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Forest Service

Intermountain
Region

Uinta
National
Forest

May 2003

2003 Land and Resource Management Plan

Uinta National Forest

National Forests in Utah Map

JPG (103 KB)

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Uinta National Forest

2003 Land and Resource Management Plan

Juab, Sanpete, Tooele, Utah, and Wasatch Counties, Utah

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User's Guide

This users guide provides an explanation of how the Forest Plan is structured, how each section supports project level planning, and how to locate specific direction for any resource activity or resource related issue.

Chapter Two – Goals and Objectives includes two sets of goals: ***Forest-wide goals*** and resource specific ***sub-goals***.

1. The ***Forest-wide goals*** provide a broad-based vision for a group of resources (e.g., physical, biological, and social/economic) for the Forest in the future. These broad-based goals collectively describe the Desired Future Condition (DFC) for all Forest resources. Each project and management activity conducted on the Forest should generally meet or move toward this broad-based DFC.

2. The ***sub-goals*** are generally resource-specific and provide a more specific description of a broad-based ***Forest-wide goal***. As an example, ***sub-goals*** describing watershed, water quality, and soil conditions collectively support the ***Forest-wide goal*** for the physical resources on the Forest. Each management activity or project should generally meet or move toward the applicable ***sub-goals and Forest-wide goals***.

3. Resource specific ***objectives*** are measurable and time specific, meaning that they specify a particular condition or action that should be achieved and a timeframe within which the condition/action should be conducted. ***Objectives*** focus on the outcome of activities and desired results. ***Objectives*** are like way-points on a map. In order to reach the long-term resource *goals*, ***objectives*** need to be met. Each ***objective*** is another step in moving toward the desired future condition described by the goals.

Chapter Three – Standards and Guidelines embodies the management direction that drives projects and activities on the Forest.

1. Standards are management direction that must be followed or met. They describe how resource management activities and uses must be conducted. In cases where a ***standard*** would not be met through a Forest Service action, a site-specific Forest Plan amendment would be necessary, or the activity or use would need to be modified or discontinued.

2. Guidelines describe how management activities and uses *should* be conducted, but are not required actions. If a Forest Service action is not consistent with a ***guideline***, a Forest plan amendment would not be necessary. However, the rational for why the guideline would not be met must be disclosed and documented in the project analysis.

Standards and ***guidelines*** are generally grouped by resource (e.g., Geology and Soils, Vegetation, Minerals, Recreation, etc.), management activity (e.g., Grazing, Fire, Timber, etc.), or Management Prescription. The third group is related to the Recreation Opportunity Spectrum allocation applied. It will be necessary to review more than one set of standards and guidelines to ensure all applicable direction has been identified for a particular activity or resource.

Consider the following scenario as an example: A project is being proposed for implementing a salvage sale in a particular drainage. Management direction that would apply to timber harvest is found under TIMBER. Additional direction related to general vegetation management is under VEGETATION. Whether a new road or only a temporary road may be utilized to access the harvest area would be found under the ROS standards and guidelines. If the area being proposed for harvest/treatment is within a 3.3 Management Prescription, then the standards and guidelines found under the 3.3 Management Prescription section would also apply. Mitigation needs relative to soil and water resources, riparian habitat conservation areas and noxious weeds would be found under the SOIL and WATER, VEGETATION, and NOXIOUS WEED sections of the standards and guidelines. To ensure all applicable direction and mitigation is addressed, it will be necessary to review all resource direction that might apply. Management direction that may apply to more than one resource was not duplicated throughout the Forest Plan. In cases where Management Prescription direction is more restrictive than the general management direction, the most restrictive direction is to be applied.

Chapter Four – Management Prescriptions describe the resource emphasis for each management prescription, and describe the generally allowed activities. The standards and guidelines listed under the specific Management Prescriptions in Chapter Three further clarify the extent of allowable activities.

Chapter Five – Management Area Descriptions and Desired Future Conditions is an expanded description of the physical, biological and social/economic resources found within each of the 18 Management Areas on the Forest. Also described are the types and levels of activities and uses that may occur, and the desired future conditions for each Management Area.

Chapter Six – Monitoring and Evaluation Plan outlines the monitoring requirements for the Forest Plan. Details of monitoring items are not described here, but will be included in a separate Monitoring Guide that will be developed later.

The ***Monitoring and Evaluation Plan*** focuses on how well the Forest Plan direction has been implemented and whether the direction is resulting in achieving the necessary changes in resource conditions and uses to move toward the desired future conditions as represented by the Forest-wide goals.

CHAPTER 1: INTRODUCTION

CHAPTER 1: INTRODUCTION

FORWARD

"Caring for the Land and Serving the People." This is the Forest Service mission.

The passage of the Creative Act in 1891 initiated the establishment of national forests for conservation and management of natural resources; this act was later incorporated into the Federal Land Policy Management Act of 1976. Since the establishment of the first national forests, natural resource management has continued to evolve, spurred by needs to respond to a variety of specific resource related issues. These issues include protecting watersheds; protecting threatened, endangered, and sensitive plant and animal species and their associated habitats; water quality and riparian area issues; roadless area management; ecosystem management and sustainability; and forested ecosystem (timber) management.

The Uinta National Forest was first designated as a Forest Reserve in 1897 in response to requests from local communities to address the depleted conditions of the local timber, range, and watershed resources. The newly-created Forest Service was seen as the best organization to address the public's concerns. Intensive resource management activities were initiated, including reductions in the number of livestock grazed on the Forest and watershed restoration projects. Improving and maintaining watersheds remains one of the main goals of the Uinta National Forest today, and is coupled with our continued understanding of ecosystems and their management requirements. Multiple use management has been and will continue to be important in charting the course for the future of resource management for the Forest Service and the Uinta National Forest.

Public involvement with lands associated with the Uinta National Forest has occurred for centuries. While we are not as dependant on products from the Forest as we once were, the need to provide natural resources is still an important role of the Uinta National Forest.

BACKGROUND

The 1984 Land and Resource Management Plan for the Uinta National Forest (also referred to as the Forest Plan) has been revised to address specific needs for change as identified in the Preliminary Analysis of the Management Situation (AMS) released in August 1999. These needs for change reflect some of the habitat management requirements for threatened, endangered, and sensitive (TES) wildlife and plant species; improved management practices for protection of soil, water, and vegetation resources; and management direction applicable to a variety of natural resources.

PURPOSE OF THE FOREST PLAN

Forest plans provide guidance for all resource management activities on a national forest. Forest plans establish:

- Forest-wide multiple-use goals and objectives,
- Forest-wide management requirements (standards and guidelines),
- Direction applicable to specific management areas (management prescriptions),
- Monitoring and evaluation requirements,
- Designation of lands suitable or not suitable for timber production and other resource management activities, and
- Recommendations to Congress for the establishment of wilderness areas, wild, scenic, and recreational rivers, and other special designations as appropriate.

Goals and objectives, standards and guidelines, management prescriptions, and a monitoring and evaluation plan are all found in this document.

Lands suitable for timber production are identified on the Timber Suitability map in Appendix E of this document. Recommendations to Congress for establishing wilderness and other special designations will be made in the Record of Decision (ROD) that will accompany this Forest Plan and associated Final Environmental Impact Statement (FEIS).

The appendices in this Forest Plan contain further information regarding national and regional policies (Appendix A); relevant statutes and regulations (Appendix A); policies for managing fish and wildlife (Appendix A); a list of the Management Indicator Species (Appendix B); criteria for classifying Riparian Habitat Conservation Areas (RHCAs) (Appendix D); and maps illustrating wildlife habitats, Visual Quality Objectives (VQOs), Recreation Opportunity Spectrum (ROS) classes, and specific watersheds where wildland fire use is restricted (Appendix E).

RELATIONSHIP TO OTHER DOCUMENTS

The Forest Plan is a result of extensive analysis that is documented in the associated Final Environmental Impact Statement (FEIS). The FEIS also describes the planning and analysis procedures used and the eight alternative management strategies, and examines the environmental impacts of each alternative on the Uinta National Forest's physical, biological, social, and economic resources. This Forest Plan represents Alternative H, the preferred alternative.

The FEIS and this revised Forest Plan include a glossary, a list of acronyms, and a complete listing of the references used in both documents. The FEIS also contains other appendices pertinent to the analysis process.

The National Forest Management Act (NFMA) requires that National Forest System lands be managed for a variety of uses on a sustained basis to ensure a continued supply of goods and services to the American people into perpetuity. NFMA regulations also establish extensive analytical and procedural requirements for the development, revision, and significant amendment of forest plans.

The National Environmental Policy Act (NEPA) ensures that environmental information is made available to public officials and citizens before decisions are made and actions are taken. This disclosure helps public officials make decisions based on an understanding of environmental consequences, and take actions that protect, restore, and enhance the environment. Essential to the NEPA process are accurate and scientific analyses, input from other agencies, and public involvement; all of these components have been incorporated in this Forest Plan revision process.

IMPLEMENTING THE FOREST PLAN

The Forest Plan provides a framework that guides the Uinta National Forest's day-to-day resource management operations. The Forest Plan is a strategic, programmatic document that does not make project-level decisions – those decisions are made after more detailed analysis and further public comment. NFMA requires that resource plans and permits, contracts, and other instruments issued for the use and occupancy of National Forest System lands be consistent with the Forest Plan. Site-specific project decisions must also be consistent with the Forest Plan unless the Forest Plan is modified by amendment. Additional guidance for forest management is found in Appendix A of this document.

PROJECT-LEVEL DECISIONS

When making project-level decisions, the objective in planning the project depends on whether the project is initiated from inside or outside the agency. In agency-initiated actions, the objective is to move toward or achieve the integrated direction in the Forest Plan through the proposed action. For proposals generated outside the agency, the objective is to decide if the proposal is or could be adapted to be consistent with Forest Plan standards. It must also be decided whether or not the project is in the public's interest. This determination is made in the context of the forest-wide goals and objectives. Regardless of the origin of the project, the following principles will apply:

- Forest-wide goals and objectives guide the identification and selection of potential agency projects.
- Determining whether or not a project is consistent with the Forest Plan is based on whether or not the project complies with all applicable standards.
- Projects that do not comply with Forest Plan standards are inconsistent with Forest Plan management direction unless the standards are modified through

amendment. If the standards are modified by amendment, project approval and Forest Plan amendment may be accomplished simultaneously.

- Forest Plan objectives, standards, project-specific outputs, and activity schedules should be used in the determination of whether or not a project is consistent with the Forest Plan. If a guideline is modified or not applied as described in the Forest Plan, the responsible official should recognize the purpose(s) for which the guideline was developed and provide assurance that any subsequently approved actions do not conflict with the objective the guideline was intended to achieve. This process must be documented during project analysis according to NEPA procedures.
- Resource plans and permits, contracts, and other instruments issued for the use and occupancy of National Forest System lands must be consistent with the Forest Plan unless specifically exempted from applicability in an amendment or revision decision document. Determinations of consistency of permits, contracts, and other instruments for occupancy and use of National Forest System lands are based on whether or not they comply with all applicable standards.

Forest plan implementation (i.e., when project decisions are made) occurs when management activities are initiated to meet standards and guidelines and work towards the Forest Plan objectives in order to achieve the overall goals for resource management and uses. However, before any project level decisions are made, additional environmental analysis and site-specific disclosure of environmental effects are required according to NEPA procedures.

VALID OUTSTANDING RIGHTS

This Forest Plan was prepared with the understanding 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 Forest Plan recognizes that such valid outstanding rights, such as those under R.S. 2477, may exist. The Forest Service will 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, contracts, cooperative agreements, and other instruments issued for the occupancy and use of National Forest System lands must be consistent with the Forest Plan, subject to valid existing rights.

Determinations of consistency are based on whether such instruments (as described above) follow Forest Plan standards and guidelines. If inconsistency is determined, the following alternatives are available to the Forest Supervisor: modify the proposal to be

consistent with the Forest Plan, reject the proposal, or amend the Forest Plan to permit the proposal (FSH 1909.12, Ch. 5.31 (a)(1)).

OPERATIONAL ACTIVITIES EXEMPT FROM NEPA

Resource inventories, action plans, action schedules, and previously-approved activities are not binding decisions and do not require additional environmental analysis and disclosure at the project level.

The following items are examples of operational activities that do not constitute site-specific decisions and are therefore exempt from NEPA procedures:

- Scheduling the revision of Allotment Management Plans,
- Amending grazing permits to comply with the Forest Plan,
- Developing five-year wildlife action plans,
- Conducting resource inventories and identifying adverse air-quality conditions in Class II airsheds,
- Developing wildland fire implementation plans (WFIP), wildland fire situation analyses (WFSA), burned area emergency rehabilitation (BAER) reports, and fire management plans (FMP),
- Developing implementation schedules and three- to five-year plans,
- Scheduling maintenance for developed recreation sites and developing heritage resource overviews, scenic byway management plans, and interpretive plans,
- Developing wilderness operation and maintenance schedules, and
- Preparing land ownership adjustment plans.

Operational activities exempt from the NEPA process are not synonymous with categorical exclusions. Operational activities do not represent irreversible commitments of resources and do not, in themselves, create any environmental effects. Actions that can be categorically excluded from documentation in an environmental assessment (EA) or environmental impact statement (EIS) are described in FSM 1952.2 and FSH 1909.15. These actions may represent irreversible commitments of resources, but do not individually or cumulatively have significant effects on the environment.

EXCEPTION FOR WHEELCHAIRS

In all areas where motorized uses are prohibited, an exception applies for users of motorized wheelchairs. Title V, Section 507(c) of the Americans with Disabilities Act states that, "A person is permitted to use his/her motorized wheelchair in a non-motorized area, so long as that wheelchair meets the legal definition of being designed solely for use by a mobility-impaired person and suitable for use in an indoor pedestrian area."

PUBLIC INVOLVEMENT

The Uinta National Forest is committed to an intensive program of public involvement. This means that the door is always open and that Forest personnel are available to explain management objectives, decisions, policies, and procedures, or to answer any other questions. Project planning will include public involvement and cooperation. Similar to this partnership with the public, the Forest engages in partnerships with local, state, federal, and tribal governments. Monitoring and evaluation reports are available for public review. Information about the Forest, as well as access to all Forest Plan revision documents, including electronic versions of the FEIS and this Forest Plan, can be found on the Forest's web page at <**http://www.fs.fed.us/r4/uinta**>.

BUDGET FORMULATION

Annual Forest budget proposals are based on the activities and actions required to achieve the goals and objectives of the Forest Plan. Monitoring results and actual costs of carrying out the standards and guidelines will be considered in the development of each year's budget proposal. Costs to carry out the Forest Plan are not complete without providing for an adequate level of monitoring and evaluation of projects.

BUDGET EXECUTION

The annual budget must comply with any specific direction provided in the annual Appropriations Act (FSM 1930). Because actual allocations rarely provide for full funding of the Forest Plan, scheduled activities and actions for any particular year are adjusted to conform to the intent of Congress. Although budget changes themselves do not require a Forest Plan amendment, implications of budget changes may. For example, a project for which funds are appropriated must be consistent with the Forest Plan. To assure this consistency, either the project or the Forest Plan may require modification.

FOREST PLAN AMENDMENT AND REVISION

Adaptive management is the foundation for planning and management. The Forest Plan must be dynamic in order to adjust for changed resource conditions, new information and science, and changed regulations and policies. Within an adaptive management framework, the need to amend or revise the Forest Plan may result from:

- Recommendations of an interdisciplinary team based on evaluation and monitoring results,
- Direction stemming from an administrative appeal or legal challenge,
- Planning errors found during Forest Plan implementation, or
- Changes in physical, biological, social, or economic conditions.

FOREST PLAN AMENDMENT

Amendments can be either significant or non-significant, as defined by 36 CFR 219.10(f). Significant amendments are usually those that affect the long-term balance of goods and services on the Forest or affect the biological health of the Forest. The Regional Forester must approve significant Forest Plan amendments. The Forest Supervisor is the responsible official for non-significant amendments.

FOREST PLAN REVISION

The Forest Supervisor is required to review conditions on the land at least every five years to determine if revision of the Forest Plan is necessary. If monitoring and evaluation indicate that immediate changes are needed, and these needed changes cannot be handled by amendment, then a revision of the Forest Plan is necessary.

The Forest Plan will normally be revised on a 10-year cycle, with anticipated completion of the revision occurring 10-15 years after Forest Plan approval. However, a major event might suggest an acceleration of the revision, while scheduled inventories, anticipated staffing changes, or other circumstances might warrant a delay. Delaying a revision is not appropriate if monitoring and evaluation show that immediate changes in the Forest Plan are needed.

A thorough review of the Forest Plan should be completed before initiating a Forest Plan revision. A review should include, but is not limited to, the following information and conditions:

- Results of recent monitoring and evaluation, in addition to pertinent research findings and recommendations,
- New laws, regulations, or policies that may suggest a need to change the Forest Plan,

- The determination of how well the Forest is progressing toward stated desired future conditions (DFCs),
- Demand projections for selected outputs,
- Predicted and actual ecosystem responses,
- Predicted and actual costs and outputs, and
- Emerging issues and opportunities.

INTEGRATION WITH THE DIRECTIVES SYSTEM

Management direction in the Forest Service Directive System, including the Forest Service Manual (FSM) and the Forest Service Handbook (FSH), is part of Forest Service management direction and is not repeated in the Forest Plan itself. Management direction also includes applicable laws, regulations, and policies, although these types of direction are not generally restated in the Forest Plan. Appendix A references the minimum resource management direction described in the directive system. Nothing precludes the development of additional minimum resource management direction whenever appropriate. Under the following circumstances, this Forest Plan does not reference minimum resource management direction if:

- The specific resource or use is not present on the Forest,
- The requirement addresses a condition or problem not applicable to the Forest, or
- The planning records document a sound rationale for the exception.

DRAFT RULES AND POLICIES

The Forest Plan and accompanying FEIS do not consider draft rules, regulations, or policies. The Forest Plan and FEIS have been prepared using scientifically-based processes and analyses, and comply with existing laws and agency direction.

COORDINATION WITH OTHERS

PUBLIC INVOLVEMENT BEYOND FOREST PLANNING – A LEGACY OF COOPERATION

The Uinta National Forest has a tradition of excellent public involvement in the management of its natural resources. The Uinta National Forest leads the Forest Service nationally in the number of volunteers assisting in project implementation. The volunteer program has also provided opportunities to bring groups of individuals with

differing viewpoints together to initiate and implement projects of mutual benefit, thus providing opportunities to forge long-term partnerships and facilitate bridging the gap between individuals. This program will continue to be an important tool in continuing the quality of public interaction and collaboration that will be necessary for responsible resource management in the future.

Environmental education is also an important aspect of involving the public in management of their national forests. Volunteer groups and others are provided with an avenue through which to broaden their understanding of the Forest Service mission and multiple use management. The Uinta National Forest supported the establishment of the Diamond Fork Youth Forest in 1998. Management of this youth forest will allow local school groups and people of all ages the opportunity to learn about and participate in natural resource management activities and in project development and implementation in a realistic setting. Interpretative services and activities are ongoing for the Mount Nebo National Scenic Byway and various historic sites on the Forest. The Forest will continue to reach thousands of volunteers and school groups and involve them in learning about and participating in management and responsible use of their natural resources.

Interpretive services are another tool the Uinta National Forest values and utilizes effectively in reaching those members of the public who visit and enjoy the Forest. The goal of the Interpretive Services program on the Uinta National Forest is to “enhance the visitors understanding, appreciation, and protection of their national forests through interpretive activities.” Several signing projects, displays, brochures, and interactive workshops have been produced in conjunction with interpretive plans. These types of activities and mediums will continue to be utilized to keep our publics involved and informed of activities and opportunities on the Uinta National Forest.

COORDINATION AND COLLABORATION WITH OTHER AGENCIES AND ORGANIZATIONS

The Uinta National Forest is committed to coordinating with all individuals, communities, agencies, and organizations that are either affected by Forest decisions or desire to be involved in planning activities. Coordination with city, county, state, federal, and tribal governments and agencies will continue through all phases of Forest Plan implementation. Additionally, the Forest will continue to emphasize coordination with communities in wildland urban interface areas. The Uinta National Forest has consistently involved the public in the development of resource management strategies and alternatives to management. This will continue both for future forest planning activities and specific project-level planning activities.

With the advent of ecosystem management and planning, it is important that resource management and project planning be approached considering ecosystems, regardless of political or agency boundaries. It is vitally important systems be addressed in their entirety to understand the complexities of activities and impacts. The challenge for the future will be to bring together the affected parties, whether private landowner, local

community, or other state or federal agency, to work together toward finding the answers to resource management problems that will benefit all resources within the area of interest.

CHAPTER 2: GOALS AND OBJECTIVES

Each sub-goal is numbered as follows: the “G” identifies it as a goal, followed by the forest-wide goal number, and then the number of the particular sub-goal (e.g., G-1-1).

Each objective is numbered as follows: the “O” identifies it as an objective, followed by the forest-wide goal number, and then the number of the particular objective (e.g., O-1-1).

CHAPTER 2: GOALS AND OBJECTIVES

SUMMARY OF FOREST-WIDE GOALS

FW-Goal-1 Soil, air, and water resources provide for watershed health, public health and safety, long-term soil productivity, and ecosystem sustainability, and meet applicable laws and regulations.

FW-Goal-2 Biologically diverse, sustainable ecosystems maintain or enhance habitats for native flora and fauna, forest and rangeland health, watershed health, and water quality.

FW-Goal-3 Suitable commodity uses are provided in an environmentally sustainable and acceptable manner to contribute to the social and economic sustainability and diversity of local communities.

FW-Goal-4 Heritage resources are identified, preserved, and enhanced.

FW-Goal-5 Scenic quality and desired landscape character are maintained and/or enhanced.

FW-Goal-6 Diverse and suitable recreational opportunities are provided responsive to public demand while maintaining ecosystem health and contributing to social and economic sustainability.

FW-Goal-7 When there is an apparent and overriding benefit, opportunities for consolidation of land ownership and subsurface and surface property rights, acquisition of appropriate access, and establishment of identifiable boundaries are pursued.

FW-Goal-8 Forest infrastructure, including facilities and transportation systems, is safe and responsive to public needs and desires; has minimal adverse effects on ecological processes and ecosystem health, diversity, and productivity; and is in balance with needed management actions.

FW-Goal-9 Opportunities for recreational, aesthetic, and educational experiences are provided while conserving special environmental, cultural, social, and/or scientific values in protected areas (e.g., congressionally designated wilderness; proposed wilderness; wild, scenic, and recreational river corridors; research natural areas; and caves).

PHYSICAL ENVIRONMENT

FW-Goal-1 Soil, air, and water resources provide for watershed health, public health and safety, long-term soil productivity, and ecosystem sustainability, and meet applicable laws and regulations.

SUB-GOALS

Sub-goal-1-1 (G-1-1)	Forest Service activities, including those permitted by the Forest Service, maintain or enhance the long-term productivity and physical, chemical, and biological processes and functions of the soil.
Sub-goal-1-2 (G-1-2)	Long-term soil productivity is maintained on at least 85 percent of all activity areas.
Sub-goal-1-3 (G-1-3)	Sufficient vegetation and litter are left on site to prevent soil movement and maintain soil productivity.
Sub-goal-1-4 (G-1-4)	Ecological and soil conditions are meeting or moving towards desired future conditions on 75 percent of the uplands and 80 percent of the riparian areas classified as suitable for grazing.
Sub-goal-1-5 (G-1-5)	Sufficient vegetation is left on channel banks to catch sediments necessary for streambank maintenance and floodplain development.
Sub-goal-1-6 (G-1-6)	To the extent practical through management of activities on the Forest, sulfur deposition upon terrestrial ecosystems does not exceed 12.3 pounds/acre (5.6 kg/hectare) per year.
Sub-goal-1-7 (G-1-7)	Management activities do not cause exceedances of National Ambient Air Quality Standards (NAAQS) (this monitoring is required by law).
Sub-goal-1-8 (G-1-8)	Activities on the Forest do not impede attainment of state clean air standards.
Sub-goal-1-9 (G-1-9)	Watersheds and their associated stream processes, channel stability, riparian resources, and aquatic habitats are maintained or restored to a functional condition.

Sub-goal-1-10 (G-1-10) Management activities protect and maintain channel stability within the range of natural variability to the extent feasible and consistent with valid existing rights.

- When channel changes or alterations are necessary, mitigation measures restore the aquatic habitat to as near natural condition as practical.
- Where water flows could move rechanneled bank materials, bank stabilization measures may be necessary.

Sub-goal-1-11 (G-1-11) All activities on the Forest comply with state and federal clean water standards and applicable permitting processes. To the extent practical through management of activities on the Forest:

- Water chemistry is maintained in all surface water where the alkalinity will not be reduced more than 10 percent of baseline, and
- Management activities do not cause exceedances of State of Utah water quality standards (this monitoring is required by law) or increases in the listing of 303(d) streams.

Sub-goal-1-12 (G-1-12) In collaboration with state and local governments, federal water rights are quantified and asserted for consumptive and instream water uses necessary for carrying out the Forest's multiple use objectives. Adequate quantity and quality of water is maintained in streams, lakes, and wetlands to provide for instream flows to support stream- and aquatic-based resources. Identified water needs are prioritized based on resource values, risks, and opportunities.

Sub-goal-1-13 (G-1-13) Water rights held by the Forest are exercised and managed to meet Forest resource management needs and purposes. Federal water rights that are not needed are made available for purchase, lease, or exchange.

Sub-goal-1-14 (G-1-14) Water rights held by the Forest are protected to prevent their encumbrance by water right applications that injure or have the potential to injure National Forest water rights or resources.

Sub-goal-1-15 (G-1-15) Where practical, streams have access to their floodplains during spring runoff, on average, two out of every three years. Stream channel width to depth ratios, entrenchment ratios, and sinuosity are within expected norms for the appropriate channel type.

Sub-goal-1-16 (G-1-16) Resource uses are provided for while preserving the unique physical, cultural, ecological, hydrological, and biological characteristics of the ecosystems in all known caves on the Forest that are currently classified as "significant" under the provisions of the Federal Cave Resources Protection Act of 1988, as well as in caves that may be identified in the future as "significant."

Sub-goal-1-17 (G-1-17) The Forest coordinates and cooperates with other tribal, federal, state, county, and city government agencies to mitigate, prepare for, and respond to major natural disaster emergencies.

OBJECTIVES

Objective-1-1 (O-1-1) By 2018, complete a forest-wide soil survey to National Soil Information System (NASIS) standards.

Objective-1-2 (O-1-2) By 2018, complete watershed assessments for all management area watersheds (5th level Hydrologic Unit Code [HUC] watersheds), identify areas at risk, and define baseline conditions.

Objective-1-3 (O-1-3) By 2008, complete a preliminary inventory of known Watershed Improvement Needs (WIN).

Objective-1-4 (O-1-4) By 2018, restore at least two 6th level Hydrologic Unit Code (HUC) watersheds to their desired future conditions.

Objective-1-5 (O-1-5) By 2008, complete mid-scale identification and mapping of riparian areas and wetlands.

Objective-1-6 (O-1-6) By 2013, validate existing water rights.

Objective-1-7 (O-1-7) Newly discovered caves are evaluated for significance within two years of their location and identification. Those caves that meet the significance criteria are submitted for official recognition as significant caves within one year of being determined significant.

BIOLOGICAL ENVIRONMENT

FW-Goal-2 Biologically diverse, sustainable ecosystems maintain or enhance habitats for native flora and fauna, forest and rangeland health, and watershed health.

SUB-GOALS

Sub-goal-2-1 (G-2-1) The fuel management aspect of the fire management program is emphasized through application of hazard reduction activities.

Sub-goal-2-2 (G-2-2) Fire is managed in an economically efficient manner, based on resource values and risks to human life and property.

Sub-goal-2-3 (G-2-3) Fire is reintroduced as an ecosystem function to move landscapes toward desired conditions.

Sub-goal-2-4 (G-2-4) Priorities to protect property and natural/cultural resources are determined based on relative values to be protected, fire management costs, and risks to human (including firefighter) safety.

Sub-goal-2-5 (G-2-5) Vegetation surrounding mine or cave openings is maintained to protect the mine or cave's microenvironment.

Sub-goal-2-6 (G-2-6) Ecosystems on the Forest provide and maintain viable and well-distributed populations of flora and fauna. New listings of threatened, endangered, and sensitive species as a result of Forest Service management activities are avoided. Population objectives developed cooperatively with the Utah Division of Wildlife Resources and U.S. Fish and Wildlife Service are achieved. To contribute to species stabilization and full recovery, habitats across all levels or scales for endangered, threatened, and proposed flora and fauna species listed in accordance with the Endangered Species Act are protected and recovered, and sensitive species appearing on the Forest Service Intermountain Region's Sensitive Species list are protected. Newly-developed management direction from recovery plans and conservation strategies to which the Forest Service is a signatory is incorporated as applicable to facilitate protection and/or recovery of threatened, endangered, or sensitive species.

Sub-goal-2-7 (G-2-7) Non-native rangelands are restored to native rangeland ecosystems as opportunities arise.

Sub-goal-2-8 (G-2-8) Ecosystem resilience is maintained by providing for a full range of seral stages and age classes (by cover type) that achieve a mosaic of habitat conditions and diversity to meet a variety of desired resource management objectives. Recruitment and sustainability of some early seral species and vegetation communities in the landscape are necessary to maintain ecosystem resilience to perturbations.

Sub-goal-2-9 (G-2-9) Maintain adequate distribution of old growth in forested community types. Maintain at least 10 percent of each forest vegetation type in an old growth condition as defined in the Forest Service publication, *Characteristics of Old Growth Forests in the Intermountain Region* (USDA 1993), or subsequently modified Regional Forester-approved definition. Ensure the presence through time by providing for suitable and potential replacement areas.

Sub-goal-2-10 (G-2-10) Management actions maintain ecosystem health and encourage conditions that are within the historic range of variation. Management actions remain within the variability of size, intensity, and frequency of native disturbance regimes characteristic of the subject landscape and ecological processes.

Sub-goal-2-11 (G-2-11) Key shrubs and/or trees are maintained to a level that allows adequate recruitment to maintain or recover the woody component. Specifically, the Forest is managed for more plants in the combined sprout and young categories than in the combined mature and dead categories.

Sub-goal-2-12 (G-2-12) Habitats for native plants that provide nectar, pollen, and floral diversity throughout the active season for pollinator species are maintained.

Sub-goal-2-13 (G-2-13) Participate in the development and implementation of a habitat management strategy for clay phacelia (*Phacelia argillacea*).

Sub-goal-2-14 (G-2-14) Potential habitat for clay phacelia (*Phacelia argillacea*) in the Spanish Fork Canyon area is managed to ensure quality habitat will be available in the future if it becomes necessary to introduce this species onto National Forest System lands to provide for its recovery.

Sub-goal-2-15 (G-2-15) Ute ladies'-tresses (*Spiranthes diluvialis*) colonies are managed so as to contribute to the protection and recovery of the species within the Diamond Fork watershed. If necessary, these colonies will serve as propagation stock for new habitats within this watershed. Bee (pollinator) habitat is identified and protected in association with these plant colonies.

Sub-goal-2-16 (G-2-16) Maintain or increase known populations of Barneby woody aster (*Aster kingii* var. *barnebyana*), dainty moonwort (*Botrychium crenulatum*), rockcress draba (*Draba globosa*), Wasatch jamesia (*Jamesia americana* var. *macrocalyx*), and Garrett's bladderpod (*Lesquerella garrettii*).

Sub-goal-2-17 (G-2-17) Activities and vegetation management minimize or eliminate the occurrence of non-native pests (including noxious weeds) and epidemic episodes of native pests.

Sub-goal-2-18 (G-2-18) Emphasis will be placed on cooperating with seed suppliers to grow State-certified, local, source-identified seed. To the extent possible, this seed should be of species the Forest uses or desires to use in revegetation. Preference will be given to using field-produced, source-identified seed over wild-collected seed.

Sub-goal-2-19 (G-2-19) Streams are managed to provide self-sustaining fisheries by ensuring that sufficient habitat and water flow are available to support all life stages of native and desired non-native aquatic species. Where streams are managed to provide a recreational fishery, sufficient habitat is maintained to ensure that the stream's recreational values are maintained.

Sub-goal-2-20 (G-2-20) Protect and maintain 10 conservation populations, 12 persistence populations, and one metapopulation (consisting of six waterbodies in the Diamond Fork drainage)[1] of Bonneville cutthroat trout within the Utah Lake/Provo River drainage of the Northern Bonneville Geographic Management Unit (GMU) (UDWR 1997a, p. 52).

Those waterbodies where population genetic purity has not yet been verified are distinguished by the "(T)" for *tentative* in the following table. Until genetic purity is determined, those waterbodies will be managed as shown.

[1] As defined in the glossary and in the Range-wide Conservation Agreement and Strategy for Bonneville Cutthroat Trout (*Oncorhynchus clarki utah*) (UDWR 2000b, pp. 17-18).

Table 2-1. Bonneville Cutthroat Trout Waterbodies and Management Strategies

Waterbody	Management Strategy	Managed for Metapopulation
Northern Bonneville GMU		
Fifth Water	Conservation	Yes
Chase Creek	Conservation	Yes
Shingle Mill Creek	Conservation	Yes
Sixth Water (T)	Conservation	Yes
Halls Fork (T)	Conservation	Yes
Cottonwood Creek (T)	Conservation	Yes
Tie Fork	Conservation	No
Little South Fork Upper Provo River	Conservation	No
Nebo Creek	Conservation	No
Holman Creek	Conservation	No
North Fork American Fork River	Persistence	No
Little Diamond	Persistence	No
Wanrhodes	Persistence	No
South Fork Deer Creek (T)	Persistence	No
Bench Creek (T)	Persistence	No
Upper South Fork Provo River (T)	Persistence	No
Soapstone (T)	Persistence	No
Right Fork Hobble Creek (T)	Persistence	No
Wardsworth Creek (T)	Persistence	No
Peteetneet Creek (T)	Persistence	No
Wimmer Ranch Creek (T)	Persistence	No
Soldier Creek (T)	Persistence	No

Sub-goal-2-21 (G-2-21) Protect and maintain the following 14 conservation populations and one metapopulation of Colorado River cutthroat trout in the following subunits:

- Four populations in the White River/Price River drainages of the South Tavaputs Plateau Subunit of the Southeastern Geographic Management Unit (GMU) (UDWR 1997b, p. 50),
- Nine populations in the South Slope Uinta Mountains portion of the Green River drainage of the South Slope Uinta Subunit of the Northeastern GMU (UDWR 1997b, p. 39),
- One population in the Strawberry River drainage of the North Tavaputs Plateau Subunit of the Northeastern GMU (UDWR 1997b, p. 39), and
- One metapopulation consisting of three waterbodies in the West

Fork Duchesne River drainage of the South Slope Uinta Subunit of the Northeastern GMU.

Table 2-2. Colorado River Cutthroat Trout Waterbodies and Management Strategies

Waterbody	Management Strategy	Managed for Metapopulation
South Tavaputs Plateau Subunit of the Southeastern GMU		
Left Fork White River	Conservation	No
Middle Fork White River	Conservation	No
Right Fork White River	Conservation	No
Tabbyune Creek	Conservation	No
South Slope Uinta Subunit of the Northeastern GMU		
West Fork Duchesne River	Conservation	Yes
Little West Fork Duchesne River	Conservation	Yes
Vat Creek	Conservation	Yes
Jones Cabin Creek	Conservation	No
Low Pass Creek	Conservation	No
Right Fork Currant Creek	Conservation	No
Currant Creek Headwaters[1]	Conservation	No
Pass Creek	Conservation	No
Race Track Creek	Conservation	No
North Tavaputs Plateau Subunit of the Northeastern GMU		
Willow Creek	Conservation	No

[1] Includes Left Fork Currant Creek, South Fork Left Fork Currant Creek, and Tut Creek.

Sub-goal-2-22 (G-2-22) Cooperate with the Utah Division of Wildlife Resources and U.S. Department of Agriculture Wildlife Services in managing predators. Predator control activities will only be conducted when necessary to prevent significant property loss, significant risk to public safety, or significant impacts on the viability of native wildlife populations.

Sub-goal-2-23 (G-2-23) Areas identified as being of special concern for habitat such as big game winter range, big game natal areas, Canada lynx denning areas, and greater sage grouse breeding areas in the Vernon and Strawberry Reservoir Management Areas are maintained and, where potential exists, improved or expanded. Disturbances in these areas are limited during critical periods for wildlife.

Sub-goal-2-24 (G-2-24) Adequate amounts and distribution of big game hiding and thermal cover are maintained. Adequate amounts of hiding cover for wildlife is retained around created openings and along roads where vegetative management activities are implemented.

Sub-goal-2-25 (G-2-25) Maintain stable and upward conditions in big game winter range habitats and improve downward trend sites.

Sub-goal-2-26 (G-2-26) Wildlife travel corridors, riparian corridors, and key linkage routes are maintained and, where feasible, restored. Connections among large, contiguous blocks of suitable habitat are provided (e.g., key linkage routes for Canada lynx within and between Lynx Analysis Units [LAUs] and big game summer and winter range movements). Wildlife movement is facilitated within key linkage areas, considering highway crossing structures when feasible. Unified management direction is established through cooperation with other ownerships via habitat conservation plans, conservation easement or agreements, and land acquisitions.

Sub-goal-2-27 (G-2-27) Maintain 20 percent of potential conifer habitat within each Lynx Analysis Unit (LAU) as high quality foraging habitat for Canada lynx.

Sub-goal-2-28 (G-2-28) Human activities (including special uses, minerals exploration and development, and utility transmission corridor placement) are managed to minimize impacts on Canada lynx and their habitat.

Sub-goal-2-29 (G-2-29) Habitat for red squirrel (a Canada lynx alternate prey species) is provided and maintained within each Lynx Analysis Unit (LAU).

Sub-goal-2-30 (G-2-30) Coordination occurs with federal, tribal, and state wildlife management agencies to identify and manage wild ungulate impacts that prevent attainment of Forest Plan management direction.

Sub-goal-2-31 (G-2-31) Northern goshawk habitat, represented by Vegetative Structural Stages (VSS) 4, 5, and 6, is provided and maintained in forested ecosystems.

Sub-goal-2-32 (G-2-32) Maintain high or optimum value northern goshawk habitat conditions on at least 80 percent of known occupied territories.

Sub-goal-2-33 (G-2-33) Maintain occupation and/or use of known active northern goshawk, boreal owl, and three-toed woodpecker nest sites during vegetation treatment project activities.

Sub-goal-2-34 (G-2-34) Raptor mortality associated with existing and proposed power lines is reduced (see *Suggested Practices for Raptor Protection on Power Lines* [Raptor Research Foundation 1996] or other applicable direction for guidance).

Sub-goal-2-35 (G-2-35) Avian mortality is reduced by minimizing the construction of tower facilities, including lighted towers, on communication sites.

Sub-goal-2-36 (G-2-36) Integrated pest management systems and strategies that provide protection of forest resources with the least hazard to humans and the environment are developed, practiced, and encouraged.

Sub-goal-2-37 (G-2-37) Riparian habitat in Central Utah Project-impacted reaches of Strawberry Valley streams, Sixth Water Creek, and lower Diamond Fork River is restored to desired conditions through mitigation activities conducted in cooperation and coordination with the Central Utah Water Conservancy District, the Department of the Interior, other federal and state agencies, and the public.

Sub-goal-2-38 (G-2-38) Healthy, self-sustaining riparian communities, habitat for viable populations of aquatic life, and conditions for natural stream dynamics exist on the Forest.

Sub-goal-2-39 (G-2-39) Provide and maintain habitat to support native fish populations.

Sub-goal-2-40 (G-2-40) Maintain active beaver colonies in at least 80 percent of 6th level Hydrologic Unit Code (HUC) watersheds within each management area, except in the Vernon and West Sheeprock Management Areas on the Vernon Unit.

Sub-goal-2-41 (G-2-41) An aquatic macroinvertebrate rating of at least 80 percent of the potential Biotic Condition Index (BCI) or equivalent index is maintained for aquatic ecosystems on the Forest.

Sub-goal-2-42 (G-2-42) Recreation facilities (including trails and dispersed sites) are designed, constructed, and operated in a manner that does not retard or prevent attainment of aquatic Forest Plan management direction.

Sub-goal-2-43 (G-2-43) Livestock are managed to achieve or maintain desired vegetative composition for greater sage grouse nesting and brood-rearing habitats in the Vernon and Strawberry Reservoir Management Areas.

Sub-goal-2-44 (G-2-44) Reclamation activities are designed to provide for achieving desired future conditions for the management area(s) involved.

Sub-goal-2-45 (G-2-45) Reclamation activities:

a. Stabilize the area,
b. Protect the aesthetics of the area,
c. Prevent water from off-site sources from impacting the disturbed area,
d. Control surface runoff to minimize erosion,
e. Trap sediment to enhance establishment of vegetation,
f. Restore and stabilize all unnecessary roads,
g. Include revegetation seeding or planting of local native species, and, where needed, fertilization and replacement of topsoil on all disturbed areas,
h. Provide maintenance of repeat applications where initial treatments do not achieve objectives, and
i. Prevent subsequent pollution from the site.

OBJECTIVES

Objective-2-1 (O-2-1) By 2005, evaluate and identify which areas on the Forest will be included in wildland fire use plans. Delineate the geographic areas to be covered by each plan. (Note: Not all areas on the Forest may be suitable for inclusion in a plan.)

Objective-2-2 (O-2-2) By 2008, complete three wildland fire use plans.

Objective-2-3 (O-2-3) By 2013, accomplish at least 20,000 acres of forest, rangeland, and riparian inventory. Incorporate this information into the Forest's GIS database.

Objective-2-4 (O-2-4) By 2013, conduct 1,000 acres of non-project related threatened, endangered, and sensitive (TES) species plant inventories.

Objective-2-5 (O-2-5) By 2013, accomplish at least 30,000 acres of vegetative treatments (combined total for all purposes).

Objective-2-6 (O-2-6) By 2008, develop a habitat management strategy for and verify the location of potential habitat (as identified by Harper and Armstrong 1992) for clay phacelia (*Phacelia argillacea*) in the Spanish Fork Canyon area.

Objective-2-7 (O-2-7) By 2008, select several Ute ladies'-tresses (*Spiranthes diluvialis*) colonies for protection and management attention to serve as propagation stock for the colonization of new habitats. Concurrently, provide adequate insect pollinator (bee) habitat in association with these colonies.

