and protection of users) or to protect the environment (such as control of fire). Timber outside the boundary but within the visual corridors, will be managed and harvested in a manner to provide special emphasis to visual quality.

b. Water Supply: All water supply dams and major diversions are prohibited.

c. Hydroelectric Power: No development of hydroelectric power facilities would be permitted.

d. Flood Control: No flood control dams, levees, or other works are allowed in the channel or river corridor. The natural appearance and essentially primitive character of the river area must be maintained.

e. Mining: New mining claims and mineral leases are prohibited within 1/4 mile of the river. Valid claims would not be abrogated. Subject to regulations (36 CFR 228) that the Secretaries of Agriculture and Interior may prescribe to protect the rivers included in the National System, other existing mining activity would be allowed to continue. Existing mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation, and visual impairment. Reasonable access will be permitted.

f. Road Construction: No roads or other provisions for overland motorized travel would be permitted within a narrow incised river valley or, if the river valley is broad, within 1/4 mile of the river bank. A few inconspicuous roads leading to the boundary of the river area at the time of study will not disqualify wild river classification. Also, unobtrusive trail bridges could be allowed.

g. Agriculture: Agricultural use is restricted to a limited amount of domestic livestock grazing and hay production to the extent currently practiced. Row crops are prohibited.

h. Recreation Development: Major public-use areas, such as large campgrounds, interpretive centers, or administrative headquarters are located outside the wild river area. Simple comfort and convenience facilities, such as fireplaces or shelters may be provided as necessary within the river area. These should harmonize with the surroundings.

i. Structures: A few minor existing structures could be allowed assuming such structures are not incompatible with the essentially primitive and natural values of the viewshed. New structures would not be allowed except in rare instances to achieve management objectives (i.e. structures and activities associated with fisheries enhancement programs could be allowed).

j. Utilities: New transmission lines, gas lines, water lines, etc. are discouraged. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, the scenic, recreational, and fish and wildlife values must be evaluated in the selection of the site.

k. Motorized travel: Motorized travel on land or water could be permitted, but is generally not compatible with this classification.

<u>Standards for Scenic Rivers.</u>

a. Timber Production: A wide range of silvicultural practices could be allowed provided that such practices are carried on in such a way that there is no substantial adverse effect on the river and its immediate environment. The river area should be maintained in its near natural environment. Timber outside the boundary but within the visual scene area should be managed and harvested in a manner which provides special emphasis on visual quality.

b. Water Supply: All water supply dams and major diversions are prohibited.

c. Hydroelectric Power: No development of hydroelectric power facilities would be allowed.

d. Flood Control: Flood control dams and levees would be prohibited.

e. Mining: Subject to regulations at 36 CFR 228 that the Secretaries of Agriculture and the Interior may prescribe to protect the values of rivers included in the National System, new mining claims and mineral leases could be allowed and existing operations allowed to continue. However, mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.

f. Road Construction: Roads may occasionally bridge the river area and short stretches of conspicuous or longer stretches of inconspicuous and well-screened roads or screened railroads could be allowed. Consideration will be given to the type of use for which roads are constructed and the type of use that will occur in the river area.

g. Agriculture: A wider range of agricultural uses is permitted to the extent currently practiced. Row crops are not considered as an intrusion of the "largely primitive" nature of scenic corridors as long as there is not a substantial adverse effect on the natural-like appearance of the river area.

h. Recreation Development: Larger scale public use facilities, such as moderate size campgrounds, public information centers, and administrative headquarters are allowed if such structures are screened from the river. Modest and unobtrusive marinas also can be allowed.

i. Structures: Any concentrations of habitations are limited to relatively short reaches of the rivercorridor. New structures that would have a direct and adverse effect on river values would not be allowed.

j. Utilities: This is the same as for wild river classifications.

k. Motorized Travel: Motorized travel on land or water may be permitted, prohibited or restricted to protect the river values.

<u>Standards for Recreational Rivers.</u>

a. Timber Production: Timber harvesting would be allowed under standard restrictions to protect the immediate river environment, water quality, scenic, fish and wildlife, and other values.

b. Water Supply: Existing low dams, diversion works, rip rap and other minor structures are allowed provided the waterway remains generally natural in appearance. New structures are prohibited.

c. Hydroelectric Power: No development of hydroelectric power facilities is allowed.

d. Flood Control: Existing flood control works may be maintained. New structures are prohibited.

e. Mining: Subject to regulations (36 CFR 228) that the Secretaries of Agriculture and the Interior may prescribe to protect values of rivers included in the National System, new mining claims and mineral leases are allowed and existing operations are allowed to continue. Mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.

f. Road Construction: Paralleling roads or railroads could be constructed on one or both river banks. There can be several bridge crossings and numerous river access points.

g. Agriculture: Lands may be managed for a full range of agricultural uses, to the extent currently practiced.

h. Recreation Development: Campgrounds and picnic areas may be established in close proximity to the river. However, recreational classification does not require extensive recreation development.

i. Structures: Small Communities as well as dispersed or cluster residential developments are allowed. New structures are allowed for both habitation and for intensive recreation use.

j. Utilities: This is the same as for wild and scenic river classifications.

k. Motorized Travel: Motorized travel on land or water may be permitted, prohibited or restricted. Controls will usually be similar to surrounding lands and waters.

Names, Classification and Outstanding Values of Eligible River Segments Requiring Interim Protection

Wasatch-Cache National Forest Eligible Wild & Scenic Rivers			
	River Name and Eligible Segment	Classification	Outstanding Values
1	Henry's Fork: Henry's Fork Lake to Trailhead	Wild	Scenery Recreation Wildlife Ecology
2	West Fork Beaver Creek: Source to Forest Boundary	Wild within Wilderness Scenic below Wilderness	Wildlife Ecology
3	Middle Fork Beaver Creek: Beaver Lake to Confluence with East Fork Beaver Creek	Wild within Wilderness Scenic below Wilderness	Wildlife Ecology
4	Thompson Creek: Source to Hoop Lake Diversion	Wild	Wildlife
5	West Fork Blacks Fork: Source to trailhead	Wild within Wilderness Scenic below Wilderness	Scenery Ecology
6	East Fork Blacks Fork: Headwaters to confluence with Little East Fork	Wild	Ecology
7	Little East Fork: Source to Mouth	Wild	Ecology
8	Blacks Fork: Confluence of West Fork and East Fork to Meeks Cabin Reservoir	Recreational	History
9	West Fork Smiths Fork: Source to Forest boundary	Scenic	History
10	East Fork Smiths Fork: Red Castle Lake to trailhead	Wild	Scenery Recreation Wildlife Ecology
11	Hayden Fork: Source to Mouth	Recreational	Scenery Ecology
12	Stillwater Fork: Source to Mouth	Wild within Wilderness Scenic below Wilderness	Scenery Ecology
13	Ostler Fork: Source to Mouth	Wild	Ecology
14	Left, Right, and East Forks Bear River: Alsop Lk and Norice Lk to near Trailhead	Wild	Scenery Geology/hydrology Ecology
15	Boundary Creek: Source to confluence with East Fork Bear	Wild	Ecology
16	High Creek: High Creek Lake to Forest Boundary	Wild	Ecology
17	Lefthand Fork Blacksmiths Fork: Source to Mouth	Recreational	Scenery
18	Logan River: Idaho state line to confluence with Beaver Creek	Scenic	Fish
19	Logan River: Confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground	Recreational	Scenery Recreation Geologyhydrology Fish Ecology
20	Beaver Creek: South Boundary of State	Recreational	Fish

	Land to Mouth		
21	White Pine Creek: Source to Mouth	Scenic	Fish
22	Temple Fork: Source to Mouth	Scenic	Fish
23	Spawn Creek: Source to Mouth	Scenic	Fish
24	Bunchgrass Creek: Source to Mouth	Scenic	Fish
25	Little Bear Creek: Little Bear Spring to Mouth	Scenic	Fish
26	Main Fork Weber River: Source to Forest Boundary	Scenic	Scenery
27	Middle Fork Weber River: Source to Forest Boundary	Wild	Scenery
28	Beaver Creek: Source to Forest boundary	Recreational	Recreation
29	Provo River: Trial Lake to U35 Bridge	Recreational	Scenery Recreation
30	Left Fork South Fork Ogden River: Frost Canyon/Bear Canyon Confluence to Causey	Wild	Scenery
31	Willard Creek: Source to Forest boundary	Scenic	Scenery Wildlife
32	Red Butte Creek: Source to Red Butte Reservoir	Scenic	Ecological
33	Little Cottonwood Creek: Source to Murray City Diversion	Recreational	Scenery Geology/hydrology Ecology

Appendix X
Implementation Guidance

Implementation Guidance

This Appendix is provided to assist forest managers in implementing the Forest Plan. It addresses approaches necessary for adequate analysis, compliance with accepted procedures, and/or critical coordination actions. This direction also establishes criteria to be used in analysis and decision making. Topics with guidance include the following:

Wildlife Conservation Project Design
Plant Collection
Fire Management
Road/Trail and Access Management
Developed Recreation Site/Facilities Management
Livestock Grazing
Minerals and Energy
Land Ownership
Special Uses
Outfitter Guides
Wilderness Managment

Wildlife Conservation Project Design: This forest plan focuses some management direction on certain species. As other species are studied and new information or understanding of those species is obtained, additional detailed species-specific implementation guidance may be added.

Canada Lynx – Map and monitor the location and intensity of snow compacting activities (snowmobiling, snowshoeing, cross-country skiing, dog sledding, etc.) that coincide with Lynx habitat, to facilitate future evaluation of effects on lynx.