Objective-2-8 (O-2-8) Detect and prevent new infestations of noxious weeds and other undesirable plants from becoming established, and prevent further spread or reduce existing infestations. (For the purposes of this objective, "established" is defined as occurring over more than one contiguous acre and persisting for more than one to two years.)

a. Allow no increase in acreage and, to the extent feasible, eradicate highly aggressive species that have not yet proliferated (are not present or are present only as small, scattered infestations) on the Forest. By 2013, limit the total infestation of these species on the Forest to no more than 100 acres. Though other species will likely be added during the planning period, these species currently include:

- Perennial pepperweed
- Leafy spurge
- Spotted knapweed
- Russian knapweed
- Diffuse knapweed
- Squarrose knapweed (Uinta and Wasatch Mountains)
- Purple loosestrife
- Yellow star-thistle
- Medusahead
- Tamarisk*
- Black henbane*

* These species are not currently listed on the Utah Noxious Weed List (UDAF 2000a) or the supplemental Additional Noxious Weeds Declared by Utah Counties (UDAF 2000b), but are invasive and undesirable species on the Uinta National Forest.

- Blue spurge*

b. Curtail the spread of existing infestations and eradicate new infestations of the following species. By 2013, limit the total infestation of these species on the Forest to no more than 5,000 acres.

- Hoary cress (also known as whitetop)
- Squarrose knapweed (Bonneville Basin)
- Dyer's woad
- Dalmatian toadflax
- Scotch thistle
- Jointed goatgrass*
- Russian olive*
- Common burdock*
- Poison hemlock*

c. Contain the following species to currently occupied acres. Focus on prevention and reduction of density within existing populations. By 2013, limit the total infestation of these species on the Forest to no more than 25,000 acres.

- Musk thistle
- Canada thistle
- Quackgrass
- Perennial sorghum
- Johnsongrass
- Field bindweed
- Bermudagrass
- Houndstongue*

Objective-2-9 (O-2-9) By 2017, complete an inventory of 80 percent of the Forest for the presence of noxious weeds and other undesirable plant species.

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* These species are not currently listed on the Utah Noxious Weed List (UDAF 2000a) or the supplemental Additional Noxious Weeds Declared by Utah Counties (UDAF 2000b), but are invasive and undesirable species on the Uinta National Forest.

Objective-2-10 (O-2-10) By 2013, conduct 5,000 acres of non-project related threatened, endangered, or sensitive (TES) species terrestrial biota inventories.

Objective-2-11 (O-2-11) By 2013, maintain or restore 10 structures for threatened, endangered, or sensitive (TES) species.

Objective-2-12 (O-2-12) By 2013, implement treatments to restore or maintain at least 1,000 acres where northern goshawk habitat is rated as high or optimum (per Graham et al. 1999), and where those acres are functioning at risk. Implement treatments that will provide reasonable assurance that areas will not drop to low to moderate value.

Objective-2-13 (O-2-13) By 2013, maintain habitat for old growth-dependent species by maintaining at least 10 percent of forested stands as old growth (as defined in *Characteristics of Old Growth Forests in the Intermountain Region* [USDA 1993]) within each management area.

Objective-2-14 (O-2-14) By 2018, provide habitat suitable to maintain stable greater sage grouse populations in the Vernon and Strawberry Reservoir Management Areas at or above established objectives, and increase depressed populations by 10 percent.

Objective-2-15 (O-2-15) By 2018, maintain identified greater sage grouse nesting habitats in the Vernon and Strawberry Reservoir Management Areas at prescribed conditions in 80 percent of habitats.

Objective-2-16 (O-2-16) By 2018, improve or restore 1,000 acres of greater sage grouse habitat on breeding, brood-rearing, and winter range habitats in the Vernon and Strawberry Reservoir Management Areas not currently meeting prescribed conditions.

Objective-2-17 (O-2-17) By 2018, complete 1,000 acres of big game winter range habitat improvements to reach desired future conditions.

Objective-2-18 (O-2-18) By 2013, survey the two Lynx Analysis Units (Upper Provo and West Fork Duchesne Management Areas) to determine the presence or absence of Canada lynx.

Objective-2-19 (O-2-19) By 2005, map the location and intensity of snow compacting activities (e.g., over-the-snow vehicle use, showshoeing, cross-country skiing, dog sledding, or timber harvest activities) on designated routes, trails, and play areas within Lynx Analysis Units (LAUs).

Objective-2-20 (O-2-20) By 2013, conduct 200 miles of non-project related threatened, endangered, or sensitive (TES) species aquatic biota inventories.

Objective-2-21 (O-2-21) By 2013, inventory 500 acres of aquatic habitat to determine the presence or absence of rare invertebrate species (mollusks), amphibians, and reptiles.

Objective-2-22 (O-2-22) By 2018, design management activities to maintain an aquatic macroinvertebrate rating of 80 percent of the potential Biotic Condition Index (BCI) or equivalent index for aquatic ecosystems.

SOCIAL/ECONOMIC ENVIRONMENT

FW-Goal-3 Suitable commodity uses are provided in an environmentally sustainable and acceptable manner to contribute to the social and economic sustainability and diversity of local communities.

SUB-GOALS

Sub-goal-3-1 (G-3-1) If consistent with ecosystem health and integrity, and threatened, endangered, and sensitive species management, forage for livestock grazing on lands identified as suited for this use is provided to support social and economic community stability.

Sub-goal-3-2 (G-3-2) Livestock grazing occurs at a season and/or level of use that allows appropriate ground cover, species composition, and age classes for the grazing unit being administered and monitored.

Sub-goal-3-3 (G-3-3) Silvicultural treatments are utilized to manage forested vegetation to provide for an ecologically sustainable (i.e., within a range of natural variability) mix of wildlife habitats, old growth and other late successional stages, recreational opportunities, and wood products for both commercial and personal use (e.g., personal use permits for the gathering of fuelwood, Christmas trees, tree seedling transplants, and miscellaneous other products).

Sub-goal-3-4 (G-3-4) An annual and sustainable program of commercial timber sales is offered. The Forest contributes to the sustaining of local lifestyles and economies.

Sub-goal-3-5 (G-3-5) If consistent with ecosystem health and integrity, the demand for mineral and energy resources through environmentally responsible exploration, development, and production on National Forest System lands is satisfied through contributions by the Forest.

Sub-goal-3-6 (G-3-6) Opportunities to develop projects that demonstrate state of the art environmental protection techniques and landscape-compatible design of oil and gas production facilities are utilized.

Sub-goal-3-7 (G-3-7) The telecommunications system adequately supports forest resource management. Commercial uses are provided within the ecosystem's capability only where essential to meet a demonstrated public.

OBJECTIVES

Objective-3-1 (O-3-1) Permit approximately 100,000 Animal Unit Months (AUMs) of forage per year for use by livestock.

Objective-3-2 (O-3-2) Offer an annual average of 3,190 CCF (hundred cubic feet) of timber, 640 CCF of which is chargeable to the Allowable Sale Quantity (ASQ).

Objective-3-3 (O-3-3) Provide 800 to 1,200 cords (1,025 to1,535 CCF) of personal-use fuelwood annually.

FW-Goal-4 Heritage resources are identified, preserved, and enhanced.

SUB-GOALS

Sub-goal-4-1 (G-4-1) Plants and use areas associated with traditional uses (e.g., sustenance, medicine, and ceremony) that are culturally significant to Native American communities are identified and maintained or protected.

OBJECTIVES

Objective-4-1 (O-4-1) By 2008, develop a proactive, long-term management plan in consultation with local Tribes, historical societies, and other interested publics to comprehensively address inventory, evaluation, interpretation, and protection of heritage resources.

Objective-4-2 (O-4-2) By 2013, develop and implement an interpretation plan for the American Fork Mining District and Strawberry military sites.

FW-Goal-5 Scenic quality and desired landscape character are maintained and/or enhanced.

OBJECTIVES

Objective-5-1 (O-5-1) By 2008, complete a Scenery Management System (SMS) inventory.

Objective-5-2 (O-5-2) By 2005, refine the Visual Quality Objective (VQO) inventory of the Great Western and Bonneville Shoreline Trails.

FW-Goal-6 Diverse and suitable recreational opportunities are provided responsive to public demand while maintaining ecosystem health and contributing to social and economic sustainability.

SUB-GOALS

Sub-goal-6-1 (G-6-1) An increasing number of users are accommodated within the capability of the resource by maintaining and improving existing developed recreation sites and emphasizing management of dispersed recreation.

Sub-goal-6-2 (G-6-2) Existing developed campgrounds are maintained in their current locations.

Sub-goal-6-3 (G-6-3) Dispersed recreation opportunities are offered in areas close to urban centers, with an emphasis on a full range of trail opportunities.

Sub-goal-6-4 (G-6-4)	Concentrated dispersed recreation use is accommodated in designated corridors within resource capabilities.
Sub-goal-6-5 (G-6-5)	Opportunities for non-motorized winter recreation activities are provided.
Sub-goal-6-6 (G-6-6)	An expanded, exclusively non-motorized winter use trail system is provided in the Daniels Summit/Dock Flat area.
Sub-goal-6-7 (G-6-7)	The Aspen Grove trailhead and parking lot on the Pleasant Grove Ranger District are managed to minimize conflicts between motorized and non-motorized winter recreation users.
Sub-goal-6-8 (G-6-8)	An integrated trail system that provides a variety of recreational opportunities is identified through a trail travel management plan. This system incorporates the Great Western and Bonneville Shoreline Trails.
Sub-goal-6-9 (G-6-9)	A comprehensive, motorized trail system(s), to include use by non-street legal vehicles, is identified and designated on the Forest Travel Map and signed on the ground. Classified roads may be part of the all-terrain vehicle trail system.
Sub-goal-6-10 (G-6-10)	Viable motorized winter use opportunities utilizing existing trails and play areas are maintained.
Sub-goal-6-11 (G-6-11)	The current level of summer special use activity is maintained, consistent with resource capability. Opportunities for winter special use activities are evaluated.
Sub-goal-6-12 (G-6-12)	Opportunities for heli-skiing are provided, consistent with the resource capability, other land uses, and other resource management goals.
Sub-goal-6-13 (G-6-13)	Recreation education and opportunity information is readily available to the public, and provided through a variety of communication methods.

OBJECTIVES

Objective-6-1 (O-6-1) By 2010, reconstruct Timpooneke, Lodgepole, and Little Mill Campgrounds, and the Diamond Fork group sites. Mill Hollow, Mount Timpanogos, Blackhawk, Bear Canyon, and Currant Creek Campgrounds will be considered for reconstruction as needed to address deferred maintenance as funds become available.

Objective-6-2 (O-6-2) By 2013, harden selected dispersed campsites and/or trailheads in the Diamond Fork and Sheep Creek-Indian Creek corridors, and in the Strawberry, upper American Fork Canyon, Cascade Springs, and Salt Creek areas to mitigate impacts of concentrate use and increase opportunity.

Objective-6-3 (O-6-3) By 2005, complete an inventory of classified and unclassified trails.

Objective-6-4 (O-6-4) By 2010, complete an analysis and determination of the management objectives for all trails.

Objective-6-5 (O-6-5) By 2018, complete construction of those sections of the Bonneville Shoreline Trail that are on National Forest System lands.

Objective-6-6 (O-6-6) By 2008, develop summer use dispersed recreation management plans that address dispersed recreation; promote protection of environmentally sensitive areas and threatened, endangered, and sensitive species; and are coordinated with the Forest Travel Management Plan.

FW-Goal-7 When there is an apparent and overriding benefit, opportunities for consolidation of land ownership and subsurface and surface property rights, acquisition of appropriate access, and establishment of identifiable boundaries are pursued.

SUB-GOALS

Sub-goal-7-1 (G-7-1) The inclusion of forest access in city and county land use planning is encouraged.

Sub-goal-7-2 (G-7-2) Appropriate access on established travel routes to the Forest boundary is assured through coordination with local jurisdictions. These travel routes include, but are not limited to, Rock Canyon, Slate Canyon, Battle Creek, Grove Creek, Nebo Creek, Bennie Creek, and White River (Left and Right Forks).

Sub-goal-7-3 (G-7-3) Within the economic and social constraints of local communities, critical habitat for federally-listed threatened and endangered species and big game winter range under other ownership within and adjacent to the Forest boundary is acquired.

OBJECTIVES

Objective-7-1 (O-7-1) By 2008, complete Land Adjustment and Right-of-Way Acquisition Plans.

Objective-7-2 (O-7-2) By 2018, complete land adjustments along the Wasatch Front to achieve a more identifiable boundary.

Objective-7-3 (O-7-3) By 2018, acquire land and rights-of-way to complete the Bonneville Shoreline Trail within the proclaimed Forest boundary.

FW-Goal-8 Forest infrastructure, including facilities and transportation systems, is safe and responsive to public needs and desires; has minimal adverse effects on ecological processes and ecosystem health, diversity, and productivity; and is in balance with needed management actions.

SUB-GOALS

Sub-goal-8-1 (G-8-1) A safe, effective, and economical transportation system is planned, designed, operated, and maintained to provide appropriate access associated with movement of people and materials to and through the Forest, and to support movement of materials associated with management, use, and administration of the Forest.

Sub-goal-8-2 (G-8-2) The existing transportation systems are managed and maintained in an environmentally sensitive manner. The Forest will continue to look for opportunities to realign transportation systems to reduce impacts on the environment, particularly out of riparian areas to upland areas.

Sub-goal-8-3 (G-8-3) Roads and trails are managed to protect or minimize impacts on resources.

Sub-goal-8-4 (G-8-4) Non-beneficial and/or unauthorized roads and trails are decommissioned, obliterated, or rehabilitated if they do not meet resource objectives or provide necessary access to facilities or inholdings.

Sub-goal-8-5 (G-8-5) Emphasis is placed on minimizing natural resource and water quality degradations resulting from maintenance activities. Safety and the preservation of capital investments are emphasized.

Sub-goal-8-6 (G-8-6) A minimum number of Forest Service roads and trails are developed, maintained, and managed to respond to resource management objectives. Many road-related activities occur in support of timber management, dispersed and developed recreation uses, range, administration, and resource protection (including fire).

Sub-goal-8-7 (G-8-7) Critical infrastructure, such as roads and administrative and recreation sites, are protected.

Sub-goal-8-8 (G-8-8) Safe, adequate, and economical facilities support public and administrative uses of National Forest System lands.

Sub-goal-8-9 (G-8-9) An inventory of classified roads is maintained.

Sub-goal-8-10 (G-8-10) An analysis and determination of the management objectives for unclassified roads is completed concurrent with landscape assessments or site-specific project development and analysis.

OBJECTIVES

Objective-8-1 (O-8-1) There are approximately 1,325 miles of classified roads that provide access to and through the Forest.

a. By 2013, it is anticipated that approximately 5-15 miles of new classified roads may be constructed.
b. By 2013, approximately 40-75 miles of classified roads may be reconstructed and/or realigned.

Objective-8-2 (O-8-2) By 2013, annual and recurrent maintenance will range from 15 to 25 percent of inventoried, classified roads.

Objective-8-3 (O-8-3) By 2018, reconstruct or replace between 8 and 15 road bridges.

Objective-8-4 (O-8-4) By 2018, decommission, obliterate, or rehabilitate at least 25 to 30 miles of non-beneficial and/or unauthorized roads and trails as identified through the transportation analysis.

Objective-8-5 (O-8-5) By 2008, update the Forest Service Facilities Master Plan, including the site evaluation criteria, based on new or changed policy and direction in the Forest Plan.

Objective-8-6 (O-8-6) By 2005, develop a Transition Plan for implementation of the Americans with Disabilities Act Guidelines (ADAG) on all Forest Service facilities.

Objective-8-7 (O-8-7) By 2008, relocate the Pleasant Grove Ranger District Office. Continue to support the collocation of the Pleasant Grove Ranger District Office with the Timpanogos Cave National Monument Administrative Office.

Objective-8-8 (O-8-8) By 2008, evaluate and update the 1986 facilities study of the Spanish Fork District Office, Spanish Fork Administrative Site, Nephi Office, and Provo Warehouse needs.

FW-Goal-9 Opportunities for recreational, aesthetic, and educational experiences are provided while conserving special environmental, cultural, social, and/or scientific values in protected areas (e.g., congressionally designated wilderness; proposed wilderness; wild, scenic, and recreational river corridors; research natural areas; and caves).

SUB-GOALS

Sub-goal-9-1 (G-9-1) Wilderness area management protects biological and physical resources and wilderness values while accommodating recreation use.

Sub-goal-9-2 (G-9-2) Manage areas recommended for wilderness designation for non-impairment.

Sub-goal-9-3 (G-9-3) Eligible Wild and Scenic River corridors are managed to preserve their free-flowing character and outstandingly remarkable values until suitability can be determined.

a. Protection of suitable segments remains in effect until Congress acts to add the proposed segments to the Wild and Scenic Rivers System and a River Management Plan can be adopted.
b. If Congress determines that a suitable segment will not be designated, management reverts to the management prescription in effect for adjoining areas.

Sub-goal-9-4 (G-9-4) The Jumpoff Research Natural Area (RNA) maintains the subalpine fir, climax aspen, mountain brush, and sagebrush steppe ecosystems for which it was designated.

Sub-goal-9-5 (G-9-5) The Diamond Fork Youth Forest provides an area for youth to investigate, study, interact with natural resource managers, and engage in management of our natural resources.

Sub-goal-9-6 (G-9-6) Interpretation and education opportunities are provided at strategic locations throughout the Forest including visitor centers, scenic byways and backways, campgrounds, trailheads, day-use areas, and the Diamond Fork Youth Forest. Themes include Leave No Trace, Tread Lightly, forest health, fire ecology, heritage resources, and unique features at specific sites. Through these opportunities, visitors gain an awareness and understanding of natural resources, natural resource management, and personal stewardship.

OBJECTIVES

Objective-9-1 (O-9-1) By 2013, complete a suitability analysis for eligible wild and scenic river segments.

Objective-9-2 (O-9-2) By 2005, develop a management plan for the Jumpoff Research Natural Area (RNA).

Objective-9-3 (O-9-3) By 2008, make approximately 2,500 conservation education contacts with students K-12 through the Diamond Fork Youth Forest.

CHAPTER 3: STANDARDS AND GUIDELINES

CHAPTER 3: STANDARDS AND GUIDELINES

USER'S GUIDE TO THE STANDARDS AND GUIDELINES

The standards and guidelines for the Forest Plan are arranged by management activity instead of by resource area. When consulting these standards and guidelines, the following three areas must be checked:

1. **Management Activity**. The standards and guidelines for the particular management activity involved.
2. **Recreation Opportunity Spectrum (ROS) Class**. The standard and guidelines for the Recreation Opportunity Spectrum (ROS) class for the area involved.
3. **Management Prescription.** The standards and guidelines for the management prescription for the area involved.

If there is a conflict between any direction for a management activity and direction for a ROS class or management prescription, the most restrictive direction will be applied.

MANAGEMENT ACTIVITIES – PHYSICAL ENVIRONMENT

Management direction for the physical environment is found in numerous laws, regulations, executive orders, Forest Service policies, and additional guidance documents. These documents are listed in Appendix A. Additional specific management direction is provided in the following sections.

AQUATIC AND RIPARIAN HABITAT MANAGEMENT

Aqua-1 **Standard:** Trees shall not be felled into streams, lakes, or bogs except when needed to improve aquatic habitat.

Aqua-2 **Guideline:** When considering hydroelectric or other surface water development proposals, require or, where appropriate, recommend instream flows and habitat conditions that maintain or restore riparian resources, favorable channel conditions, and fish passage, reproduction, and growth.

Aqua-3 **Guideline:** Within sub-watersheds containing a Bonneville or Colorado River cutthroat trout recovery stream, avoid management activities that would significantly reduce aquatic and riparian habitat or significantly retard its rate of recovery. These streams are identified in Chapter 2, sub-goals G-2-20 and G-2-21.

Aqua-4 **Guideline:** Limit construction and other activities affecting stream channels to those periods when such activities will have the least detrimental effect on the aquatic environment, unless emergency conditions deem otherwise.

Aqua-5 **Guideline:** Avoid equipment operation in stream courses, open water, seeps, or springs. If use of equipment in such areas is required, impacts should be minimized.

Aqua-6 **Guideline:** Limit equipment operation in Riparian Habitat Conservation Areas (RHCAs). If the use of equipment in these areas is required, incorporate additional mitigation to minimize adverse impacts.

Aqua-7 **Standard:** Prohibit storage of fuels and other toxicants within Riparian Habitat Conservation Areas (RHCAs). Do not fuel or service equipment in RHCAs unless there are no other alternatives. If such sites are required within an RHCA, appropriate containment measures must be employed. Construction or maintenance equipment service areas shall be located and treated to prevent gas, oil, or other contaminates from washing or leaching into streams. Equipment working in open water and wetlands

shall be cleaned prior to entry into such areas to remove gas, oil, and other contaminants.

Aqua-8 **Guideline:** Locate water drafting sites to avoid significant adverse effects to native aquatic organisms and instream flows. Locate such sites in a manner that does not retard or prevent attainment of aquatic Forest Plan management direction.

Aqua-9 **Guideline:** Subject to valid existing rights, free-flowing water and associated riparian vegetation communities should be retained at developed spring sites. If possible, existing spring developments should be modified to return water to riparian ecosystems within the source drainage.

Aqua-10 **Standard:** Unless pesticide label requirements or other considerations require greater distances, minimum pesticide spray distances (buffers) from live water are as follows:

- Backpack spraying operations: 20 feet.
- Other mechanized applications (e.g., truck or all-terrain vehicle mounted equipment): 50 feet.

The use of fluridine or the Environmental Protection Agency-approved over-water formulation of glyphosphate for treatment of water in open sewage lagoons is exempt from these limitations.

Aqua-11 **Guideline:** Direct, non-spray application of pesticides to individual plants or other similar narrowly targeted treatment needs (e.g., gopher or insect control) that avoids application to the ground may be conducted within the specified buffers for live water as stated in Aqua-10.

CAVE RESOURCE MANAGEMENT

Caves-1 **Guideline:** Management activities should not be permitted within any area draining into a known cave if those activities are likely to affect cave resources through sedimentation, soil sterilization, the addition of nutrients or other chemicals (including pesticides, herbicides, and fertilizers), or by changing the cave's natural hydrology.

Caves-2 **Guideline:** Retain vegetation within 50 feet of a known cave or above a known cave if the vegetation protects the cave's microenvironment (e.g., hydrology, habitat, climate, vegetation).

Caves-3 **Guideline:** Alteration or redirection of natural surface drainage into or away from known caves should not be allowed.

Caves-4 **Guideline:** If there is a potential for causing damage to a known cave, restrict ground-disturbing activities such as the use of heavy equipment or blasting above or in the vicinity of a known cave, or within a drainage that empties into a known cave.

Caves-5 **Standard:** Known cave entrances and/or locations will not be signed or included in information available to the public.

Caves-6 **Standard:** Known cave entrances will not be altered or used as disposal sites for slash, fill, or refuse, and no action will be taken to prevent or hinder ingress or egress of cave-dependent wildlife. Gating of known cave entrances will be allowed consistent with other Forest Plan management direction as long as gates are designed to provide for airflow, and that substantial physical alteration of the entrance is not needed to construct the gate.

Caves-7 **Guideline:** Manage known caves as “wild” caves with no modifications or facilities to aid or impede use. Allow public use of known caves unless restrictions are necessary to protect non-renewable features or threatened resources present in significant caves. Gate or take other measures to control and manage human access where unacceptable damage to known cave resources is occurring or has a high potential to occur.

MINERAL AND ENERGY RESOURCE MANAGEMENT

M&E-1 **Guideline:** To address risks to human health and safety or potential disturbance to bats or other environmental conditions, install bat-accessible gates on abandoned mines inhabited by bats.

M&E-2 **Guideline:** Avoid locating mine waste (waste rock, spent ore, tailings, etc.) facilities in Riparian Habitat Conservation Areas (RHCAs). If no alternative exists, the following three conditions must be met:

1. Locate and design the waste facilities using the best conventional techniques to ensure mass stability and prevent the release of acid or toxic materials. If the best conventional technology is not sufficient to ensure stability over the long term or prevent releases of hazardous substances as defined by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or would violate applicable water quality standards, prohibit such facilities in RHCAs.

2. Reclaim and monitor waste facilities to assure chemical and physical stability and revegetation to avoid significant adverse effects to aquatic organisms and to attain aquatic Forest Plan management direction.
3. Require reclamation bonds adequate to ensure long-term chemical and physical stability and successful revegetation of mine waste facilities.

M&E-3 **Guideline:** Modify the operating plans for existing permits to eliminate impacts that prevent attainment of aquatic Forest Plan management direction. Seek to avoid adverse effects to populations of native aquatic organisms.

M&E-4 **Standard:** Prohibit sand and gravel mining and extraction within Riparian Habitat Conservation Areas (RHCAs) unless the following three conditions are met:

- No other alternatives exist,
- The action(s) would not retard or prevent attainment of aquatic Forest Plan management direction, and
- Significant adverse effects to populations of native aquatic organisms can be avoided.

M&E-5 **Guideline:** Mineral operation structures, support facilities, and roads should be located outside of Riparian Habitat Conservation Areas (RHCAs). Where no alternative to locating such facilities in RHCAs exists, locate and construct the facilities to minimize impacts to RHCAs and streams and adverse effects on aquatic organisms.

M&E-6 **Guideline:** Minimize adverse effects to native aquatic organisms from mineral operations.

M&E-7 **Guideline:** New hydroelectric ancillary facilities should be located outside of Riparian Habitat Conservation Areas (RHCAs). For hydroelectric facilities that must be located in RHCAs, they should be located, operated, and maintained to attain aquatic Forest Plan management direction and to avoid significant adverse effects on populations of native aquatic organisms.

M&E-8 **Standard:** Reclamation will be accomplished concurrent with development operations.

M&E-9 **Guideline:** One hundred percent of areas disturbed by mineral operations should be recovered or reclaimed when the development activity is completed.

M&E-10 **Standard:** Recommend developed recreation areas and administrative sites to the Bureau of Land Management (BLM) for withdrawal from leasable and locatable mineral entry.

M&E-11 **Guideline:** Recreational dredging and sluicing opportunities (as defined by the State of Utah Recreational Dredging and Sluicing permitting process) are restricted to those drainages and/or stream segments identified in the State of Utah Recreational Dredging and Sluicing Application and most recent list of streams available for these activities. The list of streams is modified annually.

M&E-12 **Standard:** Recreational dredging will be conducted in accordance with the State of Utah Division of Water Rights Recreational Dredging and Sluicing Application. Operations outside the scope of the *Conditions of Approval* in the state permit will require a plan of operations.

M&E-13 **Standard:** For all new leasable mineral operations, leasing stipulations will be applied according to the Recreation Opportunity Spectrum (ROS) class of the area as listed in Table 3-1, and any specific resource areas as listed in Table 3-2. If there is a conflict between the two tables, the most restrictive stipulation will apply.

Table 3-1. Leasing Stipulations by Recreation Opportunity Spectrum (ROS) Class and Management Prescription

Management Prescription	Stipulation by Recreation Opportunity Spectrum (ROS) Class					
	Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Roaded Modified	Rural
1.4	NA					
1.5		NSO	NSO			
2.1[1]	NL	NSO				
2.2[1]	NSO	CSU	CSU	CSU	CSU	
2.3[1]		CSU	CSU	CSU	CSU	
2.4	NSO					
2.5		NSO	CSU	CSU	CSU	CSU
2.6		NSO	NSO	NSO	NSO	NSO
3.1		NSO	CSU	CSU	CSU	CSU
3.2		NSO	CSU	CSU	CSU	CSU
3.3		NSO	TL & CSU	TL & CSU	TL & CSU	TL & CSU
4.4		NSO	TL & CSU	TL & CSU	TL & CSU	TL & CSU
4.5		NSO	NSO	NSO	NSO	NSO
5.1		NSO	CSU	CSU	CSU	
5.2		CSU	SLT	SLT	SLT	
6.1		NSO	CSU	SLT	SLT	SLT
7.0[2]						
8.1				SLT	SLT	SLT
8.2			CSU	CSU	CSU	CSU
8.3			NSO	NSO	NSO	
8.4			CSU	CSU	CSU	
All RHCAs	NL	NSO	NSO	NSO	NSO	NSO

Note: Blank cells indicate there is no acreage within that particular management prescription/ROS class combination. Stipulation abbreviations:

CSU	Controlled Surface Use	NSO	No Surface Occupancy
LN	Lease Notice	TL	Timing Limitation
NA	Not available for lease (e.g., withdrawn)	SLT	Standard Lease Terms
NL	No Lease		

[1] Areas with a management prescription of 2.1 Wild and Scenic Rivers - Wild, 2.2 Wild and Scenic Rivers - Scenic, or 2.3 Wild and Scenic Rivers - Recreational have an underlying prescription. The most restrictive stipulation of the two prescriptions will apply in these areas.

[2] Areas with a management prescription of 7.0 Wildland Urban Interface have an underlying prescription that will dictate the stipulation to be applied.

Table 3-2. Leasing Stipulations by Resource Area

Resource Area	Stipulation
Watershed resources Geologic hazards/unstable soils	NSO
Steep slopes >35 percent	NSO
Riparian/wetlands >40 acres	NSO
Wildlife and Plant Species Greater sage grouse breeding habitat in the Vernon and Strawberry Reservoir Management Areas	TL
Critical elk winter range	TL
Critical deer winter range	TL
Critical elk calving range	TL
Critical elk year-long range	TL
Lynx Analysis Units	TL
Presence of threatened or endangered species	LN
Presence of a Forest Service sensitive species	CSU
Research Natural Areas (RNAs)	NSO
Developed campgrounds	NSO
Visual resources Preservation (subject to valid existing rights)	NL
Retention and Partial Retention	CSU
Modification	SLT

SOIL AND WATER RESOURCE MANAGEMENT

S&W-1 **Standard:** Maintain or improve long-term soil productivity and hydrologic function of the soil by limiting activities that would cause detrimental soil disturbance. Detrimental soil disturbance consists of severely burned soils, loss of ground cover, or detrimental soil displacement, erosion, puddling, or compaction, as defined in Forest Service Handbook (FSH) 2509.18 and applicable Intermountain Region supplements.

S&W-2 **Guideline:** Avoid land use practices that reduce soil moisture effectiveness, increase average erosion, cause invasion of exotic plants, and reduce abundance and diversity of forbs in the long-term (some short-term practices that would seem to contradict this direction may be beneficial in the long-term).

S&W-3 **Guideline:** Maintain at least 70 percent of potential effective ground cover to provide nutrient cycling and protect the soil from erosion in excess of soil loss tolerance limits.

S&W-4 **Guideline:** Maintain adequate ground cover to filter runoff and prevent detrimental erosion in Riparian Habitat Conservation Areas (RHCAs).

Table 3-3. Riparian Habitat Conservation Area (RHCA) Ground Cover Requirements

RHCA	Minimum Ground Cover Requirement	Minimum Percent of RHCA to Meet Requirement
Class I	90% of Potential	90%
Class II	80% of Potential	80%
Class III	80% of Potential	70%

S&W-5 **Guideline:** Borrow material should be taken from upland sources wherever feasible.

S&W-6 **Guideline:** Where practical, on-site topsoil should be conserved and replaced on disturbed areas.

S&W-7 **Guideline:** To the extent practical, require concurrent reclamation of all permitted surface-disturbing activities.

S&W-8 **Guideline:** According to the following criteria, determine requirements for and obtain (consistent with valid existing rights) instream flows by drainage:

a. State's priority for adjudication,
b. Apparent or suspected demand for diversion inside the National Forest boundary,
c. Streams with high values that are dependent upon instream flow maintenance (e.g., recreation, fisheries, aesthetics, and riparian values),
d. Potential for development of hydroelectric power or other diversions, and
e. Administrative priorities.

S&W-9 **Guideline:** Consider the following factors when determining whether sufficient quality, quantity, and timing of instream flows exist:

- Maintenance of habitat for aquatic species, including fish, wildlife, and riparian plant communities,
- Maintenance of channel stability and capacity for passing floods,

- Maintenance of recreational opportunities such as fishing, swimming, boating, and aesthetic enjoyment, and
- Maintenance of water quality and natural temperature regimes.

S&W-10 **Guideline:** When determining instream flows, give consideration to mimicking natural stream discharges by incorporating:

- Summer and winter base flows to sustain and enhance habitat for aquatic species and riparian plants,
- A peak flow component to maintain aquatic species habitat, channel capacity (including the ability to transport sediment load), and riparian plant regeneration,
- A gradual rising and falling hydrograph limb during spring runoff to protect bank stability, aquatic species habitat, and trigger fish behavioral patterns, and
- Additional flood flows that should be allowed for maintenance of floodplains.

S&W-11 **Guideline:** Minimum instream flows should be established and maintained for all fish-bearing streams as a condition of any license or permit issuance or renewal for facilities associated with hydropower, snowmaking, water transmission, or mining activities that involve the use of water.

S&W-12 **Guideline:** Riprap or other erosion protection materials should be sufficient in size and placed in such a manner as to withstand peak flows comparable to a 100-year flood.

S&W-13 **Guideline:** Reduce stream sedimentation created as a result of construction.

S&W-14 **Guideline:** Cleaning or dredging of desilting basins, ponds, and reservoirs should be done in a way that minimizes the transport of accumulated fine sediment downstream.

S&W-15 **Guideline:** Where channel changes are necessary, natural channel velocities should not be increased over the total length of the affected stream channel.

S&W-16 **Guideline:** Where floodplains or basins are used for recreation, streams should not be channelized to protect recreation structures from flooding. However, where channelization is necessary, the impacted areas should be shaped and revegetated in a manner compatible with the natural stream dynamics.

MANAGEMENT ACTIVITIES – BIOLOGICAL ENVIRONMENT

Management direction for the biological environment is found in numerous laws, regulations, executive orders, Forest Service policies, and additional guidance documents. These documents are listed in Appendix A. Additional specific management direction is provided in the following sections.

WILDLIFE AND FISH HABITAT MANAGEMENT

WL&F-1 **Guideline:** In forested habitats where vegetation treatments exceed 40 acres, retain big game hiding cover (i.e., sufficient cover to conceal an animal) for a minimum of 200 feet from the treatment edges unless an insect infestation, disease, or other natural disaster would warrant treatment before the desired cover was established. (This guideline applies only to forested cover types.)

WL&F-2 **Standard:** Provide wildlife escape ramps in all developed water sources.

WL&F-3 **Guideline:** Provide for wildlife movement through and/or around structures or project sites such as fences, spring developments, guzzlers, roads, and ditches.

WL&F-4 **Guideline:** In greater sage grouse nesting habitats in the Vernon and Strawberry Reservoir Management Areas, avoid removing sagebrush within 300 yards of greater sage grouse foraging areas along riparian zones, meadows, lakebeds, and farmland, unless such removal is necessary to achieve greater sage grouse habitat management objectives.

WL&F-5 **Guideline:** Avoid the use of highly toxic organophosphate and carbamate insecticides in greater sage grouse nesting habitats in the Vernon and Strawberry Reservoir Management Areas during nesting periods.

WL&F-6 **Guideline:** Adjust timing and location of management and public activities to minimize disturbance of greater sage grouse breeding sites in the Vernon and Strawberry Reservoir Management Areas. Activities should not take place within sight distance or 0.5 mile of leks (whichever is less) annually from March 1 to June 1.

WL&F-7 **Standard:** Protect known three-toed woodpecker nesting sites by prohibiting vegetative management activities from April 15 until September 1 annually in a 30 acre nest area.

WL&F-8 **Guideline:** Provide northern goshawk nest areas that contain one active, two alternate, and three replacement nest sites. Each nest site should be

approximately 30 acres in size, for a combined total of 180 acres per nest area when sufficient suitable habitat exists (these 180 acres do not need to be contiguous). If sufficient acreages of suitable goshawk nest areas are not present, use the acreage of existing suitable habitat that is present.

- In active goshawk nest areas, restrict all Forest Service management activities and permitted uses, except livestock grazing, during the active nesting season unless it is determined that the disturbance is not likely to result in nest abandonment.

WL&F-9 **Standard:** Prohibit forest vegetation manipulation (timber harvest, prescribed burning, fuelwood, thinnings, etc.) within active northern goshawk nest areas during the active nesting season (normally from March 1 to September 30). See WL&F-8 for nest area criteria.

WL&F-10 **Guideline:** Identify a Post-Fledgling Area (PFA) for northern goshawks which encompasses the active, alternate, and replacement nest areas and additional habitat needed to raise fledglings. A PFA 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.

a. Openings created in PFAs for goshawks as a result of mechanical vegetative treatments (not including wildland fire) should not exceed two acres in size in mixed conifer cover types, and one acre in size in spruce/fir cover types.

b. In active PFAs for goshawks, restrict all Forest Service management activities (including vegetation manipulation) and permitted uses, except livestock grazing, during the active nesting season unless it is determined that the disturbance is not likely to result in nest abandonment. See WL&F-9 for direction on forest vegetation manipulation in nesting areas during the active nesting season (normally from March 1 to September 30).

WL&F-11 **Guideline:** Prohibit management activities around active raptor nest sites (for species other than northern goshawk) from nest site selection to fledging. Nesting periods and recommended buffers by species are defined in Appendix C, Recommended Raptor Buffers. These recommended buffers may be modified on a site-specific and project-specific basis based on field observations and knowledge of local conditions, or as knowledge of raptor ecology improves.

WL&F-12 **Guideline:** Maintain effective bat habitat within caves, mines, and/or adits.

WL&F-13 **Guideline:** Within the range of natural variability, the following habitat conditions should be established and/or maintained in native fish-bearing streams. All of the desired features may not occur in a specific segment of stream within a watershed, but all should generally occur at the watershed scale for stream systems of moderate to large size (3rd through 6th order streams).

a. Percent fines in spawning gravels: 0 to 60 percent, depending upon stream morphology and geologic characteristics.
b. Percent stable streambanks: 75 percent or higher.
c. Pool riffle ratio and sequence and width depth ratios within the limits for the particular stream type as identified by the Rosgen classification system.

WL&F-14 **Guideline:** Unless there is an overriding management need, drop structures should be avoided or replaced in favor of natural channel conditions or other designs to allow aquatic organism passage and sediment and debris transport. Where drop structures are deemed necessary, they should be designed to allow for fish passage and sediment transport.

WL&F-15 **Standard:** Subject to valid existing rights, if rare invertebrates inhabit spring sources that are proposed for development, reconstruction, or maintenance of water diversions, provide full mitigation for the effects of development on these species or prohibit the development of the spring source.

WL&F-16 **Guideline:** Where feasible, provide pollinator habitat adjacent to Ute ladies'-tresses colonies by avoiding the removal of down woody material in the course of any management activities in the lower 7.5 miles of the Diamond Fork River corridor. Where removal cannot be avoided, salvage a portion of down woody material greater than 3 inches in diameter and relocate it to sunny openings adjacent to Ute ladies'-tresses colonies.

WL&F-17 **Guideline:** Protect known occupied boreal toad habitat from disturbance (e.g., trampling) during the active breeding season (generally four to five weeks following snowmelt).

FIRE MANAGEMENT

Fire-1 **Standard:** Human life is the highest priority during a fire. Once firefighters have been assigned to a fire, their safety becomes the highest value to be protected. Property and natural/cultural resources become a second priority.

Fire-2 **Guideline:** Prescribed fire and the full range of suppression tactics and fuel reduction methods are authorized forest-wide, except where direction for certain management areas and management prescriptions provides otherwise.

Fire-3 **Guideline:** Wildland fire use is authorized forest-wide, except in high-use travel corridors, where there are susceptible known cultural resources, and where direction for certain management areas and management prescriptions provides otherwise. The appropriate response is suppression in high-use travel corridors or where there are susceptible known cultural resources. In areas authorized for wildland fire use, the full range of appropriate management responses, from full suppression to monitoring, may be used.

Fire-4 **Standard:** Human-caused fires (either accidental or arson) are unwanted wildland fires and will be suppressed.

Fire-5 **Standard:** Natural ignitions will be suppressed unless the area involved is covered by an approved fire use plan that outlines the use of wildland fire use fires.

Fire-6 **Guideline:** Except for initial attack fire suppression, all equipment used in ground-disturbing or fire suppression operations on the Forest shall be cleaned prior to entry onto the Forest, or movement from one Forest project area to another, to remove all plant parts, dirt, and material that may carry noxious weed seeds. Ground-disturbing operations include, but are not limited to, range seedings, timber harvest, reforestation, wildlife browse plantings, road construction, fuel reduction, and fire suppression operations.

Fire-7 **Guideline:** Avoid delivery of chemical retardant, foam, or additives to surface waters. An exception may be warranted in situations where overriding immediate safety imperatives exist, or when the fire would cause more long-term damage to fish habitats than chemical delivery to surface waters.

Fire-8 **Standard:** Locate incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities outside of Riparian

Habitat Conservation Areas (RHCAs). If the only suitable location for such activities is within an RHCA, an exemption may be granted if adverse effects to native aquatic organisms and riparian habitats can be mitigated effectively.

Fire-9 **Guideline:** On sites located on shallow or highly erodible soils, manage low intensity prescribed fire to minimize soil erosion and loss of ground cover.

Fire-10 **Guideline:** Avoid constructing permanent firebreaks on ridges or saddles in Canada lynx habitat.

Fire-11 **Guideline:** All wildfires in greater sage grouse breeding habitats in the Vernon and Strawberry Reservoir Management Areas should be suppressed. Prescribed fire and wildland fire use may be allowed in these areas only to maintain or enhance greater sage grouse habitat.

NOXIOUS WEEDS MANAGEMENT

Weeds-1 **Standard:** Only certified noxious weed-free hay or feed is allowed on National Forest land, including hay or feed for use by recreational livestock. Any materials such as hay, straw, or mulch that are used for rehabilitation and reclamation activities shall be certified weed-free.

Weeds-2 **Standard:** All seed used on National Forest System lands will be free of seeds from weeds listed on the current Utah Noxious Weed List and the supplemental “Additional Noxious Weeds Declared by Utah Counties” list (UDAF 2000b), and meet or exceed all standards set in the Utah Noxious Weed Act.

Weeds-3 **Guideline:** Designated collection sites for native species should remain free of noxious weeds and other undesirable species. Emphasis should be given to collection in areas that are scheduled for vegetation disturbance/removal where collection will not interfere with natural recovery or planned restoration.

Weeds-4 **Guideline:** Select weed-free locations for project and incident camps, staging areas, cargo loading, drop points, helibases, and parking areas whenever possible.