Northern Goshawk – This species has been highlighted on the longer Wasatch-Cache list of sensitive species as one for which more specific information and guidance has been developed recently in The Northern Goshawk in Utah: Habitat Assessment and Management Recommendations (February, 1999.) An amendment to the 1985 Wasatch-Cache Forest Plan called the following information standards and guidelines when that direction was approved in March 2000.

Field Surveys
Where goshawk field surveys are required, complete surveys for territory occupancy within suitable habitat. Surveys will be completed during the nesting and/or post-fledgling period, and should be conducted at least one year prior to implementation of management actions.

When goshawk field surveys are required and when project planning permits, two consecutive years of surveys for territory occupancy prior to implementation of management actions is preferred.

Considerations for Goshawk Nest and Post Fledgling Areas
If a historic nest is not associated with an active nest area, management direction for home range habitat should be applied.

When an active nest area has been identified, identify 2 alternate nest areas and 3 replacement nest areas. The next two items provide recommended direction for implementation.

- Each nest area (active, alternate and replacement) should be approximately 30 acres (total of approximately 180 acres) in size when sufficient suitable habitat exists. If sufficient amounts of suitable habitat are not present, use existing suitable habitat that is available.
- Alternate nest areas should be identified in suitable habitat with similar vegetative structures as the active nest areas. Replacement nest areas should be identified in habitat which will develop similar vegetative structures as the active nest area at the time the active and alternate nest areas are projected to no longer provide adequate nesting habitat.

During active nesting periods in active nest areas (approximately 30 acres) restrict management activities and permitted uses if the activity or use is likely to result in nest abandonment.

Active nest area habitat characteristics should be used for designing or maintaining desired nest area habitats for each cover type in which nesting may occur.

Identify a post-fledgling area that encompasses the active, alternate and replacement nest areas and additional habitat needed to raise fledglings. A post-fledgling area should be approximately 420 acres in size (exclusive of nest area acres) when sufficient suitable habitat exists. If sufficient amounts of suitable habitat are not present, use existing suitable habitat that is available.

Forest vegetative manipulation within a post-fledgling area should be designed to maintain or improve the same habitat features as discussed for the goshawk home range (i.e. stand structure, snags, down logs, nest trees important in the life histories of the goshawk and its prey species common to the geographic location), except:

- Openings, as defined in glossary and Reynolds et al., created as a result of mechanical vegetative treatments (does not include wildland fire) should not exceed the following by cover type:
    - Ponderosa pine and mixed conifer 2 ac max.
    - Spruce/fir 1 ac max.
- Management activities should be restricted during the active nesting period. The active nesting period will normally occur between March 1st and Sept. 30th.

Where timber harvest is prescribed to achieve desired forest conditions, plan the transportation system to minimize disturbance to post-fledgling areas. For example, small, permanent skid trails should be used in lieu of roads to minimize disturbance to goshawk post-fledgling areas. Variance may occur if it is determined that a combination of new permanent or temporary roads and permanent skid trails would result in less overall disturbance of post-fledgling area habitat.

Ungulate Grazing
When it is determined through the landscape assessment process that ungulate grazing is contributing to an identified functioning-at-risk condition relative to habitat needed to support goshawk and its prey, modify grazing practices to maintain or restore the desired seed, mast, and foliage production defined in the landscape assessment process. Review success of modifications annually. If modifications are not providing for the desired progression toward production objectives defined in the landscape assessment, modify practices through the next annual operating plan. This guideline does not apply to non-forest patches.

For non-vegetation management activities
When land exchanges, recreation facility development, ski resort construction, utility corridors (etc.) are proposed that would result in loss of suitable goshawk habitat, sufficient mitigation measures should be employed to insure an offset of the loss. The Biological Evaluation process will be used to document findings, recommend mitigation measures, and evaluate consistency with the intent of the Conservation Strategy and Agreement for Management of the Northern Goshawk in Utah (1999).

Prioritizing habitat protection
For greatest reduction in risk of loss of goshawk habitats, treat as a priority for protection habitat areas of high or optimum value as defined (by Graham, et al, 1999) when they are determined to be at risk.

Plant Collection: Collecting of plants, seeds, or plant parts for any commercial purpose requires a special use permit issued by the District Ranger where the collecting activity is proposed. When evaluating applications for commercial collecting permits, considerations should be given to the impacts on all National Forest resources, including biological diversity.

Gathering of plants for Native American Indian ceremonial use or medicinal uses are provided for through existing treaties and other special considerations that guide transactions between tribes and the U.S. Government and will be coordinated through the Forest Supervisor.

Fire Management: Qualified resource advisors (as defined in Wasatch-Cache and Uinta Forest Fire Management Plan, 2002) will be used when a fire is projected to burn past the first burn period, normally on Type I, II, and III fires.

- Consult the Forest Hydrologist or their representative if a wildland fire threatens: 303D Listed Waterbodies that may be negatively impacted by fire or municipal watersheds. As of this date, the only 303D listed waterbodies or municipal watersheds that could be negatively impacted by fire are: Pineview Reservoir and watersheds along the Wasatch Front.

- Use a resource advisor in all Type I, II and III fires who knows which species of concern (flora and fauna) may be impacted by the fire. A resource advisor should also be consulted when determining the suitability of an ignition for wildland fire use. The resource advisor should be qualified to prepare notes that advise fire managers on resource values and possible mitigation measures.

- The Forest BAER coordinator should review all Type I, II and III fires for possible rehabilitation needs. If a prescribed burn exceeds the prescription, the Forest BAER coordinator should also review the burn for possible rehabilitation needs.

The following Go/No-Go criteria in making decisions to allow wildland fire use:
- Immediate threat to life, property, or resources that cannot be mitigated.
- The availability of fire management personnel (including pertinent Specialists).
- Effects on soils, heritage resources, species-at-risk, and other resources.
- Fire weather forecasts.

If Go/No-Go considerations indicate the ignition cannot be managed as wildland fire use, document which considerations are unacceptable, and implement appropriate suppression response.

Fire Suppression Rehabilitation and Emergency Fire Rehabilitation: Use certified, weed-free material (straw, waddles, hay bales, etc.) for all rehabilitation activities.

Consider aquatic rehabilitation needs to avoid adverse effects on inland native fish whenever RHCAs are significantly damaged by wildfire or a prescribed fire burning out of prescription.

Road/Trail and Access Management:

Prior to decommissioning roads, consider opportunities for potential development or use as travel routes for motorized, mechanized, and/or non-motorized uses.

Consider the following criteria when planning for an appropriate trail system:
- Historic and future uses of the route.
- Availability of alternate routes to the same destination or use periods to minimize user conflicts.
- Damage occurring to other resources such as excessive soil loss or water quality degradation.
- Conflicts with important wildlife and fish habitat especially to species at risk.

- Impacts to visual resources, compatibility with scenic integrity objectives.
- Needs and desires for public and administrative use, for continued use, and need to reduce conflicts between users (such as walking, mountain biking, snowmobiling, horse use).
- Public and administrative user safety and desired user experience (such as solitude, noise, user conflicts).
- Cost of and funding available for continued maintenance, including snow plowing for winter use.
- Ability to enforce.
- Impacts on adjacent and inholding private landowners and necessary signing, barriers, and patrols.
- Long-term resource management needs.
- Effects on linkages to other roads and trails.
- Compatibility with mapped Recreation Opportunity Spectrum (ROS).
- Opportunities and needs for motorized and non-motorized recreation.
- Density of roads and trails, and need for connectivity.

Consider the following criteria when planning for seasonal or temporary closure of roads or trails:

- Potential for use to cause unacceptable damage or loss to soil and water resources due to weather or seasonal conditions.
- Potential for use to cause unacceptable wildlife and/or fish conflict, habitat degradation or harassment.
- Potential for use to impact species at risk and their habitat, especially during times of breeding, young rearing or other times critical to survival.
- Potential for safety hazard due to weather-related conditions.
- Whether the route could serves a seasonal, public, desired user (such as ATV, hiking or mountain biking) or administrative need.
- Whether the area accessed has a seasonal need for protection.
- Opportunity to provide a diversity of recreational experiences and/or reduce user conflicts such as ATV, hiking, horse riding or mountain biking.
- Need to protect the road/trail investment and minimize maintenance costs.
- Need to comply with Forest contracts, permits, cooperative agreements, road purchase agreements, or easement deeds requiring that road use be controlled.
- Needs for coordination of recreational hunting and fishing opportunities with state agencies.

Developed Recreation Site/Facilities Management: During watershed assessment and/or site specific planning for reconstruction, evaluate existing facilities located within riparian habitat conservation areas for meeting site-specifically developed riparian management objectives and take actions to meet objectives where practical.

Livestock Grazing: During allotment management planning develop site-specific desired future condition descriptions for vegetation composition, structure and pattern.

Minerals and Energy: Reclamation will be considered satisfactory when the disturbed areas have been reclaimed in accordance with operating plan requirements.

Safety zones will be established between seismic operations and any site occupied by other National Forest users.

Surface management for private oil and gas minerals will be negotiated with the owner and operator to be as close as possible to the standards used for federal minerals; prohibiting such development is not an alternative.

All borrow sources will have and follow a development and reclamation plan.

Land Ownership: Where possible, in areas with complex development, Forest boundary adjustments (acquisitions and/or conveyances) should use physical characteristics readily identifiable on the ground.

Land acquisitions will be guided by the following criteria:

Priority 1 Acquisitions: (not listed in any order of priority)

- Lands and associated riparian ecosystems on water frontage such as lakes and major streams.
- Important or critical habitat lands needed for the protection of species at risk. Supports objective of protection of fish and wildlife habitats.
- Lands needed for the protection of significant historical or cultural resources, when these resources are threatened or when management may be enhanced by public ownership.
- Lands that enhance recreation opportunities and protect aesthetic values.
- Lands needed for protection and management of administrative and Congressionally designated areas.
- Rights-of-way with the greatest risk of loss and need for public access.
- Lands needed to enhance or protect watershed improvements that affect the management of National Forest or Grassland riparian areas.
- Environmentally sensitive lands such as wetlands and old growth.
- Buffer lands needed for protection of lands acquired for specific purposes listed above.
- Lands needed to support a particular goal or objective.
- Land interests where development of the mineral estate or other interest would preclude management of the surface to meet forest plan goals.

Priority 2 Acquisitions: (not listed in any order of priority)

- Key tracts of an ecosystem that are not urgently needed, but will promote more effective management of the ecosystem and will meet specific needs for vegetative management, valuable watershed management, research, public recreation or other defined management objectives. Generally, will support consolidation objectives.
- Lands needed to protect resource values by eliminating or reducing fire risks, soil erosion or occupancy trespass.

- Lands needed to reduce expenses of both the Forest Service and the public in administration and utilization. Consolidation of split estates.

Priority 3 Acquisitions:
- All other lands desirable for inclusion in the National Forest System.

Federal land conveyances (disposal) by exchange or other specific authority will be guided by the following criteria: **(not listed in any order of priority)**
- Lands inside or adjacent to communities or intensively developed private land, and chiefly valuable for non-National Forest System purposes. Support community expansion.
- Parcels that will serve a greater public need in state, county, city, or other Federal agency ownership.
- Inaccessible parcels isolated from other NFS lands. Parcels intermingled with non-federal lands.
- Parcels within major blocks of private land, the use of which is substantially for non-National Forest System purpose.
- Parcels having boundaries, or portions of boundaries, with inefficient configurations (projecting necks or long, narrow strips of land, etc.) Supports more logical and efficient management.
- Non-essential administrative sites.

Ownership boundary lines should be surveyed, marked, and posted to applicable Forest Service standards according to the following priorities (not in any order):
- Boundary lines adjacent to or near proposed management activities.
- Boundary lines where encroachment activity by adjoining owners is suspected or known to exist.
- Boundary lines at high risk that are in proximity to potential or planned outside development.

Special Uses: Only consider proposals for special use authorizations that encumber National Forest System lands if:
- Use is appropriate and consistent with management direction and desired conditions;
- Permit administration can be accomplished;
- National Forest resources will not be impaired; and
- Private land is not available to accommodate the use.

Outfitter and Guides: -When selecting new or reissuing existing Outfitter and Guide permits, evaluate proposals using the following criteria:

- **Skills and Equipment** -What skills and equipment are needed by members of the public to experience the National Forest? Do the desired activities include skills that require a substantial amount of time and talent to learn? Is the necessary equipment specialized and expensive or which the general public would not usually have access to? Are unique skills of an outfitter/guide almost a prerequisite to participate in the activity?

- **Knowledge** - Does the knowledge of outfitter/guides improve the ability of the public to enjoy recreation opportunities in a manner that reduces resource damage and user conflicts?

- **Safety** - Are outfitter/guide skills needed to assure a reasonable level of safety for the public? Without outfitter/guide assistance, could members of the public seriously endanger their health or lives?

- **Education -**Will outfitter/guide experience and background provide information, interpretation, and education on Forest resources, conditions, minimum-impact techniques, and management of public lands?

- **Unique Services Provided** - Will outfitter/guide contribute to meeting special management objectives such as:
    - Providing opportunities for special populations, which include children, disabled, minorities, and the elderly, to access parts of the Wasatch-Cache National Forest in order to participate in recreation and educational activities.
    - Protecting fragile resources.
    - Assisting in reducing critical resource impacts and conflicts between users.
    - Consistent with management area direction, increasing diversity of recreation opportunities and encouraging innovation in the outfitter industry.

- **Demand** - Is there a public demand for the types of services being offered?

- **Compatibility** - Will outfitter/guide operation be compatible with existing general public and/or other outfitter and guide activity presently occurring, and /or institutional use of an area? Is proposed service both physically and socially compatible with resource capabilities?

- **Feasibility of Offering Services Elsewhere –** To what extent could the proposed service be offered on private land, or in the case of Wilderness, in areas outside designated Wilderness? Are there alternative areas off National Forest lands available to conduct these types of activities?

- **Contribution to Rural Economies -** What contribution can or does outfitter/guide service make to diversification and resiliency of rural economies?

- **Available Resources** - Are there resources available to conduct required environmental analysis, implement, administer, and monitor the permit?

- **Restrictions** – To what degree will issuance of the permit result in greater restrictions on the non-outfitted public and potentially reduce their use and enjoyment of the forest?

- **Competition** – Would the proposal unduly compete with or interfere with public use of the area?

Wilderness Management: Consider the following management actions to manage use levels and patterns: permit system for day use and/or overnight use, area closures, designated camp areas, limitations on party size, length of stay at a campsite, stock and pack animals use and tethering limits.

Evaluate and manage wilderness access portals (roads and trails) to facilitate wilderness management. Use access and design of roads, parking and trailheads to manage use levels in wilderness.

Use public education and interpretation programs to foster wilderness values. Provide accurate and timely information on wilderness and alternative backcountry areas (recreation, access, regulations, wilderness values, Leave No Trace, etc).

Discourage predator control except when necessary to protect threatened or endangered species or to prevent special and serious losses of domestic livestock. Coordinate with Wildlife Services which is the Federal Agency responsible for predator control.

Appendix X
Implementation Guidance

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Field Surveys
Where goshawk field surveys are required, complete surveys for territory occupancy within suitable habitat. Surveys will be completed during the nesting and/or post-fledgling period, and should be conducted at least one year prior to implementation of management actions.

When goshawk field surveys are required and when project planning permits, two consecutive years of surveys for territory occupancy prior to implementation of management actions is preferred.

Considerations for Goshawk Nest and Post Fledgling Areas
If a historic nest is not associated with an active nest area, management direction for home range habitat should be applied.

When an active nest area has been identified, identify 2 alternate nest areas and 3 replacement nest areas. The next two items provide recommended direction for implementation.

- Each nest area (active, alternate and replacement) should be approximately 30 acres (total of approximately 180 acres) in size when sufficient suitable habitat exists. If sufficient amounts of suitable habitat are not present, use existing suitable habitat that is available.
- Alternate nest areas should be identified in suitable habitat with similar vegetative structures as the active nest areas. Replacement nest areas should be identified in habitat which will develop similar vegetative structures as the active nest area at the time the active and alternate nest areas are projected to no longer provide adequate nesting habitat.

During active nesting periods in active nest areas (approximately 30 acres) restrict management activities and permitted uses if the activity or use is likely to result in nest abandonment.

Active nest area habitat characteristics should be used for designing or maintaining desired nest area habitats for each cover type in which nesting may occur.

Identify a post-fledgling area that encompasses the active, alternate and replacement nest areas and additional habitat needed to raise fledglings. A post-fledgling area should be approximately 420 acres in size (exclusive of nest area acres) when sufficient suitable habitat exists. If sufficient amounts of suitable habitat are not present, use existing suitable habitat that is available.

Forest vegetative manipulation within a post-fledgling area should be designed to maintain or improve the same habitat features as discussed for the goshawk home range (i.e. stand structure, snags, down logs, nest trees important in the life histories of the goshawk and its prey species common to the geographic location), except:

- Openings, as defined in glossary and Reynolds et al., created as a result of mechanical vegetative treatments (does not include wildland fire) should not exceed the following by cover type:
    - Ponderosa pine and mixed conifer 2 ac max.
    - Spruce/fir 1 ac max.
- Management activities should be restricted during the active nesting period. The active nesting period will normally occur between March 1st and Sept. 30th.

Where timber harvest is prescribed to achieve desired forest conditions, plan the transportation system to minimize disturbance to post-fledgling areas. For example, small, permanent skid trails should be used in lieu of roads to minimize disturbance to goshawk post-fledgling areas. Variance may occur if it is determined that a combination of new permanent or temporary roads and permanent skid trails would result in less overall disturbance of post-fledgling area habitat.

Ungulate Grazing
When it is determined through the landscape assessment process that ungulate grazing is contributing to an identified functioning-at-risk condition relative to habitat needed to support goshawk and its prey, modify grazing practices to maintain or restore the desired seed, mast, and foliage production defined in the landscape assessment process. Review success of modifications annually. If modifications are not providing for the desired progression toward production objectives defined in the landscape assessment, modify practices through the next annual operating plan. This guideline does not apply to non-forest patches.

For non-vegetation management activities
When land exchanges, recreation facility development, ski resort construction, utility corridors (etc.) are proposed that would result in loss of suitable goshawk habitat, sufficient mitigation measures should be employed to insure an offset of the loss. The Biological Evaluation process will be used to document findings, recommend mitigation measures, and evaluate consistency with the intent of the Conservation Strategy and Agreement for Management of the Northern Goshawk in Utah (1999).

Prioritizing habitat protection
For greatest reduction in risk of loss of goshawk habitats, treat as a priority for protection habitat areas of high or optimum value as defined (by Graham, et al, 1999) when they are determined to be at risk.