Weeds-5 **Guideline:** Avoid ignition and burning in areas with a high risk for invasion of noxious weeds unless such actions are part of a noxious weed control strategy.

Weeds-6 **Guideline:** Avoid or minimize all types of travel, including driving and skidding, through noxious weed-infested areas.

Weeds-7 **Standard:** Designated wash areas shall be established and utilized on projects where highly aggressive or extensive infestations of noxious weeds are present, and where equipment moving about the project has the potential to spread these infestations.

Weeds-8 **Guideline:** To the extent practical and consistent with other land management objectives, retain shade to suppress noxious weeds in areas where ground-disturbing activities are planned.

Weeds-9 **Standard:** For at least three years after a project is completed, treat invading noxious weeds, as needed, on areas impacted by ground-disturbing operations.

Weeds-10 **Guideline:** Stockpiles of topsoil should be kept free of weeds. Topsoil should not be imported from off-site (particularly from off-forest) except when absolutely necessary. If soil is to be brought in from off-forest, it should be tested for the presence of noxious weed seed and transported onto the Forest only if it is found to be weed-free.

Weeds-11 **Guideline:** Gravel or borrow material source sites with noxious weed species present should not be used unless effective treatment or other mitigation measures are implemented.

Weeds-12 **Guideline:** Spray or remove weeds on sites to be disturbed prior to beginning ground-disturbing activities.

Weeds-13 **Guideline:** Integrated Pest Management (IPM) strategies, including biological, physical, and chemical treatments, may be used to control noxious weeds and other undesirable plants on the Forest.

Weeds-14 **Guideline:** Treat native poisonous plants where site-specific analysis has documented a need based on substantial livestock loss, or where an imminent threat to humans exists.

Weeds-15 **Guideline:** For all proposed projects and activities, implement appropriate mitigation measures to prevent the establishment and aid the control of noxious weeds.

Weeds-16 **Standard:** Forest Service policies and guidance and Environmental Protection Agency (EPA) label instructions for pesticide application will be followed in implementing all treatment methods.

Weeds-17 **Guideline:** To limit the spread of noxious weeds and other undesirable plant species through fecal material, domestic animals used to manipulate vegetation should not be grazed in an infested area during the period of plant seed production, and directly moved to another site.

VEGETATION MANAGEMENT

Veg-1 **Standard:** Permits for the collection of federally-listed threatened or endangered plant species may only be issued for scientific and education purposes, and then only if a *Recovery Permit* has been issued by the U.S. Fish and Wildlife Service.

Veg-2 **Standard:** Permits for the collection of Forest Service sensitive plant species may only be issued for Forest Service-approved research or scientific purposes, and then only if collection is not likely to adversely impact population viability or have negative ecological effects.

Veg-3 **Guideline:** Permits for the collection of seeds or plant cuttings of species that are not federally-listed threatened, endangered, or candidate plants, or Forest Service sensitive plants, may be issued if collection is not likely to adversely impact population viability or have negative ecological effects.

Veg-4 **Standard:** Only hand-carried tools may be used to harvest seed.

Veg-5 **Standard:** Except for Forest Service approved scientific projects, restoration projects, or cultural uses, no seeds or plants may be collected in Research Natural Areas, locations where threatened or endangered plant species are known to occur, designated wilderness areas, areas recommended for wilderness designation, or developed recreation sites.

Veg-6 **Guideline:** Permits may be issued to collect plants for bioprospecting purposes.

Veg-7 **Guideline:** Manage approximately 80 percent of potential greater sage grouse breeding and winter habitat areas in the Vernon and Strawberry Reservoir Management Areas to support the percentages and heights of canopy cover listed in the table below. Breeding habitat should retain the given height levels of grasses and a diversity of forbs annually through June 15. Vegetation should be maintained in a mosaic of openings and shrubs.

Table 3-4. Vegetation Requirements in the Vernon and Strawberry Reservoir Management Areas

Vegetation Type	Minimum % Canopy Cover	Minimum Height Canopy Cover[1]	
		Vernon Management Area	Strawberry Reservoir Management Area
Greater Sage Grouse Breeding Habitat (Maintain through June 15)			
Sagebrush	15-25%	16-32 inches	16-32 inches
Grasses	≥ 15%	≥ 6 inches	≥ 7 inches
Forbs	≥ 10%	≥ 6 inches	≥ 7 inches
Greater Sage Grouse Winter Habitat			
Sagebrush	10-30%[2]	10-14 inches [2]	10-14 inches [2]
Grasses	N/A	N/A	N/A
Forbs	N/A	N/A	N/A

[1] Minimum height is measured as droop height, the highest naturally growing portion of the plant.
[2] Above snow.
N/A There are no minimum percent canopy cover or minimum height requirements for greater sage grouse winter habitat in grasses or forbs.

Veg-8 **Guideline:** Forest vegetative manipulation within active, alternative, and replacement northern goshawk nest sites should be designed to maintain or improve desired nest area habitat. See the glossary for definitions of these sites.

Veg-9 **Guideline:** Revegetation should be initiated as promptly as practical. Seed only where natural regeneration of desirable species is unlikely or is expected to be slow. Select low nutrient demanding native species to reduce the need for fertilization. Spot re-seed as necessary.

Veg-10 **Guideline:** Use management areas as the analysis areas in evaluating contributions to vegetative Desired Future Conditions (DFCs).

Veg-11 **Guideline:** Manage for at least 30 percent of aspen and aspen/conifer forest cover types, and at least 40 percent of Douglas-fir, white fir, mixed conifer, spruce/fir, and lodgepole pine forest cover types in mature and old structural stages. (This guideline applies only to forested cover types.)

Veg-12 **Guideline:** Silvicultural practices may be used to maintain or improve old growth and late successional stage characteristics. (This guideline applies only to forested cover types.)

Veg-13 **Guideline:** All vegetation management activities should mimic the natural pattern, structure, and composition of vegetation on the landscape (within the historic range of variability).

Veg-14 **Guideline:** Vegetation treatment units should be of sufficient size and number to disperse the effects of wildlife and livestock grazing.

Veg-15 **Standard:** Within forested vegetation treatment areas, both artificially and naturally regenerated areas will be excluded from livestock grazing, bedding, and trailing, and, where possible, from salting, fire, rodents, and other damaging agents until tree seedlings are of sufficient height (at least six feet tall for aspen) to withstand these activities as determined by the silvicultural prescription.

Veg-16 **Guideline:** Where essential to protect critical infrastructure such as roads, administrative sites, and recreation sites, large woody debris may be removed or manipulated.

Veg-17 **Guideline:** Large woody debris should be provided in stream channels as follows:

a. Provide at least 20 pieces of large woody debris per mile in coniferous forest ecosystems while protecting critical infrastructure. In these ecosystems, pieces of large woody debris should be at least 12 inches in diameter and 8 feet in length.

b. Provide at least 20 pieces of large woody debris per mile in deciduous forest ecosystems while protecting critical infrastructure. In these ecosystems, pieces of large woody debris should be at least 8 inches in diameter and 8 feet in length.

Veg-18 **Guideline:** The following amounts of down logs and large woody debris should be retained. These amounts should be present at the stand level on average, and, where available, distributed over each treated 10 acres. (This guideline applies only to forested cover types.)

Table 3-5. Minimum Number of Down Logs and Large Woody Debris by Cover Type

Cover Type	Minimum Down Logs per 10 Acres[1]	Minimum Log Size[2]		Tons of Minimum Large Woody Debris >3 Inches in Diameter per 10 Treated Acres[3]
		Mid-point Diameter	Length	
Ponderosa pine	30	12 inches	8 feet	50
Mixed conifer and spruce/fir	50	12 inches	8 feet	100
Aspen	50	6 inches	8 feet	30
Aspen and aspen/lodgepole	50	6 inches	8 feet	50

[1] Down logs take precedence over tons of coarse woody debris.
[2] If the minimum size is unavailable, retain the largest logs available on the site.
[3] This number inclusive of down logs.

Veg-19 **Guideline:** Trees may be felled in Riparian Habitat Conservation Areas (RHCAs) when they pose a significant safety risk. Keep felled trees on site when needed to provide large woody debris as per Veg-16 and Veg-17.

Veg-20 **Guideline:** Where large woody debris is below the desired range, activities that would further increase the deficit should not be allowed except to reduce hazards to humans or property along roads, trails, and in or adjacent to developed recreational facilities. (This guideline applies only to forested cover types.)

TIMBER MANAGEMENT

Timber-1 **Guideline:** Utilize the appropriate silvicultural system for the forest type and stand conditions (as shown in the following table) that meet the objectives outlined in the decision document for each specific project.

Table 3-6. Silvicultural Systems Available for Management by Tree Species

Species Group	Clearcut Systems	Individual Tree Selection	Group Selection	Shelterwood Systems
Spruce/fir		X	X	X
Douglas-fir/white fir		X	X	X
Lodgepole pine	X		X	X
Aspen	X			
Ponderosa pine		X	X	X

The appropriate stocking levels for each of the major species groups on the Forest are listed in the table below. Reforestation treatments following timber harvest will be designed to meet these levels.

Table 3-7. Minimum Stocking Levels for Certification[1]

Species Group	Trees Per Acre (Target Stocking)
Spruce/fir	285
Douglas-fir	201
White fir	255
Aspen	3,000
Lodgepole pine	246
Ponderosa pine	182

[1] Certification levels based on 35 percent of maximum stand density index.

Timber-2 **Standard:** The suitable timber base is derived only from management prescription 5.2 Forested Ecosystems – Vegetation Management. Timber harvest for stewardship purposes is allowed in all other management prescriptions **except**:

- 1.4 Wilderness,
- 2.1 Wild and Scenic Rivers – Wild Classification,
- 2.4 Research Natural Areas, or
- 2.6 Undeveloped.

Timber-3 **Guideline:** On lands not identified as suited for timber production, cut or remove timber to enhance or protect other resource values or as required for public safety or insect and disease control.

Timber-4 **Guideline:** Provide wood products and collection areas that are consistent with overall vegetative resource objectives and that ensure retention of snags and down woody debris appropriate to the collection area.

Timber-5 **Guideline:** Permits may be issued for fuelwood gathering and Christmas tree harvest where such activities are consistent with resource management objectives.

Timber-6 **Guideline:** Conifer snags 18 inches Diameter at Breast Height (DBH) or greater should not be removed for personal use fuelwood.

Timber-7 **Guideline:** The following minimum number and size of snags should be provided. If the minimum number of snags is unavailable, use the largest trees available on site. It is desirable to have snags represented in all size classes above the minimum where they are available, distributed across each 100 acres. (This guideline applies only to forested cover types.)

Table 3-8. Minimum Number of Snags by Cover Type

Cover Type	Minimum Snags per 100 Acres	Minimum Preferred Size	
		Diameter at Breast Height in Inches	Feet Tall
Douglas-fir and white fir	300	18	30
Mixed conifer and spruce/fir	300	18	30
Aspen	200	8	15
Lodgepole pine and aspen/conifer	300	8	15

Timber-8 **Guideline:** Where snags are below the desired range, activities that would further increase the deficit should not be allowed except to reduce hazards to humans or property along roads, trails, and in or adjacent to developed recreational facilities. (This guideline applies only to forested cover types.)

Timber-9 **Guideline:** Logging, construction, and maintenance activities should be conducted to prevent debris and slash from entering stream channels.

Timber-10 **Guideline:** Log landings should not be located on areas where surface runoff will discharge directly into the channel or within Riparian Habitat Conservation Areas.

Timber-11 **Standard:** Ground-based skidding will be limited to less than 40 percent slopes, except on highly erodible soils such as Green River and Mancos Shale where ground-based skidding will be limited to less than 30 percent slopes, unless site-specific analysis determines there will not be unacceptable effects to soil productivity or water quality.

Timber-12 **Standard:** Prohibit timber harvest, including fuelwood cutting (both recreational and permitted), in Riparian Habitat Conservation Areas (RHCAs) except as described below:

a. Allow salvage and fuelwood cutting in RHCAs only under the following conditions:
    1. Where catastrophic events such as fire, flooding, wind, or insect damage result in degraded riparian conditions, or
    2. Where the following conditions are met:
        i. Where present and future woody debris needs are met,
        ii. Where cutting would not prevent attainment of aquatic Forest Plan management direction, and
        iii. Where significant adverse effects on populations of aquatic organisms can be avoided.
b. Apply silvicultural practices, including prescribed fire, for RHCAs to acquire desired vegetation characteristics where needed to achieve aquatic Forest Plan management direction. Apply silvicultural practices in a manner that does not retard attainment of aquatic Forest Plan management direction and that avoids significant adverse effects to aquatic organism populations.

Timber-13 **Standard:** The collection of commercial and personal use fuelwood (including fuelwood for both recreational on-Forest use and permitted use) is prohibited in the lower 7.5 miles of the Diamond Fork River corridor.

Timber-14 **Guideline:** Timber management activities within the visual scene area of the following management prescriptions should be managed in a manner that provides special emphasis on visual quality:

- 2.2 Wild and Scenic Rivers – Scenic Classification,
- 2.3 Wild and Scenic Rivers – Recreational Classification, and
- 2.5 Scenic Byways.

MANAGEMENT ACTIVITIES – SOCIAL/ECONOMIC ENVIRONMENT

Management direction for the social/economic environment is found in numerous laws, regulations, executive orders, Forest Service policies, and additional guidance documents. These documents are listed in Appendix A. Additional specific management direction is provided in the following sections.

ENERGY TRANSMISSION, UTILITY, AND COMMUNICATION CORRIDORS AND SITES MANAGEMENT

C&S-1 **Guideline:** Locate energy transmission, mining, or other large structures and facilities that could be used as perch sites for raptors at least two miles from greater sage grouse leks.

C&S-2 **Guideline:** Avoid building power lines and other tall structures that could become potential perch sites for raptors within two miles of greater sage grouse habitats (nesting, brood-rearing, and winter) in the Vernon and Strawberry Reservoir Management Areas. Bury power lines or, if structures must be built or currently exist, modify the structures to prevent raptors from using the structures.

C&S-3 **Guideline:** For existing and proposed power line construction, ensure raptor protection measures are utilized to reduce raptor mortality.

C&S-4 **Standard:** For permit issuance or re-issuance, require burial of telephone lines and electrical utility lines of 33 kilovolts or less (including new lines and the replacement of existing lines in existing corridors), unless one or more of the following applies:

a. Objectives for scenery can be met using an overhead line.
b. Burial is not feasible due to geologic hazard or unfavorable geologic conditions.
c. Greater long-term site disturbance would result if the lines were buried.
d. Burial is not technically feasible.

C&S-5 **Guideline:** Public access restrictions may be imposed within energy transmission, utility, and communication corridors and sites for health, safety, or resource considerations, or to be compatible with management direction for surrounding areas.

C&S-6 **Guideline:** New hydroelectric ancillary facilities should be located outside of Riparian Habitat Conservation Areas (RHCAs). If hydroelectric facilities must be located in RHCAs, they should be located, operated, and maintained to avoid effects that would retard or prevent attainment of aquatic Forest Plan management direction and to avoid significant adverse effects on populations of native aquatic organisms.

GRAZING MANAGEMENT

Graze-1 **Standard:** Term livestock grazing may not be permitted in the following management prescriptions:

- 2.1 Wild and Scenic Rivers – Wild Classification,
- 2.4 Research Natural Areas,
- 3.2 Watershed Emphasis,
- 4.5 Developed Recreation,
- 8.1 Mineral Development,
- 8.3 Administrative Sites (except as allowed for administrative purposes per guideline MP-8.3-3 on page 3-51), or
- 8.4 Recreation Residences.

Graze-2 **Guideline:** Livestock grazing may continue in designated dispersed recreation areas.

Graze-3 **Standard:** Limit grazing to meet the following utilization levels within Riparian Habitat Conservation Areas (RHCAs) based on the average current year's growth.

Table 3-9. Utilization Standards by RHCA Class

RHCA Class	Minimum Percent of Stream Length	Utilization Standard by Season of Use			
		Very Early – Early		Mid – Late Seral	
		Early	Late	Early	Late
Minimum Greenline Stubble Height[1]					
Class I	90%	5”	6”	4”	5”
Class II	80%	4”	5”	3”	4”
Class III	70%	3”	4”	2”	3”
Forage Utilization Limits[2]					
Class I	90%	45%	35%	55%	45%
Class II	80%	50%	40%	60%	50%
Class III	70%	60%	50%	65%	55%
Willow Utilization[2]					
Class I	90%	N/A	35%	N/A	50%
Class II	80%	N/A	35%	N/A	50%
Class III	70%	N/A	35%	N/A	50%

Note: There are no willow utilization standards for early season use.
[1] Height of key species (palatable, hydrophytic species indicative of mid to late seral riparian plant communities, or as indicated in the site-specific Allotment Management Plan). If acceptable “key species” are absent from a site, only utilization standards shall be used.
[2] Percent of total average annual growth.

Graze-4 **Standard:** Limit grazing to meet the following utilization levels on non-riparian vegetation types based on the annual average of the current year’s growth. However, through June 15, minimum canopy cover and height requirements for greater sage grouse habitat in the Vernon and Strawberry Reservoir Management Areas (as shown in the table in Veg-7 on page 3-17) take precedence over the forage utilization standards in the following table.

Table 3-10. Forage Utilization Standards

Vegetation Type	Forage Utilization	
	Very Early – Early Seral	Mid – Late Seral
General Uplands and Winter Range		
Upland shrublands (sagebrush, snowberry, mountain mahogany species, cliffrose, bitterbrush, saltbrush, and mountain brush)	40%	60%
Grasslands	45%	65%
Forest-wide		
Sub-alpine shrublands	25%	35%
Sub-alpine grasslands	40%	45%

Graze-5 **Standard:** Locate new livestock troughs, tanks, and holding facilities out of Riparian Habitat Conservation Areas (RHCAs). For existing livestock handling facilities inside RHCAs, assure that facilities do not prevent attainment of aquatic Forest Plan management direction. Modify, relocate, or close existing facilities where aquatic Forest Plan management direction cannot be met.

Graze-6 **Standard:** Locate livestock salt grounds outside of Riparian Habitat Conservation Areas (RHCAs).

Graze-7 **Standard:** Locate sheep bed grounds outside of Riparian Habitat Conservation Areas (RHCAs).

Graze-8 **Guideline:** Minimize trailing livestock through Riparian Habitat Conservation Areas (RHCAs). Close or relocate livestock driveways to minimize impacts to RHCAs.

Graze-9 **Guideline:** Implement intensive grazing management that provides periodic rest designed to achieve and maintain desired vegetation community composition and structure.

Graze-10 **Guideline:** Sheep should graze through foraging areas only once and should not return to the same area at a later date during the same grazing season.

Graze-11 **Guideline:** Limit use of traditional bed grounds and salting areas to twice on the same bed ground during a grazing season. Some areas in unsatisfactory condition may require closure of bed grounds to improve vegetative conditions.

Graze-12 **Guideline:** Defer livestock grazing in areas disturbed by wildland fire or other natural events until vegetation has reestablished sufficiently, but for no less than two growing seasons.

Graze-13 **Standard:** Riparian Habitat Conservation Areas (RHCAs) are closed to all forms of predator control except for the treeing and subsequent shooting of cougar or bear by U.S. Department of Agriculture Wildlife Services personnel during approved control activities or by hunters during established seasons. This direction applies only to predators preying on authorized livestock.

Graze-14 **Standard:** M-44 devices can be used on grazing allotments only when current year losses to coyote predation, using the USDA Wildlife Service's reported losses, have exceeded historical losses, **and** it is the District Ranger's judgment that all other methods to control offending animals have failed, **and** there is a serious threat to livestock. This direction applies only to predators preying on authorized livestock.

Graze-15 **Standard:** Predator control in wilderness (all of which is mapped as no control zone – wilderness) is not allowed except in emergencies. Permission to pursue an offending animal within wilderness may be considered if there are two confirmed killing events where the animal has retreated into the wilderness and returned to molest livestock, **and** it is the Regional Forester's judgment that existing circumstances warrant the action. This direction applies only to predators preying on authorized livestock.

Graze-16 **Standard:** The pursuit of a predator for the purposes of predator control is allowed for a maximum distance of 2 miles beyond the boundary of the affected sheep allotment. If the offending animal enters a coordinated control zone, no control zone – non-wilderness, or no control zone – wilderness before the 2 mile distance is reached, the animal may not be pursued further except under the following conditions:

- The offending animal has crossed into a no control zone – non-wilderness, **and**
- It is the District Ranger's judgment that existing circumstances warrant the action (this authorization must be granted for each individual case).

This direction applies only to predators preying on authorized livestock.

Graze-17 **Standard:** Livestock grazing shall not impede the successful establishment of regeneration in naturally created or management created openings in forested habitats. Utilize fencing and/or herd management as necessary.

LANDS AND PROPERTY BOUNDARY MANAGEMENT

Lands-1 **Guideline:** Use the following criteria to assist in the identification of lands that could be made available for disposal/conveyance (criteria are not listed in any priority):

1. Lands inside or adjacent to communities or intensively developed private lands that are valuable primarily for non-National Forest System purposes.
2. Parcels that would serve a greater public need in state, county, city, or other federal agency ownership.
3. Inaccessible parcels isolated from other National Forest System lands (e.g., parcels intermingled with private lands).
4. Parcels within major blocks of private land used substantially for non-National Forest System purposes.
5. Parcels having boundaries or portions of boundaries with inefficient configurations that would support more logical and efficient management (e.g., projecting necks or long, narrow strips of land).
6. Additionally, disposal/conveyance of lands should not result in any net loss in critical winter ranges or threatened, endangered, or sensitive species habitats; wetlands; or identified critical access to the Forest.

Lands-2 **Guideline:** Use the following criteria to assist in the identification of lands that could be acquired (criteria are not listed in any priority):

1. Lands associated with critical terrestrial or aquatic wildlife habitats (e.g., big game winter range).
2. Lands needed for the protection of significant historical or cultural resources.
3. Lands that enhance public access or recreation opportunities, or provide protection to aesthetic values.
4. Lands that would affect more logical and efficient management (e.g., isolated private or non-National Forest System inholdings).
5. Lands needed to reduce expenses of both the Forest Service and the public in administration and utilization of resources (e.g., split mineral estates).

RECREATION MANAGEMENT

Rec-1 **Guideline:** Existing campgrounds in riparian areas and floodplains may remain and be modified or reconstructed. Consider closing or relocating facilities where aquatic Forest Plan management direction cannot be met.

Rec-2 **Guideline:** New recreation facilities should be located outside of RHCAs. If the only suitable location for such facilities is within an RHCA, an

exception may be made if adverse effects to native aquatic organisms are avoided or adequately mitigated.

Rec-3 **Guideline:** Recreation carrying capacity in dispersed areas should be determined by the physical capability of the site.

Rec-4 **Standard:** Horse use is prohibited in all campgrounds except where otherwise designated.

Rec-5 **Standard:** The entire Forest is open to camping in undeveloped areas unless otherwise posted closed for resource protection or public safety.

Rec-6 **Guideline:** Overnight camping is discouraged within 100 feet of any perennial lake or stream except in designated dispersed sites and existing developed sites.

Rec-7 **Guideline**: All recreation facilities construction and reconstruction should comply with Americans with Disabilities Act (ADA) standards and accessibility guidelines where technically feasible.

Rec-8 **Standard:** Pack-it-in pack-it-out practices will be used in all Forest Service managed facilities and dispersed sites not managed under permit.

Rec-9 **Guideline:** Where possible, use existing and future developed sites as base areas and jumping-off points for dispersed recreation activities to consolidate use.

Rec-10 **Standard:** The Bonneville Shoreline Trail on National Forest System lands will be a multipurpose, non-motorized trail. Trail sections on other jurisdictions may have differing restrictions.

Rec-11 **Guideline:** Offer fuelwood to the public to discourage the collection of fuelwood within developed recreation sites in the lower 7.5 miles of the Diamond Fork River corridor.

Rec-12 **Standard:** Off-road vehicle use for the purpose of retrieving game is not allowed.

Rec-13 **Standard:** Recreational use of motorized vehicles other than on designated roads and trails is limited to 150 feet from the edge of each side of a classified road to access dispersed recreation sites, except where 150 feet would cross into a designated wilderness area.

Rec-14 **Standard:** No additional recreation developments such as golf courses, ski resorts, or tennis courts, or expansion of existing recreation developments outside of the permitted area are allowed except for

developments or expansions already approved by the date this revised Forest Plan has been approved.

Rec-15 **Guideline:** Designated, hardened, dispersed recreational facilities may be developed to concentrate use and reduce resource impacts to the biophysical resources.

SCENERY MANAGEMENT

Scene-1 **Standard:** Safety concerns will supercede objectives for scenery when vegetative manipulation, signing, etc., is needed to ensure public safety.

Scene-2 **Guideline:** Forest resource uses or activities should meet the assigned objectives for scenery management as displayed on the map for each management area located in Chapter 5. In the short-term there may be activities that produce impacts not meeting planned scenery objectives, yet facilitate a higher level of scenic quality in the long-term.

Scene-3 **Standard:** The Forest Service publication *The Built Environment Image Guide* (USDA 2001a) and the Recreation Opportunity Spectrum (ROS) class will be considered in facility design and in the selection of construction materials and colors.

SPECIAL USES MANAGEMENT

SU-1 **Standard:** Issue no outfitter and guide permits for use in wilderness. Allow exceptions to be considered on a case-by-case basis for special regulation hunts such as cougar, limited entry, and once-in-a-lifetime permits.

SU-2 **Standard:** Manage existing recreation residences at the Tibble Fork, Silver Lake Flat, and Bryants Fork areas as recreation residence tracts.

SU-3 **Guideline:** Manage existing recreation residences in the Payson Lake and Nebo areas as recreation tracts unless environmental analyses demonstrate a higher public need for these lands.

SU-4 **Standard:** No new recreation residence tracts will be created or developed. No new construction will be permitted on vacant lots within existing recreation residence tracts. A vacant lot may be occupied as an in-lieu lot of an existing permit holder in limited circumstances.

TRANSPORTATION MANAGEMENT

Trans-1 **Standard:** Off-highway vehicles greater than 50 inches wide will only be allowed on the classified road system.

Trans-2 **Guideline:** Off-highway vehicles 50 inches wide or less will be allowed on the classified roads system that is designated open for their use.

Trans-3 **Guideline:** Motorized trails should not be constructed or single-track motorized trails reconstructed to accommodate all-terrain vehicles with the exception of trails necessary to complete loops and linkages in the all-terrain system. Existing ATV trails may be reconstructed and/or realigned to address public health and safety, and natural resource concerns.

Trans-4 **Standard:** Motorized trail use is not allowed in areas with a Semi-Primitive Non-Motorized or Primitive Recreation Opportunity Spectrum (ROS) designation, with the exception of emergency vehicles.

Trans-5 **Guideline:** Trails should be managed for multiple uses except in isolated instances where specific trails may be managed for limited uses if an overriding or unique situation is identified.

Trans-6 **Guideline:** Winter parking in Strawberry Valley should not be expanded by more than 25 percent of the capacity existing in the year 2003.

Trans-7 **Guideline:** Make mutually advantageous agreements with local governments (e.g., tribal, state, county, and city) to include primary access roads to National Forest System land on their transportation system where these agreements will maintain the right to public use.

Trans-8 **Standard:** No soil shall be used to cover temporary bridges.

Trans-9 **Guideline:** Construct and maintain crossings to prevent diversion of streamflow out of the channel and down the road in the event of crossing failure.

Trans-10 **Guideline:** Avoid significant adverse effects to populations of native aquatic organisms and sediment delivery to streams by:

a. Avoiding road locations in Riparian Habitat Conservation Areas (RHCAs) where feasible,
b. Outsloping the roadway surface (except in cases where outsloping would increase sediment delivery to streams or where outsloping is not feasible or safe),

c. Routing road drainages away from potentially unstable stream channels, fills, and hillslopes (if this is not possible, mitigate effects),

d. Avoiding disruption of natural hydrologic flow paths, and

e. Avoiding sidecasting of soils or snow directly into streams.

Trans-11 **Guideline:** Road crossings and other structures should not disrupt the migration or other movement of aquatic organisms inhabiting the water body unless a barrier is desired to protect specific species.

Trans-12 **Standard:** Routes and areas on the Forest are closed to motorized use unless designated open on the travel plan or posted open on the ground.

Trans-13 **Standard:** No off-road motorized vehicle use by the public is allowed unless specified by a Forest Service permit, operating plan/operating instructions, or contract (e.g., fuelwood collection, maintenance of improvements, or minerals exploration).

Trans-14 **Standard:** Locations, plans, designs, specifications, funding, and alternatives for access will be the responsibility of the special use permit holder, subject to review and approval by the Forest before any construction.

Trans-15 **Guideline:** The following criteria may be the basis for closure, obliteration, and/or decommission of classified and unclassified roads and trails:

a. Use of the road and/or trail travelway is causing vegetation damage.

b. The road and/or trail is located where unacceptable levels of sediment are entering perennial or intermittent streams.

c. The road and/or trail is located on side slopes greater than 65 percent.

d. The road grades are greater than 12 percent, and the trail grades are greater than 16 percent, depending on the type of soils and types of mitigation.

e. The road and/or trail is located on soils subject to mass movement.

f. The road and/or trail is substantially within wetlands and riparian areas, and is in non-compliance with the Clean Water Act.

g. The road and/or trail degrade and/or compromise the Forest's Visual Quality Objectives (VQOs).

h. The road and/or trail does not serve any forest management objective.

i. The road is adversely affecting a heritage site eligible for the National Register of Historic Sites.

Trans-16 **Guideline:** Seasonal road closures may be used to manage and protect resources and capital investments.

Trans-17 **Guideline:** The Forest Service should continue to exercise jurisdiction over Forest Service roads developed after the reservation of the Forest, even though a county may designated a road as a Class D road. At the discretion of the Forest Service, in cooperation with the state and affected county, jurisdiction of Forest Service roads may be transferred.

Trans-18 **Guideline:** If a minor or local road crosses several management prescriptions, the road should meet the respective resource area objective while providing a reasonably uniform traffic service level over the entire route.

Trans-19 **Standard:** Temporary roads will be closed and rehabilitated following completion of the activities for which they were constructed and any associated administrative use. Temporary roads will be managed to prevent use by the general public.

RECREATION OPPORTUNITY SPECTRUM (ROS) CLASSES

ROS-1 **Guideline:** Forest resource uses and activities should meet the objectives for the assigned Recreation Opportunity Spectrum (ROS) classes as displayed on the map for each management area located in Chapter 5.

ROS-2 **Standard:** The Semi-Primitive Non-Motorized Recreation Opportunity Spectrum (ROS) class is closed to motorized use including over-the-snow vehicles.

ROS-3 **Guideline:** Motorized use in the Semi-Primitive Non-Motorized Recreation Opportunity Spectrum (ROS) class is limited to heli-skiing activities, emergency situations to protect human life, and limited administrative purposes, which include, but are not limited to, the use of:

- Chainsaws, rock drills, and other motorized tools,
- Motorized equipment and vehicles for initial attack fire suppression,
- Motorized equipment and vehicles for hazard fuels reductions,
- Motorized equipment and vehicles for fire suppression only when a Wildland Fire Situation Analysis shows such action is necessary,
- Motorized equipment and vehicles where required to maintain or reconstruct permitted facilities such as dams, and
- Motorized equipment and vehicles to conduct permitted activities such as snow measurement and seismic exploration.

ROS-4 **Standard:** Motorized recreation use, with the exception of over-the-snow vehicles, is limited to the classified road system and those parts of the inventoried trail system designated for motorized use in all Semi-Primitive Motorized, Roaded Natural, Roaded Modified, and Rural Recreation Opportunity Spectrum (ROS) classes. Any other use of motorized equipment off of classified roads or inventoried trails is allowed only for approved administrative activities or as authorized in a permit.

ROS-5 **Guideline:** Over-the-snow vehicle use is allowed off trails and roads in all Semi-Primitive Motorized, Roaded Natural, Roaded Modified, and Rural Recreation Opportunity Spectrum (ROS) classes, except where otherwise seasonally closed to motorized use. The map “Over-the-snow Vehicle Use Opportunities” located in Appendix E illustrates the areas where these uses are allowed.

ROS-6 **Standard:** Road construction and reconstruction opportunities are allowed by Recreation Opportunity Spectrum (ROS) class as described in the table below.

Table 3-11. Road Construction Opportunities by Recreation Opportunity Spectrum (ROS) Class

Allowable Activity	Recreation Opportunity Spectrum (ROS)					
	P	SPNM	SPM	RN	RM	R
Construction of temporary roads	No	No	Yes	Yes	Yes	Yes
Construction of new classified roads	No	No	No	Yes	Yes	Yes
Reconstruction or realignment of existing classified roads to address public safety and resource concerns	No	No	Yes	Yes	Yes	Yes

P	Primitive	RN	Roaded Natural
SPNM	Semi-Primitive Non-Motorized	RM	Roaded Modified
SPM	Semi-Primitive Motorized	R	Rural

MANAGEMENT PRESCRIPTIONS

1.4 WILDERNESS

MP-1.4-1 **Guideline:** Wildland fire use is allowed to reduce unnatural fuel accumulations and restore fire to its natural role when the following conditions exist:

a. Reduction of available fuels and other conditions will promote attainment of a healthy wilderness ecosystem.

b. Fire location does not constitute an unacceptable risk to resources or property outside the wilderness area.

MP-1.4-2 **Standard:** Prescribed fire is allowed only to meet wilderness management objectives.

MP-1.4-3 **Standard:** Manage activities on the Forest to maintain air quality to meet Class II standards.

MP-1.4-4 **Guideline:** Long-term (longer than 14 days) visibility impairment from human activities (in-service or out-service) should not impair long-term baseline visual range more than 10 percent of the 90th percentile in wilderness airsheds.

MP-1.4-5 **Standard:** Lands are not available for the collection of forest products, except as provided for in MP-1.4-6, MP-1.4-7, and MP-1.4-8.

MP-1.4-6 **Guideline:** Incidental recreational collection of plant materials is allowed as long as plant survival is not impaired (e.g., no removal of tree bark or uprooting of plants).

MP-1.4-7 **Guideline:** No collection of seeds or plants is permitted except for Forest Service approved scientific projects, restoration projects, or cultural uses.

MP-1.4-8 **Standard:** Incidental recreational rock collecting is allowed as long as geologic features are not defaced.

MP-1.4-9 **Guideline:** Establish seasonal camping stay and group size limits where needed to meet management goals.

MP-1.4-10 **Standard:** The Mount Timpanogos Wilderness Area is closed to open campfires.

MP-1.4-11 **Guideline:** Some hardening of wilderness infrastructure, such as trails, campsites, and sanitation facilities, may occur in order to reduce impacts on adjacent areas.

MP-1.4-12 **Guideline:** Orient education and information efforts toward low impact, leave no trace use.

MP-1.4-13 **Standard:** Collection of vertebrate fossils is prohibited.

1.5 RECOMMENDED WILDERNESS

MP-1.5-1 **Standard:** Existing motorized and mechanical transport uses are allowed only if they do not lead to long-term adverse changes to wilderness character.

MP-1.5-2 **Standard:** New roads or trails for motorized or mechanical transport uses are prohibited.

MP-1.5-3 **Standard:** Mechanical vegetation treatments that would compromise the wilderness values of the area are prohibited.

MP-1.5-4 **Standard:** Oil and gas leasing is prohibited.

MP-1.5-5 **Guideline:** Existing roads and trails may be reconstructed and/or realigned to address public health and safety, and natural resource concerns.

MP-1.5-6 **Guideline:** Management activities should result in either the maintenance of the designated Recreation Opportunity Spectrum (ROS) class or a shift to a more primitive ROS class.

MP-1.5-7 **Guideline:** New recreation special use permits or the expansion of terms and conditions in existing special use permits are allowed only if no adverse affects to wilderness character would result.

MP-1.5-8 **Guideline:** Wildland fire use is allowed to reduce unnatural fuel accumulations and restore fire to its natural role when the following conditions exist:

a. Available fuels and other conditions will promote attainment of a healthy ecosystem.
b. Fire location does not constitute an unacceptable risk to resources or property outside the management prescription area.

MP-1.5-9 **Guideline:** Prescribed fire is allowed.

MP-1.5-10 **Standard:** Lands are not available for the collection of forest products, except as provided for in MP-1.5-11, MP-1.5-12, and MP-1.5-13.

MP-1.5-11 **Guideline:** Incidental recreational collection of plant materials is allowed as long as plant survival is not impaired (e.g., no removal of tree bark or uprooting of plants).

MP-1.5-12 **Guideline:** No collection of seeds or plants is permitted except for Forest Service approved scientific projects, restoration projects, or cultural uses.

MP-1.5-13 **Standard:** Incidental recreational rock collecting is allowed as long as geologic features are not defaced.

2.1 WILD AND SCENIC RIVERS – WILD CLASSIFICATION

MP-2.1-1 **Standard:** A few minor existing structures are allowed to remain if such structures are not incompatible with the essentially primitive and natural values of the viewshed. No new structures are allowed.

MP-2.1-2 **Standard:** No major public use areas, such as campgrounds, interpretive centers, or administrative headquarters, may be constructed.

MP-2.1-3 **Guideline:** Trails may be constructed and/or maintained in accordance with standards applied to wilderness areas.

MP-2.1-4 **Standard:** All direction applicable to management prescription 1.4 Wilderness is also applicable to management prescription 2.1.

2.2 WILD AND SCENIC RIVERS – SCENIC CLASSIFICATION

MP-2.2-1 **Standard:** Subject to regulations (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 may 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.

MP-2.2-2 **Standard:** Water supply dams and major diversions are prohibited.

MP-2.2-3 **Standard:** Development of hydroelectric power facilities is prohibited.

MP-2.2-4 **Standard:** Flood control dams and levees are prohibited.

MP-2.2-5 **Standard:** A wide range of silvicultural practices are allowed in scenic river corridors, but must be designed to maintain a near natural environment. Ensure there are no substantial adverse effects on the river and its immediate environment.

MP-2.2-6 **Guideline:** Vegetation management activities are allowed only if they maintain or enhance the scenic setting.

MP-2.2-7 **Guideline:** New transmission, gas, and water lines, etc., are discouraged.

MP-2.2-8 **Guideline:** Livestock grazing within existing allotments, and recreational grazing (e.g., by llamas or horses), is allowed to the degree it does not compromise the outstandingly remarkable values of the area.

MP-2.2-9 **Standard:** Large scale public use facilities, such as moderately-sized campgrounds, visitor information stations, and administrative headquarters, are allowed if such structures are screened from the river, maintaining a near natural environment.

MP-2.2-10 **Guideline:** Recreation and non-recreation developments may be considered.

MP-2.2-11 **Guideline:** Additional motorized and/or non-motorized trails may be constructed.

MP-2.2-12 **Guideline:** Roads may occasionally bridge the river area and short stretches of conspicuous or longer stretches of inconspicuous and well-screened roads may be allowed if consistent with the area's Recreation Opportunity Spectrum (ROS) class. 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.

MP-2.2-13 **Standard:** Where motorized travel is allowed, it will be managed to protect the outstandingly remarkable river values.

2.3 WILD AND SCENIC RIVERS – RECREATIONAL CLASSIFICATION

MP-2.3-1 **Standard:** 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 will be conducted in a manner that minimizes surface disturbance, sedimentation, pollution, and visual impacts.

MP-2.3-2 **Standard:** Vegetation management activities will employ needed mitigation to protect the immediate river environment, water quality, and scenic, fish, wildlife, and other values.

MP-2.3-3 **Guideline:** Vegetation management activities are allowed only if they maintain or enhance the recreational setting.

MP-2.3-4 **Guideline:** New transmission lines, gas lines, water lines, etc., are discouraged.

MP-2.3-5 **Guideline:** Campgrounds and picnic areas may be established in close proximity to the river. A recreational classification, however, does not require extensive recreation development.

MP-2.3-6 **Standard:** New structures for habitation (e.g., warming huts, recreation residences) are prohibited.

MP-2.3-7 **Guideline:** Recreation developments (e.g., visitor centers, restrooms, parking areas, interpretive sites, and hardened access trails) may be provided. Non-recreation developments may be considered.

MP-2.3-8 **Guideline:** Additional motorized and/or non-motorized trails may be constructed consistent with the area's Recreation Opportunity Spectrum (ROS) class.

MP-2.3-9 **Standard:** Allow existing low dams, diversion works, riprap, and other minor structures provided the waterway remains generally natural in appearance and generally free flowing. New structures are prohibited.

MP-2.3-10 **Standard:** New developments of hydroelectric power facilities are prohibited.

MP-2.3-11 **Standard:** Allow existing flood control works to be maintained. New structures are prohibited.

MP-2.3-12 **Guideline:** Paralleling roads or railroads may be constructed on one or both riverbanks if consistent with the area's Recreation Opportunity Spectrum (ROS) class. Several bridge crossings and numerous river access points may exist.

MP-2.3-13 **Guideline:** Construction of temporary roads and construction and reconstruction of classified roads may be allowed only if needed to expand

or maintain recreational access and if consistent with the area's Recreation Opportunity Spectrum (ROS) class.

2.4 RESEARCH NATURAL AREAS (RNAs)

MP-2.4-1 **Guideline:** Vegetation management activities are only allowed when necessary to help perpetuate the unique and/or representative ecosystem.

MP-2.4-2 **Standard:** No recreation or non-recreation developments are allowed.

MP-2.4-3 **Standard:** No motorized or non-motorized trails may be constructed.

MP-2.4-4 **Standard:** No road construction or reconstruction is allowed.

MP-2.4-5 **Guideline:** No collection of seeds or plants is permitted except for Forest Service approved scientific projects, restoration projects, or cultural uses.

2.5 SCENIC BYWAYS

MP-2.5-1 **Guideline:** Vegetation management activities are only allowed when necessary to provide for public safety or to maintain or enhance the outstanding recreational, education, and scenic qualities of the area.

MP-2.5-2 **Guideline:** Recreation and non-recreation developments (e.g., signage, interpretation, and pull-offs) may be provided as needed, compatible with the scenic setting.

MP-2.5-3 **Guideline:** Additional motorized and/or non-motorized trails may be constructed.

MP-2.5-4 **Guideline:** Temporary and classified roads may be constructed if consistent with the area's Recreation Opportunity Spectrum (ROS) class.

2.6 UNDEVELOPED

MP-2.6-1 **Guideline:** Non-recreation developments may be allowed if needed for valid existing rights or if the development maintains the qualities associated with the area.