Plant Collection: Collecting of plants, seeds, or plant parts for any commercial purpose requires a special use permit issued by the District Ranger where the collecting activity is proposed. When evaluating applications for commercial collecting permits, considerations should be given to the impacts on all National Forest resources, including biological diversity.

Gathering of plants for Native American Indian ceremonial use or medicinal uses are provided for through existing treaties and other special considerations that guide transactions between tribes and the U.S. Government and will be coordinated through the Forest Supervisor.

Fire Management: Qualified resource advisors (as defined in Wasatch-Cache and Uinta Forest Fire Management Plan, 2002) will be used when a fire is projected to burn past the first burn period, normally on Type I, II, and III fires.

- Consult the Forest Hydrologist or their representative if a wildland fire threatens: 303D Listed Waterbodies that may be negatively impacted by fire or municipal watersheds. As of this date, the only 303D listed waterbodies or municipal watersheds that could be negatively impacted by fire are: Pineview Reservoir and watersheds along the Wasatch Front.

- Use a resource advisor in all Type I, II and III fires who knows which species of concern (flora and fauna) may be impacted by the fire. A resource advisor should also be consulted when determining the suitability of an ignition for wildland fire use. The resource advisor should be qualified to prepare notes that advise fire managers on resource values and possible mitigation measures.

- The Forest BAER coordinator should review all Type I, II and III fires for possible rehabilitation needs. If a prescribed burn exceeds the prescription, the Forest BAER coordinator should also review the burn for possible rehabilitation needs.

The following Go/No-Go criteria in making decisions to allow wildland fire use:
- Immediate threat to life, property, or resources that cannot be mitigated.
- The availability of fire management personnel (including pertinent Specialists).
- Effects on soils, heritage resources, species-at-risk, and other resources.
- Fire weather forecasts.

If Go/No-Go considerations indicate the ignition cannot be managed as wildland fire use, document which considerations are unacceptable, and implement appropriate suppression response.

Fire Suppression Rehabilitation and Emergency Fire Rehabilitation: Use certified, weed-free material (straw, waddles, hay bales, etc.) for all rehabilitation activities.

Consider aquatic rehabilitation needs to avoid adverse effects on inland native fish whenever RHCAs are significantly damaged by wildfire or a prescribed fire burning out of prescription.

Road/Trail and Access Management:

Prior to decommissioning roads, consider opportunities for potential development or use as travel routes for motorized, mechanized, and/or non-motorized uses.

Consider the following criteria when planning for an appropriate trail system:
- Historic and future uses of the route.
- Availability of alternate routes to the same destination or use periods to minimize user conflicts.
- Damage occurring to other resources such as excessive soil loss or water quality degradation.
- Conflicts with important wildlife and fish habitat especially to species at risk.

- Impacts to visual resources, compatibility with scenic integrity objectives.
- Needs and desires for public and administrative use, for continued use, and need to reduce conflicts between users (such as walking, mountain biking, snowmobiling, horse use).
- Public and administrative user safety and desired user experience (such as solitude, noise, user conflicts).
- Cost of and funding available for continued maintenance, including snow plowing for winter use.
- Ability to enforce.
- Impacts on adjacent and inholding private landowners and necessary signing, barriers, and patrols.
- Long-term resource management needs.
- Effects on linkages to other roads and trails.
- Compatibility with mapped Recreation Opportunity Spectrum (ROS).
- Opportunities and needs for motorized and non-motorized recreation.
- Density of roads and trails, and need for connectivity.

Consider the following criteria when planning for seasonal or temporary closure of roads or trails:

- Potential for use to cause unacceptable damage or loss to soil and water resources due to weather or seasonal conditions.
- Potential for use to cause unacceptable wildlife and/or fish conflict, habitat degradation or harassment.
- Potential for use to impact species at risk and their habitat, especially during times of breeding, young rearing or other times critical to survival.
- Potential for safety hazard due to weather-related conditions.
- Whether the route could serves a seasonal, public, desired user (such as ATV, hiking or mountain biking) or administrative need.
- Whether the area accessed has a seasonal need for protection.
- Opportunity to provide a diversity of recreational experiences and/or reduce user conflicts such as ATV, hiking, horse riding or mountain biking.
- Need to protect the road/trail investment and minimize maintenance costs.
- Need to comply with Forest contracts, permits, cooperative agreements, road purchase agreements, or easement deeds requiring that road use be controlled.
- Needs for coordination of recreational hunting and fishing opportunities with state agencies.

Developed Recreation Site/Facilities Management: During watershed assessment and/or site specific planning for reconstruction, evaluate existing facilities located within riparian habitat conservation areas for meeting site-specifically developed riparian management objectives and take actions to meet objectives where practical.

Livestock Grazing: During allotment management planning develop site-specific desired future condition descriptions for vegetation composition, structure and pattern.

Minerals and Energy: Reclamation will be considered satisfactory when the disturbed areas have been reclaimed in accordance with operating plan requirements.

Safety zones will be established between seismic operations and any site occupied by other National Forest users.

Surface management for private oil and gas minerals will be negotiated with the owner and operator to be as close as possible to the standards used for federal minerals; prohibiting such development is not an alternative.

All borrow sources will have and follow a development and reclamation plan.

Land Ownership: Where possible, in areas with complex development, Forest boundary adjustments (acquisitions and/or conveyances) should use physical characteristics readily identifiable on the ground.

Land acquisitions will be guided by the following criteria:

Priority 1 Acquisitions: (not listed in any order of priority)

- Lands and associated riparian ecosystems on water frontage such as lakes and major streams.
- Important or critical habitat lands needed for the protection of species at risk. Supports objective of protection of fish and wildlife habitats.
- Lands needed for the protection of significant historical or cultural resources, when these resources are threatened or when management may be enhanced by public ownership.
- Lands that enhance recreation opportunities and protect aesthetic values.
- Lands needed for protection and management of administrative and Congressionally designated areas.
- Rights-of-way with the greatest risk of loss and need for public access.
- Lands needed to enhance or protect watershed improvements that affect the management of National Forest or Grassland riparian areas.
- Environmentally sensitive lands such as wetlands and old growth.
- Buffer lands needed for protection of lands acquired for specific purposes listed above.
- Lands needed to support a particular goal or objective.
- Land interests where development of the mineral estate or other interest would preclude management of the surface to meet forest plan goals.

Priority 2 Acquisitions: (not listed in any order of priority)

- Key tracts of an ecosystem that are not urgently needed, but will promote more effective management of the ecosystem and will meet specific needs for vegetative management, valuable watershed management, research, public recreation or other defined management objectives. Generally, will support consolidation objectives.
- Lands needed to protect resource values by eliminating or reducing fire risks, soil erosion or occupancy trespass.

- Lands needed to reduce expenses of both the Forest Service and the public in administration and utilization. Consolidation of split estates.

Priority 3 Acquisitions:
- All other lands desirable for inclusion in the National Forest System.

Federal land conveyances (disposal) by exchange or other specific authority will be guided by the following criteria: **(not listed in any order of priority)**
- Lands inside or adjacent to communities or intensively developed private land, and chiefly valuable for non-National Forest System purposes. Support community expansion.
- Parcels that will serve a greater public need in state, county, city, or other Federal agency ownership.
- Inaccessible parcels isolated from other NFS lands. Parcels intermingled with non-federal lands.
- Parcels within major blocks of private land, the use of which is substantially for non-National Forest System purpose.
- Parcels having boundaries, or portions of boundaries, with inefficient configurations (projecting necks or long, narrow strips of land, etc.) Supports more logical and efficient management.
- Non-essential administrative sites.

Ownership boundary lines should be surveyed, marked, and posted to applicable Forest Service standards according to the following priorities (not in any order):
- Boundary lines adjacent to or near proposed management activities.
- Boundary lines where encroachment activity by adjoining owners is suspected or known to exist.
- Boundary lines at high risk that are in proximity to potential or planned outside development.

Special Uses: Only consider proposals for special use authorizations that encumber National Forest System lands if:
- Use is appropriate and consistent with management direction and desired conditions;
- Permit administration can be accomplished;
- National Forest resources will not be impaired; and
- Private land is not available to accommodate the use.

Outfitter and Guides: -When selecting new or reissuing existing Outfitter and Guide permits, evaluate proposals using the following criteria:

- **Skills and Equipment** -What skills and equipment are needed by members of the public to experience the National Forest? Do the desired activities include skills that require a substantial amount of time and talent to learn? Is the necessary equipment specialized and expensive or which the general public would not usually have access to? Are unique skills of an outfitter/guide almost a prerequisite to participate in the activity?

- **Knowledge** - Does the knowledge of outfitter/guides improve the ability of the public to enjoy recreation opportunities in a manner that reduces resource damage and user conflicts?

- **Safety** - Are outfitter/guide skills needed to assure a reasonable level of safety for the public? Without outfitter/guide assistance, could members of the public seriously endanger their health or lives?

- **Education -**Will outfitter/guide experience and background provide information, interpretation, and education on Forest resources, conditions, minimum-impact techniques, and management of public lands?

- **Unique Services Provided** - Will outfitter/guide contribute to meeting special management objectives such as:
    - Providing opportunities for special populations, which include children, disabled, minorities, and the elderly, to access parts of the Wasatch-Cache National Forest in order to participate in recreation and educational activities.
    - Protecting fragile resources.
    - Assisting in reducing critical resource impacts and conflicts between users.
    - Consistent with management area direction, increasing diversity of recreation opportunities and encouraging innovation in the outfitter industry.

- **Demand** - Is there a public demand for the types of services being offered?

- **Compatibility** - Will outfitter/guide operation be compatible with existing general public and/or other outfitter and guide activity presently occurring, and /or institutional use of an area? Is proposed service both physically and socially compatible with resource capabilities?

- **Feasibility of Offering Services Elsewhere –** To what extent could the proposed service be offered on private land, or in the case of Wilderness, in areas outside designated Wilderness? Are there alternative areas off National Forest lands available to conduct these types of activities?

- **Contribution to Rural Economies -** What contribution can or does outfitter/guide service make to diversification and resiliency of rural economies?

- **Available Resources** - Are there resources available to conduct required environmental analysis, implement, administer, and monitor the permit?

- **Restrictions** – To what degree will issuance of the permit result in greater restrictions on the non-outfitted public and potentially reduce their use and enjoyment of the forest?

- **Competition** – Would the proposal unduly compete with or interfere with public use of the area?

Wilderness Management: Consider the following management actions to manage use levels and patterns: permit system for day use and/or overnight use, area closures, designated camp areas, limitations on party size, length of stay at a campsite, stock and pack animals use and tethering limits.

Evaluate and manage wilderness access portals (roads and trails) to facilitate wilderness management. Use access and design of roads, parking and trailheads to manage use levels in wilderness.

Use public education and interpretation programs to foster wilderness values. Provide accurate and timely information on wilderness and alternative backcountry areas (recreation, access, regulations, wilderness values, Leave No Trace, etc).

Discourage predator control except when necessary to protect threatened or endangered species or to prevent special and serious losses of domestic livestock. Coordinate with Wildlife Services which is the Federal Agency responsible for predator control.

Appendix XI
Botanical Resources

Appendix XI Tables

Purpose of Appendix

This appendix is designed to provide information about habitat, status, distribution, and habitat grouping for the Threatened, Proposed, and Sensitive (current and proposed) and Forest Watch species of plants that occur on the Wasatch Cache National Forest. The information is provided to enable managers to more efficiently direct the implementation of Botanical Resources goals, objectives, standards, and guidelines.

Discussion
These lists are dynamic in nature and plants will be added to, or removed, depending on the viability of the species. Plants that are globally and locally stable, yet rare, are placed on a Forest Watch List. These plants will be considered in project level analysis and NEPA and in time, if needed, will have monitoring protocols established.

Global Ranking-Global ranking assess the rarity of plants throughout their distribution worldwide and is assigned by the Association for Biodiversity Information (Natural Heritage Program).
G1 – Less than 6 viable element occurrences (EO) OR less than 1000 individuals OR less than 2,000 acres globally.
G2 – 6-20 EOs OR 1000-3000 individuals OR 2,000-10,000 acres.
G3 – 21-100 Eos OR 3,000 – 10,000 individuals OR 10,000 – 50,000 acres.
G4 – Apparently secure; this rank is lower than G3 but factors or threats exist that cause concern.
G5 – Population or stand demonstrably secure to ineradicable due to being commonly found in the world.

Subspecies Level
Subspecies receive a T-rank attached to the G-rank. With the subspecies, the G-rank reflects the condition of the entire species; whereas, the T-rank reflects the global situation of just the subspecies.

State Ranking- Assess the rarity of plants within the state and is assigned by the state Natural Heritage Program.
S1 = Less than 6 EOs OR less than 100 individuals OR less than 2000 acres within the state.
S2 = 6-20 EOs OR 1000-3000 individuals OR 2000-10000 acres within the state.
S3 = 21-100 EOs OR 3000-10000 individuals OR 10000-50000 acres within the state.
S4 = Apparently secure within the State; this rank is clearly lower than S3 but factors exist to cause some concern (i.e., there is some threat, or somewhat narrow habitat. NO THREAT RANK.
S5 = Demonstrably secure to ineradicable in the State. NO THREAT RANK.
NOTES:
- Rank may be expressed as a range of values; hence S2S3 means the rank is somewhere between S2 and S3.
- Adding a question mark (?) to the rank, such as in S2?, represents more certainty than S2S3, but less than S2.

Global Distribution-
Global Distribution = Disjunct, Local Endemic (< 100 square miles), Regional Endemic (distribution 100-10,000 square miles), Sparsely Distributed (isolated populations), Peripheral (on the edge of its range), Widespread, Circumboreal, Circumpolar.

Table XI - 1. Federal and State Status, Endemism, Global distribution of the Plant Species at Risk on the Wasatch-Cache National Forest.

Species	Common Name	Global	State	Endemism	Global Distribution	Status
Angelica wheeleri Wats.	Wheeler's angelica	G2	S2	Utah	Regional Endemic	Recommended Sensitive
Arabis glabra (L.) Bernh. var *furcatipilis* Hopkins	Hopkin's tower-mustard	G5T2?	S1	Northeastern Utah, western CA	Sparsely Distributed	Recommended Sensitive
Artemisia norvegica var. *piceetorum (A.arctica* Less. ssp. *Arctica*) Welsh & Goodrich	Spruce wormwood	G5T1Q	S1	UT, AK, CAL, CO.	Regional endemic	Recommended Sensitive
Astragalus jejunus var. *jejunus* Wats.	Starvling milkvetch	G3T3	S1	Western US?	Regional Endemic	Sensitive
Botrychium lineare	Dainty moonwort	G1	S1	North America	Sparsely Distributed	Proposed
Corydalis caseana ssp brachycarpa (Rydb.) Ownbey	Wasatch fitweed	G5T2	S2	Central Wasatch Mtns.	Regional Endemic	Recommended Sensitive
Cymopterus lapidosus (Jones) Jones	Echo spring-parsley	G3	S1	Western Summit Co. and southwest WY	Local endemic	Recommended Sensitive
Cypripedium calceolus var *parviflorum* L. (*Cypripedium parviflorum* – Salisb.)	Lady's slipper	G5	S1	Utah, British Columbia to Washington , New York and Louisiana, Eurasia	Widespread	Recommended Sensitive
Cypripedium fasciculatum Kellogg ex Wats.	Clustered lady's slipper, brownie lady's slipper	G4	S1	Ut, Id, Wy & CO west to WA, OR &CAL	Sparsely Distributed	Sensitive
Dodecatheon dentatum var. utahense	Utah shooting star, Wasatch shooting star	G4T1	S1	SLC Co., UT	Local Endemic	Recommended Sensitive
Draba brachystylis	Wasatch draba	G1G2	S1	Wasatch Mtns. Charleston Mtns. NV	Regional Endemic	Recommended Sensitive
Draba globosa (D. densifolia var. apiculata)	Rockcress draba	G3	S2	Western US	Sparsely Distributed	Sensitive
Draba maguirei sensu lato	Maguire's draba	G3	S3	Logan Canyon	Local Endemic	Sensitive
Draba maguirei var. *burkei*	Burke's draba	G3T2	S2	Northeastern Utah	Local Endemic	Sensitive
Erigeron arenarioides (D.C. Eaton) Gray	Wasatch daisy	G3?	S3?	Utah	Local Endemic	Recommended Sensitive
Erigeron cronquistii Maguire	Cronquist daisy	G2	S2	Cache County Utah	Local Endemic	Sensitive
Erigeron garrettii A. Nels	Garrett's daisy	G2	S2	Central Wasatch Mtns	Local Endemic	Recommended Sensitive
Eriogonum brevicaule var. loganum (A. Nels.) Welsh	Logan buckwheat	G2Q	S2	Logan Canyon	Local Endemic	Sensitive
Ivesia utahensis *Wats.*	Utah Ivesia	G2	S2	Utah	Local Endemic	Recommended Sensitive
Jamesia americana var. macrocalyx (Small) Engler	Wasatch Jamesia, Wasatch cliff-bush	G5T2	S2	Utah	Local Endemic	Sensitive
Lepidium montanum var. alpinum Wats.	alpine pepper plant, Wasatch pepper-wort	G5?T1	S1	Wasatch and Oquirrh Mtns.	Local Endemic	Recommended Sensitive
Lesquerella garrettii Payson	Garrett's bladderpod	G2	S2	Wasatch Mtns.	Local Endemic	Sensitive

Species	Common Name	Global	State	Endemism	Global Distribution	Status
Papaver radicatum ssp *kluanense (P. kluanense)*	Artic Poppy	G5T3 T4	S1	AK,CO, ID,MT,NM,UT,WY & Canada	Regional Endemic	Sensitive
Penstemon compactus (Keck) Crosswhite	Cache beardtongue	G2	S2	Logan Canyon	Local Endemic	Sensitive
Penstemon platyphyllus *Rydb.*	broad-leaf beardtongue,	G2G3	S2S3	Utah	Regional Endemic	Recommended Sensitive
Potentilla cottamii *N. Holmgren*	Cottam's cinquefoil,	G1	S1	Northeastern Utah, Southern Idaho	Sparsely Distributed	Sensitive
Potentilla pensylvanica var. *paucijuga* (Rydb.) Welsh & Johnston	Alpine cinquefoil, few-leaflet cinquefoil	G1	S1	Utah	Regional Endemic	Recommended Sensitive
Primula maguirei L.O. Williams	Maguire's primrose	G1	S1	Logan Canyon	Local Endemic	Threatened
Spiranthes diluvialis Sheviak	Ute ladies'-tresses	G2	S1	Western US	Sparsely Distributed	Threatened
Thelesperma pubescens *Dorn*	Uinta greenthread	G1	S1	Utah	Local Endemic	Sensitive
Viola frank-smithii N. Holmgren	Frank Smith Violet	G2	S2	Logan Canyon	Local Endemic	Sensitive

Global = Global ranking as assigned by Natural Heritage Program and Utah Native Plant Society. T = threatened, PT = proposed threatened, C = candidate, Q= question on taxonomy State = Utah State ranking, Utah Conservation Data Center and Utah Native Plant Society Rare Species list 2000; * = Utah State ranking, Utah Natural Heritage Program, 2000.