MP-2.6-2 **Standard:** Prescribed fire, wildland fire use, and noxious weed treatments are the only vegetation management activities allowed.

MP-2.6-3 **Standard:** No recreation developments are allowed.

MP-2.6-4 **Standard:** No new motorized trails may be constructed.

MP-2.6-5 **Guideline:** New non-motorized trails may be constructed.

MP-2.6-6 **Standard:** No temporary or classified roads may be constructed.

3.1 AQUATIC, TERRESTRIAL, AND HYDROLOGIC RESOURCES

MP-3.1-1 **Guideline:** Non-recreation developments may be considered.

MP-3.1-2 **Guideline:** Total soil resource commitment should be limited to no more than 4 percent of the riparian area acreage with this prescription within any given watershed.

MP-3.1-3 **Guideline:** Vegetation management activities may be allowed if they maintain or enhance biophysical resources.

MP-3.1-4 **Guideline:** Additional motorized and/or non-motorized trails may be constructed.

3.2 WATERSHED EMPHASIS

MP-3.2-1 **Guideline:** Non-recreation developments may be considered.

MP-3.2-2 **Guideline:** Total soil resource commitment should be limited to no more than 3 percent of the riparian area acreage with this prescription within any given watershed.

MP-3.2-3 **Guideline:** Vegetation management activities may be allowed if they maintain or enhance biophysical resources.

MP-3.2-4 **Standard:** All motorized recreation (including the use of over-the-snow vehicles) in big game winter range is limited to designated routes.

MP-3.2-5 **Standard:** Motorized trail opportunities are limited to those existing as of the implementation date of this 2003 Forest Plan revision. No increase in miles of motorized trails is allowed except in the event realignment or relocation is needed to address public safety or resource concerns.

MP-3.2-6 **Standard:** Road density and design will be compatible with watershed and habitat objectives.

3.3 AQUATIC AND TERRESTRIAL HABITAT

This prescription applies to areas with multiple habitats (big game winter range, Lynx Analysis Units [LAUs], greater sage grouse habitat in the Vernon and Strawberry Reservoir Management Areas, etc.). Where habitats overlap, the most restrictive standard or guideline will take precedence. See Appendix E for maps of habitat areas.

MP-3.3-1 **Guideline:** Non-recreation developments may be considered.

MP-3.3-2 **Guideline:** Vegetation management activities may be allowed if they maintain or enhance biophysical resources.

MP-3.3-3 **Guideline:** Designated, hardened, dispersed recreational facilities may be developed to concentrate use and reduce resource impacts to the biophysical resources.

MP-3.3-4 **Guideline:** Additional motorized and/or non-motorized trails may be constructed.

MP-3.3-5 **Standard:** Road density and design will be compatible with watershed and habitat objectives.

MP-3.3-6 **Guideline:** For streams identified as conservation and persistence streams for Bonneville and Colorado River cutthroat trout, total soil resource commitment should be limited to no more than 4 percent of the riparian area acreage within this prescription within the watershed. These conservation and persistence streams are identified in Chapter 2, sub-goals G-2-20 and G-2-21.

APPLY THE FOLLOWING STANDARDS AND GUIDELINES IN BIG GAME WINTER RANGE (SEE BIG GAME WINTER RANGE MAP IN APPENDIX E).

MP-3.3-7 **Guideline:** Classified roads not needed for through travel, or that do not provide access to an active project or a designated recreation destination (e.g., cross-country ski and snowmobile trailheads) should be closed from December 1 to March 30. If classified roads are open to through travel or provide access to recreation destinations (e.g., cross-country ski and snowmobile trail heads), they should be designed, constructed, and managed to accommodate passenger car traffic and snow removal.

MP-3.3-8 **Guideline:** Surface disturbances should receive prompt revegetation efforts using native species desirable for wintering big game.

MP-3.3-9 **Guideline:** Give priority to control of inappropriate off-highway vehicle use and unauthorized mineral removal on winter range along the Wasatch Front.

MP-3.3-10 **Standard:** All motorized recreation (including the use of over-the-snow vehicles) in big game winter range is limited to designated routes.

APPLY THE FOLLOWING STANDARDS AND GUIDELINES IN CANADA LYNX ANALYSIS UNITS (SEE LYNX ANALYSIS UNITS [LAUs] MAP IN APPENDIX E).

MP-3.3-11 **Guideline:** Spruce/fir old growth acreage should be maintained with at least 50 percent of the acreage in stands greater than 30 acres in size, at least 25 percent of the acreage in stands greater than 80 acres, and 25 percent in stands greater than 5 acres. Old growth aspen acreage should be in stands greater than 80 acres in size.

MP-3.3-12 **Standard:** If more than 30 percent of the Canada lynx habitat in a Lynx Analysis Unit (LAU) is currently in unsuitable condition, no further reduction of suitable habitat shall occur as a result of vegetation management activities.

MP-3.3-13 **Guideline:** Vegetation management shall not change more than 15 percent of Canada lynx habitat within a Lynx Analysis Unit (LAU) to an unsuitable condition within a 10 year period.

MP-3.3-14 **Guideline:** Within each Lynx Analysis Unit (LAU), maintain denning habitat on at least 10 percent of the area capable of producing stands with characteristics suitable for denning habitat. Denning habitat should be well distributed, in patches generally larger than 5 acres.

MP-3.3-15 **Guideline:** Vegetation management activities designed to retain or restore Canada lynx denning habitats should be located where there is a low probability of stand-replacing fire.

MP-3.3-16 **Standard:** Pre-commercial thinning will be allowed only when stands no longer provide high-quality snowshoe hare habitat (e.g., self-pruning processes have eliminated snowshoe hare cover and forage availability during winter conditions with average snowpack), or where necessary to provide defensible space within 200 feet of Forest Service or private infrastructure.

MP-3.3-17 **Guideline:** Following a disturbance such as a blowdown, fires, insects, and disease, where Canada lynx denning habitat is less than 10 percent of a Lynx Analysis Unit (LAU), do not salvage harvest when the affected area is smaller than five acres if it could continue to provide lynx denning

habitat (exceptions exist for developed recreation sites or other sites of high human concentration). Where larger areas are affected, retain a minimum of 10 percent of the affected area per LAU in patches of at least five acres to provide future denning habitat. In such areas, defer or modify management activities that would prevent development or maintenance of lynx foraging habitat.

MP-3.3-18 **Standard:** A net increase in groomed or designated over-the-snow routes or the creation of any designated snowmobile play areas in Lynx Analysis Units (LAUs) is not allowed unless the designation serves to consolidate unregulated use and improves Canada lynx habitat. Over-the-snow routes for winter logging activities, non-recreational special uses, and mineral and energy exploration–and-development activities and practices are exceptions to this restriction. Cross-country snowmobile use is allowed.

MP-3.3-19 **Guideline:** Remote monitoring of mineral and energy development sites and facilities should be encouraged to reduce snow compaction.

MP-3.3-20 **Guideline:** Avoid upgrading unpaved roads if it would result in increased speeds or would forseeably contribute to development or increased human activity. Roads may be upgraded to address public health and safety issues, or to address a resource concern, if consistent with the area's Recreation Opportunity Spectrum (ROS) class.

MP-3.3-21 **Guideline:** Roadside brushing on low speed and low volume roads open for public use should be done at the minimum level necessary while providing for public health and safety.

4.4 DISPERSED RECREATION

MP-4.4-1 **Guideline:** Recreation and non-recreation developments should be limited to a level that facilitates the dispersed recreation experience and addresses resource impacts.

MP-4.4-2 **Guideline:** Additional motorized and/or non-motorized trails may be constructed.

4.5 DEVELOPED RECREATION

MP-4.5-1 **Guideline:** Recreation and non-recreation developments are allowed.

MP-4.5-2 **Standard:** Wildland fire use is not authorized. Wildland fires will be suppressed.

MP-4.5-3 **Guideline:** Vegetation management is limited to activities or treatments that provide scenic quality and healthy vegetation while providing for fire prevention and public safety.

MP-4.5-4 **Guideline:** Additional motorized and/or non-motorized trails may be constructed.

5.1 FORESTED ECOSYSTEMS – LIMITED DEVELOPMENT

MP-5.1-1 **Guideline:** Recreation and non-recreation developments are allowed.

MP-5.1-2 **Guideline:** Vegetation management activities are allowed.

MP-5.1-3 **Guideline:** Additional motorized and/or non-motorized trails may be constructed.

5.2 FORESTED ECOSYSTEMS – VEGETATION MANAGEMENT

MP-5.2-1 **Guideline:** Recreation and non-recreation developments are allowed.

MP-5.2-2 **Guideline:** Vegetation management activities are allowed.

MP-5.2-3 **Guideline:** Additional motorized and/or non-motorized trails may be constructed.

6.1 NON-FORESTED ECOSYSTEMS

MP-6.1-1 **Guideline:** Recreation and non-recreation developments are allowed.

MP-6.1-2 **Guideline:** Vegetation management activities are allowed.

MP-6.1-3 **Guideline:** Additional motorized and/or non-motorized trails may be constructed.

7.0 WILDLAND URBAN INTERFACE

MP-7.0-1 **Standard:** The standards and guidelines for the underlying prescription for all areas identified as 7.0 Wildland Urban Interface will be applied.

MP-7.0-2 **Guideline:** If the underlying management prescription allows wildland fire use, it may be used in areas identified as 7.0 Wildland Urban Interface outside of the following 11 watersheds. However, if one of these watersheds overlaps with 1.5 Wilderness, wildland fire use is authorized. These watersheds are:

Bartholomew Canyon	Payson Canyon
Battle Creek	Provo Canyon
Dry Canyon	Right Fork Maple Canyon
Grove Creek	Rock Canyon
Little Rock Canyon (Provo)	Slate Canyon
Little Rock Canyon (Springville)	

A map of these watersheds, *Watersheds Where Wildland Fire Use is Restricted*, can be found in Appendix E.

8.1 MINERAL DEVELOPMENT

MP-8.1-1 **Guideline:** Vegetation management should be limited to the removal of vegetation prior to mineral development, noxious weed control, and site reclamation/revegetation when mineral operations are completed.

MP-8.1-2 **Guideline:** Non-recreation developments are allowed.

MP-8.1-3 **Standard:** Wildland fire use is not authorized. Wildland fires will be suppressed.

MP-8.1-4 **Standard:** No motorized or non-motorized trails may be constructed.

8.2 UTILITY CORRIDOR/COMMUNICATION SITES

MP-8.2-1 **Guideline:** Non-recreation developments are allowed.

MP-8.2-2 **Standard:** Wildland fire use is not authorized. Wildland fires will be suppressed.

MP-8.2-3 **Guideline:** Vegetation management should be limited to activities consistent with installation and maintenance of the utility line or communication site and mitigation against potential erosion and visual quality impacts.

MP-8.2-4 **Standard:** The following limitations for power lines, water transmission lines, fiber optic lines, and gas pipeline corridors will be applied:

Table 3-12. Corridor Limitations

Corridor	Type of Facility	Limitation
Spanish Fork Canyon • Utah Power and Light • Deseret Generating and Transmission	Power transmission facilities	Corridor is limited to the right-of-way for currently permitted power transmission facilities. Any additional power will be accommodated on existing facilities or upgraded facilities.
Nephi Front • Deseret Generating and Transmission		
Deseret Corridor • Deseret Generating and Transmission		
Spanish Fork Canyon to Sheep Creek, and Syar Tunnel to the Last Chance Power Plant • Central Utah Project power line		
American Fork Canyon • Power lines to South Fork Guard Station and Mutual Dell Organization Camp • Tibble Fork recreation residences		
American Fork FERC Licensed Facility	Power generating and transmission facilities	Corridors are limited to the right-of-way for currently permitted power transmission facilities. Any additional power will be accommodated on existing or upgraded facilities.
Wolf Creek Gas Pipeline Corridor • Chevron Corporation	Underground pipeline	Construction and maintenance corridor is limited to 75 feet along existing pipeline alignment. Right-of-way width will be the minimum to serve the facility.

Corridor	Type of Facility	Limitation
Payson Gas Pipeline Corridor • Questar Corporation	Underground pipeline	Corridor limited to 75 feet in width. Southern edge of corridor: • Located a perpendicular distance of 25 feet to the south (or southwest, depending on pipeline orientation) of the centerline of existing pipeline, except for approximately 2,000 feet of corridor near Pete Winward Reservoir, where southern boundary will be a perpendicular distance of 50 feet to the south (or southwest, depending on pipeline orientation) of the centerline of the pipeline. Northern edge of corridor: • Located a perpendicular distance of 50 feet to the north (or northeast, depending on pipeline orientation) of the centerline of existing pipeline, except for approximately 2,000 feet of corridor near Pete Winward Reservoir, where northern boundary will be a perpendicular distance of 25 feet to the north (or northeast, depending on orientation of pipeline) of the centerline of the pipeline. Right-of-way width will be the minimum to serve facility.
Central Utah Project Water Transmission Pipelines, including: 1. Pipeline from West Fork Duchesne River to Currant Creek Reservoir, 2. Tunnel and pipeline from Strawberry to Sixth Water, 3. Diamond Fork Pipeline, and 4. Last Chance Power Plant to Diamond Fork Tunnels and Pipeline	Series of tunnels and underground pipelines	Corridor is limited to the existing right-of-way as permitted. Right-of-way width will be the minimum to serve the facility.
Olmstead Water Transmission Pipeline	Underground/ above ground pipeline	Corridor is limited to the existing right-of-way as permitted. Right-of-way width will be the minimum to serve the facility.
Salt Lake Water Diversion	Water transmission facility	Corridor is limited to the existing right-of-way as permitted. Right-of-way width will be the minimum to serve the facility.
Fiber Optic Line Corridor • AT&T	Underground fiber optic line	Corridor is limited to existing right-of-way corridor as permitted. Right-of-way will be the minimum to serve the facility.

Corridor	Type of Facility	Limitation
Maple Dell Power Line • Strawberry Water Users	Above ground power transmission facility	Corridor is limited to the existing location as permitted. Any additional power will be accommodated on existing facilities or upgraded facilities.
Teat Mountain Power Line • Utah County Public Works	Underground power transmission line	Corridor is limited to the right-of-way for currently permitted power transmission facilities. Any additional power will be accommodated on existing facilities or upgraded facilities.
Bartholomew Canyon • Springville City	Water collection facilities (pipes and tanks), underground pipeline, power generating facility and power line.	Corridor is limited to the right-of-way as permitted. Right-of-way width will be the minimum to serve the facilities.

MP-8.2-5 **Standard:** No recreation developments are allowed.

8.3 ADMINISTRATIVE SITES

MP-8.3-1 **Standard:** Wildland fire use is not authorized. Wildland fires will be suppressed.

MP-8.3-2 **Guideline:** Vegetation management is limited to activities or treatments that provide scenic quality and healthy vegetation while providing for fire prevention and public safety.

MP-8.3-3 **Standard:** Livestock grazing is limited to administrative purposes.

MP-8.3-4 **Standard:** No motorized or non-motorized trails may be constructed.

MP-8.3-5 **Standard:** No recreation developments are allowed.

MP-8.3-6 **Standard:** Non-recreation developments are limited to administrative purposes.

8.4 RECREATION RESIDENCES

MP-8.4-1 **Standard:** No non-recreation developments are allowed.

MP-8.4-2 **Standard:** Wildland fire use is not authorized. Wildland fires will be suppressed.

MP-8.4-3 **Guideline:** Vegetation management is limited to activities or treatments that provide scenic quality and healthy vegetation while providing for fire prevention and public safety.

MP-8.4-4 **Guideline:** The construction of new motorized or non-motorized trails accessing the Forest through recreation residences is generally avoided. However, if trail construction is needed to provide an identified public need for access to the Forest, it may be considered.

MP-8.4-5 **Guideline:** Recreation developments are allowed.

CHAPTER 4: MANAGEMENT PRESCRIPTIONS

CHAPTER 4: MANAGEMENT PRESCRIPTIONS

INTRODUCTION

A management prescription is direction applied to a geographical area that identifies a resource emphasis and associated limits on use and development. The following prescriptions have been adapted from regional prescriptions to fit specific conditions on the Uinta National Forest.

With the exception of over-the-snow vehicles, motorized recreation is allowed only on **designated** roads and motorized trails regardless of management prescription.

All management direction in these prescriptions, including direction for existing and recommended wilderness, is limited to the extent allowed by law and consistent with valid existing rights (e.g., mineral and water rights).

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, naturally functioning ecosystems, ecological preserves, and any identified special features. Recreation developments are limited to the construction of primitive trails and signs. The only non-recreation developments allowed are those consistent with valid existing rights.

MANAGEMENT EMPHASIS

1.4 Wilderness

These areas are managed consistent with the Wilderness Act of 1964 and the Utah Wilderness Act of 1984 with no delineation for condition class or recognition of varying levels of opportunities for solitude. These areas are managed to allow natural processes to prevail. Vegetation management is limited to wildland fire use and noxious weed treatments that do not employ mechanized or motorized means. Prescribed fire use is allowed only when necessary to promote or maintain wilderness characteristics or integrity. No timber harvest is allowed. Grazing will continue to be allowed per the Wilderness Act of 1964 and the Utah Wilderness Act of 1984. Recreation developments such as pit toilets may exist where necessary to accommodate high visitor use.

1.5 Recommended Wilderness

This prescription applies to areas that are recommended for addition to the Wilderness Preservation System. These areas will be managed to retain their existing wilderness character until Congress takes action on that recommendation. Existing motorized and mechanized uses may continue to the extent they do not lead to long-term adverse changes to the area's wilderness characteristics. The area is managed to allow natural processes to prevail. Vegetation management is limited to wildland fire use, prescribed fire, noxious weed treatments, and mechanical treatments as long as they do not result in impairment of wilderness characteristics. No timber harvest is allowed. Grazing will continue to be allowed as per the Wilderness Act of 1964 and the Utah Wilderness Act of 1984.

These are mostly pristine areas of the Forest where there is limited evidence of people away from trails or camping areas. Areas recommended for wilderness designation are generally undeveloped lands retaining their natural condition. They generally appear to have been affected primarily by the forces of nature and therefore offer an excellent opportunity for solitude or a primitive type of recreation. Occasionally, however, a visitor may see effects of human activity such as primitive trails and signs.

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 (RNAs), Scenic Byway Systems, and Undeveloped Areas. Management emphasis is on maintaining or restoring those values for which the area was designated.

MANAGEMENT EMPHASIS

Wild and Scenic Rivers
Rivers include land corridors that extend one-fourth mile from each bank. Rivers and their corridors found eligible as additions to the Wild and Scenic Rivers System are managed to protect their free-flowing waters and "outstandingly remarkable values," as defined in the Wild and Scenic Rivers Act of 1968. Any developments that would affect these values (including hydropower developments) are prohibited.

2.1 Wild and Scenic Rivers – Wild Classification

These areas will be managed to allow natural processes, including wildland fire, to prevail. Vegetation management is limited to wildland fire use and noxious weed treatments that do not employ mechanized or motorized means. No road construction or reconstruction is allowed. Recreational livestock grazing is the

only type of livestock grazing allowed. The only non-recreation developments allowed are those consistent with valid existing rights.

2.2 Wild and Scenic Rivers – Scenic Classification

Vegetation management is limited to activities or treatments that maintain or enhance the scenic setting. Additional motorized trails may be constructed. Grazing is allowed to the degree it does not compromise the outstandingly remarkable values of the area. Developed recreation facilities are limited to those that complement the primitive or undeveloped character of the corridor. Recreation and other developments may be considered (e.g., the installation of a communication relay site).

2.3 Wild and Scenic Rivers – Recreational Classification

Vegetation management is limited to activities or treatments that maintain or enhance the recreational setting. Road construction and reconstruction will be allowed to maintain or expand recreational access. Additional motorized trails may be constructed. Livestock grazing is allowed. Recreation developments such as restrooms, parking areas, and hardened access trails may be provided. Other developments may be considered (e.g., the installation of a communication relay site).

2.4 Research Natural Areas

Research Natural Areas (RNAs) are managed to protect their unique and/or representative qualities for the purpose of using the ecotype as a benchmark from which to measure human-induced effects elsewhere. Vegetation management may be considered in circumstances when these activities help perpetuate the unique and/or representative ecosystem.

2.5 Scenic Byways

Scenic Byway Systems are managed to protect and maintain their outstanding recreational, educational, and scenic qualities. Vegetation management is limited to activities or treatments that maintain or enhance these qualities or provide for public safety. Additional motorized trails may be constructed. Recreation and other developments, such as signage, interpretation, or pull-offs, may be provided as needed, compatible with the scenic setting.

2.6 Undeveloped

The primary emphasis of this prescription is preservation of the qualities associated with undeveloped areas. Prescribed fire and wildland fire use may be employed where necessary to maintain or enhance the biophysical environment. Noxious weed treatments are allowed. No other vegetation management activities are allowed. No new recreation developments are allowed. Some motorized use and equipment may be allowed on existing trails. Additional facilities for motorized recreation would not be constructed. Non-recreation developments may be allowed where needed for other

valid existing uses (e.g., private mineral rights), or where road construction or reconstruction is not needed and the activity is consistent with the primary emphasis of this prescription.

3.0 AQUATIC, TERRESTRIAL, AND HYDROLOGIC RESOURCES

THEME

This prescription includes lands where management emphasis is on preserving, maintaining, or restoring quality aquatic, terrestrial, and/or hydrologic conditions. Although other uses and activities may occur, the primary emphasis is on providing high quality fish habitat, wildlife habitat, and/or watershed conditions that meet desired conditions. Vegetation management activities, including timber harvest, may be allowed if they maintain or enhance biophysical resources. Prescribed fire and wildland fire use are allowed. Road density and design will be compatible with watershed and habitat objectives. All motorized recreation (including the use of over-the-snow vehicles) in big game winter range is limited to designated routes and, in the case of over-the-vehicles, designated snowplay areas. Construction of motorized trails may be considered where consistent with the prescription emphasis and desired Recreation Opportunity Spectrum (ROS) class. Designated, hardened, dispersed recreational facilities may be developed to concentrate use and reduce resource impacts to the biophysical resources. Other developments may be considered.

MANAGEMENT EMPHASIS

3.1 Aquatic, Terrestrial, and Hydrologic Resources

Emphasis is on maintaining or improving existing quality aquatic, terrestrial, and hydrologic conditions through limited to moderate management activity. This prescription includes areas where multiple habitat and resource values are present. These values are recognized as important and may require restoration to reach desired conditions. Other uses and activities may be allowed provided they do not inhibit attainment of objectives for the areas. Vegetation management activities, including timber harvest, may be used to address vegetation needs for wildlife habitat, watershed improvement, and/or forest health needs. Additional motorized trails may be constructed. Livestock grazing is allowed where compatible with desired aquatic, terrestrial, and hydrologic conditions.

3.2 Watershed Emphasis

These areas are managed to achieve high quality soil productivity and watershed conditions. Where improvement is needed, it is achieved by implementing watershed improvement projects and applying soil and water conservation practices to land-disturbing activities. Motorized trail opportunities are limited to those existing in 2003. No increase in miles of motorized trails is allowed. Grazing and timber harvest are not allowed.

3.3 Aquatic and Terrestrial Habitat

These areas are managed for quality habitat to contribute toward maintenance and/or recovery of plant and animal species. Resources are maintained or improved to achieve desired conditions for habitats of threatened, endangered, sensitive, and Management Indicator Species (MIS). Most, but not all, of the critical deer and elk winter range is included within this prescription. Vegetation management, including timber harvest, may be used to address vegetation needs for wildlife habitat, watershed improvement, and/or forest health needs. Additional motorized trails may be constructed. Grazing may be allowed with limitations based on the species for which a particular area is being managed (e.g., an area managed for greater sage grouse habitat will require different stubble heights than an area managed for winter range). No additional winter recreation facilities may be constructed in the areas of this prescription managed as Lynx Analysis Units (LAUs).

4.0 RECREATION

THEME

This prescription includes lands managed for dispersed and developed recreation. A wide spectrum of recreational settings may be provided. Facilities are constructed and maintained. Landscape elements may be altered by human activities and developments. Recreation, although emphasized, is managed to ensure sustainability of the biophysical ecosystem. Other uses are allowed to the extent they do not significantly compromise recreation resource values.

MANAGEMENT EMPHASIS

4.4 Dispersed Recreation

The emphasis in this prescription is on providing opportunities for and/or facilitating dispersed recreation. This management prescription includes areas of existing or anticipated concentrations of recreational use. Intensive vegetation management may be required to maintain desired conditions. Additional motorized trails may be constructed. Development is limited to a level that facilitates the dispersed recreation experience and addresses resource impacts.

4.5 Developed Recreation

These areas include developed facilities such as campgrounds, boat docks, resorts, and water systems. Because of the large capital investments in these areas, site protection will be paramount. Wildland fire use is not allowed. Intensive vegetation management may be required to maintain desired conditions. Additional motorized trails may be constructed.

5.0 FORESTED ECOSYSTEMS

THEME

This prescription includes lands that are predominantly forested. Management focuses on plant species composition and structure to achieve sustainable resource conditions, and provides for the full range of multiple uses, including commodity and non-commodity outputs where suitable.

MANAGEMENT EMPHASIS

5.1 Forested Ecosystems – Limited Development

Emphasis is on maintaining or restoring vegetation to achieve multiple resource values. Additional motorized trails may be constructed. Management of forested ecosystems enhances wildlife habitats, improves watershed stability, and improves vegetative diversity. Management encompasses the full range of land and resource treatment activities. Additional motorized trails may be constructed. Grazing by livestock is allowed, but forage production for livestock use is limited to meet requirements for wildlife, riparian, water quality, or other objectives

5.2 Forested Ecosystems – Vegetation Management

Emphasis is on maintaining or restoring vegetation to achieve multiple resource values and provide for multiple uses. Management area direction also includes timber resource goals and objectives, but achievement of high yields is not the primary purpose. The Forest's suitable timber base is located within this management prescription. Timber volumes harvested are applied to the Forest's allowable sale quantity (ASQ). Management encompasses the full range of activities and uses. Road densities and designs are compatible with multiple resource values. Additional motorized trails may be constructed. Recreation and other developments requiring the construction and reconstruction of roads and trails will be considered.

6.0 NON-FORESTED ECOSYSTEMS

THEME

This prescription includes lands that are predominantly non-forested. Management focuses on plant species composition and structure to achieve sustainable resource conditions, and provides for the full range of multiple uses, including commodity and non-commodity outputs where suitable.

MANAGEMENT EMPHASIS

6.1 Non-forested Ecosystems

Emphasis is on maintaining or restoring vegetation conditions to achieve ecosystem health. Management encompasses the full range of land and resource treatment activities. Additional motorized trails may be constructed. Grazing by livestock is allowed, but forage production for livestock use may be limited to meet requirements for wildlife, riparian, water quality, or other objectives.

7.0 WILDLAND URBAN INTERFACE

THEME

The use of this prescription is intended to identify those National Forest System lands that are close to or intermingled with lands owned or managed by others. The prescription is applied in areas where management on National Forest System lands influences or is influenced by the proximity of other lands. In addition, all the watersheds on the Forest where wildland fire use is restricted are included in these areas. Management emphasizes cooperating with adjacent landowners in managing for diverse interests. Application of this prescription identifies areas where hazardous fuels treatments and coordination with adjacent communities to reduce fire risk will be emphasized.

Wherever this prescription is used, there is an underlying prescription that identifies the primary emphasis of the area. If there is any conflict between generally allowed activities, the most restrictive prescription will apply. If prescribed fire is allowed in the underlying prescription, it may be used in these areas. If wildland fire use is allowed in the underlying prescription, it may be used in these areas outside of watersheds where wildland fire use is restricted (as shown in Appendix E on page E-9). However, if one of these watersheds overlaps with prescription 1.5 Recommended Wilderness, wildland fire use is authorized. Motorized recreation is allowed only on designated roads and motorized trails.

8.0 LONG-TERM USE OR OCCUPANCY

THEME

This prescription includes lands managed for special development and use, and is for identifying existing, not potential, sites. Wildland fire use is not allowed.

MANAGEMENT EMPHASIS

8.1 Mineral Development

Features in these areas may include oil and gas production sites or other mineral development sites for locatable and salable minerals. Vegetation management activities are generally limited to noxious weed control, the removal of vegetation prior to mineral development, and site reclamation/revegetation when mineral operations are completed. Lands with this prescription are not considered suitable for grazing but are often unfenced. Occasional limited use by livestock may occur.

8.2 Utility Corridor/Communication Sites

Features in these areas may include various non-recreation special uses such as utility corridors or communication sites allocated for long-term site investment. Vegetation management activities are generally limited to activities consistent with the installation and maintenance of the utility line or communication site and mitigation against potential erosion and visual quality impacts. Though not considered suitable for grazing, these sites are often unfenced and some grazing use may occur. Recreation use is limited to incidental dispersed use, such as a trail crossing through the area.

8.3 Administrative Sites

These areas include Forest Service guard stations and administrative pastures. Vegetation management is limited to activities or treatments that maintain scenic quality and healthy vegetation while providing for fire prevention and public safety. Development, grazing, and public use are limited to administrative purposes.

8.4 Recreation Residences

These are National Forest System lands under special use permit as recreation residences. Vegetation management is limited to activities or treatments that maintain scenic quality and healthy vegetation while providing for fire prevention and public safety. Additional motorized trails may be constructed.

CHAPTER 5: MANAGEMENT AREA DESCRIPTIONS AND DESIRED FUTURE CONDITIONS (DFCs)

DESIRED FUTURE CONDITIONS FOR ALL MANAGEMENT AREAS

The following Desired Future Conditions (DFCs) apply to all management areas on the Uinta National Forest. Any additional information specific to a particular area is found in the section for that management area.

SPECIAL FEATURES

Newly-identified caves are evaluated for "significance" per the Federal Cave Resources Protection Act of 1988. Those caves that meet the significance criteria are submitted for official recognition.

AIR

Smoke emissions from prescribed and wildland fires are within the historical frequency and 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.

GEOLOGY AND SOILS

Most soils have at least minimal protective ground cover, soil organic matter, and large 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 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.

WATER AND WATERSHED

Water quality is managed to meet State of Utah clean water standards. All existing water rights are validated. Streams are managed to maintain natural fluvial processes where possible, in turn providing high quality aquatic habitat and water quality. Upland vegetation in all management areas is managed to maintain sufficient ground and soil cover to limit erosion and sediment transport to streams. Riparian Habitat Conservation Areas (RHCAs), regardless of width, are in a stable or upward trend. RHCAs and their corresponding steam channels provide quality habitat for associated terrestrial and aquatic wildlife species. Forest management activities are implemented in a manner that prevents unacceptable watershed impacts.

VEGETATION

Known populations of all federally-listed threatened, endangered, proposed, or candidate plant species, and all Forest Service sensitive plant species occurring on the Forest are maintained or increased. Suitable habitat for rare plant species and rare plant communities has been surveyed. Noxious weeds and undesirable invasive plants are effectively combated using integrated pest management. Priority is given to eliminating weeds from critical habitats and preventing new infestations, then to reducing density or eliminating longer-established populations. The Forest uses public education to motivate the public to employ weed prevention practices. Deteriorated vegetated communities are assessed for estimated potential for recovery, and active restoration work completed as appropriate. Suitable habitat conditions are provided for plant-pollinating insects. Vegetative communities exist in a full range of seral stages and age classes. Vegetation management focuses on improving the diversity of forested and non-forested communities, with an emphasis on aspen stand regeneration and insect and disease control in conifer species. Vegetation is managed to create a more diverse mosaic of species and size classes within the landscape in an effort to move the vegetation towards desired future conditions. Wildlife habitat needs are considered in designing treatment projects, but do not necessarily drive the purpose and need for treatment. Forested vegetation that is classified as capable and available is managed to provide a portion of the Forest's Allowable Sale Quantity (ASQ). Forested vegetation throughout the remainder of the Forest is managed for general forest health and other forest resource needs. Timber harvest activities conducted to achieve management objectives provide opportunities for the local dependant timber industry.

AQUATICS

The State of Utah and the Uinta National Forest work cooperatively to define goals and objectives for management of individual waterbodies. Management priority is for the conservation and/or recovery of populations of fish, amphibian, and aquatic invertebrate threatened, endangered, and sensitive (TES) species. The potential for expansion of TES populations is recognized and facilitated. Sport fisheries are also recognized and managed as important recreation opportunities. Recreational fishing opportunities are maintained and expanded in cooperation with State resource management agencies. Native fish populations are maintained through natural means with supplementation of sport fish populations being coordinated with State resource agencies and implemented in accordance with cooperative resource management, restoration, and recovery agreements and strategies.

Aquatic habitat is complex and diverse and includes a number of distinct ecosystem types – streams, rivers, lakes, ponds, springs, and marshes – within which exist the range of biotic and abiotic components required by populations of aquatic and semi-aquatic species for survival and reproduction. The biotic or living components consist of combinations of plants, animals, and microorganisms that inhabit specific ecological niches within each ecosystem. The abiotic or nonliving components include the

physical environment (water, substrate, and suspended materials) that occurs within the boundaries of the ecosystem (Rand and Petrocelli 1985, pp. 2-3).

Aquatic habitats are managed to maintain cool, clear water to meet the physiological needs of aquatic and semi-aquatic species. Well-vegetated stream banks are maintained for cover and bank stability to provide undercut bank cover, reduce erosion and sedimentation to maintain clean spawning gravels, maintain floodplain function for rearing habitat, and provide velocity refugia.

The value of riparian habitat areas is recognized and protected. Natural stream processes are emphasized and artificial channel maintenance activities are minimized. The value of instream cover and habitat diversity and complexity are recognized and maintained through the recruitment and incorporation of channel stabilization and forming materials such as native riparian vegetation, logs, root wads, and boulders. Natural reproduction of native fish, amphibian, and aquatic invertebrate populations is maintained through minimizing sedimentation to maintain clean spawning gravels and floodplain function for rearing habitat, and to provide velocity refugia. Riparian habitats are managed to prevent unacceptable impacts from resource management activities and public uses.

The value of instream flows for aquatic and semi-aquatic species are recognized and protected to meet the physiological and physical habitat requirements of aquatic and semi-aquatic species. Instream flows are adequate to protect aquatic habitat attributes necessary for the continued persistence and viability of native fish, amphibian, and aquatic invertebrate populations.

The values of springs and wetlands are recognized and protected. Recreation facilities, roads, and trails are constructed and maintained to facilitate recreational use while protecting water quality, wetlands, and stream/riparian habitat. Marshy edges of ponds, lakes, and springs are protected to allow for the development of in-water and riparian vegetation. Soils around waterbodies are not compacted to allow for burrowing and over-wintering of amphibians. Water developments for improved management of livestock grazing are designed to protect existing riparian and amphibian habitat. Stream and lakeshore habitat restoration projects address and incorporate components that emphasize amphibian habitat needs.

WILDLIFE

The Uinta National Forest supports a wide variety of vegetation types, and therefore a wide variety of wildlife habitat types. The most common vegetation community types on the Forest are aspen forest, oak/maple, sagebrush, conifer forest, pinyon/juniper woodlands, mountain brush, and riparian. Because of the wide variety of habitat types, the Uinta National Forest supports a broad diversity of wildlife species. A few of the wildlife species that are commonly found in aspen forests on the Uinta National Forest include northern goshawk, ruffed grouse, flammulated owl, northern saw-whet owl, great horned owl, red-naped sapsucker, hairy woodpecker, downy woodpecker,

warbling vireo, house wren, long-tailed weasel, elk, mule deer, moose, and mountain cottontail. Wildlife species commonly found in oak/maple habitats on the Forest include mountain short-horned lizard, racer, Virginia's warbler, orange-crowned warbler, green-tailed towhee, spotted towhee, chipping sparrow, rock squirrel, least chipmunk, and mountain cottontail. Wildlife species commonly found in conifer forests on the Uinta National Forest include sharp-shinned hawk, blue grouse, three-toed woodpecker, Hammond's flycatcher, mountain chickadee, red-breasted nuthatch, brown creeper, ruby-crowned kinglet, hermit thrush, yellow-rumped warbler, pine siskin, Cassin's finch, red squirrel, northern flying squirrel, southern red-backed vole, porcupine, and snowshoe hare. Wildlife species commonly found in sagebrush habitats on the Uinta National Forest include sagebrush lizard, side-blotched lizard, Swainson's hawk, greater sage grouse, sage thrasher, Brewer's sparrow, vesper sparrow, badger, and Uinta ground squirrel. Species commonly found in pinyon/juniper woodlands on the Uinta include side-blotched lizard, gopher snake, western rattlesnake, great horned owl, ash-throated flycatcher, pinyon jay, blue-gray gnatcatcher, black-throated gray warbler, long-eared myotis, and black-tailed jackrabbit. Species commonly found in different types of riparian habitats include spotted sandpiper, broad-tailed hummingbird, willow flycatcher, red-winged blackbird, yellow warbler, Wilson's warbler, Lincoln's sparrow, song sparrow, fox sparrow, mink, moose, muskrat, and American beaver.

The desired future condition of each habitat type is a vegetation community where species composition and age-class distribution are within the historic range of variability for that community type and that approach patterns described under properly functioning conditions. Vegetation conditions that are within the historic range of variability are desired because these are habitat conditions under which all native species evolved and to which they are adapted. Vegetation composition and structure are important because they largely determine types and amounts of food and cover available for each species.

For aspen forests, desired future conditions include a heterogeneous mosaic of age classes, with young, mid, and old age classes represented across the landscape. Aspen regeneration should be sufficient to withstand browsing pressure from wildlife and livestock and still provide sufficient recruitment to ensure stand maintenance or stand replacement across the landscape. At least 30 percent of stands should be in mature or old age classes, and at least 10 percent should have old growth structural characteristics. Mature and old stands should have densities of at least two large-diameter snags ($\geq$8 inches diameter at breast height) per acre, and at least five large-diameter logs ($\geq$6 inches mid-point diameter) per acre. Desired future conditions also include seral aspen forests that are being maintained by periodic disturbance, and not being converted at large spatial scales to conifer forest due to lack of disturbance. Grass, forb, and shrub growth is productive, providing forage and browse for both wildlife and livestock.

For oak/maple cover types, desired future conditions include a heterogeneous mosaic of age classes, with young, mid, and old age classes represented across the landscape. Young age classes are not only important for ensuring sustainability of the oak

communities across the landscape, they also provide young leaf and shoot growth for mule deer, elk, and moose. Young vegetative growth on oak and other woody species is more palatable and nutritious than older growth, and Gambel oak communities are important in providing critical winter range for big game on the Forest.

For sagebrush cover types, desired future conditions also include a heterogeneous mosaic of age classes, with young, mid, and old age classes represented across the landscape. Similar to Gambel oak, young vegetative growth is more palatable and nutritious than older growth, and sagebrush communities also provide critical and high value winter range for big game. Grass and forb growth is productive, providing forage for many species of wildlife including greater sage grouse. Non-native annual grasses like cheatgrass and noxious weeds are not increasing in cover.

For spruce/fir and Douglas-fir/white fir conifer forests, desired future conditions include a balanced range of age classes, with at least 40 percent of stands mature or old, and at least 10 percent having old growth structural characteristics. Mature and old growth stands should have multi-layered canopies, with densities of at least three large-diameter snags ($\geq$18 inches diameter at breast height) per acre, and at least five large-diameter logs ($\geq$12 inch mid-point diameter) per acre. Insects and disease are not causing large-scale tree mortality across entire landscapes.

For pinyon/juniper woodlands, desired future conditions include open stands with productive herbaceous growth. Disturbance is sufficient to prevent large-scale invasion of adjacent vegetation associations (e.g., sagebrush and mountain brush) by pinyon/juniper.

RECREATION

Summer use dispersed recreation management plans are developed. Developed recreation sites are managed to meaningful measures standards. Recreation special uses have site plans and are managed to standard. Travel management plans have been completed, and motorized trails have been built or reconstructed to meet trail standards. The portions of the Bonneville Shoreline Trail that are on the Forest have been completed. Off-highway vehicle (OHV) and all-terrain vehicle (ATV) use is limited to existing roads and trails, reducing indiscriminate use that causes resource damage in critical watersheds and habitats.

HERITAGE RESOURCES

Visitors to the Forest find opportunities to touch, explore, enjoy, and learn about their cultural heritage. They recognize and respect the diversity of past Forest users, and understand the fundamental relationship between people and the land. This access to the past is constantly growing through an active heritage program, which is fully integrated into other management areas including recreation, interpretation, and environmental education. A long-term management plan is developed in consultation with local Tribes, Historical Societies, and other interested publics to address

management of heritage resources, including historic Forest Service structures. Information about past human activities provides a context for understanding current ecological issues, and provides a foundation for ecological restoration projects. Knowledge of past activities is increased through archaeological and historical research. Known sites are protected against erosion and impacts from recreation.

RANGE

Grazing opportunities are maintained on 71 open cattle and sheep allotments and continue to support the livestock industry in the local communities. Livestock grazing continues to be a viable and sustainable use of vegetation on these allotments, and is managed to ensure the long-term resource goals for soil productivity, vegetative communities, wildlife habitats, and water quality are achieved.

MINERALS

The Forest administers its minerals program to encourage and facilitate the orderly exploration, development, and production of mineral resources. It will continue to support this effort as per Agency and Department policy and applicable laws and regulations.

Leasable. Special use permits for oil and gas exploration have been issued in the past, and future proposals will be entertained. The Forest will examine and act upon formal worthy proposals with environmental considerations and apply the appropriate stipulation(s). Leasing of National Forest System lands in the high and moderate areas as identified in the *Western Uinta Basin Oil and Gas Leasing FEIS* (USDA 1997b) will continue to be offered competitively. That FEIS covers the following management areas: Diamond Fork (eastern side), Strawberry Reservoir (portions south of U.S. Highway 40), Upper Spanish Fork Canyon, White River, and Willow Creek. The remaining management areas were not covered in that FEIS, but will be analyzed for future land allocation. In all cases, site-specific analysis will be reviewed upon the receipt of any proposal before implementing on-the-ground activities. Interest lately has occurred in several areas on the Forest, particularly in the southern portion of the Nephi Management Area. Competitive award of leasing for oil and gas has already occurred in the White River Management Area.

Locatable. The General Mining Law of 1872 authorizes qualified parties to enter lands open to mineral entry and locate mining claims for locatable minerals; the Forest Service cannot prohibit mining. Both the General Mining Law and Forest Service mining regulations establish a process whereby the Forest Service evaluates mining proposals in the context of its responsibilities as steward of National Forest System lands. The Forest Service does have the authority to regulate locatable minerals activities to prevent and/or minimize surface damage to National Forest System lands. The Forest Service, along with the applicant, then prepares reasonable mitigation and reclamation measures to address any

significant associated surface disturbance. The Forest will continue to support the General Mining Law of 1872 unless instructed to do otherwise.