Table XI-2. Wasatch-Cache NF Species at Risk Watch List

Species	Common Name	Global	State	Endemism	Global Distribution	Status
Abies concolor (Gord.&Glend.)Lindl.	White Fir	G5	S1(WY)	Utah (except Dagget &Rich Cty), OR, WY, Cal, AZ, NM & Mexico	Regional Endemic	Watch
Arabis lasiocarpa Rollins	Wasatch rock-cress, Toiyabe rock-cress	G3	S3	Wasatch Mountains	Local Endemic	Watch
Aster sibericus var. *meritus* L. (*Eurybia sibirica* (L.) Nesom)	Siberian aster	G5T5	S1	UT, AK, Yukon, OR, ID, WY Eurasia	Disjunct	Watch
Astragalus flexuosus var. *flexuosus* (Hook.) Rydb.	Bent milkvetch	G5T5	S1	Western and Central US	Widespread	Watch
Astragalus robbinsii (Oakes) Gray	Robbins' milkvetch	G5	S1	AK to Newfoundland, So to OR, NV, CO, and Vermont	Regional Endemic	Watch
Botrychium crenulatum	Dainty moonwort, crenualte moonwort	G3	S1	Western US	Disjunct	Watch
Cirsium eatonii var. *murdockii* Welsh	Murdock's thistle	G5T2T3	S2S3	CO, ID, NV, UT	Regional Endemic	Watch
Cymopterus acaulis var. parvus Goodrich	Small spring parsley	G5T2T3,	S2S3	Western US	Regional Endemic	Watch
Epipactis gigantea Dougl. ex. Hook	Giant Helleborine	G4	S2S3	Western US	Sparsely Distributed	Watch
Lathyrus lanszwertii var. Lanszwerti	Nevada Sweetpea	G4G5T4	S1(WY)	Western US	Regional Endemic	Watch
Lesquerella utahensis Rydb.	Utah bladderpod	G3	S3	UTAH?	Local Endemic	Watch
Musineon lineare (Rydb.) Mathias	Rydberg's Musineon	G2	S2	Bear River Range	Regional Endemic	Watch
Pedicularis parryi ssp. *Mogollonica*	Mogollon Lousewort	G5T2T4Q	S1(WY)	AZ, CO,NM, UT, Wy	Regional Endemic	Watch
Penstemon uintahensis	Uinta Beardtongue	G3	S3	Uinta Mountains	Regional Endemic	Watch
Porterella carnosula (H.&A.) Torr.	Western Porterella	G4	S1	Utah, OR to Wy, South to CA &AZ	Regional Endemic	Watch
Potamogeton foliosus var *fibrillosus* (Fern.) Haynes & Reveal	fibrous-stipuled pond-weed	G5T2T4	S1	Western US	Regional Endemic	Watch
Viola beckwithii T. & G.	Beckwith's violet	G4	S2	Western US	Peripheral	Watch

Global = Global ranking as assigned by Natural Heritage Program and Utah Native Plant Society. T = threatened, PT = proposed threatened, C = candidate, Q= question on taxonomy State = Utah State ranking, Utah Conservation Data Center and Utah Native Plant Society Rare Species list 2000; * = Utah State ranking, Utah Natural Heritage Program, 2000. Those species that are listed as S1 in Wyoming are annotated with a (WY) next to the state ranking.

Table XI-3. Geographical Distribution and Habitat Groupings of the Plant Species At Risk on the Wasatch-Cache National Forest.

Species	Common Name	Management Area							Habitat							
		Stansburys	Bear Management Area	Cache Box Elder Mgmt. Area	N.Wasatch Ogedn Valley	Central Wasatch Mgmt. Area	Eastern Uintas Mgmt Area	Western Uintas Mgmt Area	Mountain Forest	Riparian Meadows/ Seeps	Rock Cliffs/ Crevices Talus/Scree	High elev. Grassland	Shrubland	Woodland	Alpine	Subalpine/Non Forest
Abies concolor (Gord. &Glend.) Lindl.	White Fir						X		X							
Angelica wheeleri Wats.	Wheeler's angelica									X						
Arabis glabra (L.) Bernh. var *furcatipilis* Hopkins	Hopkin's tower-mustard			X		X				X				X		
Arabis lasiocarpa Rollins	Wasatch rock-cress, Toiyabe rock-cress			X	X	X			X				X	X		
Artemisia norvegica var. *piceetorum* Welsh & Goodrich	Spruce wormwood						X	X	X						X	
Aster sibericus var. *meritus* L.	Siberian aster						X				X				X	
Astragalus flexuosus var. *flexuosus* (Hook.) Rydb.	Bent milkvetch							X	X				X	X		
Astragalus jejunus var. *jejunus* Wats.	starvling milkvetch		X										X			
Astragalus robbinsii *(Oakes) Gray*	Robbins' milkvetch							X		X			X	X		
Botrychium crenulatum	Dainty moonwort, crenualte moonwort							X					X	X		
Botrychium lineare	Slender Moonwort					*X				X						
Cirsium eatonii var. *murdockii* Welsh	Murdock's thistle						X				X					
Corydalis caseana ssp brachycarpa (Rydb.) Ownbey	Wasatch fitweed				X	X			X	X				X	X	
Cymopterus acaulis var. parvus Goodrich	small spring parsley	X											X			

Species	Common Name	Management Area							Habitat							
		Stansburys	Bear Management Area	Cache Box Elder Mgmt. Area	N.Wasatch Ogedn Valley	Central Wasatch Mgmt. Area	Eastern Uintas Mgmt Area	Western Uintas Mgmt Area	Mountain Forest	Riparian Meadows/ Seeps	Rock Cliffs/ Crevices Talus/Scree	High elev. Grassland	Shrubland	Woodland	Alpine	Subalpine/Non Forest
Cymopterus lapidosus (Jones) Jones	Echo spring-parsley						X	X					X			
Cypripedium calceolus ssp parviflorum L.	Lady's slipper					X				X						
Cypripedium fasciculatum Kellogg ex Wats.	clustered lady's slipper, brownie lady's slipper			X		X			X							
Dodecatheon dentatum var. utahense	Utah shooting star, Wasatch shooting star					X				X	X					
Draba brachystylis	Wasatch draba					X	X		X		X					
Draba globosa (D. densifolia var. apiculata)	rockcress draba					X	X	X			X				X	
Draba maguirei sensu lato	Maguire's draba			X					X		X				X	X
Draba maguirei var. *burkei*	Burke's draba			X	X						X				X	X
Epipactis gigantea Dougl. ex. Hook	Giant Helleborine			X						X						
Erigeron arenarioides (D.C. Eaton) Gray	Wasatch daisy				X	X					X					
Erigeron cronquistii Maguire	Cronquist daisy			X							X					
Erigeron garrettii A. Nels	Garrett's daisy					X					X				X	X
Eriogonum brevicaule var. loganum (A. Nels.) Welsh	Logan buckwheat		X	X					X		X		X	X	X	X
Ivesia utahensis *Wats.*	Utah Ivesia			X		X					X				X	
Jamesia americana var. macrocalyx (Small) Engler	Wasatch Jamesia, Wasatch cliff-bush					X					X					

Species	Common Name	Management Area							Habitat							
		Stansburys	Bear Management Area	Cache Box Elder Mgmt. Area	N.Wasatch Ogedn Valley	Central Wasatch Mgmt. Area	Eastern Uintas Mgmt Area	Western Uintas Mgmt Area	Mountain Forest	Riparian Meadows/ Seeps	Rock Cliffs/ Crevices Talus/Scree	High elev. Grassland	Shrubland	Woodland	Alpine	Subalpine/Non Forest
Lathyrus lanszwertii var. Lanszwerti	Nevada Sweetpea	X	X	X	X	X	X	X						X		
Lepidium montanum var. alpinum Wats.	alpine pepper plant, Wasatch pepper-wort					X					X					
Lesquerella garrettii Payson	Garrett's bladderpod					X					X					X
Lesquerella utahensis Rydb.	Utah bladderpod					X					X		X		X	
Musineon lineare	Rydberg's Musineon			X							X					
Papaver radicatum ssp *kluanense*	Alpine Poppy						X	X			X				X	
Pedicularis parryi ssp.Mogollonica	Mogollon Lousewort						X		X				X	X	X	
Penstemon compactus (Keck) Crosswhite	Cache beardtongue			X							X					X
Penstemon platyphyllus *Rydb.*	Broad-leaf Beardtongue,				X	X					X		X			
Penstemon uintahensis	Uinta Beardtongue						X	X			X				X	X
Porterella carnosula (H.&A.) Torr.	Western Porterella						X			X						
Potamogeton foliosus var *fibrillosus* (Fern.) Haynes & Reveal	Fibrous-stipuled pond-weed						X			X						
Potentilla cottamii *N. Holmgren*	Cottam's cinquefoil,	X									X					
Potentilla pensylvanica var. *paucijuga* (Rydb.) Welsh & Johnston	Alpine cinquefoil, few-leaflet cinquefoil							X				X			X	
Primula maguirei L.O. Williams	Maguire's primrose			X							X			X		

Species	Common Name	Management Area							Habitat							
		Stansburys	Bear Management Area	Cache Box Elder Mgmt. Area	N.Wasatch Ogedn Valley	Central Wasatch Mgmt. Area	Eastern Uintas Mgmt Area	Western Uintas Mgmt Area	Mountain Forest	Riparian Meadows/ Seeps	Rock Cliffs/ Crevices Talus/Scree	High elev. Grassland	Shrubland	Woodland	Alpine	Subalpine/Non Forest
**Spiranthes diluvialis* Sheviak	Ute ladies'-tresses									X						
Thelesperma pubescens *Dorn*	Uinta greenthread						X				X			X		
Viola beckwithii T. & G.	Beckwith's violet			X	X	X						X	X	X		
Viola frank-smithii N. Holmgren	Frank Smith Violet			X							X					

Star (*) indicates that the species is not found on the forest, or is found by historic specimen only.