Outstanding mineral rights including sub-surface and existing active and valid claims will continue to be honored, along with the appropriate access rights and needs. The Forest will continue to work with private entities to ensure that environmental considerations will be implemented to standards as outlined in the Forest Plan. Management areas generally affected include American Fork, Diamond Fork, Mona, Payson, Nephi, Vernon, and West Sheeprock.

Recreational. Recreational prospecting by the public includes suction dredging, sluicing, and panning for gold. This type of prospecting is increasing in popularly, particularly in the American Fork Management Area. The public views this type of activity as recreational in nature; however, even though it is often authorized under a cooperative recreational permit issued by the State of Utah, that permit does not relieve the permittee from complying with all applicable federal mining laws and regulations when impacts go beyond the very limited scope of those authorized under the State permit, which is tiered to federal mining law and regulation. Consequently, recreational mining is covered under locatable minerals.

Salable. Salable minerals are abundant and have generally been extracted from all management areas within the Forest from designated sites or randomly across the Forest. As far as management and disposal are concerned, salable minerals are managed at the sole discretion of the Forest Service. The value of salable minerals is dependent upon the market, quality of the mineral, and availability of removal and transportation. The Forest Service is generally the sole user of material from borrow sources on the Forest. The Forest develops pits for construction and maintenance of Forest roads and other facilities. The public is encouraged to seek sources offered by commercial vendors.

FIRE

Fire is effectively and safely reintroduced into the ecosystem wherever possible, and fuels levels and vegetation are moving towards desired future conditions. The reduction of fuels in the wildland urban interface protects homes, forest infrastructure, and sensitive watersheds from catastrophic wildfire. The Forest has implemented the National Fire Plan and associated Cohesive Strategy, President Bush's Healthy Forests Initiative, and other forest policies. Fuels treatments consist of prescribed fire, wildland fire use, mechanical treatments, biological treatments, and other approved fuels treatment techniques. These treatments play an active role in the management of forested and non-forested vegetation health, rangeland health, wildlife habitat, watershed, and social concerns across the Forest. All fuels treatment methods are utilized to improve vegetation structure and age class diversity. Concurrent with this emphasis on fuels treatments, the Forest maintains an effective fire suppression organization that utilizes the appropriate management response to fires. Assessments for determining whether hazard fuel reductions are necessary have been completed.

The Wasatch Front Fuels Assessment prioritizes treatment areas across state, local, and federal boundaries.

LANDS AND SPECIAL USES

Land Adjustment and Right-of-Way Acquisition Plans are completed. Encroachments on National Forest System lands are identified and resolved. Easements are granted and obtained where needed. Acquisitions to complete the Bonneville Shoreline Trail on National Forest System land are completed. All private boundaries bordering National Forest System lands are surveyed and posted to preclude additional encroachments or trespasses.

TRANSPORTATION

Miles of classified roads remain relatively unchanged. The Forest is well accessible with many roads in-place and functioning for many years. Roads (particularly arterial and collector roads) are maintained and constructed to a standard that is providing a safe economical facility. Local roads provide access to and through the area. Ecosystem integrity, public safety, and available funding is in balance with access needs and desires to maintain a minimum road system. When possible, roads or portions of roads that have negatively affected watershed and aquatic conditions are relocated or hardened.

SOCIAL AND ECONOMIC

Management of the Forest contributes both tangible and intangible social and economic benefits to communities. Quality of life is maintained and enhanced by factors such as the availability of a variety of recreational opportunities, the ability to view sustainable populations of wildlife and fish in quality habitats, maintenance and improvement of air quality and water quality and quantity, and the ability to retreat from fast-paced urban life in a variety of forest settings. The economic diversity of local communities is enhanced by providing sustainable and predictable levels of goods and services such as recreation, wood products, forage, and other products consistent with management direction and ecosystem health. Forest landscapes and activities contribute to a sense of place and members of the public are assured that the ecosystems of the Uinta National Forest are maintained and/or improved for the benefit of current and future generations.

FOREST-WIDE MAP OF ALL MANAGEMENT AREAS

Forest-wide Map of All Management Areas (11x17”)

JPG (199 KB)

PDF (293 KB)

AMERICAN FORK MANAGEMENT AREA

LOCATION

The American Fork Management Area consists of the American Fork River drainage. The area is bounded by the Uinta National Forest boundary on the west and the American Fork watershed boundary on the north, east, and south.

The management prescriptions applied within the management area are summarized in the following table.

Table 5-1. Management Prescriptions in the American Fork Management Area

Management Prescription	Acres*
1.4 Wilderness	25,240
1.5 Recommended Wilderness	1,550
2.1 Wild and Scenic Rivers – Wild Classification	360†
2.3 Wild and Scenic Rivers – Recreational Classification	150†
2.6 Undeveloped	1,270
3.1 Aquatic, Terrestrial, and Hydrologic Resources	6,000
3.2 Watershed Emphasis	16,910
4.4 Dispersed Recreation	6,790
4.5 Developed Recreation	230
7.0 Wildland Urban Interface	19,790†
8.3 Administrative Sites	10
8.4 Recreation Residences	90
Total Acres	58,090

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

† These acres are not included in the total as they are duplicated in other prescriptions.

SPECIAL FEATURES

Description

A one-mile segment of the South Fork of the American Fork River is eligible for the National Wild and Scenic Rivers System: 0.75 miles within the Mount Timpanogos Wilderness Area are eligible as a wild river, and 0.25 miles outside the wilderness area are eligible as a recreational river. Timpanogos Cave National Monument is located entirely within the Forest boundary. Monument facilities include a visitor center, concession area, picnic areas, nature trail, and trail system up to and through three caves. The administrative headquarters for the monument is located on National Forest System lands. Portions of the Mount Timpanogos and Lone Peak Wilderness Areas are located in the management area. One of the two major trails accessing the Mount Timpanogos Wilderness Area and four trails accessing the Lone Peak Wilderness Area

are within the area. Both Mount Timpanogos and Lone Peak Wilderness Areas are urban wildernesses, and both receive heavy day and weekend use. Most of this use occurs between late spring and fall. All or portions of the following three roadless areas lie within the management area: Mount Timpanogos (#418032), Twin Peaks (#418040), and Mill Canyon Peak (#418041). These roadless areas total approximately 25,050 acres, or 43 percent of the management area.

In 1997, under the authority of the Recreation Fee Demonstration Program (also called Fee Demo), two entrance stations were installed in the American Fork Canyon-Alpine Loop corridor. The Uinta National Forest, Timpanogos Cave National Monument, Utah Department of Transportation, and Utah County are partners in implementing this program. Congress authorized the program to allow agencies to collect fees to balance the costs for managing federal lands. In addition to the entrance stations, self-service fee tubes are located at major trailheads and recreation sites. One hundred percent of the fees collected remain in the area. Legislation has extended the Fee Demo program through September 2004, with revenues to remain available for use through September 2007.

Desired Future Condition

The 0.75-mile segment of the South Fork American Fork River within the Mount Timpanogos Wilderness Area maintains its eligibility as a wild river under the National Wild and Scenic Rivers System; the 0.25-mile segment of the river outside the wilderness boundary maintains its eligibility as a recreational river. Fee Demo funds provide for maintenance and improvement of recreation facilities, law enforcement presence, and visitor services in American Fork Canyon.

GEOLOGY AND SOILS

Description

This management area is one of the most geologically diverse on the Forest. The area lies on the west flank of the Wasatch Mountains. Numerous faults lie within the management area. The steep western face of the Wasatch Mountains, including the scarp near the mouth of American Fork Canyon, is the line of offset with the Wasatch fault. This fault is the easternmost major normal fault of the Basin and Range province. The dominant rock types are Paleozoic limestone, shale, sandstone, and quartzite of the Oquirrh Group, but the area also includes exposures of Tertiary volcanic and granitic rocks in the Lone Peak and Clayton Peak areas. These igneous intrusions metamorphosed some of the adjoining sedimentary rocks. Rocks in this area were complexly folded and faulted during the Sevier and Laramide Orogenies. The folding during the Sevier Orogeny resulted in the repetition of Paleozoic carbonates. These carbonate rocks were later eroded by percolating groundwater to form numerous caverns, including Timpanogos Cave, which was formed by solution of Mississipian limestone. Stream erosion resulted in exposure of underlying Cambrian and Pre-Cambrian sedimentary rocks in the lower part of the canyon. During the Ice Ages, high elevation sites within the area were glaciated. Lake Bonneville formed during the last glacial period and covered a large area of western Utah and eastern Nevada, including

the lowest reaches of this management area. The terrain on the east side of the area is somewhat less rugged. Debris flows and avalanches are dominant geomorphic processes in steeper canyons and in headwater drainages throughout the area and may occur in any rock type. Debris flows occur during spring runoff in high water years and in response to intense summer thunderstorms. Deep-seated landslides or earth flows occur in the Pennsylvanian Manning Canyon shale in most of the places it is exposed.

Soils in this management area formed from a wide range of weathered rock and accumulations including glacial drift, alluvium, loess, coluvium, and residium from sedimentary, metamorphic, and igneous rocks. Diversity of soil formation factors has led to a diversity of soils: deep soils are intermingled with rock outcrops and shallow soils, stable soils are intermingled with soils of inherent weak stability, and granular soil materials are intermingled with plastic soil materials. Glacial landtypes (glacial canyons, moraines, and scoured uplands) are the most common landtype, occupying about 33 percent of the management area. Stream canyon (occupying 29 percent of the area) and tectonic mountain (occupying 28 percent) are other landtypes commonly found here. Fault block mountain, lacustrine, landslide, mountain foothill, and structurally controlled limestone landtypes also occur here, but are less common (none occupy less than 5 percent of the area). Cumulic cryoboroll (4 percent), typic cryoboroll (6 percent), pachic cryoboroll (9 percent), pachic argiboroll (3 percent), typic argiboroll (2 percent), lithic halustoll (4 percent), udic haloboroll (7 percent), typic haploboroll (7 percent), typic cryorthent (2 percent), lithic cryorthent (3 percent), typic cryochrept (5 percent), and rock/rockfall (12 percent) are the most common soils. Most soils generally have loam, silt loam, or sandy loam topsoils with a high gravel, cobble, or stone content. Subsoils are mostly loam or silt loam, but some sandy loam, clay loam, and clay subsoils also occur in the area. Most subsoils have a high gravel, cobble, or stone content. In many areas the soils are quite limited or very shallow. Permeability varies considerably. Most soils are well or excessively drained. Disturbed erosion hazard ranges from moderate to extreme. Soil productivity varies from relatively good to low. Several soils are inherently instable.

WATER AND WATERSHED

Description

Rain makes up approximately 40 percent of the total precipitation at lower elevations of the management area. Precipitation at the highest elevations exceeds 60 inches per year, while the precipitation at the lowest elevations ranges from 16 to 20 inches per year. The majority of the area's winter precipitation results from frontal storms. High intensity thunderstorms are common from July through September.

The management area provides domestic, irrigation, municipal, and well water as well as stock water and water for power and storage. Municipal water is provided to American Fork, Pleasant Grove, Lehi, Alpine, the Bureau of Reclamation, and other smaller entities. There is currently a demand for the area to supply more culinary water for local municipalities. The drainage contributes approximately 83,500 acre-feet of water to streamflow, and supplies an additional unmeasured quantity of groundwater.

Most of the water yield is from the higher elevations. There are approximate 69 miles of perennial streams within the management area, including the American Fork River, South Fork American Fork River, Grove Creek, Battle Creek, Deer Creek, Silver Creek, and Dry Creek. There are approximately 115 miles of intermittent streams in the area as well. Five human-made reservoirs are located in the management area: Silver and Pittsburg Lakes (both natural lakes that have been artificially enlarged), Silver Lake Flat Reservoir, Tibble Fork Reservoir, and a PacifiCorp diversion dam downstream of Hanging Rock in the main stem of the American Fork River. A proposal to return Silver Lake to its natural level, or to stabilize the lake at its current or some intermediate level, is being considered. A proposal to remove the PacifiCorp diversion dam in the main stem of the American Fork River is being considered as well.

Extensive mining activity occurred in the American Fork drainage in the late 19th and early 20th Centuries. Evidence of this activity is especially apparent in the North Fork American Fork drainage. This past mining activity has had detrimental effects on water quality and aquatic populations

A comprehensive water quality monitoring program was established in the American Fork drainage in the summer of 2000. Water samples were collected at various sites throughout the main stem within the North Fork American Fork River and tributaries to the North Fork American Fork River. Results indicate that lead is exceeding State of Utah clean water standards below the Pacific Mine and at the confluence of Mary Ellen Gulch and the North Fork American Fork River. Zinc is exceeding State of Utah clean water standards below the Bog Mine. Fish tissue was sampled during the 1999 field season as well. Arsenic, lead, and cadmium were found in fish tissue throughout the North Fork American Fork and main stem of the American Fork River. According to the draft 2002 State of Utah 303(d) list, portions of the North Fork American Fork and main stem American Fork River will be listed for arsenic. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-2. Miles of Stream by Riparian Habitat Conservation Area Class in the American Fork Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	55
Class II	8
Class III	121
Total Miles	184

* Miles are rounded to the nearest 1 mile.

Desired Future Condition

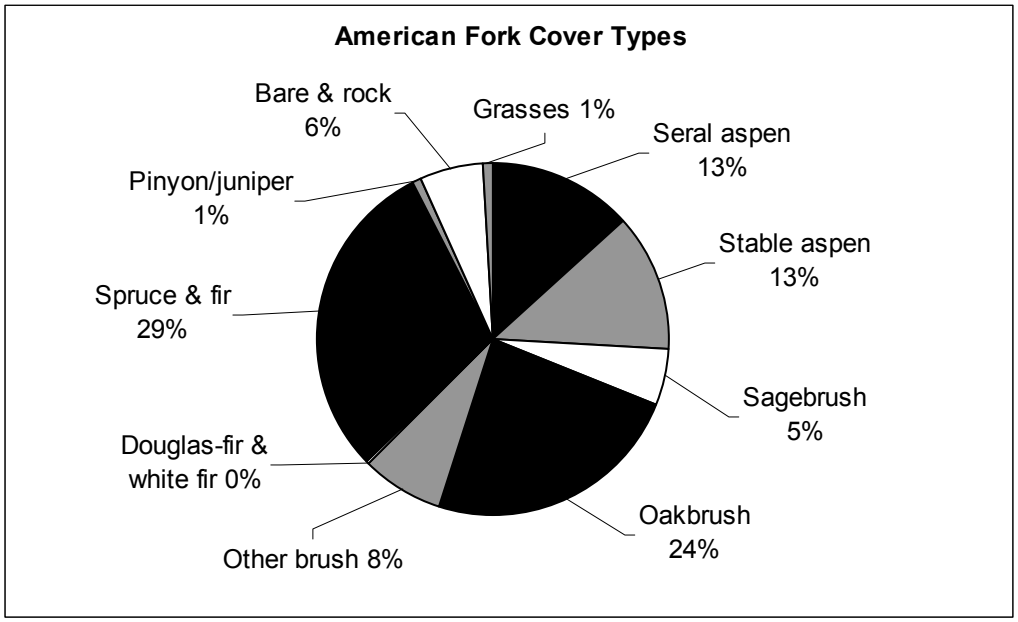
The North Fork American Fork River and main stem American Fork River are removed from the State of Utah 303(d) list of water bodies.

VEGETATION

Description

Vegetation communities in the management area include riparian hardwood forests, aspen, spruce/fir, Douglas-fir, alpine grass-forb communities, and mountain brush communities. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-1. Vegetation Cover Types in the American Fork Management Area



Forest Service sensitive species found in the management area are Wasatch jamesia (*Jamesia americana* var*. macrocalyx*) and Garrett's bladderpod (*Lesquerella garrettii*). Species of concern documented by the State of Utah within the watershed, in addition to those listed above, are Garrett's daisy (*Erigeron garrettii*), Wasatch draba (*Draba brachystylis),* broadleaf beardtongue (*Penstemon platyphyllus*), Wasatch fitweed (*Corydalis caseana* ssp. *brachycarpa*), Utah ivesia (*Ivesia utahensis*), *Lesquerella utahensis*, and Barneby woody aster (*Aster kingii* var. *barnebyana*).

There are infestations of musk thistle, Canada thistle, Dalmatian toadflax, spotted knapweed, dyer's woad, and leafy spurge in the area. Yellow star-thistle and tamarisk are known to be just downstream of the Forest boundaries in the watershed. At present the infestations of these noxious or invasive weeds are small and scattered.

AQUATICS

Description

Fish. The American Fork Management Area is located within the Northern Bonneville Geographic Management Unit for Bonneville cutthroat trout (*Oncorhynchus clarki utah*). Streams within the management area were historically inhabited by Bonneville cutthroat trout, and some genetically pure populations still reside in isolated stream reaches. Bonneville cutthroat trout are a Region 4 and state sensitive species and were petitioned for listing under the Endangered Species Act in February 1998. This petition was found not warranted in October 2001. Conservation agreements with the Utah Division of Wildlife Resources (UDWR) have been developed for this species (UDNR 1997a, UDNR 2000b). Populations of Bonneville cutthroat trout within the area have been identified as persistence populations due to the low potential for recovery of a genetically pure population. Other native fish species believed to be present within the management area include mottled sculpin and mountain sucker.

Non-native German brown trout (*Salmo trutta*) and rainbow trout (*Oncorhynchus mykiss*) have been introduced into and still occupy suitable habitat within the management area. These species present a risk to the recovery and future viability of cutthroat trout populations within the management area. Rainbow trout are currently stocked by the UDWR to supplement a popular recreational fishery in the American Fork River.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality. However, it is assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains high value habitat for northern leopard frog and substantial value habitat for tiger salamander, Great Basin spadefoot toad, boreal toad, boreal chorus frog, Woodhouse's toad, and Great Plains toad. Boreal toads were recorded in American Fork Canyon historically (UDNR 2002c).

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, two species, coarse rams-horn and creeping ancylid, have been documented on the Forest or in waters immediately adjacent to the Forest, and it is believed that they may be present within the management area.

Threatened, Endangered, and Sensitive (TES) Species. Bonneville cutthroat trout is the only TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. This management area provides a wide variety of important wildlife habitat, from alpine habitat in the Lone Peak Wilderness Area to forested riparian in American Fork Canyon. The most extensive habitat types include oak/maple, conifer forest (primarily spruce/fir), and aspen forest. The cottonwood and box elder-dominated forested riparian habitat in American Fork Canyon provides valuable habitat for a broad array of wildlife species. Additional forested riparian habitat occurs in Dry Canyon.

Threatened, Endangered, and Sensitive (TES) Species. Bald eagles occur in American Fork Canyon during the winter. Western yellow-billed cuckoos historically nested in the lower part of American Fork Canyon (UDNR 2002c). Caves and mines within the management area provide important roosting habitat for Townsend's big-eared bat and other bat species. Spotted bats have also been recorded in American Fork Canyon. Northern goshawk nests have been found in the management area. Flammulated owl nests also have been found in aspen trees within the management area. There is a historic record of wolverine from Silver Creek (UDNR 2002c).

Big Game Species and Other Wildlife. A herd of mountain goats occurs within the Lone Peak Wilderness Area. The herd originated from mountain goats that were translocated into the Twin Peaks area in 1967, the first mountain goat introduction in the state of Utah. Rocky Mountain bighorn sheep also occur within the Lone Peak Wilderness Area as a result of recent reintroductions. Oak/maple, mountain brush, and sagebrush vegetation associations along the west slope of the management area provide critical and high value deer winter range and high value elk winter range.

The terrestrial snail widespread column, rubber boa, milk snake, and veery have been recorded within this management area (UDNR 2002c). Veerys were reported to have bred within American Fork Canyon between 1926 and 1942 (UDNR 2002c). The disappearance of western yellow-billed cuckoos and veerys from American Fork Canyon is an example of how loss and degradation of forested riparian habitats has impacted biodiversity. Forested riparian habitats with cottonwood and box elder in the overstory and willows in the understory must have historically occurred along all of the major rivers draining out of the Wasatch Range all the way to Utah Lake. Sections of these rivers below the Forest boundary have been particularly impacted by development. The low-elevation forested riparian habitat type has been negatively impacted by development more than any other habitat type on the Uinta National Forest. This habitat type is also the habitat richest in species diversity.

RECREATION

Description

The American Fork Management Area is adjacent to rapidly growing urban areas in Utah Valley, and is just south of the Salt Lake Valley. This management area received approximately two million recreation visitor days in 1998. Most of these users come

from the urban Utah and Salt Lake Valleys. Recreational activities include developed and dispersed camping, picnicking, fishing, hiking, mountain biking, bike touring, hunting, horseback riding, recreational gold panning, cross-country skiing, heli-skiing, snowmobiling, scenic driving, rock climbing, and photography. The area is a world-renowned rock climbing destination. Forest Service facilities consist of individual and group campgrounds, picnic areas, fishing sites, trailheads, foot and stock trails, all-terrain vehicle (ATV) trails, groomed snowmobile trails, and groomed cross-country ski trails. The Great Western Trail, a National Millennium Trail, is located along the eastern length of the management area. The non-motorized Bonneville Shoreline Trail, a Millennium Legacy Trail, parallels the western boundary of the area along the remnant shoreline of ancient Lake Bonneville.

The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-3. Recreation Opportunity Spectrum (ROS) Classes in the American Fork Management Area

ROS Class	Acres*
Primitive	25,240
Semi-Primitive Non-Motorized	16,570
Semi-Primitive Motorized	9,190
Roaded Natural	2,540
Roaded Modified	4,510
Rural	30

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

Recreation opportunities are provided for a wide variety of opportunities, but are focused primarily on primitive/urban wilderness experiences and non-motorized activities due to the fact that the majority of the area is managed for wilderness and to protect watershed areas. The Mount Timpanogos Wilderness Area provides a primitive/urban wilderness experience in that one can experience a wilderness setting with limited human evidence on the land, but with a low opportunity for solitude and close proximity to an urban area.

Dispersed recreation opportunities are available throughout the management area. Motorized activities are limited to existing roads in the main canyon bottoms and trails in Mineral Basin and along the western front of Mount Timpanogos. All other trails are limited to non-motorized activities due to wilderness and municipal watershed management considerations. Mechanized uses will still be allowed in some areas outside of wilderness. Heli-skiing is allowed within areas with a Semi-Primitive Non-Motorized ROS classification. While dispersed recreation can and does occur across

the management area, active management of dispersed recreation is focused along the corridors of the American Fork Canyon Road (State Route 92) and that portion of the Alpine Scenic Loop within the management area. The Great Western Trail is managed to maintain its designation as a National Millennium Trail. The Bonneville Shoreline Trail is managed to maintain its designation as a Millennium Legacy Trail. Conflicts between motorized and non-motorized winter recreation users are minimized at the Aspen Grove trailhead and parking lot. Timpooneke and Little Mill Campgrounds are reconstructed.

HERITAGE RESOURCES

Description

The American Fork Management Area contains some of the most important archaeological and historical sites on the Uinta National Forest, including American Fork Cave and other ancient American Indian campsites. A number of boulders containing important ancient American Indian rock have been illegally removed through the years; very little rock art remains as a result.

The only Uinta National Forest site that is currently on the National Register of Historic Places is the Upper American Fork Power Plant, which is operated by PacifiCorp under a special use permit. The management area contains some of the finest Civilian Conservation Corps (CCC) features in northern Utah, including the Mutual Dell amphitheater, Timpooneke Ranger Station, South Fork Ranger Station, and the bridge at Granite Flat Campground (with interpretive signs on the CCC nearby).

Other known historic sites that are potentially eligible for the National Register include the Hillman Lime Kiln and Silver Lake Dam. Some of the recreation residences in the Tibble Fork recreation residence tract are probably eligible for the National Register; others at both Tibble Fork and Silver Lake will become old enough to be potentially eligible (over 50 years of age) during this planning period.

Some of the earliest watershed work involving contour trenches in the western United States occurred in this management area. Beginning in 1938, several areas were trenched in an attempt to reduce downstream flood damage. Few sites associated with this effort remain, as many were replaced during later watershed treatments. Some of these features may become potentially eligible for the National Register during the next planning period.

Desired Future Condition

An interpretation plan for the American Fork Mining District is developed and implemented. Other aspects of the canyon's long history, including American Indian use, are preserved and interpreted, so visitors can understand the strong connection between people and this landscape. The Timpooneke Guard Station continues to be an outstanding example of a CCC-constructed facility.

RANGE

Description

This management area encompasses the Mahogany Mountain and Mill Canyon Peak sheep allotments. About one-fourth of the Snake Creek sheep allotment is also within this management area (the other portion of the allotment is within the Lower Provo Management area). All three allotments are currently vacant due to lack of demand for sheep grazing opportunities.

Desired Future Condition

The Mahogany Mountain and Mill Canyon Peak sheep allotments are closed to grazing to minimize the potential for disease transmission between domestic sheep and the bighorn sheep population, and to avoid conflicts with recreation uses. The portion of the Snake Creek Allotment that lies within this management area is maintained as open and available for livestock use.

MINERALS

Description

This management area has long been associated with mining activities to provide an economic base for local residents along the Wasatch Front. Minerals obtained in the upper reaches of the North Fork of American Fork Canyon include gold, silver, lead, zinc, and copper. Much of the land that was dedicated to mineral extraction is in private ownership, but is located within the National Forest boundary. At present there are seven active mining claims on National Forest System lands, including the Big Dane series, International, and Kearsage. Access by road is very difficult due to steep grades, narrow canyons, and the remoteness of the area. The North Fork of American Fork Canyon was withdrawn from any future mining claims for purposes of watershed protection in the 1960s. Recreational dredging is allowed but only under permit issued by the State of Utah. There is not likely to be any more mineral exploration or mining on National Forest System lands. Landowners of existing patent claims on private property may start operations in the future once the ore rock can be mined and processed economically.

FIRE

Description

In the past 10 years there have been 113 small fires (under 10 acres each) and two large fires, the Oak Hill and Box Elder Fires in 2000 (totaling approximately 1,160 acres), in the American Fork Management Area. Cumulatively these fires have burned 1,725 acres, or 2.9 percent of the entire management area. The area consists of steep and rugged terrain; fires that start on the lower third of these steep mountainsides have a greater risk of becoming large damaging fires with long-term effects on soils, vegetation, wildlife, and public and private infrastructure. Wildland urban interface

areas are located along the entire length of the Wasatch Front and around Tibble Fork and Silver Lake Flat Reservoirs.

Desired Future Condition

Hazard fuels treatments are focused in wildland urban interface areas and developed recreation sites, reducing the potential for crown fires in these areas. Fuels treatments are conducted in cooperation with the State of Utah to reduce hazard fuels in the wildland urban interface, resulting in increased protection of homes from catastrophic wildfire. The Lone Peak and Mount Timpanogos Wilderness Areas are priority areas for wildland fire use. Fires starting low to mid-slope on steep mountainsides have a priority management response as these fires have a greater chance of becoming large, damaging fires. Fuels treatments and natural fires are managed to protect or enhance important sensitive watersheds throughout the management area. A 1,000-acre fuels treatment project has been planned for the Dry Fork drainage in 2003.

LANDS AND SPECIAL USES

Description

The management area encompasses 250 acres of National Park Service land managed as Timpanogos Cave National Monument. The upper end of American Fork Canyon consists of an old mining district and many claims that went to patent, resulting in many private landowners, particularly within the Mineral Basin area. A hydropower project licensed by the Federal Energy Regulatory Commission (FERC) diverts water from the American Fork River and transports it through the Lone Peak Wilderness Area to a power plant on a lower reach of the American Fork River. The Tibble Fork and Silver Lake recreation residence tracts are located within this management area, as is the Mutual Dell organizational camp. Snowbird Ski and Summer Resort also extends into the management area; however, major ski facility developments are confined to private lands, though some ski runs cross portions of the National Forest. Other land special uses exist for municipal water systems and communication and power lines that service recreational residences as well as some of the communities along the Wasatch Front. The following table displays the land ownership of the management area.

Table 5-4. Acres within the American Fork Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	58,080
National Park Service	250
State of Utah	0
Private	4,620
Total Acres	62,950

Desired Future Condition

All available acreage within the drainage that meets the public need will be identified for acquisition priority. Land adjustments along the Wasatch Front will result in a more identifiable Forest boundary using the Bonneville Shoreline Trail as the boundary. The Tibble Fork and Silver Lake recreation residence tracts will continue to be managed as recreation special use areas. The Mutual Dell organizational camp continues to offer a variety of opportunities for youth groups, and will continue to be managed as a recreation special use area. Special uses for municipal water systems and communication and power lines will continue to be permitted.

TRANSPORTATION

Description

The Alpine Loop Scenic Backway (State Route 92), begins in this management area and proceeds to the east, then south over the divide into the North Fork of the Provo River drainage. This road is heavily used by recreationists to access and pass through the area. The management area contains approximately 53 miles of classified roads used to access the Forest for recreation and resource management purposes.

Management Prescriptions Map – American Fork Management Area

JPG (194 KB)

PDF (858 KB)

Recreation Opportunity Spectrum Classes Map – American Fork Management Area

JPG (152 KB)

PDF (359 KB)

Visual Quality Objectives Map – American Fork Management Area

JPG (152 KB)

PDF (349 KB)

CURRANT CREEK MANAGEMENT AREA

LOCATION

The Currant Creek Management Area is located within Wasatch County and is within the Uinta Mountains Geographic Area. The boundaries of the area are formed by the West Fork Duchesne Management Area to the north, the Strawberry Reservoir Management Area to the southwest, State land to the southeast, and other non-federal lands to the east.

The management prescriptions applied within the management area are summarized in the following table.

Table 5-5. Management Prescriptions in the Currant Creek Management Area

Management Prescription	Acres*
2.4 Research Natural Areas	270
3.1 Aquatic, Terrestrial, and Hydrologic Resources	1,250
3.2 Watershed Emphasis	520
4.4 Dispersed Recreation	4,630
4.5 Developed Recreation	130
5.1 Forested Ecosystems – Limited Development	17,210
5.2 Forested Ecosystems – Vegetation Management	18,850
8.3 Administrative Sites	10
Total Acres	42,870

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

SPECIAL FEATURES

Description

All or portions of the following six roadless areas lie within this management area: Vat Creek (#418004), White Ledge (#418034), Coyote Ridge (#418042), Co-op Creek (#418043), Chicken Creek (#418044), and Currant Creek Peak (#418045). These roadless areas total approximately 21,960 acres, or 51 percent of the management area. The approximately 270-acre Jumpoff Research Natural Area (RNA) was designated for its unique combination of subalpine fir, climax aspen, mountain brush, and sagebrush steppe ecosystems.

Desired Future Condition

The Jumpoff Research Natural Area (RNA) has an approved management plan, and continues to provide valuable data related to forested ecosystems.

GEOLOGY AND SOILS

Description

The Currant Creek Management Area lies on the south slope of the Uinta Mountains and the northern side of the Uinta Basin. This area is part of the Colorado Plateau. The Uinta Mountains are a long east-west anticline faulted along the edges. The upper elevations (i.e., the northern half) of this management area are within this region of faulting, and contain numerous geologic formations. The southern half of this management area lies on the Oligocene conglomerate, sandstone and shales of the Duchesne River/Uinta formations that extend through much of the western Uinta Basin. The upper elevations of the Uinta Mountains, including areas within this management area on Currant Creek Peak and Red Creek Mountain, contain glacially eroded and glacially depositional landforms. Some active and paleolandslides exist within the northern half of this management area. Post-glacial sediment occurs along many of the streams within the management area. Alluvial deposits lie within the Currant Creek drainage.

Landtype mapping has been completed only for the northwestern part (about 15 percent) of this management area. This mapping indicates that the following features occur in the area: tectonic mountain, structurally controlled shale and sandstone, stream canyon, plateauland, landslide, and glacially scoured uplands, canyons and moraine landtypes. There are no published soil surveys for the area. The soils in this management area are diverse, a reflection of the diversity of the underlying geology and geologic processes that have occurred here. Soils are generally medium to fine textured and have high silt and sand contents. Some soils are calcareous and have a substantial clay content. Many soils have a high gravel or cobble content. The depth, drainage, permeability, and productivity of these soils varies. Inherent erosiveness for most of these soils is moderate. Disturbed erosion hazard ranges from slight to severe.

WATER AND WATERSHED

Description

Average annual precipitation in the area ranges between 13 inches per year in the lowest portion of the management area to over 30 inches in the upper portions of the area, with over 80 percent or more of the total occurring as snow between October and April. Most of the remainder of the precipitation occurs during summer thunderstorms.

The Vat Creek tunnel brings water from the West Fork Duchesne River into the Currant Creek watershed. The Currant Creek Reservoir, completed in 1988, and the tunnel it feeds divert water from Currant Creek above the dam to Strawberry Reservoir for further distribution and use.

There are approximately 131 miles of streams within this management area: 81 are perennial and 50 are intermittent. The main drainages within the area include Racetrack, Pass, Low Pass, Jones Cabin, Willow Springs, Coal Mine Hollow, and Red

Ledge Creeks, and the South, Left, and Right Forks of Currant Creek. All streams within the Currant Creek drainage are currently meeting State of Utah clean water standards. Drainages above the Currant Creek Reservoir are still natural, free-flowing systems. Currant Creek below the Currant Creek Reservoir is regulated and floods have been reduced from historic levels. Riparian communities are being impacted with the current below-dam flows. Historic uses in the area included water development for irrigation and developed recreation uses. Water from the management area is used for stock, irrigation, domestic, power, storage, and municipal purposes. The Strawberry Water Users Association holds the municipal water right in this area. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-6. Miles of Stream by Riparian Habitat Conservation Area Class in the Currant Creek Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	32
Class II	<1
Class III	99
Total Miles	131

* Miles are rounded to the nearest 1 mile.

Desired Future Condition

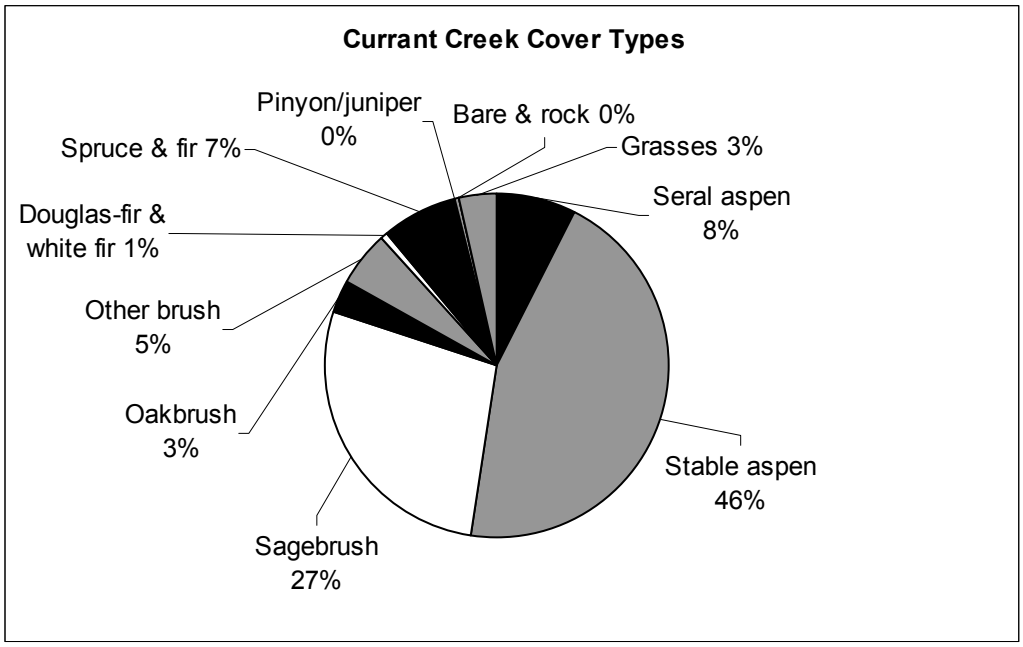
The Central Utah Project (CUP) activities associated with trans-basin diversion of water from Currant Creek Reservoir to Strawberry Reservoir continue to occur.

VEGETATION

Description

Vegetation throughout the management area is comprised primarily of aspen, aspen/conifer, and sagebrush, with some spruce/fir at the upper elevations in Smith Basin, Pass Creek, and near Currant Creek Peak. Snowberry and mixed mountain brush communities are scattered throughout the area. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-2. Vegetation Cover Types in the Currant Creek Management Area



Recent timber harvest activities have focused on maintaining or improving forested ecosystems health as related to insect and disease control, aspen regeneration, and general wildlife habitat enhancement. These timber sales have contributed to local economies by providing jobs and associated benefits from expenditure of funds within local communities by local timber operators. Approximately 1,250 acres, primarily in the spruce/fir type, have been harvested within the management area since 1970.

There are no known TES plant species within the area. Noxious weeds known to occur in this area are musk thistle and Canada thistle. Current infestations are believed to be small and scattered.

Desired Future Condition

Vegetation management focuses on improving the diversity of forested and non-forested communities, with an emphasis on aspen stand regeneration and insect and disease control in conifer species. Wildlife habitat needs are considered in designing treatment projects, but do not necessarily drive the purpose and need for treatment. Forested vegetation that is classified as capable and available is managed to provide a portion of the Forest's Allowable Sale Quantity (ASQ). Forested vegetation throughout the remainder of the management area is managed for general forest health and other forest resource needs. Timber harvest activities conducted to achieve management objectives provide opportunities for the local dependant timber industry.

AQUATICS

Description

Fish. The management area is located within the South Slope Uinta Subunit of the Northeastern Geographic Management Unit for Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*). Strong populations of Colorado River cutthroat trout are believed to exist in six tributaries to Currant Creek Reservoir: Jones Cabin Creek, Low Pass Creek, Right Fork Currant Creek, Pass Creek, Race Track Creek, and the Currant Creek headwaters, which includes the Left Fork of Currant Creek, South Fork of the Left Fork Currant Creek, and Tut Creek. These populations have been identified as conservation populations. Habitat for Colorado River cutthroat trout within the tributaries of Currant Creek Reservoir is believed to be in a stable to upward trend. Colorado River cutthroat trout are a Region 4 and state sensitive species, and were petitioned for listing under the Endangered Species Act in December 1999. Findings for the petition have not yet been determined. Conservation agreements with the UDWR have been developed for this species. Other native fish species present within the management area may include mottled sculpin, mountain sucker, speckled dace, and Utah chub.

Non-native brown, brook (*Salvelinus fontinalis*), and rainbow trout have been introduced into and may still occupy suitable habitat within the management area. These species present a risk to the recovery and future viability of cutthroat trout populations within the management area.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality. However, it is assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains high value habitat for boreal chorus frog, boreal toad, Great Basin toad, Great Plains toad, northern leopard frog, tiger salamander, and Woodhouse's toad.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, no observations of state listed rare or imperiled aquatic macroinvertebrates have been reported for the management area.

Threatened, Endangered, and Sensitive (TES) Species. Colorado River cutthroat trout is the only TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. The primary wildlife habitat types within this management area are aspen forest and sagebrush, with lesser amounts of conifer forest (primarily spruce/fir), mountain brush, oak/maple, and grasslands. This area also provides a large amount of riparian habitat along the many streams, springs, and ponds above Currant Creek Reservoir, and along Currant Creek below the reservoir. This management area contains the Forest's only research natural area.

Threatened, Endangered, and Sensitive (TES) Species. Northern goshawks nest in this management area, and flammulated owls potentially nest here. Relatively few wildlife surveys have been conducted within this management area.

Big Game Species and Other Wildlife. This area is considered primarily summer and transitional range for big game. Deer or elk winter range does not occur within the management area, but critical elk winter range occurs on the eastern end of the state-owned Currant Creek Wildlife Management Area along Currant Creek below Forest Service land. Introduced wild turkeys occur along Currant Creek below the reservoir.

RECREATION

Description

The Currant Creek Management Area is removed from the urban centers along the Wasatch Front. Recreational use occurs year-round with most use by residents of northern Utah. Recreation activities within the area include moderate amounts of dispersed and developed camping, fishing, hunting, off-highway vehicle (OHV) use, and general dispersed area use. The Currant Creek Campground and Reservoir are destinations for weekend recreationists and hunters. These are the only developed recreational facilities within the management area. Overall, recreational use is light as compared to the areas immediately adjacent to the Wasatch Front. The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-7. Recreation Opportunity Spectrum (ROS) Classes in the Currant Creek Management Area

ROS Class	Acres*
Primitive	270
Semi-Primitive Motorized	15,600
Roaded Natural	23,490
Roaded Modified	3,510

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

Recreation opportunities provide for a wide variety of users. Dispersed recreation activities are available throughout the management area, with an emphasis on active management of dispersed recreation focused along the Trout Creek Road and Co-op Creek Road corridors. Dispersed campsites may be hardened to minimize impacts to adjacent resources. Developed recreation opportunities are provided at the Currant Creek Campground and Reservoir as well as recreational opportunities associated with a natural setting. Summer OHV use is restricted to the classified road system.

HERITAGE RESOURCES

Description

This area was used by both ancient American Indians and historic Utes (those using the area in the last 150 years); a few archaeological sites have been located that document this use. Very little archaeological work has been done in the area; as a result, no sites from the historic period have been documented. However, it is likely that grazing, logging, and recreation campsites exist.

RANGE

Description

This Management area encompasses all of the Currant Creek, Bear Hole, and Water Hollow cattle allotments, and portions of the Indian Springs, Red Ledge, and Trout Creek sheep allotments, and the East Daniels cattle allotment.

Desired Future Condition

Livestock grazing activities continue to be permitted on the allotments within this management area.

FIRE

Description

Due to elevation and vegetation types in this management area, fire activity over the past 10 years has been light with only 24 small fires, most of which were under 10 acres each. Cumulatively these fires have burned approximately 120 acres, less than 0.27 percent of the entire management area. Fuel reduction projects have been limited to small slash and pile burns projects.

Desired Future Condition

Hazard fuels treatments are focused in wildland urban interface areas and developed recreation sites, reducing the potential for crown fires in these areas. Fuels treatments are conducted in cooperation with the State of Utah to reduce hazard fuels in the wildland urban interface, resulting in increased protection of homes from catastrophic wildfire. Fuels treatments and natural fires are managed to protect or enhance

important sensitive watersheds in the management area. Fire management within the Jumpoff Research Natural Area is consistent with the management goals of the area.