Appendix XI
Botanical Resources

Appendix XI Tables

Purpose of Appendix

This appendix is designed to provide information about habitat, status, distribution, and habitat grouping for the Threatened, Proposed, and Sensitive (current and proposed) and Forest Watch species of plants that occur on the Wasatch Cache National Forest. The information is provided to enable managers to more efficiently direct the implementation of Botanical Resources goals, objectives, standards, and guidelines.

Discussion
These lists are dynamic in nature and plants will be added to, or removed, depending on the viability of the species. Plants that are globally and locally stable, yet rare, are placed on a Forest Watch List. These plants will be considered in project level analysis and NEPA and in time, if needed, will have monitoring protocols established.

Global Ranking-Global ranking assess the rarity of plants throughout their distribution worldwide and is assigned by the Association for Biodiversity Information (Natural Heritage Program).
G1 – Less than 6 viable element occurrences (EO) OR less than 1000 individuals OR less than 2,000 acres globally.
G2 – 6-20 EOs OR 1000-3000 individuals OR 2,000-10,000 acres.
G3 – 21-100 Eos OR 3,000 – 10,000 individuals OR 10,000 – 50,000 acres.
G4 – Apparently secure; this rank is lower than G3 but factors or threats exist that cause concern.
G5 – Population or stand demonstrably secure to ineradicable due to being commonly found in the world.

Subspecies Level
Subspecies receive a T-rank attached to the G-rank. With the subspecies, the G-rank reflects the condition of the entire species; whereas, the T-rank reflects the global situation of just the subspecies.

State Ranking- Assess the rarity of plants within the state and is assigned by the state Natural Heritage Program.
S1 = Less than 6 EOs OR less than 100 individuals OR less than 2000 acres within the state.
S2 = 6-20 EOs OR 1000-3000 individuals OR 2000-10000 acres within the state.
S3 = 21-100 EOs OR 3000-10000 individuals OR 10000-50000 acres within the state.
S4 = Apparently secure within the State; this rank is clearly lower than S3 but factors exist to cause some concern (i.e., there is some threat, or somewhat narrow habitat. NO THREAT RANK.
S5 = Demonstrably secure to ineradicable in the State. NO THREAT RANK.
NOTES:
- Rank may be expressed as a range of values; hence S2S3 means the rank is somewhere between S2 and S3.
- Adding a question mark (?) to the rank, such as in S2?, represents more certainty than S2S3, but less than S2.

Global Distribution-
Global Distribution = Disjunct, Local Endemic (< 100 square miles), Regional Endemic (distribution 100-10,000 square miles), Sparsely Distributed (isolated populations), Peripheral (on the edge of its range), Widespread, Circumboreal, Circumpolar.

Table XI - 1. Federal and State Status, Endemism, Global distribution of the Plant Species at Risk on the Wasatch-Cache National Forest.

Species	Common Name	Global	State	Endemism	Global Distribution	Status
Angelica wheeleri Wats.	Wheeler's angelica	G2	S2	Utah	Regional Endemic	Recommended Sensitive
Arabis glabra (L.) Bernh. var *furcatipilis* Hopkins	Hopkin's tower-mustard	G5T2?	S1	Northeastern Utah, western CA	Sparsely Distributed	Recommended Sensitive
Artemisia norvegica var. *piceetorum (A.arctica* Less. ssp. *Arctica*) Welsh & Goodrich	Spruce wormwood	G5T1Q	S1	UT, AK, CAL, CO.	Regional endemic	Recommended Sensitive
Astragalus jejunus var. *jejunus* Wats.	Starvling milkvetch	G3T3	S1	Western US?	Regional Endemic	Sensitive
Botrychium lineare	Dainty moonwort	G1	S1	North America	Sparsely Distributed	Proposed
Corydalis caseana ssp brachycarpa (Rydb.) Ownbey	Wasatch fitweed	G5T2	S2	Central Wasatch Mtns.	Regional Endemic	Recommended Sensitive
Cymopterus lapidosus (Jones) Jones	Echo spring-parsley	G3	S1	Western Summit Co. and southwest WY	Local endemic	Recommended Sensitive
Cypripedium calceolus var *parviflorum* L. (*Cypripedium parviflorum* – Salisb.)	Lady's slipper	G5	S1	Utah, British Columbia to Washington , New York and Louisiana, Eurasia	Widespread	Recommended Sensitive
Cypripedium fasciculatum Kellogg ex Wats.	Clustered lady's slipper, brownie lady's slipper	G4	S1	Ut, Id, Wy & CO west to WA, OR &CAL	Sparsely Distributed	Sensitive
Dodecatheon dentatum var. utahense	Utah shooting star, Wasatch shooting star	G4T1	S1	SLC Co., UT	Local Endemic	Recommended Sensitive
Draba brachystylis	Wasatch draba	G1G2	S1	Wasatch Mtns. Charleston Mtns. NV	Regional Endemic	Recommended Sensitive
Draba globosa (D. densifolia var. apiculata)	Rockcress draba	G3	S2	Western US	Sparsely Distributed	Sensitive
Draba maguirei sensu lato	Maguire's draba	G3	S3	Logan Canyon	Local Endemic	Sensitive
Draba maguirei var. *burkei*	Burke's draba	G3T2	S2	Northeastern Utah	Local Endemic	Sensitive
Erigeron arenarioides (D.C. Eaton) Gray	Wasatch daisy	G3?	S3?	Utah	Local Endemic	Recommended Sensitive
Erigeron cronquistii Maguire	Cronquist daisy	G2	S2	Cache County Utah	Local Endemic	Sensitive
Erigeron garrettii A. Nels	Garrett's daisy	G2	S2	Central Wasatch Mtns	Local Endemic	Recommended Sensitive
Eriogonum brevicaule var. loganum (A. Nels.) Welsh	Logan buckwheat	G2Q	S2	Logan Canyon	Local Endemic	Sensitive
Ivesia utahensis *Wats.*	Utah Ivesia	G2	S2	Utah	Local Endemic	Recommended Sensitive
Jamesia americana var. macrocalyx (Small) Engler	Wasatch Jamesia, Wasatch cliff-bush	G5T2	S2	Utah	Local Endemic	Sensitive
Lepidium montanum var. alpinum Wats.	alpine pepper plant, Wasatch pepper-wort	G5?T1	S1	Wasatch and Oquirrh Mtns.	Local Endemic	Recommended Sensitive
Lesquerella garrettii Payson	Garrett's bladderpod	G2	S2	Wasatch Mtns.	Local Endemic	Sensitive

Species	Common Name	Global	State	Endemism	Global Distribution	Status
Papaver radicatum ssp *kluanense (P. kluanense)*	Artic Poppy	G5T3 T4	S1	AK,CO, ID,MT,NM,UT,WY & Canada	Regional Endemic	Sensitive
Penstemon compactus (Keck) Crosswhite	Cache beardtongue	G2	S2	Logan Canyon	Local Endemic	Sensitive
Penstemon platyphyllus *Rydb.*	broad-leaf beardtongue,	G2G3	S2S3	Utah	Regional Endemic	Recommended Sensitive
Potentilla cottamii *N. Holmgren*	Cottam's cinquefoil,	G1	S1	Northeastern Utah, Southern Idaho	Sparsely Distributed	Sensitive
Potentilla pensylvanica var. *paucijuga* (Rydb.) Welsh & Johnston	Alpine cinquefoil, few-leaflet cinquefoil	G1	S1	Utah	Regional Endemic	Recommended Sensitive
Primula maguirei L.O. Williams	Maguire's primrose	G1	S1	Logan Canyon	Local Endemic	Threatened
Spiranthes diluvialis Sheviak	Ute ladies'-tresses	G2	S1	Western US	Sparsely Distributed	Threatened
Thelesperma pubescens *Dorn*	Uinta greenthread	G1	S1	Utah	Local Endemic	Sensitive
Viola frank-smithii N. Holmgren	Frank Smith Violet	G2	S2	Logan Canyon	Local Endemic	Sensitive

Global = Global ranking as assigned by Natural Heritage Program and Utah Native Plant Society. T = threatened, PT = proposed threatened, C = candidate, Q= question on taxonomy State = Utah State ranking, Utah Conservation Data Center and Utah Native Plant Society Rare Species list 2000; * = Utah State ranking, Utah Natural Heritage Program, 2000.