LANDS AND SPECIAL USES

Description

There is potential on the east side of the management area for encroachments and trespasses. The demand for special use permits for land activities is limited; requests will be reviewed on case-by-case basis to determine public need and interest. The following table displays the land ownership of the management area.

Table 5-8. Acres within the Currant Creek Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	42,860
State of Utah	11,310
Private	0
Total Acres	54,170

Desired Future Condition

The management area is kept as unencumbered as possible. The Currant Creek Guard Station and Currant Creek Peak Communication Site continue to be maintained and utilized by the Forest. Special use permits are issued only if the associated activity is in the public interest.

TRANSPORTATION

Description

This management area contains approximately 86 miles of classified roads used to access the Forest for recreation and resource management purposes. The primary arterial routes include Tut Creek, Co-op Creek, and Currant Creek Roads. More than 50 percent of the Currant Creek Road (#083) segment from the Currant Creek Dam to Low Pass Road (#106) passes through landslide prone areas. There is a high maintenance cost associated with maintaining this road segment.

Desired Future Condition

Currant Creek Road (#083) has been relocated across the Currant Creek Dam to the West Side Currant Creek Road (#471). Through this relocation, critical access to the Currant Creek Campground and Work Center is maintained, a maintainable road across stable soils is provided, and classified road miles are reduced. A motorized trail from the Currant Creek Dam to Low Pass Road has been constructed utilizing the original Currant Creek Road alignment, maintaining motorized access around Currant Creek Reservoir and associated portions of this management area.

Management Prescriptions Map – Currant Creek Management Area

JPG (158 KB)

PDF (820 KB)

Recreation Opportunity Spectrum Classes Map – Currant Creek Management Area

JPG (185 KB)

PDF (323 KB)

Visual Quality Objectives Map – Currant Creek Management Area

JPG (168 KB)

PDF (301 KB)

DEER CREEK RESERVOIR MANAGEMENT AREA

LOCATION

The Deer Creek Reservoir Management Area is bounded by the Uinta National Forest boundary on the north and by the natural boundaries of the Deer Creek Reservoir watershed. Less than 20 percent of the total watershed area is within the proclaimed boundary of the Uinta National Forest. The majority of the balance of the watershed is in private ownership. The management prescriptions applied within the management area are summarized in the following table.

Table 5-9. Management Prescriptions in the Deer Creek Reservoir Management Area

Management Prescription	Acres*
3.1 Aquatic, Terrestrial, and Hydrologic Resources	740
3.3 Aquatic and Terrestrial Habitat	430
4.4 Dispersed Recreation	210
4.5 Developed Recreation	40
5.1 Forested Ecosystems – Limited Development	28,550
5.2 Forested Ecosystems – Vegetation Management	8,380
7.0 Wildland Urban Interface	3,060†
8.1 Mineral Development	3
8.2 Utility Corridor/Communication Sites	480
Total Acres	38,833

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

† These acres are not included in the total as they are duplicated in other prescriptions.

SPECIAL FEATURES

Description

All or portions of the following six roadless areas lie within this management area: Vat Creek (#418004), Box Spring (#418006), Daniels Canyon (#418007), Two Tom Hill (#418013), South Fork of the Provo River (#418024), and Wallsburg (#418037). These roadless areas total 30,420 acres, or 78 percent of the management area.

GEOLOGY AND SOILS

Description

The Deer Creek Management Area lies on the east flank of the Wasatch Mountains and on the south side of Heber Valley. These Paleozoic Oquirrh Group siltstones, sandstones, and limestone rocks are the dominant geologic formation in this management area. Tertiary deposits of igneous lava, breccia, and tuff deposited in the gap between the Uinta Mountains and the Wasatch Mountains underlie the very

northeastern edge of this area. Various geomorphic processes have occurred here. Ancient glaciers carved mountain valleys and left ground and laterial moraines in the upper elevations of this management area. Some landslides can also be found within the area. Heber Valley formed through normal faulting and folding after the Wasatch overthrust, and is the easternmost basin in the Basin and Range Province. The eastern edge of the management area adjoins the Charleston Thrust, one of the major faults of the Sevier thrust belt. Normal alluvial erosive processes are also active.

Stream canyons are the most common landtype, occupying about 51 percent of the management area. Tectonic mountain (occupying 26 percent of the area), structurally controlled sandstone (occupying 9 percent), landslide (4 percent), and glacial canyon, moraine, and scoured upland (10 percent) are other landtypes commonly occurring within the management area. Cluff (3 percent), Daybell-Fitzgerald (6 percent), Daybell (9 percent), Gappmayer (6 percent), Gappmayer-Wallsburg (3 percent), Rockland (12 percent), Roundy (22 percent), Sessions (2 percent), and Wallsburg-Rock (4 percent) are the most common soils. Most of these soils formed from glacial deposits, sandstone, other mixed sedimentary, or quartzite parent materials. Soils are generally medium to fine textured. Most topsoils have a loam texture, and many have high cobble or gravel contents. There are also some topsoils with a high clay (clay loam) or sand (sandy loam) content. Subsoils are generally very gravelly or cobbly loam, fine sand, fine sandy loam, clay loam, or clay. Soils vary, but most are deep, moderately productive, and moderately or excessively well drained. Soil permeability and disturbed erosion hazard varies.

WATER AND WATERSHED

Description

Precipitation at Deer Creek Reservoir averages between 16 and 20 inches per year, while the mountains in the management area average in excess of 30 inches annually.

The management area is a watershed for several small communities, the largest of which is Heber City with a population of approximately 5,610. Deer Creek Reservoir lies within state lands in the northern portion of the watershed. This reservoir is a major storage facility providing culinary water to over a million people in Utah and Salt Lake Counties.

The main stem channel, the Provo River, is located near the northern and western border of the watershed outside of the National Forest boundary. In the recent past, portions of the main channel of the Provo River have not had perennial flow; however, the Central Utah Project (CUP) Completion Act directed minimum perennial flows between Jordanelle and Deer Creek Reservoirs following the completion of Jordanelle Reservoir. The Provo River below Deer Creek Reservoir, just outside of the northwest corner of the management area, is managed as a blue ribbon sport fishery and is stocked with non-native species. The tributaries are perennial in the lower reaches near the Provo River, except where dewatered by irrigation diversions. Tributaries become intermittent to ephemeral in upper reaches. All areas of the watershed drain into Deer

Creek Reservoir. All tributaries from Heber and South Kamas Valleys drain into the Provo River. Tributaries from Round Valley drain directly into Deer Creek Reservoir. There are approximately 38 miles of perennial and 69 miles of intermittent streams within the management area on National Forest System lands. Water uses from the management area include stock water, domestic, irrigation, and storage. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-10. Miles of Stream by Riparian Habitat Conservation Area Class in the Deer Creek Reservoir Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	13
Class II	0
Class III	94
Total Miles	107

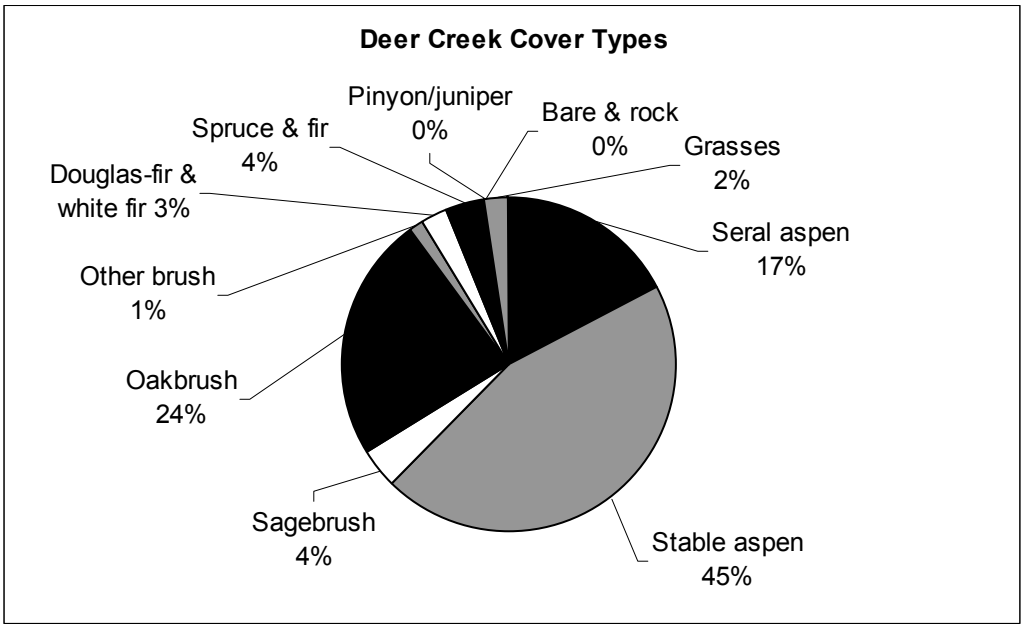
* Miles are rounded to the nearest 1 mile.

VEGETATION

Description

Vegetation is primarily aspen, with oak at the lower elevations and some scattered patches of conifer on the upper north facing slopes. Important prime farmlands are located on the valley floor. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-3. Vegetation Cover Types in the Deer Creek Management Area



There are no known TES plant species or Utah plant species of concern in the management area. The noxious weeds musk thistle and Canada thistle are found scattered throughout the management area. Approximately 200 acres, primarily in the spruce/fir type, have been harvested within the management area using commercial timber sales since 1970.

Desired Future Condition

Commercial timber sales are employed as the preferred management tool where economically viable and environmentally sound; however, achievement of high yields is not the primary purpose. Timber removed from these areas contributes to the Forest's Allowable Sale Quantity (ASQ).

AQUATICS

Description

Fish. The management area is located within the Northern Bonneville Geographic Management Unit for Bonneville cutthroat trout. Streams within the management area were historically inhabited by Bonneville cutthroat trout and some genetically pure populations may still reside in isolated stream reaches. Bonneville cutthroat trout are a Region 4 and state sensitive species and were petitioned for listing under the Endangered Species Act in February 1998. This petition was found not warranted in October 2001. Conservation agreements with the UDWR have been developed for this species; however, no conservation or persistence populations of Bonneville cutthroat trout have been identified for the management area.

The management area is located within the identified historic range for leatherside chub, a native species that is a state listed sensitive species. The life history and habitat requirements of this species are poorly understood and its current distribution and abundance is not well known. Other native fish species present within the management area may include mottled sculpin, mountain sucker, redside shiner, and Utah chub.

Non-native brown and rainbow trout have been introduced into and may still occupy suitable habitat within the management area. Naturally-reproducing brown trout inhabit the Provo River and are assumed to inhabit its tributaries as well. Deer Creek Reservoir is stocked with rainbow trout. These species present a risk to the recovery and future viability of cutthroat trout populations within the management area and are currently stocked by the UDWR to support local recreational fisheries. The potential for limited populations of genetically pure Bonneville cutthroat trout exists within streams located in the management area; however, there exists a high probability of future hybridization with other species.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality; however, it is assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented; however, observations of Columbia spotted frog have been reported above Deer Creek Reservoir. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains high value habitat for northern leopard frog and substantial value habitat for boreal chorus frog, boreal toad, and Great Basin spadefoot toad. There is one boreal toad record from 1959 at Daniels Summit (UDNR 2002c).

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, no observations of state listed rare or imperiled aquatic macroinvertebrates have been reported for the management area.

Threatened, Endangered, and Sensitive (TES) Species. Bonneville cutthroat trout is the only TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitat. The primary wildlife habitat types within this management area are aspen forest and oak/maple, with lesser amounts of sagebrush and conifer forest . Important riparian habitat occurs along Daniels Creek and Main Creek.

Threatened, Endangered, and Sensitive (TES) Species. Northern goshawk and flammulated owl nests have been found within this management area.

Big Game Species and Other Wildlife. Most of the area is considered summer and transitional range for big game. Critical deer winter range and high value elk winter range also occur within and above Daniels Canyon along the Forest boundary.

RECREATION

Description

This area is impacted by very heavy off-forest recreation and moderate on-forest recreation activities. There is heavy OHV use along the Little Valley Road from the management area boundary to Deer Creek Reservoir. Main Canyon Creek and Little Hobble Creek areas within the management area also receive a great deal of OHV use. The majority of this use comes from the Utah and Salt Lake Valley urban areas. Work currently underway to widen U.S. Highway 189 through Provo Canyon to Heber will shorten the drive time between Utah and Wasatch Counties, most likely resulting in an increase in the number of people using the resources within the watershed for recreation. Tremendous pressures exist from the general public and environmental groups to provide quality recreation opportunities while managing impacts on other resources. Population growth and its associated recreation impacts (water quality and quantity) and conversion of farmlands are major issues that local government planners and decision makers are addressing. The Great Western Trail, a National Millennium Trail, crosses through the southwestern portion of the management area. There are two developed recreation sites in the management area: Whiskey Springs, a day use area, and Lodgepole Campground, which is currently being reconstructed and upgraded, and will provide single units and two group sites.

The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-11. Recreation Opportunity Spectrum (ROS) Classes in the Deer Creek Reservoir Management Area

ROS Class	Acres*
Semi-Primitive Non-Motorized	2,420
Semi-Primitive Motorized	24,460
Roaded Natural	8,240
Roaded Modified	3,730

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

Lodgepole Campground is reconstructed, with all construction disturbances mitigated and revegetated. Site protection is paramount in this area. Intensive vegetation management may be employed in order to maintain desired conditions. A wide variety of recreational opportunities are provided in the management area, but most are primarily focused on relatively primitive experiences. Summer motorized use is allowed on designated roads and trails. Dispersed recreation opportunities are available throughout the management area, although active management of these activities is focused on the road corridors. Dispersed campsites may be hardened in order to minimize impacts to adjacent resources. The non-motorized winter use trail system in the Daniels Summit/Dock Flat area is expanded. Recreation is limited to incidental dispersed use. Outfitter and guide opportunities are maintained at current levels. The Great Western Trail is managed to maintain its designation as a National Millennium Trail.

HERITAGE RESOURCES

Description

A few ancient American Indian campsites have been found in the area, though others probably exist. Only one historic site has been found – a hydrocarbon mine that is potentially eligible for the National Register. Other historic sites representing grazing, logging, and recreation will probably be found in the future.

RANGE

Description

There are portions of seven grazing allotments within this management area: Little Valley-Heber, Wallsburg, Twin Peaks, Strawberry, and Lake Creek sheep allotments, and the West Daniels and East Daniels cattle allotments.

Desired Future Condition

Livestock grazing activities continue to be permitted on the allotments within this management area.

FIRE

Description

In the past 10 years there have been 36 small fires (under 10 acres each) and one larger fire, the Wallsburg Fire in 2000, of approximately 100 acres in the Deer Creek Reservoir Management Area. Cumulatively these fires have burned 280 acres, or 0.65 percent of the entire management area. Wildland urban interface areas are located along the Forest boundary around the Center Creek and Lake Creek Roads, Daniels Pass area on State Route 40, and Lodgepole Campground.

Desired Future Condition

Increased development on private land adjacent to the Forest could result in an expansion of the urban interface areas.

LANDS AND SPECIAL USES

Description

A utility corridor runs along the U.S. Highway 40 road corridor. There are several irrigation ditches in the management area. A gravel pit is located in the Highway 40 road corridor near the northern part of the management area. The following table displays the land ownership of the management area.

Table 5-12. Acres within the Deer Creek Reservoir Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	38,840
State of Utah	0
Private	1,500
Total Acres	40,340

Desired Future Condition

The utility corridor along U.S. Highway 40 in the eastern portion of the management area is maintained. Vegetation management in this area is limited to that consistent with installation and maintenance of the utility line and mitigation of erosion and visual quality impacts. Although not considered suitable for livestock grazing, some grazing use may occur. A gravel pit in the northeast portion of the management area is maintained. Irrigation ditches are well maintained and water released from these diversion structures is controlled. Vegetation management is generally limited to noxious weed control, the removal of vegetation prior to mineral development, and site reclamation/revegetation once mineral operations are completed.

TRANSPORTATION

Description

U.S. Highway 40 passes through the eastern end of this management area and is used by recreationists as a primary route to Strawberry Reservoir. This highway is also a main route to the Heber Valley. This management area contains 47 miles of classified roads used to access the Forest for recreation and resource management purposes.

Management Prescriptions Map – Deer Creek Reservoir Management Area

JPG (166 KB)

PDF (1,042 KB)

Recreation Opportunity Spectrum Classes Map – Deer Creek Reservoir Management Area

JPG (156 KB)

PDF (418 KB)

Visual Quality Objectives Map – Deer Creek Reservoir Management Area

JPG (152 KB)

PDF (384 KB)

DIAMOND FORK MANAGEMENT AREA

LOCATION

The Diamond Fork management area is located within Utah County and lies immediately east of the Wasatch Front. Spanish Fork Peak at 10,197 feet above sea level is the highest point in the management area. The lowest point is located at the confluence of the Spanish Fork River at about 6,000 feet. The Diamond Fork drainage is separated from the Hobble Creek drainage by Pump Ridge on the north. Strawberry Ridge separates the drainage from the Strawberry Valley and headwater streams of the Strawberry River on the east. The management prescriptions applied within the management area are summarized in the following table.

Table 5-13. Management Prescriptions in the Diamond Fork Management Area

Management Prescription	Acres*
2.2 Wild and Scenic Rivers – Scenic Classification	2,510†
3.2 Watershed Emphasis	3,660
3.3 Aquatic and Terrestrial Habitat	11,200
4.4 Dispersed Recreation	8,760
4.5 Developed Recreation	70
5.1 Forested Ecosystems – Limited Development	26,940
5.2 Forested Ecosystems – Vegetation Management	760
6.1 Non-forested Ecosystems	45,400
7.0 Wildland Urban Interface	4,870†
8.2 Utility Corridors/Communication Sites	260
8.3 Administrative Sites	10
Total Acres	97,060

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

† These acres are not included in the total as they are duplicated in other prescriptions.

SPECIAL FEATURES

Description

Fifth Water Creek (7.8 miles) is eligible for designation as a scenic river in the National Wild and Scenic Rivers System. The Ruby Christensen Memorial Forest is located in upper Halls Fork. The memorial forest was established for use as an outdoor natural resource education site in 1964. The area has since ceased to be used as such, but still has local significance to residents of Springville and Spanish Fork. In 1998, the Diamond Fork watershed was selected as the pilot location for initiation of the Diamond Fork Youth Forest. The area was selected because of its proximity to major population bases and its wide range of resources. The youth forest program will provide educational opportunities for people of all ages. All or portions of the following six roadless areas lie within this management area: Pump Ridge (#418012), Two Tom Hill

(#418013), Red Mountain (#418014), Strawberry Ridge (#418015), Diamond Fork (#418016), and Mapleton (#418025). These roadless areas total approximately 84,630 acres, or 87 percent of the management area. The Department of Interior under the Central Utah Completion Act, Section 202 (a) (6), has withdrawn 2,795 acres within this area. This withdrawal provides jurisdiction of these acres for completion and protection of the Diamond Fork System.

Desired Future Condition

Fifth Water Creek maintains its eligibility for the National Wild and Scenic Rivers System as a scenic river. The Diamond Fork Youth Forest is fully functional, serving to educate the public about the principles of a multiple use approach to ecosystem management, the variety of management tools available, the effects of those tools on the landscape, and their use in the achievement of desired objectives. Efforts are aimed primarily at providing educational opportunities for local youth as well as other members of the community. Facilities are provided that support and enhance the educational experience for year-round activities.

GEOLOGY AND SOILS

Description

The Diamond Fork Management Area lies in the Wasatch Mountains. These mountains are a product of several episodes of folding and faulting. The steep western face of the Wasatch Mountains, including the scarp along the very western edge of this management area, is the line of offset with the Wasatch fault. The eastern edge of this management area is in the vicinity of where the Wasatch plateaus intersect with the Wasatch Mountains. This fault is the easternmost major normal fault of the Basin and Range province. Ancient glaciers affected a small part of this management area, carving mountain valleys on the upper elevations of Spanish Fork Peak. Four major formations extend into this management area. The west side of this management area is composed largely of the Paleozoic limestone and shale of the Oquirrh formation. The northeastern and eastern parts of this management area are underlain by the Eocene siltstones, shales and conglomerates of the Green River and Uinta formations. The Paleocene sandstones and conglomerates of the North Horn formation extend into the south-central parts of this management area. Numerous active and paleolandslides exist within the area, primarily on the Uinta and Green River shale formations. Lacustrine deposits from ancient Lake Bonneville occur just west of this management area. Normal alluvial erosive processes are also active, as evidenced by the alluvial deposits that lie along Diamond Fork Creek.

The soils in this management area are derived from sandstone, shale, and, to a lesser extent, limestone. Glacially derived soils are generally absent except at the highest elevations of Spanish Fork Peak. The stream canyon landtype is the most common landtype, occupying about 50 percent of the management area. Tectonic mountain (occupying 30 percent of the area), structurally controlled shale (occupying 12 percent), and landslide (6 percent) are other landtypes commonly found here. Fault block mountain, glacially scoured uplands and canyons, mountain foothill, plateaulands, and

structurally controlled limestone and sandstone landtypes also occur here, but none occupy more than 5 percent of the area. The most common soils are typic (7 percent), argic (5 percent), lithic (5 percent), and pachic (8 percent) cryoboroll; pachic udic haploboroll (5 percent); boralfic and calcic argixeroll (6 percent); typic hapludoll (18 percent); pachic argiustoll (8 percent); entic halustoll (3 percent); lithic cryorthent (8 percent); umbric dystrochrept (4 percent); typic cryoboralf (6 percent); and typic and mollic eutroboralf (10 percent). These soils are generally medium to fine textured with loam, silt loam, silty clay loam, clay loam, fine sandy loam, or silty clay topsoils. Some topsoils have a high gravel or cobble content. Most subsoils are calcareous and have high gravel, cobble, or stone contents. Subsoils have loam, fine sandy loam, silt loam, silty clay loam, sandy clay loam, clay loam, silty clay, or clay textures. Soil depths vary, though most are moderately deep. Most of these soils are slow to moderately permeable, and well or excessively drained. Inherent erosiveness for most of these soils is moderate, and disturbed erosion hazard is generally high or very high. Soil productivity varies from relatively good to low.

WATER AND WATERSHED

Description

This watershed is the largest headwater tributary of the Spanish Fork River. The management area contains approximately 98 miles of perennial streams. The area also contains approximately 225 miles of intermittent streams. The drainage receives approximately 18 inches of precipitation at its mouth and over 30 inches in its highest headwater areas. The majority of the precipitation comes in the form of snow between the months of October and April. The main stems of both Sixth Water and Lower Diamond Fork Creeks are listed on the State of Utah 303(d) list for flow alteration, riparian habitat alteration, and stream habitat alteration. Water from the management area is used for stock water, irrigation, domestic, power, storage, and municipalities. Spanish Fork City receives municipal water from this management area.

A major influence in this management area is the Central Utah Project (CUP). The CUP diverts Utah's share of Colorado River water (roughly 260,000 acre-feet of water annually) from the Duchesne River Basin. This project consists of a network of dams, water diversions, and reservoirs to transfer water from the Duchesne River and its tributaries to the Wasatch Front. The first diversion operations began in 1915 to transfer water from the West Fork Duchesne River to Strawberry Reservoir, then through the Sixth Water and Diamond Fork drainages to the Spanish Fork area.

The completion of the Diamond Fork System will bring an average of 86,100 acre-feet of CUP water and 61,500 acre-feet of Strawberry Valley Project water per year through the Diamond Fork drainage through 2010. In order to deliver this amount of water and restore habitats adversely impacted by historically high CUP water flows, a series of pipelines, tunnels, and aqueducts have been or are being built to remove a majority of the transported water from the stream channels. In the fall of 1997, a 510 cfs (cubic feet per second) pipeline was completed from the mouth of Diamond Fork to Monks Hollow. Construction is currently underway to connect this pipeline to the Sixth Water

aqueduct via a tunnel and/or additional pipelines. One of the main objectives of the operation of the Diamond Fork System is to provide flows that will allow mitigation or restoration of past impacts from the Strawberry Valley Project. Impacts from augmented flows include loss of a multiple age cottonwood forest along lower Diamond Fork and Sixth Water Creeks, stream channel down-cutting, excessive stream bank erosion, decreased aquatic habitat, and increased sedimentation. The selected flow regime, including its magnitude, timing, and duration, are among the most important factors in achieving restoration of the Sixth Water Diamond Fork channels and riparian resources.

The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area (RHCA) classes.

Table 5-14. Miles of Stream by Riparian Habitat Conservation Area Class in the Diamond Fork Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	70
Class II	0
Class III	253
Total Miles	323

* Miles are rounded to the nearest 1 mile.

Desired Future Condition

Watershed emphasis management is focused along the slopes of Spanish Fork Peak, and continues to provide protection to the water collection system that provides the water supply for the city of Spanish Fork. Water quality in streams previously impacted by enhanced flows from CUP activities (Lower Diamond Fork and Sixth Water Creeks) is improved to meet state water quality standards. Riparian vegetation along lower Diamond Fork and Sixth Water Creeks is enhanced to be within the range of desired future conditions for RHCAs.

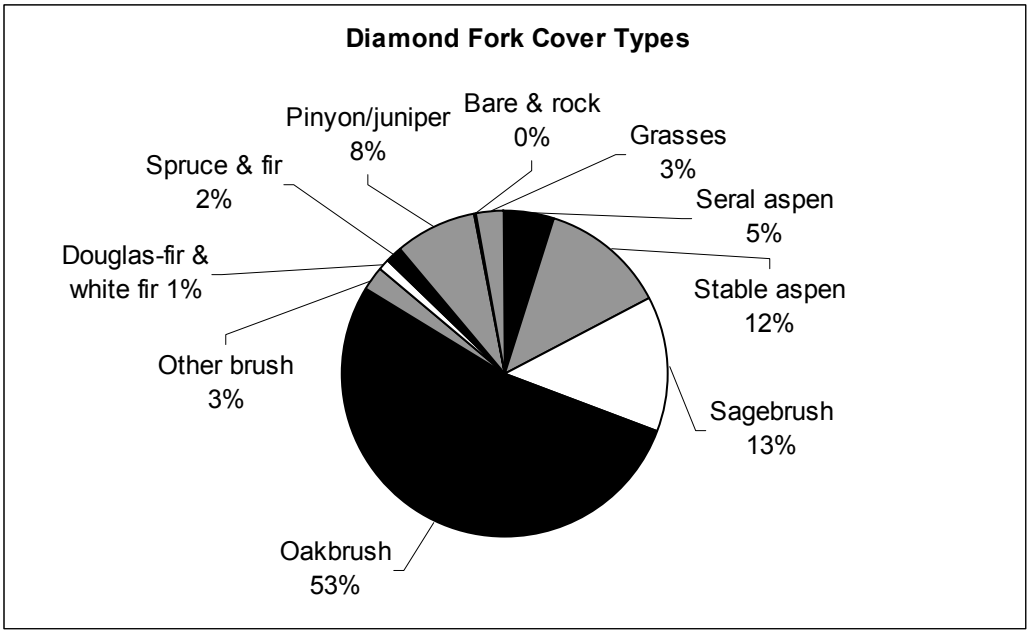
VEGETATION

Description

Much of the landscape in the Diamond Fork drainage is quite dry, especially in contrast to the Right Fork of Hobble Creek, which is located just to the north and east. Several of the dominant soil types, such as those derived from the Green River Shale, have properties that make them droughty and therefore support vegetation that is typical of relatively lower elevations. Vegetation is primarily oak and pinyon/juniper throughout the main drainage. Small amounts of aspen and conifer occur on the upper elevation

north facing slopes. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-4. Vegetation Cover Types in the Diamond Fork Management Area



The one federally listed or sensitive plant known to occur in the Diamond Fork management area is Ute ladies'-tresses (*Spiranthes diluvialis*), an orchid species designated as threatened. This species is endemic to saturated soils near springs, lakes, and perennial streams. It is known to occur at elevations between 4,000 and 7,000 feet. The Diamond Fork/Spanish Fork River population is the largest along the Wasatch Front, and one of the largest, most concentrated occurrences throughout the species' range.

This management area contains a relatively high number of noxious and invasive weed species, located mostly along roads and riparian drainages. Documented species are musk thistle, Canada thistle, Scotch thistle, whitetop, tamarisk, and Dalmatian toadflax. Infestations of whitetop and thistles are sometimes extensive. Weed treatment has been concentrated along roads and in the lower portion of the Diamond Fork riparian area. Musk thistle infestations have been greatly reduced compared to infestation levels of the 1980s. Approximately 630 acres, primarily in the Douglas-fir/white fir type, have been harvested within the management area using commercial timber sales since 1970.

Desired Future Condition

Upland, forested, and non-forested vegetation (oak and maple complexes) are managed to create diversified age classes and structures consistent with the desired

future conditions for those vegetation types. Riparian habitat along Diamond Fork Creek is managed to achieve and maintain healthy, dynamic, sustainable communities in which the Ute ladies'-tresses orchid is an integral, if not dominant, component (USDI 1999b, p. 12). Potential habitat for clay phacelia (*Phacelia argillacea*) is protected. Riparian and hardwood vegetation in the floodplain is restored along 50 percent of lower Diamond Fork below its confluence with Sixth Water Creek. Forested ecosystems are managed for a variety of resource purposes, including long-term timber management objectives.

AQUATICS

Description

Fish. The Diamond Fork Management Area is located within the Northern Bonneville Geographic Management Unit for Bonneville cutthroat trout. Drainages within the management area have historically been inhabited by Bonneville cutthroat trout and some genetically pure populations may still reside in isolated stream reaches. Bonneville cutthroat trout are a Region 4 and state sensitive species and were petitioned for listing under the Endangered Species Act in February 1998. This petition was found not warranted in October 2001. Conservation agreements with the UDWR have been developed for this species. Populations of Bonneville cutthroat trout within the management area have been identified as conservation populations in Fifth Water Creek, Chase Creek, Shingle Mill Creek, Sixth Water Creek, Halls Fork, and Cottonwood Creek. Additional cutthroat populations have been identified as persistence populations in Little Diamond Creek and Wanrhodes Creek.

The management area is located within the identified historic range for leatherside chub, a native species that is a state listed sensitive species. The life history and habitat requirements of this species are poorly understood and its current distribution and abundance is not well known. Other native fish species present within the management area may include mottled sculpin, mountain sucker, speckled dace, and Utah chub.

Non-native brown and rainbow trout have been introduced into and may still occupy suitable habitat within the management area. These species present a risk to the recovery and future viability of cutthroat trout populations within the management area. Bonneville cutthroat trout are currently stocked by the UDWR to supplement a popular recreational fishery in Sixth Water Creek.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality. However, it is assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains high value habitat for Great Basin spadefoot toad

and substantial value habitat for boreal chorus frog, boreal toad, northern leopard frog, tiger salamander, and Woodhouse's toad. There is one record of boreal toad from Rays Valley in 1976 (UDNR 2002c). In 2002 a population of Columbia spotted frog was discovered on Bureau of Reclamation land within the management area boundary.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, no observations of state listed rare or imperiled aquatic macroinvertebrates have been reported for the management area.

Threatened, Endangered, and Sensitive (TES) Species. Bonneville cutthroat trout and Columbia spotted frog are the only TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. The Diamond Fork Management Area contains a wide variety of vegetation associations and therefore a wide variety of wildlife habitats, from conifer and aspen forests in the headwaters in the eastern portions of the area to pinyon/juniper, oak/maple, mountain brush, sagebrush, and grass-dominated habitats. Forested riparian habitat occurs along Diamond Fork, Wanrhodes Canyon, Cottonwood Canyon, Fifth Water, and Dry Canyon. Forested riparian habitats are extremely important for terrestrial wildlife because they provide habitat for diverse assemblages of reptiles, birds, and mammals. Forested riparian habitats have been substantially impacted in Diamond Fork Canyon, and only a fraction of the cottonwood-dominated riparian forest that occurred in the canyon historically is present today.

Threatened, Endangered, and Sensitive (TES) Species. Bald eagles occur along Diamond Fork during the winter. Northern goshawks are known to nest within this management area, and flammulated owls potentially nest in aspen forests in the eastern part of the management area.

Big Game Species and Other Wildlife. This management area provides critical and high value deer and elk winter range at lower elevations in addition to summer and transitional big game range. Mountain goats have dispersed south to Spanish Fork Peak along the lower northern boundary of the Diamond Fork Management Area. Introduced wild turkeys are common in the canyon. Golden eagles are known to nest within the upper canyon. Smooth green snakes and milk snakes have been recorded within this drainage. Remaining forested riparian habitat within the drainage provide potential habitat for western yellow-billed cuckoos and veerys.

RECREATION

Description

The proximity of the drainage to the Wasatch Front lends itself to being a favorite place for recreationists. The area is rural in nature and offers a multitude of recreation opportunities. The road corridors are used for scenery and wildlife viewing and driving for pleasure. Recreational opportunities include developed and dispersed camping, hiking, mountain biking, heli-skiing, horseback riding, ATV and OHV use, rock climbing, and rappelling. The drainage also contains the Fifth Water hot pots. These natural hot springs are located at the base of a small waterfall and are heavily used for soaking. The Great Western Trail, a National Millennium Trail, is located along the eastern length of the management area. The non-motorized Bonneville Shoreline Trail, a Millennium Legacy Trail, is located along the western boundary of the area along the remnant shoreline of ancient Lake Bonneville.

Use by anglers is low to moderate but is expected to increase as the condition of the fishery improves. The UDWR rates the streams in this drainage as Class 3, an average fishery, but with some important spawning and nursery aspects. Upland watershed conditions and fisheries and riparian areas not impacted by augmented flows are improving, and are expected to continue to improve. With full implementation of the Diamond Fork System by the Central Utah Project, it is likely that the stream will eventually be considered a Class 2, or even a Class 1, fishery.

The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-15. Recreation Opportunity Spectrum (ROS) Classes in the Diamond Fork Management Area

ROS Class	Acres*
Semi-Primitive Non-Motorized	7,900
Semi-Primitive Motorized	57,550
Roaded Natural	20,140
Roaded Modified	11,460

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

Recreation opportunities in the management area are varied. Experiences in rural-type settings are available in the Diamond Campground and the lower 7.5 miles of the Diamond Fork Creek drainage. Dispersed recreation management provides both motorized and non-motorized opportunities. Approximately 7,100 acres encompassing the Spanish Fork Peak area are managed to provide Semi-Primitive Non-Motorized recreation opportunities. The rest of the management area (approximately 89,900

acres) provides a mix of motorized opportunities varying from Rural to Semi-Primitive settings. Dispersed recreation activities are managed intensively along the Diamond Fork/Halls Fork Road corridor, and in the Wanrhodes Creek drainage. Dispersed campsites have been hardened and designated for use as necessary to provide opportunities to the public while protecting riparian area resources within these corridors. Both motorized and non-motorized trail opportunities exist. ATVs utilize both designated trails and the existing road system as their main trail system. ATV trail opportunities include loop trails and additional facilities to tie into adjacent National Forest trail systems that provide similar opportunities. The Monks Hollow ATV trail is completed, and any areas that have been disturbed through construction have been revegetated. Heli-skiing opportunities are available. The Diamond Fork Campground group sites are reconstructed. The Great Western Trail is managed to maintain its designation as a National Millennium Trail. The Bonneville Shoreline Trail is managed to maintain its designation as a Millennium Legacy Trail.

HERITAGE RESOURCES

Description

The area contains a wide variety of archaeological and historic sites that reflect a number of themes important to Utah County history. There are ancient American Indian sites in the management area. The area is also a known travelway for historic Ute peoples (those using the area in the last 150 years). Local Ute guides brought the Dominguez and Escalante Expedition of 1776 through this area as well, though no known features associated with that expedition exist in the canyon. One of the sites of a skirmish between Mormon Settlers and Utes occurred in Little Diamond Creek in 1866; part of that culturally significant site is on National Forest System lands.

Diamond Fork shows the influence of humans since European settlement more that most other areas of the Forest, as reflected by the number of National Register eligible homesteads and former farming fields. Many of these fields are still visible as they were reseeded with crested wheatgrass and smooth brome after they were acquired by the Forest Service. The Strawberry Water Project was completed in 1912; some important sites from this endeavor, such as the West Portal and the construction camp, remain. The Diamond Fork Guard Station is eligible for the National Register. There are also a number of historic sites associated with the Spanish Fork Livestock Association (one of the first livestock associations in the state) and grazing in general.

Desired Future Condition

Information about past activities is fully integrated into both environmental education and interpretation programs in the area. Archaeological sites are protected against vandalism through law enforcement, education, and project planning.

RANGE

Description

The Diamond Fork Management area encompasses the Diamond Fork Allotment, and a portion of the Billie's Mountain and Hobble Creek Allotments. Livestock management within the lower seven miles of the Diamond Fork drainage continues to be increasingly challenging due to Central Utah Project (CUP) development, recreation use, and a management emphasis on stream improvement and restoration.

Desired Future Condition

Livestock grazing activities continue to be permitted on the allotments within this management area.

FIRE

Description

In the past 10 years there have been 45 small fires (under 10 acres each) and one other fire of approximately 60 acres in the Diamond Fork Management Area. Cumulatively these fires have burned 285 acres, or 0.29 percent of the entire management area. Only limited fuels treatments have been conducted in the past 10 years. Wildland urban interface areas are located around Little Diamond, Diamond Campground, and scattered private homes and summer cabins off Diamond Fork Road (#029).

Desired Future Condition

Fuels treatment projects are planned for burn block treatment areas in the management area in 2003, creating a mix age diversity of vegetation throughout the area. The burn block areas are Red Hollow, Monks/ Brimhall, Halls Fork, Fifth through Sixth Water, First through Sixth Water, Little Diamond/Spanish Fork Peak, and Billies Mountain, totaling approximately 34,500 acres. Fuels treatments and natural fires are managed to protect or enhance sensitive watersheds throughout the management area.

LANDS AND SPECIAL USES

Description

There are two existing utility corridors within this management area. Utah Power and Light occupies the corridor along Highway 6 and Deseret Generation and Transmission occupies the corridor along the eastern edge of the management area boundary. The southwestern portion of the management area contains a large amount of private land, specifically the Wanrhodes Basin, comprising about a tenth of the entire management area. The Bureau of Reclamation has a withdrawal in the bottom of the Diamond Fork drainage to develop and maintain the water transmission pipeline. The following table displays the land ownership of the management area.

Table 5-16. Acres within the Diamond Fork Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	97,040
State of Utah	0
Private	8,330
Total Acres	105,370

Desired Future Condition

The two utility corridors within this management area are maintained. Vegetation management in this area is limited to that consistent with installation and maintenance of the utility lines and mitigation of erosion and visual quality impacts. The Forest Service cooperates with private landowners and Utah County to preserve public access and recreation opportunities across private lands. Opportunities to acquire lands that are within the public interest and block up the National Forest System lands are pursued. Land adjustments along the Wasatch Front result in a more identifiable Forest boundary. Specifically, the Bonneville Shoreline Trail marks the Forest boundary.

TRANSPORTATION

Description

There are approximately 110 miles of classified roads providing access for recreational and management activities. The primary roads accessing the area are the Diamond Fork Road (#029) and the Rays Valley-Sheep Creek Road (#051). These roads connect within the northern portion of the management area.

Desired Future Condition

The Rays Valley Road from just north of Fifth Water to Springville Crossing has been reconstructed to an upland location out of riparian area along the unnamed tributary to Diamond Fork, providing critical arterial access from the Wasatch Front to eastern portions of the Forest as well as administrative access to CUP Diamond Fork project facilities.

Management Prescriptions Map – Diamond Fork Management Area

JPG (208 KB)

PDF (1,509 KB)

Recreation Opportunity Spectrum Classes Map – Diamond Fork Management Area

JPG (188 KB)

PDF (538 KB)

Visual Quality Objectives Map – Diamond Fork Management Area

JPG (196 KB)

PDF (506 KB)

HOBBLE CREEK MANAGEMENT AREA

LOCATION

The Hobble Creek Management Area lies within the Overthrust Mountains Geographic Area, and is located in Utah County. The management area includes the Left and Right Forks of Hobble Creek and Whiting Canyon, a smaller drainage, all draining into Utah Lake. The management prescriptions applied within the management area are summarized in the following table.

Table 5-17. Management Prescriptions in the Hobble Creek Management Area

Management Prescription	Acres*
2.6 Undeveloped	4,240
3.1 Aquatic, Terrestrial, and Hydrologic Resources	7,560
3.2 Watershed Emphasis	14,200
3.3 Aquatic and Terrestrial Habitat	7,220
4.4 Dispersed Recreation	2,320
4.5 Developed Recreation	30
5.1 Forested Ecosystems – Limited Development	22,770
5.2 Forested Ecosystems – Vegetation Management	2,340
6.1 Non-forested Ecosystems	10,310
7.0 Wildland Urban Interface	34,460†
8.2 Utility Corridor/Communication Sites	180
Total Acres	71,170

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

† These acres are not included in the total as they are duplicated in other prescriptions.

SPECIAL FEATURES

Description

All or portions of the following seven roadless areas lie within this management area: Rock Canyon/Buckley Mountain (#418011), Pump Ridge (#418012), Two Tom Hill (#418013), Red Mountain (#418014), South Fork of the Provo River (#418024), Mapleton (#418025), and Wallsburg (#418037). These roadless areas total approximately 67,730 acres, or 95 percent of the management area.

GEOLOGY AND SOILS

Description

The Hobble Creek Management Area lies in the Wasatch Mountains. These mountains are a product of several episodes of folding and faulting. The steep western face of the Wasatch Mountains, including the scarp along the very western edge of this

management area, is the line of offset with the Wasatch fault. This fault is the easternmost major normal fault of the Basin and Range province. Several other faults pass through this management area. Ancient glaciers affected a small part of this management area, carving mountain valleys on the upper elevations of Provo and Spanish Fork Peak. Most of the management area is underlain by the Paleozoic quartzite, shale, and limestone of the Oquirrh formation. The terrain on the east side of the management area is somewhat less rugged. Debris flows and avalanches are dominant geomorphic processes in steeper canyons throughout the area and may occur in any rock type. Debris flows occur during spring runoff in high water years and in response to intense summer thunderstorms. Some landslides/earthflows exist within the area. Lacustrine deposits from ancient Lake Bonneville extend into the very westernmost edge of this management area.

Most soils in this management area are derived from limestone, shales, sandstone, and quartzite. Glacially derived soils occur in the higher elevations on Provo and Spanish Fork Peaks. The stream canyon and tectonic mountain landtypes are the most common landtypes, occupying about 65 percent and 18 percent, respectively, of the management area. Fault block mountain; glacial moraines; scoured uplands and canyons; landslide; mountain foothill; lacustrine; and structurally controlled limestone, shale, and sandstone landtypes also occur here, but none occupy more than 5 percent of the area. The most common soils are typic (6 percent), argic (14 percent) and pachic (2 percent) cryoborolls; pachic udic haploboroll (4 percent); boralfic argixerolls (13 percent); typic hapludoll (15 percent); pachic argiustoll (2 percent); lithic cryorthent (10 percent); rockland/rock (4 percent); umbric dystrochrept (8 percent); lithic ustochrept (2 percent); typic cryoboralf (5 percent); and typic eutroboralf (3 percent). These soils are generally medium to fine textured. Topsoils are generally fine sandy loam, loam, silt loam, clay loam, or silty clay textured. Most topsoils have a high gravel or cobble content. Subsoils typically have high gravel or cobble contents, and are calcareous. Subsoils have loam, fine sandy loam, silt loam, silty clay loam, sandy clay loam, clay loam, or clay textures. Soil depths vary dependent upon slope position. Most soils are moderately permeable, and well or excessively drained. Inherent erosiveness for most of these soils is moderate to low, and disturbed erosion hazard is generally moderate to very high. Soil productivity varies.

WATER AND WATERSHED

Description

Precipitation ranges from 15 to 20 inches at lower elevations and exceeds 30 inches in higher headwater areas. Most of this precipitation falls as snow during the winter. High intensity, short duration summer thunderstorms are common from July through September.

There are approximately 232 miles of streams within the management area: approximately 31 miles are classified as perennial and 201 miles are classified as intermittent. The major streams within the management area include the Left and Right

Forks of Hobble Creek, Wardsworth Creek, and Bartholomew and Whittemore Canyons.

Water from the management area is used for stock and well water, irrigation, domestic uses, power, and municipalities. The management area provides municipal water for Springville City from the Bartholomew and Spring Canyon areas. Whiting Canyon provides municipal water for the city of Mapleton. Bartholomew Canyon is due for Federal Energy Regulatory Commission (FERC) relicensing. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-18. Miles of Stream by Riparian Habitat Conservation Area Class in the Hobble Creek Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	29
Class II	<1
Class III	203
Total Miles	232

* Miles are rounded to the nearest 1 mile.

Desired Future Condition

Riparian areas within the Hobble Creek Management Area are important for both livestock and wildlife species. Waters from the Left Fork Hobble Creek drainage continue to provide water for Springville City.

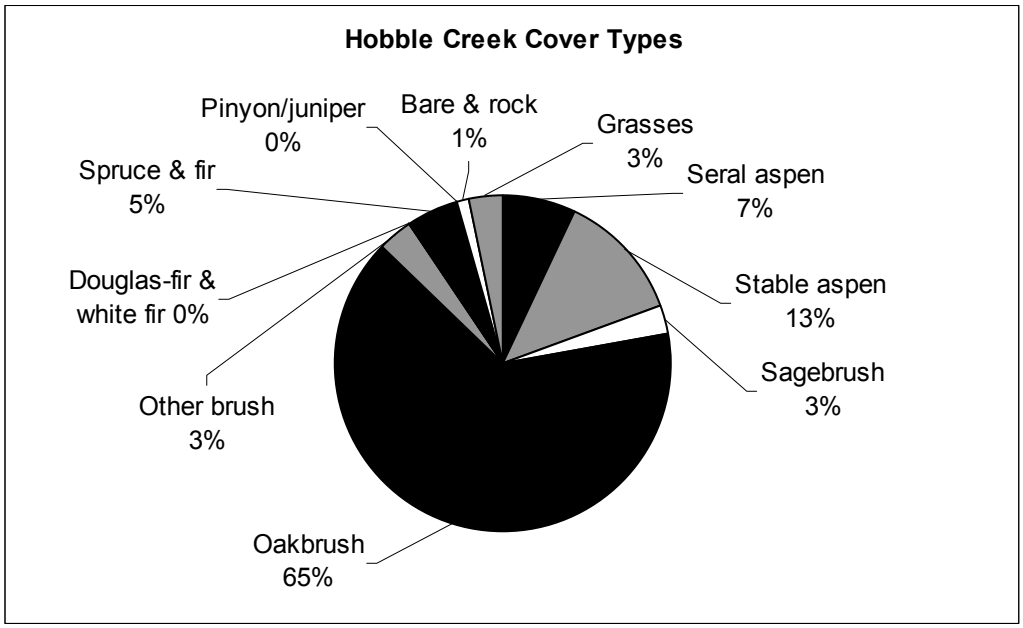
The Bartholomew and Maple Canyon watersheds continue to provide municipal water for the cities of Springville and Mapleton, and are protected from impacts that could result in compromising the integrity of the water collection and delivery systems located within the management area.

VEGETATION

Description

Oak, oak/maple, sagebrush/grass, mountain brush, pinyon/juniper, and aspen types primarily characterize vegetation, with limited conifer and aspen/conifer at upper elevations. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-5. Vegetation Cover Types in the Hobble Creek Management Area



No TES plant species or Utah plant species of concern are documented for this area. There are several species of noxious and invasive weed species known, including tamarisk, dyer's woad, houndstongue, Dalmatian toadflax, musk thistle, Canada thistle, and whitetop. Most infestations are found along roads or riparian drainages. Whitetop can be found in scattered infestations of one or more acres in moister upland areas. To date, weed treatments have been focused along roadsides. Approximately 200 acres, primarily in the Douglas-fir/white fir type, have been harvested within the management area using commercial timber sales since 1970.

Desired Future Condition

Approximately 2,500 acres of forested ecosystem are managed for multiple uses. Timber harvested is chargeable toward the Forest's Allowable Sale Quantity (ASQ).

AQUATICS

Description

Fish. The Hobble Creek Management Area is located within the Northern Bonneville Geographic Management Unit for Bonneville cutthroat trout. Drainages within the management area have historically been inhabited by Bonneville cutthroat trout and some genetically pure populations may still reside in isolated stream reaches. Bonneville cutthroat trout are a Region 4 and state sensitive species and were petitioned for listing under the Endangered Species Act in February 1998. This petition was found not warranted in October 2001. Conservation agreements with the UDWR

have been developed for this species. Populations of Bonneville cutthroat trout within the area have been identified as persistence populations in the Right Fork of Hobble Creek and Wardsworth Creek because they are isolated from other cutthroat trout populations within the region and are not considered part of a viable metapopulation. The occurrence of other native fish species within the management area is uncertain.

Non-native brown and rainbow trout have been introduced into and still occupy suitable habitat within the management area. These species present a risk to the recovery and future viability of cutthroat trout populations within the management area. In areas not occupied by Bonneville cutthroat trout, rainbow trout are stocked by the UDWR, to supplement popular recreational fisheries within the management area.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality. However, it is assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains substantial value habitat for boreal chorus frog, boreal toad, Great Basin spadefoot toad, northern leopard frog, tiger salamander, and Woodhouse's toad.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, three species, coarse rams-horn, creeping ancylid, and taiga bluet, have been documented on the Forest or in waters immediately adjacent to the Forest, and it is believed that they may be present within the management area.

Threatened, Endangered, and Sensitive (TES) Species. Bonneville cutthroat trout is the only TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. Oak/maple is the dominant habitat type, with aspen forest, conifer forest (primarily spruce/fir), sagebrush, and grass-dominated habitats also occurring within the management area. Forested riparian habitat along the Left Fork of Hobble Creek has been substantially impacted by development and agriculture on private lands. The Right Fork of Hobble Creek provides valuable forested riparian habitat. Rocky alpine habitats occur on Provo Peak and Corral Mountain along the northwestern management area boundary.

Threatened, Endangered, and Sensitive (TES) Species. Northern goshawk nests have been found within this management area, and flammulated owls potentially nest in

aspen stands in the eastern portion of the management area. Historically, peregrine falcons nested on cliffs along the Wasatch Front within this management area. As peregrine falcon numbers continue to increase in Utah, it is likely that birds will again nest within this management area. Bald eagles have been reported to occur along the Right Fork of Hobble Creek in the winter. Townsend's big eared-bats have been reported from Powerhouse Mountain.

Big Game Species and Other Wildlife. Mountain goats and bighorn sheep occur in high-elevation habitats within this management area and in the Lower Provo Management Area to the north. This management area provides substantial amounts of critical and high value deer and elk winter range at lower elevations, in addition to summer and transitional range at higher elevations. Introduced wild turkeys occur within this area. The taiga bluet (damselfly), rubber boa, and milk snake have been recorded in this management area (UDNR 2002c). Short-eared owls and western red bats have been reported just west of the management area boundary (UDNR 2002c).

RECREATION

Description

The Hobble Creek area is immediately adjacent to the Wasatch Front and receives a great deal of recreational day use by the public. Three developed campgrounds, Whiting, Cherry, and Balsam, are located within the management area. Fishing opportunities are available on the Right Fork of Hobble Creek, and limited opportunities are available on the Left Fork of Hobble Creek.

Other uses within the area include dispersed camping, hiking, mountain biking, heli-skiing, horseback riding, hunting, and driving for pleasure. Driving for pleasure is especially popular during the autumn. The Right Fork of Hobble Creek is utilized by the public as part of a loop drive into Diamond Fork Canyon, and is especially popular in the fall months when the vegetation is changing colors. The road from Pole Heaven across the Wasatch Front to Kolob Basin provides an impressive view of Utah Valley; the road can be accessed either by four-wheel drive, ATV, or snowmobile. A small portion of the Great Western Trail, a National Millennium Trail, crosses the northeastern corner of the management area. The non-motorized Bonneville Shoreline Trail, a Millennium Legacy Trail, is located along the western boundary of the area along the remnant shoreline of ancient Lake Bonneville.

The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-19. Recreation Opportunity Spectrum (ROS) Classes in the Hobble Creek Management Area

ROS Class	Acres*
Semi-Primitive Non-Motorized	42,250
Semi-Primitive Motorized	20,790
Roaded Natural	4,510
Roaded Modified	3,090
Rural	550

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

Dispersed recreation occurs throughout the area, but is actively managed in the Right Fork Hobble Creek corridor. Management of this corridor is coordinated with the Diamond Fork dispersed recreation corridor. Developed recreation opportunities continue to be provided at the Whiting, Cherry, and Balsam Campgrounds. Overnight camping facilities that accommodate horse use are provided in proximity to trailheads in areas where impacts to adjacent riparian resources are minimal. Recreation opportunities include both motorized and non-motorized activities. Non-motorized activities are generally associated with undeveloped areas. Summer motorized activities are available on designated roads and trails. Heli-skiing is allowed in areas with a Semi-Primitive Non-Motorized ROS classification. The southeast portion of the Cascade Peak/Provo Peak area is managed to maintain its undeveloped characteristics. No additional trails are constructed to provide access to the interior of this area. The Great Western Trail is managed to maintain its designation as a National Millennium Trail. The Bonneville Shoreline Trail is managed to maintain its designation as a Millennium Legacy Trail.

HERITAGE RESOURCES

Description

Extensive private land ownership in this area is the result of homesteading that began in the 1860s; however, few of the sites associated with this effort are on National Forest System lands. Instead, archaeological and historical sites include ancient American Indian campsites, segments of an 1860s era military road, and historic livestock grazing and recreation campsites. Both Cherry and Balsam Campgrounds were built by the CCC, but few intact features from the original campgrounds remain. There is a National Register eligible lime kiln within the management area near Ironton.

Desired Future Condition

Known heritage sites along trails and in developed recreation sites are stabilized and interpreted, as appropriate, including the Ironton Lime Kiln.

RANGE

Description

This Management area encompasses the majority of the Hobble Creek Allotment, and small portions the Little Valley-Heber, Wallsburg, and Twin Peaks Allotments.

Desired Future Condition

Livestock grazing activities continue to be permitted on the allotments within this management area.

FIRE

Description

In the past 10 years there have been approximately 40 small fires (under 10 acres each) and two large fires (totaling approximately 3,020 acres) in the Hobble Creek Management Area. Cumulatively these fires have burned 3,220 acres, or 4.59 percent of the entire management area. The Wing Fire in 2000 (810 acres) and the Springville Fire (2,207 acres) in 2002 occurred in urban interface areas along the Wasatch Front. Aggressive rehabilitation treatments were conducted to reduce flood flows on areas affected by these fires. The management area consists of steep and rugged terrain; fires that start on the lower third of these steep mountainsides have a greater risk of becoming large damaging fires due to terrain, thermal exposure, and fuel types, resulting in long-term effects on soil, vegetation, wildlife, and public and private infrastructure. Approximately 45 percent of the management area is classified as wildland urban interface: these areas are located along the Wasatch Front and completely surrounding the large area of private land in the Left Fork drainage, consisting of Hobble Creek, Pole Heaven, and Bartholomew and Whitmore Canyons.

Desired Future Condition

Fuels treatments and natural fires are managed to protect or enhance important sensitive watersheds throughout the management area.

LANDS AND SPECIAL USES

Description

There is a large block of private land within the Left Fork drainage in the management area. Many year-round residences are located at the mouth of Pole Heaven and in Bartholomew and Whittemore Canyons, as well as along the Left Fork Hobble Creek Road. A few homes are also located in Grindstone Canyon, south of the Hobble Creek Golf Course. Other facilities within the management area boundaries include Springville City's Hobble Creek Golf Course, Jolly's Ranch, Rotary Park (at the mouth of Hobble Creek Canyon), the Boy Scout Camp Jeremiah Johnson (a privately-owned facility), and Kelly's Grove (a privately-owned and operated recreation facility located between the

golf course and Jolly's Ranch). Springville City operates a hydroelectric power generating facility associated with their municipal water supply facilities, located in Bartholomew Canyon at the mouth of Hobble Creek Canyon. With the exception of the golf course, these facilities are entirely within the National Forest boundary but, for the most part, located on private lands. The following table displays the land ownership of the management area.

Table 5-20. Acres within the Hobble Creek Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	71,180
State of Utah	0
Private	13,000
Total Acres	84,180

Desired Future Condition

The Wardsworth Peak Repeater Site is maintained and continues to be used for Forest Service communications needs. The Bartholomew hydroelectric facilities continue to be operated by the City of Springville under permits from the Federal Energy Regulatory Commission (FERC) and the Uinta National Forest. Operation of these facilities ensures mitigation measures are achieved to provide the maximum protection for water-dependent ecosystems within the drainages. This could range from minimum instream flows for maintenance or enhancement of natural habitats, channel stability, recreational opportunities, and water quality to limitations of use to existing water rights. The lower portions of Left Fork Hobble Creek, Pole Heaven, and Whittemore Canyon are privately owned. The Forest Service cooperates with private landowners and Utah County to preserve public access and recreation opportunities across private lands. Opportunities to acquire lands that are within the public interest and block up the National Forest System lands are pursued. Land adjustments along the Wasatch Front result in a more identifiable Forest boundary.

TRANSPORTATION

Description

Access throughout this management area is provided on approximately 52 miles of classified National Forest System roads used to access the Forest for recreation and resource management purposes. The majority of these miles are maintained for high clearance vehicle access. The primary arterial route includes the Right Fork of Hobble Creek Road (#058), and the primary collector route is the Left Fork of Hobble Creek (#132)

Management Prescriptions Map – Hobble Creek Management Area

JPG (216 KB)

PDF (1,270 KB)

Recreation Opportunity Spectrum Classes Map – Hobble Creek Management Area

JPG (167 KB)

PDF (484 KB)

Visual Quality Objectives Map – Hobble Creek Management Area

JPG (186 KB)

PDF (444 KB)

LOWER PROVO MANAGEMENT AREA

LOCATION

The Lower Provo Management Area is bounded by the Uinta National Forest boundary on the west, the natural boundaries of the Provo River watershed on the north and south, and Wasatch Mountain State Park on the east. The management area is immediately adjacent to rapidly growing urban areas in Utah and Salt Lake Valleys.

U.S. Highway 189 passes through Provo Canyon along the Provo River within the management area from Orem, northeast to Deer Creek Reservoir. Approximately 19,830 acres of private land lie on either side of the highway, splitting the National Forest System lands within the management area into two parts. Sundance Ski Area is located on private land within the Forest boundary. The Alpine Loop Scenic Backway, State Route 92, begins in the American Fork Management Area and proceeds to the east, then south over the divide into the North Fork of the Provo River drainage. Wasatch Mountain and Deer Creek Reservoir State Parks are adjacent to the Forest boundary at the northeast corner of the management area. The eastern portion of the Mount Timpanogos Wilderness Area is within the central portion of the management area. The management prescriptions applied within the management area are summarized in the following table.

Table 5-21. Management Prescriptions in the Lower Provo Management Area

Management Prescription	Acres*
1.4 Wilderness	6,110
2.1 Wild and Scenic Rivers – Wild Classification	250†
2.3 Wild and Scenic Rivers – Recreational Classification	990†
2.5 Scenic Byways	1,400
2.6 Undeveloped	14,080
3.1 Aquatic, Terrestrial, and Hydrologic Resources	6,210
3.2 Watershed Emphasis	13,390
3.3 Aquatic and Terrestrial Habitat	1,520
4.4 Dispersed Recreation	9,980
4.5 Developed Recreation	120
6.1 Non-forested Ecosystems	10,620
7.0 Wildland Urban Interface	22,350†
8.1 Mineral Development	1
8.2 Utility Corridor/Communication Sites	60
Total Acres	63,491

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

† These acres are not included in the total as they are duplicated in other prescriptions.

SPECIAL FEATURES

Description

A 1.1 mile segment of the North Fork Provo River is eligible for the National Wild and Scenic Rivers System: 0.6 miles within the Mount Timpanogos Wilderness Area are eligible as a wild river, and 0.5 miles outside the wilderness area are eligible as a recreational river. A 2.6 mile segment of the Little Provo Deer Creek is also eligible as a recreational river. The Mount Timpanogos Wilderness Area is a small, urban wilderness with heavy day, weekend, and holiday use, most of which occurs in the period from late spring through fall. Additionally, use of the wilderness area is high on nights with a full moon, as many hikers make the trip to the summit by moonlight. Over 90 percent of the use is along trail corridors.

The State-designated Provo Canyon Scenic Byway begins at the mouth of Provo Canyon and continues along U.S. Highway 189 to Heber City. Approximately 1,400 acres of National Forest System lands are located along this byway corridor.

All or portions of the following four roadless areas lie within this management area: Rock Canyon/Buckley Mountain (#418011), South Fork of the Provo River (#418024), Mount Timpanogos (#418032), and Mill Canyon Peak (#418041). These roadless areas total approximately 47,960 acres, or 76 percent of the management area.

Desired Future Condition

The portion of the North Fork Provo River within the Mount Timpanogos Wilderness Area maintains its eligibility for the National Wild and Scenic Rivers System as a wild river; the portion outside the wilderness area maintains its eligibility as a recreational river. Approximately 32 percent of the management area is managed as wilderness. Wilderness areas are managed to provide wilderness-related recreational, aesthetic, and educational opportunities as well as resource protection measures. Management actions prevent unacceptable impacts on wilderness values resulting from substantial human visitation.

National Forest System lands along U.S. Highway 189, the Provo Canyon Scenic Byway, are managed to protect and maintain the outstanding recreational, educational, and scenic qualities within the corridor.

GEOLOGY AND SOILS

Description

This management area lies in the Wasatch Mountains. These mountains are a product of several episodes of folding and faulting. The steep western face of the Wasatch Mountains, including the scarp above the Provo-Orem Benches, is the line of offset with the Wasatch fault. This is the easternmost major normal fault of the Basin and Range province. The west face of the Wasatch Mountains consists of faulted wedges of Paleozoic limestone (i.e., Great Blue formation) and shale (i.e., Manning Canyon formation). Above these is the younger Oquirrh group, a thick sequence of bent and

broken limestone, shale, and sandstone. Paleozoic Weber River quartzite lies along much of the northeastern edge of this management area. Glaciation was very active in the upper elevations of Mount Timpanogos, Cascade Mountain, and Provo Peak, as evidenced by the numerous cirques, U-shaped valleys, and moraines. Large alluvial fans lie at the mouth of most canyons. Numerous active and paleolandslides and earthflows exist within the area. Lacustrine deposits from ancient Lake Bonneville extend from the west onto the Forest in a few locations. Debris flows and avalanches are dominant geomorphic processes in steeper canyons and in headwater drainages throughout the area and may occur in any rock type. Debris flows occur during spring runoff in high water years and in response to intense summer thunderstorms.

Stream canyons are the most common landtype, occupying about 38 percent of the management area. Tectonic mountain (occupying 25 percent of the area) and glacial canyon, moraine, and scoured upland (occupying 23 percent) landtypes also commonly occur. Fault block mountain, lacustrine, landslide, mountain foothill, and structurally controlled shale and limestone landscapes also occur here, but none occupy more than 5 percent of the area. Cumulic cryoboroll (6 percent), typic cryoboroll (6 percent), calcic cryoboroll (2 percent), pachic cryoboroll (4 percent), pachic argiboroll (3 percent), typic argiboroll (4 percent), typic calciustoll (2 percent), lithic halustoll (6 percent), udic haloboroll (8 percent), typic haploboroll (8 percent), typic cryorthent (2 percent), typic cryochrept (6 percent), and rock/rockfall (10 percent) are the most common soils. These soils generally have loam, silt loam, or fine sandy loam topsoils, most with a high gravel, cobble, or stone content. Subsoils are very gravelly, cobbly, or stony loam; silt loam; fine sandy loam; clay loam; silty clay loam; or clay, and some are calcareous. Soil depths and productivities vary considerably. Most soils are well or excessively drained, have moderate to slow permeability, and high to very high disturbed erosion hazard.

WATER AND WATERSHED

Description

Rain makes up approximately 40 percent of the total precipitation at lower elevations. Precipitation at the highest elevations exceeds 50 inches per year, while precipitation at the lowest elevations is between 16 and 20 inches per year. The majority of the area's winter precipitation results from frontal storms. High intensity thunderstorms are common from July through September.

The Provo River is one of the largest rivers emerging from the Wasatch Front. The segment of the river within the management area flows almost entirely through private lands, with only 0.7 miles of its course on the Uinta National Forest. The management area encompasses the Provo River watershed, which supplies water to communities in the Utah and Salt Lake Valleys. Much of the surface runoff is currently used for irrigation or municipal and industrial use. Water is diverted from the North Fork of the Duchesne River via pipeline to the Provo River for use by cities along the Wasatch Front. The Provo River is designated as a Class I (priority) watershed, in need of restoration. There are approximately 25 miles of perennial and 178 miles of intermittent

streams on National Forest System lands within the management area. Both Orem and Provo Cities use springs located within Provo Canyon for culinary water. Portions of Little Provo Deer Creek are heavily impacted by road incursions and channel modifications. Water from the Lower Provo Management Area is used for stock and well water, irrigation, domestic uses, power, storage, and municipalities. This management area provides municipal water for Springville, Lindon, Salt Lake City, the Bureau of Reclamation, and other smaller entities. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-22. Miles of Stream by Riparian Habitat Conservation Area Class in the Lower Provo Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	21
Class II	4
Class III	178
Total Miles	203

* Miles are rounded to the nearest 1 mile.

Desired Future Condition

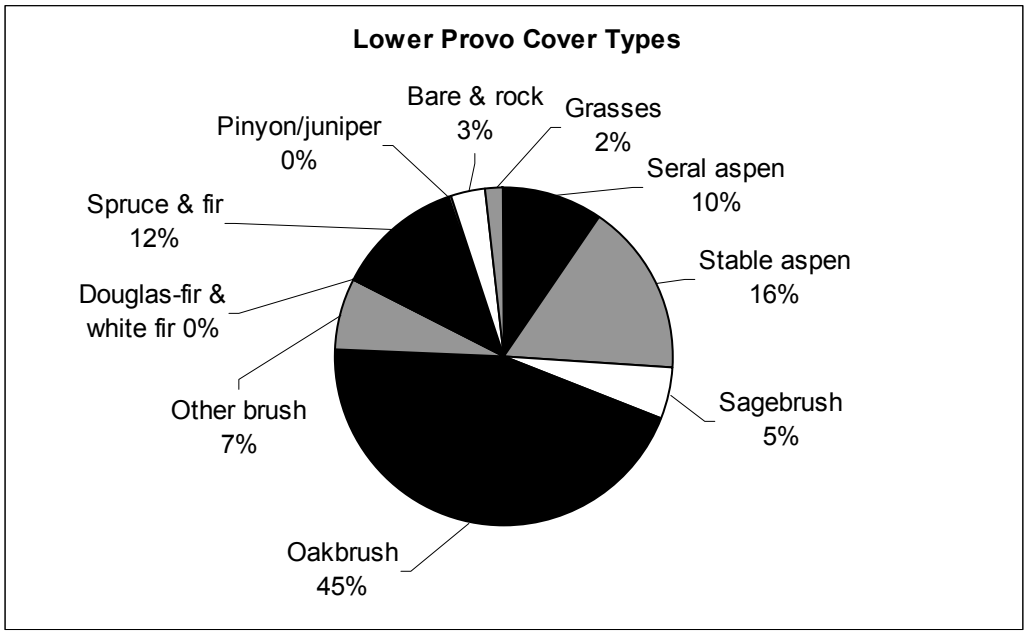
Management is focused on maintaining high water quality conditions for municipal water supplies and high quality fisheries.

VEGETATION

Description

Vegetation is primarily oak, sagebrush, and grasslands in the lower elevations; aspen and spruce/fir are predominant in the higher elevations. The Little Provo Deer Creek corridor at the eastern edge of the management area contains chokecherry and box elder as well as a variety of wildflowers and other water-loving plants. There are also numerous small sagebrush/grass and wet meadow areas within this corridor. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-6. Vegetation Cover Types In the Lower Provo Management Area



At least two sensitive plant species are found at various locations within the management area: Wasatch jamesia (*Jamesia americana* var. *macrocalyx*), and Garrett's bladderpod (*Lesquerella garrettii*). In addition to these species, Utah's Natural Diversity database documents populations of Garrett's daisy (*Erigeron garrettii),* Utah fleabane (*Erigeron arenarioides*), Wasatch draba (*Draba brachystylis*), Barneby woody aster (*Aster kingii* var. *barnebyana*), and Wasatch fitweed (*Corydalis caseana* ssp. *brachycarpa*). Noxious and invasive weed species found in the management area include leafy spurge, Dalmatian toadflax, whitetop, and cheatgrass. Yellow star-thistle is found nearby, below the National Forest boundary.

Desired Future Condition

Vegetation management activities along U.S. Highway 189, the Provo Canyon Scenic Byway, are limited to treatments that maintain or enhance the qualities of the area or provide for public safety. The eastern-most portion of the management area is managed with an emphasis on restoring vegetative conditions to achieve ecosystem health. Management is focused on providing a diverse composition of non-forested vegetation.

AQUATICS

Description

Fish. The management area is located within the Northern Bonneville Geographic Management Unit for Bonneville cutthroat trout. Streams within the management area were historically inhabited by Bonneville cutthroat trout and some genetically pure

populations may still reside in isolated stream reaches. Bonneville cutthroat trout are a Region 4 and state sensitive species and were petitioned for listing under the Endangered Species Act in February 1998. This petition was found not warranted in October 2001. Conservation agreements with the UDWR have been developed for this species.

Populations of Bonneville cutthroat trout have been identified as persistence populations in the South Fork of Deer Creek due to the low potential for recovery of a genetically pure population. Other native fish species present within the management area may include mottled sculpin, mountain sucker, mountain whitefish, and Utah chub.

Non-native brown and rainbow trout have been introduced into and may still occupy suitable habitat within the management area. These species present a significant risk to the recovery and future viability of cutthroat trout populations within the management area. Brown and Bonneville cutthroat trout are currently stocked by the UDWR to supplement popular recreational fisheries within the management area.

The Provo River is considered a blue ribbon fishery due to the excellent size and vigor of the fish and high quality of the habitat. The UDWR considers the river a top quality fishing water important for spawning and rearing for native salmonids. Non-native game fish species found in this segment include brown trout, rainbow trout, walleye, yellow perch, and largemouth bass.

Amphibians. The distribution of amphibian species within the management area is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains high value habitat for northern leopard frog, and substantial value habitat for boreal chorus frog, boreal toad, Great Basin spadefoot toad, tiger salamander, and Woodhouse's toad. Boreal toads occurred historically near Vivian Park in Provo Canyon (UDNR 2002c).

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, three species, coarse rams-horn, creeping ancylid, and California floater, have been documented on the Forest or in waters immediately adjacent to the Forest, and it is believed that they may be present within the management area.

Threatened, Endangered, and Sensitive (TES) Species. Bonneville cutthroat trout is the only TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. This management area provides a wide variety of wildlife habitats from extensive areas of alpine habitat within the Mount Timpanogos Wilderness Area to low-elevation oak/maple habitats. Oak/maple, aspen forest, and conifer forest (primarily

spruce/fir) are the primary habitat types, with lesser amounts of alpine, mountain brush, and sagebrush. Forested riparian habitat occurs along the Provo River between Deer Creek Reservoir and the western Forest boundary and along the South Fork. Most of this riparian habitat occurs on non-Forest Service lands.

Threatened, Endangered, and Sensitive (TES) Species. Bald eagles occur in Provo Canyon during the winter. Northern goshawks are known to nest within the management area, and flammulated owls may nest in aspen stands in this management area. Western yellow-billed cuckoos historically nested along the lower Provo River. Abandoned mines within the management area provide potential roosting habitat for Townsend's big-eared bats, spotted bats, and other bat species.

Big Game Species and Other Wildlife. Mountain goats and bighorn sheep occur on Mount Timpanogos and in the Cascade Mountain/Provo Peak area. The mountain goats introduced into these areas were translocated from Olympic National Park in Washington. Twenty-five Rocky Mountain bighorn sheep were translocated to Mount Timpanogos in 2000. This management area provides critical and high value deer winter range and high value elk winter range at lower elevations, in addition to summer and transitional range for big game. Golden eagles are known to nest on cliffs within this management area. The cross vertigo (terrestrial snail), black gloss (terrestrial snail), rubber boa, smooth green snake, black swift, Williamson's sapsucker, purple martin, and black rosy finch have been recorded to occur in this management area. There is a record of a wolverine sighting just below Deer Creek Dam in 1977 (UDNR 2002c).

RECREATION

Description

The Provo River corridor is a popular recreation destination for local users. The river is a renowned fly fishing destination, and is also popular for recreational kayaking and floating. Located within the corridor are the Provo River Parkway Trail (a small portion of which is located on National Forest System lands), many picnic areas operated by Provo City, and one picnic area (Upper Falls) under special use permit to Utah County Parks and Recreation. A two-mile stretch of the Great Western Trail from Vivian Park to Nunn's Park is also located in this corridor. Uses of the corridor include rafting, tubing, kayaking, photography, and ice and rock climbing. Approximately 13,000 visitors use the North Fork Provo River corridor to access the Mount Timpanogos Wilderness Area each year. The northern portion of the management area lies with in the Recreation Fee Demonstration Project area, described in more detail in the discussion for the American Fork Management Area on page 5-11.

The biggest law enforcement issues relate to motorized encroachment by ATVs, trucks, and over-the-snow machines. A Memorandum of Understanding between the Forest Service and Wasatch Mountain State Park has been signed to develop an extensive motorized trail system in this area to provide opportunities for this type of use and

lessen the impact to other resources. Other law enforcement problems include illegal campfires, group size violations, and trail cutting.

Brigham Young University's Aspen Grove facility and Sundance Ski Area are estimated to contribute 30 percent of the use experienced in this area. Cascade Springs in the Little Provo Deer Creek corridor is a popular attraction and location for educational groups, wildlife viewing, and weddings. Most recreation use along this corridor, particularly on weekends, is by snowmobiles, OHVs, and cross-country skiers. Heli-skiing occurs in the Cascade Mountain/Provo Peak area. Traveling from the Alpine Loop Scenic Backway across the Wasatch Front to Kolob Basin provides an impressive view of Utah Valley; the road can be accessed either by four-wheel drive, ATV, or snowmobile.

Hunting and fishing are common activities. The area is laced with numerous side roads and dispersed recreation areas. The Great Western Trail, a National Millennium Trail, crosses the length of the management area. The non-motorized Bonneville Shoreline Trail, a Millennium Legacy Trail, is located along the western boundary of the area along the remnant shoreline of ancient Lake Bonneville.

The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-23. Recreation Opportunity Spectrum (ROS) Classes in the Lower Provo Management Area

ROS Class	Acres*
Primitive	6,110
Semi-Primitive Non-Motorized	35,280
Semi-Primitive Motorized	10,760
Roaded Natural	7,450
Roaded Modified	3,700
Rural	180

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

Recreation opportunities are provided for a wide variety of uses. Summer motorized use is permitted on designated and signed routes in approximately 47 percent of the management area; the remaining 53 percent is allocated to non-motorized uses. Heli-skiing occurs in the Cascade Mountain/Provo Peak area. The motorized trail system developed through coordination efforts with Wasatch Mountain State Park has reduced impacts on other resources. The Mount Timpanogos Wilderness Area provides a primitive/urban wilderness experience in that one can experience a wilderness setting with limited human evidence on the land, but with a low opportunity for solitude and

close proximity to an urban area. The Aspen Grove trailhead and parking lot are managed to minimize conflicts between motorized and non-motorized winter recreation users. Dispersed recreation opportunities are available throughout the management area. Active management of dispersed recreation is focused along the corridors of the Alpine Loop Scenic Backway and Cascade Scenic Drive. This area is tied in with Wasatch Mountain State Park and is part of the Recreation Fee Demonstration Program. Some dispersed sites are hardened to minimize resource impacts from high levels of human use. The Cascade Mountain/Provo Peak area offers an undeveloped, non-motorized experience, while allowing for heli-skiing opportunities.

Cascade Springs, Rock Canyon Campground, Hope Campground, Mount Timpanogos Campground, Theater-in-the-Pines Group Site and Picnic Area, Upper Falls Picnic Area (under special use permit to Utah County), and an archery range in Pole Canyon (under special use permit to the Timpanogos Archery Club) are managed for developed recreation. Management is focused on maintaining capital improvements and increased utilization of these facilities in the face of increasing demand for these types of recreational experience. Intensive vegetation management is utilized when necessary to maintain desired conditions. The Great Western Trail is managed to maintain its designation as a National Millennium Trail. The Bonneville Shoreline Trail is managed to maintain its designation as a Millennium Legacy Trail.

HERITAGE RESOURCES

Description

A few archaeological sites have been identified in this area, including National Register-eligible ancient American Indian campsites. The Theater-in-the-Pines amphitheater was built by the CCC and the Works Progress Administration (WPA), and is an outstanding example of their labors. The metal structure on the summit of Mount Timpanogos (referred to as the Glass House due to its appearance when reflecting the sun), is also potentially eligible for the National Register. There are also a few historic mines in the area.

Desired Future Condition

Theater-in-the-Pines is maintained in good condition and serves as an important community resource. Information about past human activities is fully integrated into educational and interpretive efforts throughout the area.

RANGE

Description

The Lower Provo Management area contains the Deer Creek allotment and a portion of the Snake Creek sheep allotments. Both allotments are currently vacant, and will likely remain so due to lack of demand for sheep grazing opportunities. Livestock grazing activities had been managed in conjunction with grazing on Wasatch Mountain State

Park, but those areas on the State Park are also vacant and there are no immediate plans to restock them with livestock.

Desired Future Condition

Livestock grazing opportunities are available on the Snake Creek and Deer Creek sheep allotments.

FIRE

Description

In the past 10 years there have been 106 small fires (under 10 acres each), two large fires (the Y Mountain Fire in 2001 and the East Vivian Fire in 2000, totaling approximately 4,100 acres), and the Cascade Springs #1 prescribed fire (approximately 1,000 acres) in the Lower Provo Management Area. Cumulatively these fires have burned 3,744 acres, or 5.89 percent of the entire management area. All three of the large fires occurred in wildland urban interface areas and sensitive watersheds. Aggressive rehabilitation treatments were conducted to reduce flood flows on areas affected by these fires.

The management area consists of steep and rugged terrain; fires that start on the lower third of these steep mountainsides have a greater risk of becoming large damaging fires due to terrain, thermal exposure, and fuel types, resulting in long-term effects on soils, vegetation, wildlife, and public and private infrastructure. Wildland urban interface areas are located along Provo Canyon, at Vivian Park and Sundance Ski Resort, and along the Alpine Loop, State Route 92, and the Wasatch Front.

Desired Future Condition

Fuel treatment projects totaling 2,500 acres have been planned for the Cascade Springs area in 2003. Fuels treatments and natural fires are managed to protect or enhance important sensitive watersheds.

LANDS AND SPECIAL USES

Description

The majority of the private land located within the management area is along the Provo River and the South Fork of the Provo. Scattered parcels of private land exist along the Wasatch Front and within the drainages east of Provo. There are two parcels of State land: a portion of Deer Creek Reservoir State Park and an area north of the Olmstead Diversion under the jurisdiction of the UDWR. There are a variety of land special uses within the management area, including three high voltage power lines that traverse Provo Canyon; a natural gas pipeline; an Orem, Lindon, and Provo City water transmission line; and the trail to the Brigham Young University “Y.” Provo Canyon is not a designated utility corridor though the Salt Lake aqueduct traverses the entire length of the canyon. The following table displays the land ownership of the management area.

Table 5-24. Acres within the Lower Provo Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	63,480
State of Utah	2,070
Private	17,760
Total Acres	83,310

Desired Future Condition

The Forest Service cooperates with private landowners and Utah County to preserve public access and recreation opportunities across private lands. Opportunities to acquire lands that are within the public interest and block up the National Forest System lands are pursued. Land adjustments and acquisitions associated with the Bonneville Shoreline Trail are complete along the Wasatch Front, resulting in a more identifiable Forest boundary.

TRANSPORTATION

Description

U.S. Highway 189 passes through Provo Canyon along the Provo River within the management area from Orem, northeast to Deer Creek Reservoir. This stretch of road is managed by the State as the Provo Canyon Scenic Byway. The Alpine Loop Scenic Backway begins in the American Fork Management Area and proceeds to the east, then south over the divide into the North Fork of the Provo River drainage. The management area contains approximately 58 miles of classified roads used to access the Forest for recreation and resource management purposes. The primary collector route is Squaw Peak Road (#027), which starts from U.S. Highway 189 in Provo Canyon then heads south to Hobble Creek Canyon. The majority of roads in this management area are maintained for high clearance vehicles.

Management Prescriptions Map – Lower Provo Management Area

JPG (183 KB)

PDF (1,124 KB)

Recreation Opportunity Spectrum Classes Map – Lower Provo Management Area

JPG (176 KB)

PDF (514 KB)

Visual Quality Objectives Map – Lower Provo Management Area

JPG (182 KB)

PDF (481 KB)

MONA MANAGEMENT AREA

LOCATION

The Mona Management Area is located within Juab County. The management area is bounded by the Forest boundary on the west and by the natural boundaries of the Mona Reservoir watershed to the north, east, and south. The management prescriptions applied within the management area are summarized in the following table.

Table 5-25. Management Prescriptions in the Mona Management Area

Management Prescription	Acres*
1.4 Wilderness	14,930
1.5 Recommended Wilderness	250
3.3 Aquatic and Terrestrial Habitat	850
4.4 Dispersed Recreation	140
8.2 Utility Corridor/Communication Sites	10
Total Acres	16,180

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

SPECIAL FEATURES

Description

The majority of the Mount Nebo Wilderness Area is located within this management area, and accounts for 90 percent of the entire management area. A portion of one roadless area is within this management area: Nephi (#418029). This roadless area totals approximately 870 acres, or 0.05 percent of the management area.

GEOLOGY AND SOILS

Description

The Mona Management Area lies on the west flank of Mount Nebo, the southern most extension of the Wasatch Mountains. These mountains are a product of several episodes of folding and faulting. The steep western face of the Wasatch Mountains, including the portion of Mount Nebo that comprises this management area, is the line of offset with the Wasatch fault. This fault is the easternmost major normal fault of the Basin and Range province. Mount Nebo is composed largely of the Paleozoic limestone and shale of the Oquirrh formation. Ancient glaciers carved cirques and mountain valleys on the upper elevations of Mount Nebo within this management area. Large alluvial fans lie along the base of this range. Lacustrine deposits from ancient Lake Bonneville occur just west of this management area. Debris flows and avalanches are dominant geomorphic processes in steeper canyons and in headwater drainages, and may occur in any rock type. Debris flows occur during spring runoff in high water years and in response to intense summer thunderstorms.

Stream canyon (found on about 47 percent of this management area) and tectonic mountain (31 percent) landtypes are the most commonly found in this management area. Mountain foothill; fault-block mountain; landslide; structurally controlled limestone; and glacially scoured uplands, canyons, and moraine landtype associations are found within this management area, but none occupy more than 5 percent of the area. The most common soils are rock/rubble (occupying 23 percent of the area), Agassiz (occupying 9), Bezzant (13 percent), Flygore-Parkay/Starley-Rock (5 percent), Lizzant (4 percent), Lundy-Rock (5 percent), Pachic Cryoborolls (18 percent), and Yeates Hollow-Rock (8 percent). These soils generally have loam topsoils, most with a high gravel, cobble, or stone content. Subsoils are typically very gravelly, cobbly, or stony loam, and some have a high clay content and/or are calcareous. Soil depths and disturbed erosion hazards vary, but most are deep and have moderate to slight erosion hazards. Most of these soils are moderately permeable, and are well or excessively drained. Soil productivities are generally low to moderate.

WATER AND WATERSHED

Description

Annual precipitation for the entire Nebo Unit, which consists of the Mona, Nephi, Payson, and Thistle Management Areas, ranges from 15 to over 30 inches at the higher elevations. The majority of the precipitation within the area falls as snow during the months of October through April.