Table XI-2. Wasatch-Cache NF Species at Risk Watch List

Species	Common Name	Global	State	Endemism	Global Distribution	Status
Abies concolor (Gord.&Glend.)Lindl.	White Fir	G5	S1(WY)	Utah (except Dagget &Rich Cty), OR, WY, Cal, AZ, NM & Mexico	Regional Endemic	Watch
Arabis lasiocarpa Rollins	Wasatch rock-cress, Toiyabe rock-cress	G3	S3	Wasatch Mountains	Local Endemic	Watch
Aster sibericus var. *meritus* L. (*Eurybia sibirica* (L.) Nesom)	Siberian aster	G5T5	S1	UT, AK, Yukon, OR, ID, WY Eurasia	Disjunct	Watch
Astragalus flexuosus var. *flexuosus* (Hook.) Rydb.	Bent milkvetch	G5T5	S1	Western and Central US	Widespread	Watch
Astragalus robbinsii (Oakes) Gray	Robbins' milkvetch	G5	S1	AK to Newfoundland, So to OR, NV, CO, and Vermont	Regional Endemic	Watch
Botrychium crenulatum	Dainty moonwort, crenualte moonwort	G3	S1	Western US	Disjunct	Watch
Cirsium eatonii var. *murdockii* Welsh	Murdock's thistle	G5T2T3	S2S3	CO, ID, NV, UT	Regional Endemic	Watch
Cymopterus acaulis var. parvus Goodrich	Small spring parsley	G5T2T3,	S2S3	Western US	Regional Endemic	Watch
Epipactis gigantea Dougl. ex. Hook	Giant Helleborine	G4	S2S3	Western US	Sparsely Distributed	Watch
Lathyrus lanszwertii var. Lanszwerti	Nevada Sweetpea	G4G5T4	S1(WY)	Western US	Regional Endemic	Watch
Lesquerella utahensis Rydb.	Utah bladderpod	G3	S3	UTAH?	Local Endemic	Watch
Musineon lineare (Rydb.) Mathias	Rydberg's Musineon	G2	S2	Bear River Range	Regional Endemic	Watch
Pedicularis parryi ssp. *Mogollonica*	Mogollon Lousewort	G5T2T4Q	S1(WY)	AZ, CO,NM, UT, Wy	Regional Endemic	Watch
Penstemon uintahensis	Uinta Beardtongue	G3	S3	Uinta Mountains	Regional Endemic	Watch
Porterella carnosula (H.&A.) Torr.	Western Porterella	G4	S1	Utah, OR to Wy, South to CA &AZ	Regional Endemic	Watch
Potamogeton foliosus var *fibrillosus* (Fern.) Haynes & Reveal	fibrous-stipuled pond-weed	G5T2T4	S1	Western US	Regional Endemic	Watch
Viola beckwithii T. & G.	Beckwith's violet	G4	S2	Western US	Peripheral	Watch

Global = Global ranking as assigned by Natural Heritage Program and Utah Native Plant Society. T = threatened, PT = proposed threatened, C = candidate, Q= question on taxonomy State = Utah State ranking, Utah Conservation Data Center and Utah Native Plant Society Rare Species list 2000; * = Utah State ranking, Utah Natural Heritage Program, 2000. Those species that are listed as S1 in Wyoming are annotated with a (WY) next to the state ranking.

Table XI-3. Geographical Distribution and Habitat Groupings of the Plant Species At Risk on the Wasatch-Cache National Forest.

Species	Common Name	Management Area							Habitat							
		Stansburys	Bear Management Area	Cache Box Elder Mgmt. Area	N.Wasatch Ogedn Valley	Central Wasatch Mgmt. Area	Eastern Uintas Mgmt Area	Western Uintas Mgmt Area	Mountain Forest	Riparian Meadows/ Seeps	Rock Cliffs/ Crevices Talus/Scree	High elev. Grassland	Shrubland	Woodland	Alpine	Subalpine/Non Forest
Abies concolor (Gord. &Glend.) Lindl.	White Fir						X		X							
Angelica wheeleri Wats.	Wheeler's angelica									X						
Arabis glabra (L.) Bernh. var *furcatipilis* Hopkins	Hopkin's tower-mustard			X		X				X				X		
Arabis lasiocarpa Rollins	Wasatch rock-cress, Toiyabe rock-cress			X	X	X			X				X	X		
Artemisia norvegica var. *piceetorum* Welsh & Goodrich	Spruce wormwood						X	X	X						X	
Aster sibericus var. *meritus* L.	Siberian aster						X				X				X	
Astragalus flexuosus var. *flexuosus* (Hook.) Rydb.	Bent milkvetch							X	X				X	X		
Astragalus jejunus var. *jejunus* Wats.	starvling milkvetch		X										X			
Astragalus robbinsii *(Oakes) Gray*	Robbins' milkvetch							X		X			X	X		
Botrychium crenulatum	Dainty moonwort, crenualte moonwort							X					X	X		
Botrychium lineare	Slender Moonwort					*X				X						
Cirsium eatonii var. *murdockii* Welsh	Murdock's thistle						X				X					
Corydalis caseana ssp brachycarpa (Rydb.) Ownbey	Wasatch fitweed				X	X			X	X				X	X	
Cymopterus acaulis var. parvus Goodrich	small spring parsley	X											X			

Species	Common Name	Management Area							Habitat							
		Stansburys	Bear Management Area	Cache Box Elder Mgmt. Area	N.Wasatch Ogedn Valley	Central Wasatch Mgmt. Area	Eastern Uintas Mgmt Area	Western Uintas Mgmt Area	Mountain Forest	Riparian Meadows/ Seeps	Rock Cliffs/ Crevices Talus/Scree	High elev. Grassland	Shrubland	Woodland	Alpine	Subalpine/Non Forest
Cymopterus lapidosus (Jones) Jones	Echo spring-parsley						X	X					X			
Cypripedium calceolus ssp parviflorum L.	Lady's slipper					X				X						
Cypripedium fasciculatum Kellogg ex Wats.	clustered lady's slipper, brownie lady's slipper			X		X			X							
Dodecatheon dentatum var. utahense	Utah shooting star, Wasatch shooting star					X				X	X					
Draba brachystylis	Wasatch draba					X	X		X		X					
Draba globosa (D. densifolia var. apiculata)	rockcress draba					X	X	X			X				X	
Draba maguirei sensu lato	Maguire's draba			X					X		X				X	X
Draba maguirei var. *burkei*	Burke's draba			X	X						X				X	X
Epipactis gigantea Dougl. ex. Hook	Giant Helleborine			X						X						
Erigeron arenarioides (D.C. Eaton) Gray	Wasatch daisy				X	X					X					
Erigeron cronquistii Maguire	Cronquist daisy			X							X					
Erigeron garrettii A. Nels	Garrett's daisy					X					X				X	X
Eriogonum brevicaule var. loganum (A. Nels.) Welsh	Logan buckwheat		X	X					X		X		X	X	X	X
Ivesia utahensis *Wats.*	Utah Ivesia			X		X					X				X	
Jamesia americana var. macrocalyx (Small) Engler	Wasatch Jamesia, Wasatch cliff-bush					X					X					

Species	Common Name	Management Area							Habitat							
		Stansburys	Bear Management Area	Cache Box Elder Mgmt. Area	N.Wasatch Ogedn Valley	Central Wasatch Mgmt. Area	Eastern Uintas Mgmt Area	Western Uintas Mgmt Area	Mountain Forest	Riparian Meadows/ Seeps	Rock Cliffs/ Crevices Talus/Scree	High elev. Grassland	Shrubland	Woodland	Alpine	Subalpine/Non Forest
Lathyrus lanszwertii var. Lanszwerti	Nevada Sweetpea	X	X	X	X	X	X	X						X		
Lepidium montanum var. alpinum Wats.	alpine pepper plant, Wasatch pepper-wort					X					X					
Lesquerella garrettii Payson	Garrett's bladderpod					X					X					X
Lesquerella utahensis Rydb.	Utah bladderpod					X					X		X		X	
Musineon lineare	Rydberg's Musineon			X							X					
Papaver radicatum ssp *kluanense*	Alpine Poppy						X	X			X				X	
Pedicularis parryi ssp.Mogollonica	Mogollon Lousewort						X		X				X	X	X	
Penstemon compactus (Keck) Crosswhite	Cache beardtongue			X							X					X
Penstemon platyphyllus *Rydb.*	Broad-leaf Beardtongue,				X	X					X		X			
Penstemon uintahensis	Uinta Beardtongue						X	X			X				X	X
Porterella carnosula (H.&A.) Torr.	Western Porterella						X			X						
Potamogeton foliosus var *fibrillosus* (Fern.) Haynes & Reveal	Fibrous-stipuled pond-weed						X			X						
Potentilla cottamii *N. Holmgren*	Cottam's cinquefoil,	X									X					
Potentilla pensylvanica var. *paucijuga* (Rydb.) Welsh & Johnston	Alpine cinquefoil, few-leaflet cinquefoil							X				X			X	
Primula maguirei L.O. Williams	Maguire's primrose			X							X			X		

Species	Common Name	Management Area							Habitat							
		Stansburys	Bear Management Area	Cache Box Elder Mgmt. Area	N.Wasatch Ogedn Valley	Central Wasatch Mgmt. Area	Eastern Uintas Mgmt Area	Western Uintas Mgmt Area	Mountain Forest	Riparian Meadows/ Seeps	Rock Cliffs/ Crevices Talus/Scree	High elev. Grassland	Shrubland	Woodland	Alpine	Subalpine/Non Forest
**Spiranthes diluvialis* Sheviak	Ute ladies'-tresses									X						
Thelesperma pubescens *Dorn*	Uinta greenthread						X				X			X		
Viola beckwithii T. & G.	Beckwith's violet			X	X	X						X	X	X		
Viola frank-smithii N. Holmgren	Frank Smith Violet			X							X					

Star (*) indicates that the species is not found on the forest, or is found by historic specimen only.