The watershed that comprises this management area drains into Mona Reservoir. There are 10 miles of perennial and 35 miles of intermittent streams found on National Forest System land within this management area. The watershed provides municipal, stock water, irrigation, and domestic water. Mona is the only municipality receiving water from this management area. Several irrigation ditches and pipelines were constructed to aid in the transfer of water from the Forest onto private land outside of the Forest boundary. These water conveyance devices are managed through the issuance of special use permits and/or easements per the Colorado Ditch Bill of 1986. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-26. Miles of Stream by Riparian Habitat Conservation Area Class in the Mona Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	11
Class II	0
Class III	34
Total Miles	45

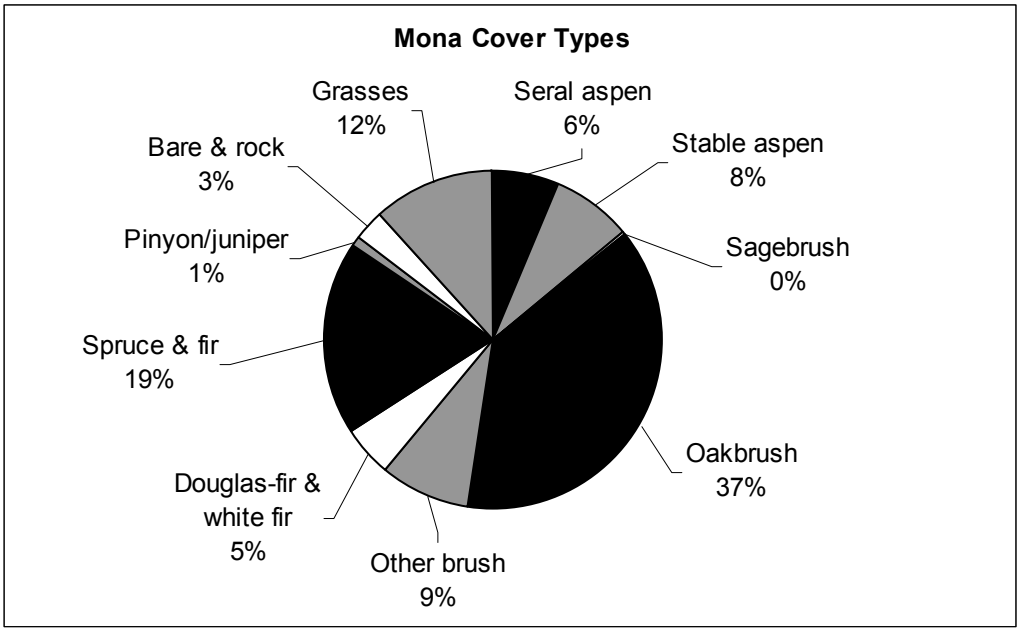
Miles are rounded to the nearest 1 mile.

VEGETATION

Description

Vegetation in this area is primarily sagebrush and dry grasses in the lower foothills, with aspen and conifers (primarily Douglas-fir/white fir) predominant in the higher elevations. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-7. Vegetation Cover Types in the Mona Management Area



Several populations of Barneby woody aster (*Aster kingii* var. *barnebyana*), a Forest Service sensitive species, occur within the management area, as well as populations of King woody aster (*Aster kingii* var. *kingii*), a state-identified watch species (UDNR 1998e, p. 195). No noxious weed infestations have been documented in this management area.

AQUATICS

Description

Fish. The Mona Management Area is located within the Northern Bonneville Geographic Management Unit for Bonneville cutthroat trout. Streams within the management area were historically inhabited by Bonneville cutthroat trout; however, it is not believed that populations of this species still persist in the area. The management unit has few fish-bearing streams and the presence of other native fish species is not known. Non-native rainbow trout have been introduced into and may still occupy

suitable habitat within the management area. Rainbow trout are currently stocked by the UDWR to support recreational fisheries within the management area.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality. However, it is assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains high value habitat for northern leopard frog and substantial value habitat for boreal toad, Great Basin spadefoot toad, Great Plains toad, tiger salamander, and Woodhouse's toad.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, no observations of state listed rare or imperiled aquatic macroinvertebrates have been reported for the management area. There is a historical record of the aquatic snail coarse rams-horn from Salamander Lake (UDNR 2002c).

Threatened, Endangered, and Sensitive (TES) Species. There are no TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. The primary habitat types within the Mona Management Area are oak/maple, alpine habitat on Mount Nebo, conifer forest (spruce/fir and Douglas-fir/white fir), and aspen forest. Riparian habitat occurs along North Creek, Mona Creek, and Willow Creek.

Threatened, Endangered, and Sensitive (TES) Species. Three-toed woodpeckers have been reported from this management area, and Lewis' woodpecker has been reported from Salamander Lake.

Big Game Species and Other Wildlife. Twenty-five Rocky Mountain bighorn sheep were reintroduced to Mount Nebo during the 1970s in a cooperative effort between the UDWR and the Forest Service. This herd never increased, and most of the individuals have died. The UDWR plans to reintroduce more Rocky Mountain bighorn sheep onto Mount Nebo in 2003. Mountain goats have not been translocated to Mount Nebo, but goats introduced to nearby areas are likely to disperse to Mount Nebo in the near future. This management area provides critical and high value deer and elk winter range at lower elevations, in addition to summer and transitional big game range.

RECREATION

Description

There are no developed recreation sites within this management area. The area does provide for dispersed camping and trail use opportunities for hikers, equestrians, and OHV use along designated routes. The Mona Pole Road bisects the Mount Nebo Wilderness Area. This road is used as a four-wheel drive road and is managed through the issuance of permits during the season it is open. During the winter, a section of the road is used as a designated snowmobile route. This road is also used as an access route to the Privateer Mine. The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-27. Recreation Opportunity Spectrum (ROS) Classes in the Mona Management Area

ROS Class	Acres*
Primitive	14,930
Semi-Primitive Non-Motorized	250
Semi-Primitive Motorized	140
Roaded Natural	850

Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

Recreation on the majority of the management area is limited to non-motorized use. The monitoring of the Mona Pole Road is completed and a final decision of the disposition of the road is made. The Bonneville Shoreline Trail is developed and managed to maintain its designation as a Millennium Legacy Trail.

HERITAGE RESOURCES

Description

Few archaeological sites have been found in this area, probably due to its relative steepness. No ancient American Indian sites have been found in the area, though these sites probably exist. One of the most important historic sites is an 1870s camp associated with early transcontinental mapping surveys. Other historic sites include hard rock mines and ditches. The Willow Creek ditch system is eligible for the National Register due to its fine example of the intensive labor that went into such early water diversion systems.

RANGE

Description

There are no grazing allotments within this management area.

MINERALS

Description

This area contains a significant number of old mining claims that date back to the late 1890s. Many of the mines have been played out, and in others it is not economically feasible to extract the ore in today's market. According to Bureau of Land Management records, many of these claims have lapsed in validity. Prior to expiration, the owners of these mining claims were notified of the pending lapse and were given time to conduct assessment work to valid their mineral rights. Negative replies resulted in the closure of many mines. It is not anticipated that any more claims will be filed, at least in the near future. One outstanding private sub-surface mineral right remains. This outstanding mineral claim within the Mount Nebo Wilderness is for gypsum and the owner is actively operating the mine at this time. The surface is owned by the Forest Service.

FIRE

Description

In the past 10 years there have been 12 small fires (under 10 acres each) and one large fire (the Birch Fire in 2001, approximately 2,700 acres) in the Mona Management Area. Cumulatively these fires have burned around 2,800 acres, or 17.14 percent of the entire management area. Aggressive rehabilitation treatments have been conducted to reduce flood flows on areas affected by the Birch Fire. The area consists of steep and rugged terrain; fires that start on the lower third of these steep mountainsides have a greater risk of becoming large damaging fires due to terrain, thermal exposure, and fuel types, resulting in long-term effects on soils, vegetation, wildlife, and public and private infrastructure. For the most part, fuels treatments are limited to non-motorized and non-mechanized means as over 90 percent of the management area is designated as wilderness. This area provides municipal and irrigation water for surrounding cities.

LANDS AND SPECIAL USES

Description

National Forest System lands make up the majority of this management area, with the exceptions of the Privateer Mine and the northern tip of the area. The Privateer Mine is an isolated inholding within the Mount Nebo Wilderness Area. There is a utility corridor, a water collection system, and irrigation ditches under easements or special use permits in the management area. The following table displays the land ownership of the management area.

Table 5-28. Acres within the Mona Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	16,180
State of Utah	210
Private	190
Total Acres	16,580

Desired Future Condition

Wilderness inholdings and encroachments are resolved. Opportunities to acquire lands that are within the public interest and block up the National Forest System lands are pursued. A small portion of a utility corridor located in the southwest portion of this management area is maintained. Vegetation management in this area is limited to that consistent with installation and maintenance of the utility line and mitigation of erosion and visual quality impacts.

TRANSPORTATION

Description

This management area contains 13 miles of classified roads and 12 miles of inventoried trails used to access the forest for recreation and resource management purposes. The Mona Pole Road (#160) bisects the Mount Nebo Wilderness Area.

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Management Prescriptions Map – Mona Management Area

JPG (131 KB)

PDF (448 KB)

Recreation Opportunity Spectrum Classes Map – Mona Management Area

JPG (118 KB)

PDF (173 KB)

Visual Quality Objectives Map – Mona Management Area

JPG (113 KB)

PDF (161 KB)

NEPHI MANAGEMENT AREA

LOCATION

The Nephi Management Area is located within Juab, Utah, and Sanpete Counties. The area is bounded by the Forest boundary on the south and by the natural boundaries of the Mona Reservoir and Salt Creek watersheds on the east and west. The management prescriptions applied within the management area are summarized in the following table.

Table 5-29. Management Prescriptions in the Nephi Management Area

Management Prescription	Acres*
1.4 Wilderness	7,450
1.5 Recommended Wilderness	4,400
2.5 Scenic Byways	2,970
3.3 Aquatic and Terrestrial Habitat	4,030
4.4 Dispersed Recreation	6,390
4.5 Developed Recreation	60
5.1 Forested Ecosystems – Limited Development	3,730
6.1 Non-forested Ecosystems	3,550
7.0 Wildland Urban Interface	1,880†
8.2 Utility Corridor/Communication Sites	30
8.3 Administrative Sites	10
8.4 Recreation Residences	2
Total Acres	32,622

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

† These acres are not included in the total as they are duplicated in other prescriptions.

SPECIAL FEATURES

Description

The Devils Kitchen Geologic Interest Site is one of the highlights of this management area. Eroded layers of red-tinted river gravel and silt form the spires and sharp ridges that give this area its interesting formation. This area is known locally as mini Bryce Canyon National Park because of the similarity between the two areas. A portion of the Mount Nebo Wilderness Area is within this management area, as is the southern end of the Mount Nebo National Scenic Byway. All or portions of the following three roadless areas lie within this management area: Hop Creek Ridge (#418021), Golden Ridge (#418028), and Nephi (#418029). These roadless areas total approximately 23,920 acres, or 73 percent of the management area.

GEOLOGY AND SOILS

Description

The Nephi Management Area lies on the south flank of Mount Nebo, the southern most extension of the Wasatch Mountains. These mountains are a product of several episodes of folding and faulting. The steep western face of the Wasatch Mountains, including the scarp extending from Birch Creek toward Nephi, is the line of offset with the Wasatch fault. This fault is the easternmost major normal fault of the Basin and Range province. Mount Nebo is composed largely of the Paleozoic limestone and shale rocks of the Oquirrh formation. This management area adjoins the San Pitch Mountains, part of the high plateaus that extend across southern Utah. The San Pitch Mountains are formed of Cretaceous and Tertiary conglomerate and sandstone rocks. Some of these rock types extend into the Nephi Management Area. Ancient glaciers carved mountain valleys on the upper elevations of Mount Nebo. Large earthflows occur in the very southeast corner of this management area. Lacustrine deposits from ancient Lake Bonneville occur just west of this management area. Debris flows and avalanches are dominant geomorphic processes in steeper canyons and in headwater drainages throughout the area and may occur in any rock type. Debris flows occur during spring runoff in high water years and in response to intense summer thunderstorms.

Stream canyon (occupying 39 percent of the area), tectonic mountain (occupying 37 percent), and structurally controlled sandstone (14 percent) are the most common landtypes found in this management area. Fault block mountain; mountain foothill; landslide; and glacially scoured upland, canyons, and moraine landtype associations also occur within this area. The most common soils are rock/rubble (7 percent), Agassiz (4 percent), Bezzant (16 percent), Hamtah (6 percent), Pachic cryoborolls (19 percent), Saxby (8 percent), Sheep Creek (5 percent), Typic haploborolls (14 percent), and Yeates Hollow (10 percent). These soils generally have loam topsoils, many with high gravel, cobble, or stone contents. Subsoils are typically very gravelly, cobbly, or stony loam; clay loam; or sandy clay loam. Soil depths range from non-existent to very deep. Most soils are moderately permeable, though some are moderately rapid and others moderately slow. These soils are well or excessively drained, and most have a moderate to slight disturbed erosion hazard. These soils have low to moderate productivity.

WATER AND WATERSHED

Description

Annual precipitation for the entire Nebo Unit, which consists of the Payson, Mona, Nephi and Thistle Management Areas, ranges from 15 to over 30 inches at higher elevations. The majority of the precipitation within the area falls as snow during the months of October through April. There are 30 miles of perennial streams and 96 miles of intermittent streams found within the management area. Salt Creek is the only major drainage within this management area, and it drains into Mona Reservoir and then to Utah Lake. This management area provides domestic, irrigation, stock, and municipal

water, as well as water for power. Nephi is the only municipality receiving water from this management area. Several irrigation ditches were constructed in the management area to aid in the transfer of water from the Forest onto private land outside of the Forest boundary. These ditches are managed through the granting of easements per the Colorado Ditch Bill of 1986. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-30. Miles of Stream by Riparian Habitat Conservation Area Class in the Nephi Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	19
Class II	3
Class III	104
Total Miles	126

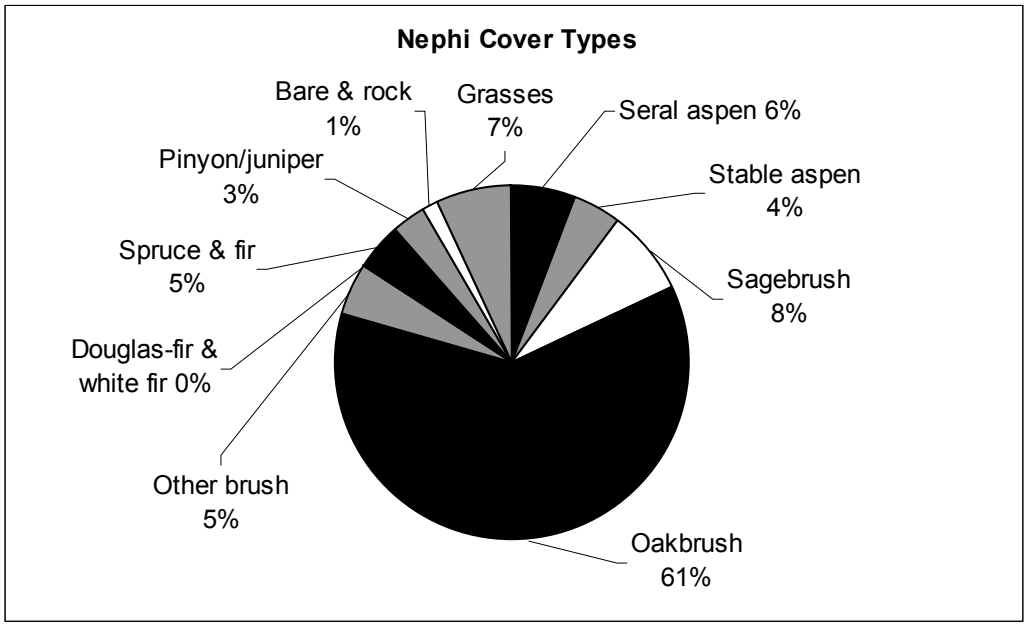
* Miles are rounded to the nearest 1 mile.

VEGETATION

Description

Vegetation consists mostly of Gambel oak with some aspen in the upper elevations. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-8. Vegetation Cover Types in the Nephi Management Area



Ponderosa pine is not native to the area, but was introduced in some areas during the first half of the century. In the past, the Ponderosa Campground area has needed treatment for inchworm eradication. West of Ponderosa Campground, a stand of planted ponderosa pine was lost to mountain pine beetle infestation. As a management option, a timber sale was used to salvage timber from this area. This sale area was one of the few timber operations performed along the Mount Nebo National Scenic Byway. Approximately 85 acres, primarily in the ponderosa pine type near Ponderosa Campground, have been harvested within the management area using commercial timber sales since 1970.

Barneby woody aster (*Aster kingii* var. *barnebyana*), a Forest Service sensitive species, and King woody aster (*Aster kingii* var. *kingii*), a state-identified watch species (UDNR 1998e, p. 195), occur in the area. Infestations of tamarisk have been documented in two drainages.

AQUATICS

Description

Fish. The Nephi Management Area is located within the Southern Bonneville Geographic Management Unit for Bonneville cutthroat trout. Streams within the management area were historically inhabited by Bonneville cutthroat trout; however, it is not believed that viable populations of this species still occur within the management area. Mottled sculpin are the only other native fish species known to be present within the management area.

Non-native brown, brook, and rainbow trout have been introduced into and still occupy suitable habitat within the management area. These species present a risk to the recovery and future viability of any cutthroat trout populations that may occur within the management area.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality. However, it is assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains high value habitat for Great Basin spadefoot toad and northern leopard frog, with substantial value habitat for boreal chorus frog, boreal toad, Great Plains toad, tiger salamander, and Woodhouse's toad.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, no observations of state listed rare or imperiled aquatic macroinvertebrates have been reported for the management area.

Threatened, Endangered, and Sensitive (TES) Species. There are no TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. The dominant habitat type is oak/maple, with lesser amounts of sagebrush, aspen forest, conifer forest (primarily spruce/fir), mountain brush, and grass-dominated habitats. Forested riparian habitat occurs along Salt Creek, Red Creek, and Pole Creek.

Threatened, Endangered, and Sensitive (TES) Species. Bald eagles occur along Salt Creek during winter. Northern goshawks are known to nest within this management area, and flammulated owls potentially nest in the management area. Abandoned mines within this management area provide potential roosting habitat for Townsend's big-eared bats, spotted bats, and other bat species.

Big Game Species and Other Wildlife. The Nephi Management Area provides critical and high value winter range for both deer and elk, in addition to summer and transitional big game range.

RECREATION

Description

With this being the southernmost end of the Wasatch Front, recreation use is moderate to heavy. There are two developed campgrounds, one highly-used dispersed camping site, and a variety of trails for hiking, mountain biking, and horseback riding. Ponderosa Campground is unique in the fact that it was developed in a planted ponderosa pine stand. It offers a different experience from the other camping areas along the Mount Nebo National Scenic Byway precisely for that reason. Access points for the Mount Nebo Wilderness Area, which comprises the western portion of this management area, exist off the main roads. During the winter, the area is open for snowmobile and cross-country ski use along designated routes.

The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-31. Recreation Opportunity Spectrum (ROS) Classes in the Nephi Management Area

ROS Class	Acres*
Primitive	7,450
Semi-Primitive Non-Motorized	6,570
Semi-Primitive Motorized	10,350
Roaded Natural	5,220
Roaded Modified	3,020
Rural	30

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

The Nephi Management Area supports a wide spectrum of recreation opportunities ranging from a rural setting, developed recreation residences, and campgrounds, to the solitude of the primitive setting of the Mount Nebo Wilderness Area. Overlooks and trailheads located along the Mount Nebo National Scenic Byway corridor have been redesigned and are managed as outlined in the Nebo Loop Scenic Byway Corridor Management Plan. Campgrounds located in this area are functioning at capacity. All special use permits continue to be managed according to stipulations as outlined in the permit. The Bonneville Shoreline Trail is developed and managed to maintain its designation as a Millennium Legacy Trail.

HERITAGE RESOURCES

Description

Ancient American Indian campsites exist within this management area, and are important reminders of the long history of human activity in the area. The CCC-built bridge at Ponderosa Campground is eligible for the National Register. Other historic features include the site of the Mount Nebo Ranger Station, the location of the Nebo CCC Camp, a CCC monument, salt mines, and stone quarries. Most of the recreation residences along Salt Creek are potentially eligible for the National Register of Historic Places. Other features that record past management actions in this area include ponderosa pine plantations in Salt Creek, which were began in the early 1900s, and contour trenching on the east side of Mount Nebo, constructed in the 1950s.

Desired Future Condition

Known sites are preserved as visual reminders of past activity, and information about past activity is actively interpreted.

RANGE

Description

This management area encompasses approximately half of the Nephi-Salt Creek cattle and sheep allotment. The remainder of the allotment lies within the adjacent Thistle Management area. This allotment is currently identified as one of the few upon which both cattle and sheep may be permitted to run together. The sheep permit is currently available, as the previous permittee waived his permit back to the Forest Service.

Approximately one-third of this management area is not within an established grazing allotment.

Desired Future Condition

Livestock grazing activities continue to be permitted on the allotment within this management area.

FIRE

Description

In the past 10 years there have been 15 small fires (under 10 acres each) and one 100-acre fire in the Nephi Management Area. Cumulatively these fires have burned 175 acres, or 0.53 percent of the entire management area. The southwestern part of this area is steep and rugged and has very sparse ground fuels. Fires on these steep mountainsides have a greater risk of becoming large damaging fires due to terrain, thermal exposure, and fuel types, resulting in long-term effects on soils, vegetation, wildlife, and public and private infrastructure. Wildland urban interface areas are located in Bear Canyon and Salt Creek near the southern end of the management area. Part of the Mount Nebo Wilderness Area and Ponderosa Campground are within this area as well.

LANDS AND SPECIAL USES

Description

Three small isolated tracts of private land and one tract of about 900 acres exist within this management area. The Mount Nebo recreation residence tract is located within this management area. There is one mineral development located in Gardner Canyon currently operating under a special use permit. There are small sections of two utility corridors identified within this management area. Vegetation management in these areas is limited to that consistent with installation and maintenance of the utility line and mitigation of erosion and visual quality impacts. Special use permits exist for water collections and transmission lines south of Little Birch Creek. The following table displays the land ownership of the management area.

Table 5-32. Acres within the Nephi Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	32,630
State of Utah	0
Private	1,100
Total Acres	33,730

Desired Future Condition

The Mount Nebo recreation residence tract is managed as a recreation special use development area unless environmental analyses show a higher need for these lands. Any vacant lots in this tract will not be permitted. The small sections identified as utility corridors within this management area are maintained. Vegetation management in this area is limited to that consistent with installation and maintenance of the utility line and mitigation of erosion and visual quality impacts. Water systems and recreation residence tracts are maintained to be light on the land. As opportunities become available National Forest System lands have been blocked up.

TRANSPORTATION

Description

The area is accessible by 32 miles of classified roads. Thirty-six miles of inventoried trails can be used to access the area for recreation and resource management purposes. The primary arterial route is the Mount Nebo National Scenic Byway (#015), which starts in the Payson Management Area, heads south through the Nephi Management Area, and continues to State Route 132.

Desired Future Condition

Portions of the Pole Canyon Road (#016) have been relocated to an upland location, improving and restoring riparian habitat.

Management Prescriptions Map – Nephi Management Area

JPG (157 KB)

PDF (670 KB)

Recreation Opportunity Spectrum Classes Map – Nephi Management Area

JPG (141 KB)

PDF (229 KB)

Visual Quality Objectives Map – Nephi Management Area

JPG (134 KB)

PDF (219 KB)

PAYSON MANAGEMENT AREA

LOCATION

The Payson Management Area consists of 36,710 acres, 2,600 of which are private inholdings in Utah County. The management area is bounded on the north and east by the Forest boundary and by the natural boundaries of the Peteetneet Creek watershed on the east and the Mona Reservoir watershed on the southwest. The management prescriptions applied within the management area are summarized in the following table.

Table 5-33. Management Prescriptions in the Payson Management Area

Management Prescription	Acres*
1.4 Wilderness	4,670
1.5 Recommended Wilderness	3,620
2.5 Scenic Byways	4,370
3.3 Aquatic and Terrestrial Habitat	3,550
4.4 Dispersed Recreation	5,990
4.5 Developed Recreation	310
5.1 Forested Ecosystems – Limited Development	9,510
5.2 Forested Ecosystems – Vegetation Management	2,200
7.0 Wildland Urban Interface	7,900†
8.1 Mineral Development	1
8.2 Utility Corridor/Communication Sites	130
8.3 Administrative Sites	10
8.4 Recreation Residences	30
Total Acres	34,391

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

† These acres are not included in the total as they are duplicated in other prescriptions.

SPECIAL FEATURES

Description

The Mount Nebo National Scenic Byway climbs from an elevation of 5,000 feet to over 9,000 feet as it passes through several different management areas. The main corridor through this area is the byway, designated a National Scenic Byway in June 1998. All or portions of the following four roadless areas lie within this management area: Birdseye (#418026), Payson (#418027), Golden Ridge (#418028), and Nephi (#418029). These roadless areas total approximately 23,640 acres, or 69 percent of the management area.

Desired Future Condition

Twenty-five percent of the area is managed as part of the Mount Nebo Wilderness Area, where natural processes are allowed to prevail.

GEOLOGY AND SOILS

Description

The Payson Management Area lies on the north flank of Mount Nebo, the southern most extension of the Wasatch Mountains. These mountains are a product of several episodes of folding and faulting. The steep, western face of the Wasatch Mountains, including the scarp that extends from Spanish Fork to Nephi, and the scarp extending from Peteetneet Creek northward toward Provo, is the line of offset with the Wasatch fault. This fault is the easternmost major normal fault of the Basin and Range province. Mount Nebo is composed largely of the Paleozoic limestone and shale of the Oquirrh Group. Large alluvial fans lie along the western and northern base of this range and within this management area. Ancient glaciers carved mountain valleys on the upper elevations of Loafer Mountain in a small part of this management area. Lacustrine deposits from ancient Lake Bonneville occur along the west and north edges of this management area. Debris flows and avalanches are dominant geomorphic processes in steeper canyons and in headwater drainages, and may occur in any rock type. Debris flows occur during spring runoff in high water years and in response to intense summer thunderstorms. Large ancient earthflows can be seen in the Santaquin and Payson areas.

Stream canyon (occupying 44 percent of the area), tectonic mountain (occupying 41 percent), and structurally controlled limestone (6 percent) landtypes are the most common in this management area. Fault block mountain, glacially scoured canyons and uplands, lacustrine, and mountain foothill landtypes also occur, but none occupy more than 5 percent of the area. The most common soils are Argic pachic cryoborolls (7 percent), Agassiz (4 percent), Bezzant (6 percent), Dry Creek (3 percent), Flygore-Starley-Rock (9 percent), Pachic cryoborolls (31 percent), Rockland (8 percent), Typic haploborolls (6 percent), and Yeates Hollow-Rock (5 percent). These soils generally have loam or gravelly, stony, or very stony loam topsoils. These soils formed from alluvial, colluvial, or residuum limestone, shale, sandstone, quartzite, conglomerate, or volcanic parent materials. Subsoils are typically loam, sandy loam, clay loam, or clay with high stone, gravel, or cobble content. Soil depths range from non-existent to very deep. Most of these soils have moderate to moderately slow permeability, and well or excessively drained. Disturbed erosion hazard ranges from slight to moderate. Soil productivity varies from moderate to low.

WATER AND WATERSHED

Description

Annual precipitation for the entire Nebo Unit, which consists of the Payson, Mona, Nephi, and Thistle Management Areas, ranges from 15 to over 30 inches at higher

elevations. The majority of the precipitation within the area falls as snow during the months of October through April. There are 31 miles of perennial streams and 69 miles of intermittent streams located within this management area. Major drainages in this area are the Summit Creek and Peteetneet Creek drainages that flow into Utah Lake. These watersheds provide municipal, irrigation, stock, domestic, and well water, as well as providing water for storage and power. Several reservoirs (Payson Lakes, Big East Lake, Lake McClellan, Red Lake, Maple Lake, Dry Lake Reservoir, and Pete Winward Reservoir) were constructed to aid in the transfer of water from the Forest to nearby cities. Municipalities served by the Payson Management Area include the cities of Payson and Santaquin, and the Strawberry Water Users Association. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-34. Miles of Stream by Riparian Habitat Conservation Area Class in the Payson Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	7
Class II	0
Class III	93
Total Miles	100

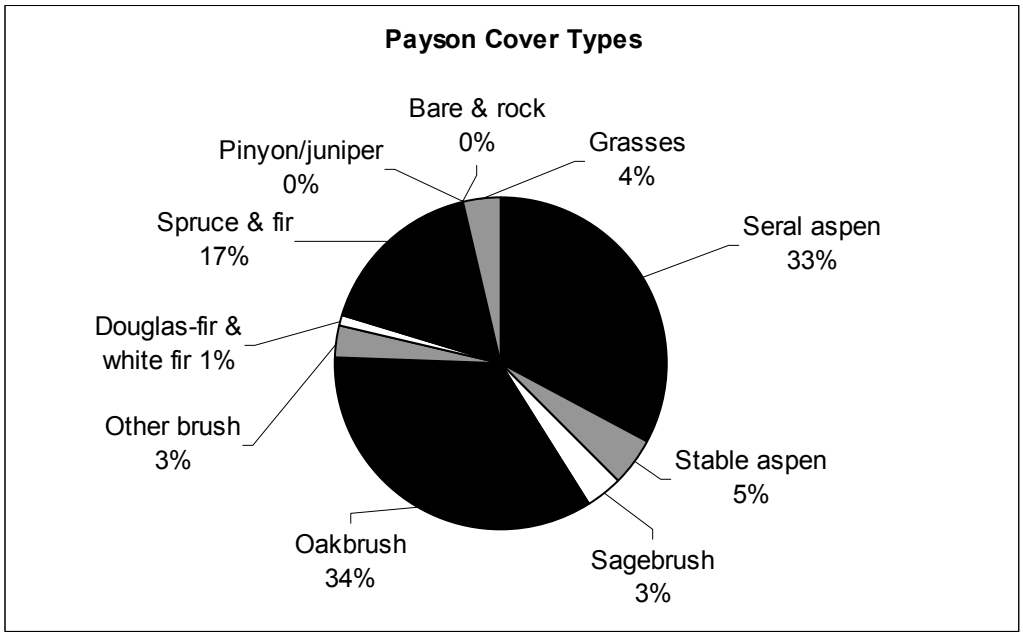
* Miles are rounded to the nearest 1 mile.

VEGETATION

Description

Vegetation consists primarily of aspen with spruce and Douglas-fir/white fir on the north and east facing slopes. The lower portions of Payson Canyon are dominated by oak and oak/maple stands. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-9. Vegetation Cover Types in the Payson Management Area



Ponderosa pine is not native to this management area but was introduced in some areas during the first half of the century. One of the remaining stands of ponderosa pine is currently showing signs of needlecast and pine needle scale. Fuelwood has been removed from the area through a personal use firewood program, though only a few areas have been open for fuelwood removal. To date, fuelwood harvest has been concentrated along travel routes with the intent to reduce the risk posed by snags and hazard trees and to reduce negative impacts to visual resources. Approximately 520 acres, primarily in the Douglas-fir/white fir type, have been harvested within the management area using commercial timber sales since 1970.

Wasatch jamesia (*Jamesia Americana* var. *macrocalyx*) and Garrett's bladderpod (*Lesquerella garrettii*), Forest Service sensitive plant species, and King woody aster (*Aster kingii* var. *kingii*), a state-identified watch species (UDNR 1998e, p. 195), are known to occur in the management area. No noxious weeds have been documented in the area.

Desired Future Condition

Approximately 11,700 acres of this management area are managed to maintain or restore vegetation to achieve multiple resource values and increase diversity. Timber harvest may be used on approximately 2,000 of these acres to accomplish these goals. While timber harvest may be used, these lands are not managed to promote growth and yield.

AQUATICS

Description

Fish. The Payson Management Area is located within the Northern Bonneville Geographic Unit for Bonneville cutthroat trout. Streams within the management area were historically inhabited by Bonneville cutthroat trout and some populations still reside in isolated stream reaches within the area. Bonneville cutthroat trout are a Region 4 and state sensitive species and were petitioned for listing under the Endangered Species Act in February 1998. This petition was found not warranted in October 2001. Conservation agreements with the UDWR have been developed for this species. Persistence populations of Bonneville cutthroat trout within the management area have been identified in Peteetneet and Wimmer Ranch Creeks.

The management area is located within the identified historic range for leatherside chub, a native species that is a state listed sensitive species. The life history and habitat requirements of this species are poorly understood and its current distribution and abundance is not well known. Other native fish species present within the management area may include mottled sculpin, redside shiner, speckled dace, and Utah chub.

Non-native rainbow trout have been introduced into and may still occupy suitable habitat within the management area. These species present a risk to the recovery and future viability of any cutthroat trout populations that may be present within the management area. Rainbow trout are stocked by UDWR to support recreational fisheries within the management area.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality. However, it is assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains substantial value habitat for boreal chorus frog, boreal toad, Great Basin spadefoot toad, Great Plains toad, northern leopard frog, tiger salamander, and Woodhouse's toad. Boreal toads were historically found at Payson Lakes.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, one species of rare aquatic insect, white-faced meadowhawk, has been documented to occur within the management area.

Threatened, Endangered, and Sensitive (TES) Species. Bonneville cutthroat trout is the only TES aquatic species that may be present within the management area.

WILDLIFE

Description

Habitats. The Payson Management Area encompasses a wide range of elevations and a wide variety of habitat types, including aspen forest, oak/maple, conifer forest (primarily spruce/fir), mountain brush, sagebrush, and alpine habitats. Forested riparian habitats occur along Peteetneet Creek and Santaquin Creek.

Threatened, Endangered, and Sensitive (TES) Species. Northern goshawks are known to nest in this management area, and flammulated owls potentially nest here. Abandoned mines within the management area provide potential roosting habitat for Townsend's big-eared bats, spotted bats, and other bat species.

Big Game Species and Other Wildlife. This management area provides critical and high value winter range for deer and elk, as well as summer and transitional big game range. Purple martins have historically nested near Payson Lakes, and rubber boas have been recorded in the management area.

RECREATION

Description

The Payson Management Area is located along the south end of the Wasatch Front and receives a great deal of recreational use by the public. There are several developed campgrounds in the management area, the most popular of which is Payson Lakes Campground. The management area offers a variety of trails for mountain biking, hiking, horseback riding, and motorized trail biking. Fishing is very popular along the Peteetneet Creek and at the lakes located within the Payson Lakes recreation area. Use of the lakes is limited to non-motorized watercraft, fishing, and swimming. Swimming is limited to the designated beach area. Lakes and streams, which are accessible by paved roads, are stocked with fish produced by UDWR hatcheries in nearby cities. During the winter, the Mount Nebo National Scenic Byway is open to snowmobile and cross-country ski use. The Payson Management Area is open to dispersed camping just south of the Bennie Creek trailhead.

The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-35. Recreation Opportunity Spectrum (ROS) Classes in the Payson Management Area

ROS Class	Acres*
Primitive	4,670
Semi-Primitive Non-Motorized	7,460
Semi-Primitive Motorized	11,700
Roaded Natural	5,440
Roaded Modified	4,250
Rural	860

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

The Payson Management Area supports a wide spectrum of recreation opportunities ranging from a rural setting and developed recreation residences and campgrounds, to the solitude of the primitive setting in the Mount Nebo Wilderness Area. Overlooks and trailheads located along the Mount Nebo National Scenic Byway corridor have been redesigned and are managed as outlined in the Nebo Loop Scenic Byway Management Plan. Campgrounds located in this area are functioning at capacity. All special use permits continue to be managed as outlined in the permit. Thought the Bonneville Shoreline Trail may only cross the northwestern portion of the management area, it is developed and managed to maintain its designation as a Millennium Legacy Trail.

HERITAGE RESOURCES

Description

The rock retaining walls in the canyon along Peteetneet Creek were built by the Civilian Conservation Corps (CCC) and are probably eligible for the National Register of Historic Places. These walls are some of the best and most easily accessible CCC retaining wall work left in northern Utah, and they have a high interpretive value that is significant to this management area. The Santaquin Canyon bridge is another fine example of CCC stonework, and it is also eligible for the National Register of Historic Places. Payson Lakes Guard Station and Pete Winward and Dry Lake Reservoirs are eligible for the National Register as well. Several other dams in the Payson Lakes area have been modified to the degree that they are no longer eligible for the register. There are a few ancient American Indian sites in the area, and Payson Canyon was used as a travelway for historic Utes (those using the area in the last 150 years). Other archaeological sites include the remains of sawmills and recreation camps. Many of the Payson Lakes recreation residences are potentially eligible for the National Register of Historic Places.

Desired Future Condition

Heritage information is fully integrated into interpretive and educational programs. Visual reminders of past activities, such as the Peteetneet Creek retaining wall, are preserved for future generations.

RANGE

Description

This management area encompasses approximately half of the Payson Cattle Allotment. The remainder of this allotment lies within the adjacent Thistle Management area. Approximately one-quarter of this management area is not within any established grazing allotment.

Desired Future Condition

Livestock grazing activities continue to be permitted on the allotment within this management area.

FIRE

Description

In the past 10 years there have been 44 small fires (under 10 acres each) and one large fire (the Mollie Fire in 2001, approximately 8,000 acres) in the Payson Management Area. Cumulatively these fires have burned 8,200 acres, or 24.04 percent of the entire management area. The Mollie Fire resulted in extensive damage to soils, vegetation, watershed, and wildlife habitat, with over 34 percent of the burn area having burned under high intensity. Predicted soil loss as a result of the fire is 64.07 tons per acre for 2002. Aggressive rehabilitation treatments have been conducted to reduce flood flows on affected areas.

The management area consists of steep and rugged terrain; fires that start on the lower third of these steep mountainsides have a greater risk of becoming large damaging fires with long-term effects on soils, vegetation, wildlife, and public and private infrastructure. The western and northern areas of the management area along the Forest boundary are urban interface areas with a focus on fuels reduction treatments, as is the Payson Lakes Campground and other developed recreation sites in the management area.

LANDS AND SPECIAL USES

Description

Less than 10 percent of the land within the management area boundary is private land. Urban development, however, is coming up to the Forest boundary and could create encroachments. There is a tract of recreation residences located just north of the Payson Lakes Campground facility. Camp Koholowo, an organizational camp, is

located in Santaquin Canyon. This camp is located on National Forest System land and is administered through the issuance of a special use permit.

There is one energy corridor that runs through this area. Questar Corporation operates the pipeline that is currently installed in this corridor through the issuance of a special use permit. An additional pipeline was buried within this corridor in 2001, after which the entire area was put back to slope and seed. An irrigation system permitted to Payson City is located within the management area. The following table displays the land ownership of the management area.

Table 5-36. Acres within the Payson Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	34,380
State of Utah	690
Private	2,010
Total Acres	37,080

Desired Future Condition

When opportunities present themselves, the Forest acquires inholdings. Land adjacent to communities is surveyed and marked to reduce or eliminate encroachments. The tract of recreation residences located just north of the Payson Lakes Campground is managed as a recreation special use development areas unless environmental analyses show a higher need for these lands. Vacant lots or lots that become vacant will not be permitted. Camp Koholowo continues to offer environmental education and recreation opportunities to female youth groups. The designated utility corridor in this management area is maintained. Vegetation management within this area is limited to that consistent with installation and maintenance of the utility line and mitigation of erosion and visual quality impacts. The Questar pipeline is no longer a visual impact to the scenery along the corridor. Land adjustments along the Wasatch Front result in a more identifiable Forest boundary.

TRANSPORTATION

Description

The management area is accessible by 45 miles of classified roads. Approximately 40 miles of inventoried trails are also used to access the Forest for recreation and resource management purposes. The primary arterial route is the Mount Nebo National Scenic Byway (#015), which starts in the eastern portion of the areas, heads south through the Nephi Management Area, and continues to State Route 132.

Management Prescriptions Map – Payson Management Area

JPG (176 KB)

PDF (644 KB)

Recreation Opportunity Spectrum Classes Map – Payson Management Area

JPG (151 KB)

PDF (248 KB)

Visual Quality Objectives Map – Payson Management Area

JPG (137 KB)

PDF (243 KB)

STRAWBERRY RESERVOIR MANAGEMENT AREA

LOCATION

The Strawberry Reservoir Management Area is located in Wasatch County. The natural boundaries of the Strawberry Reservoir watershed, along with the Forest boundary on the east, are the boundaries for this management area. A small portion of the Uintah and Ouray Ute Indian Reservation borders the area near Soldier Creek Reservoir. The management prescriptions applied within the management area are summarized in the following table.

Table 5-37. Management Prescriptions in the Strawberry Reservoir Management Area

Management Prescription	Acres*
3.1 Aquatic, Terrestrial, and Hydrologic Resources	2,680
3.2 Watershed Emphasis	38,310
3.3 Aquatic and Terrestrial Habitat	210
4.4 Dispersed Recreation	27,460
4.5 Developed Recreation	980
5.1 Forested Ecosystems – Limited Development	13,730
5.2 Forested Ecosystems – Vegetation Management	40,960
7.0 Wildland Urban Interface	4,550†
8.1 Mineral Development	90
8.2 Utility Corridor/Communication Sites	1,090
8.3 Administrative Sites	20
8.4 Recreation Residences	90
Total Acres	125,620

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

† These acres are not included in the total as they are duplicated in other prescriptions.

SPECIAL FEATURES

Description

Strawberry Reservoir is the main feature of the management area. It is one of the better sport fisheries in the state and has one of the highest use levels. Recognizing the importance of this area and the number of users, the Forest established a Visitor Information Center to help interpret the importance of the watershed, fish, and other wildlife. The area has always been an important fishery for the State; they operate and maintain a fish egg collection facility in the area.

All or portions of the following eight roadless areas lie within this management area: Box Spring (#418006), Chipman Creek (#418008), Two Tom Hill (#418013), Strawberry Ridge (#418015), Wallsburg (#418037), Co-op Creek (#418043), Chicken Creek

(#418044), and Currant Creek Peak (#418045). These roadless areas total approximately 38,750 acres, or 31 percent of the management area.

GEOLOGY AND SOILS

Description

The Strawberry Management Area lies at the western edge of the Uinta Basin within the Colorado Plateau. In the vicinity of the Twin Peaks area and across the northern section of the watershed, the older rocks are thrust over younger rocks in the complex area between the Uinta and the Wasatch Mountains. Within Daniels Canyon and adjacent areas, the rocks are Paleozoic siltstone, sandstone, and limestone of the Oquirrh Group. The upper elevations of Currant Creek Peak include glacially eroded and glacially depositional landforms. Post-glacial sediment occurs along many of the streams within the Strawberry Basin. Alluvial deposits lie north and south of Strawberry Reservoir within the Strawberry River, Co-op Creek, and Indian Creek drainages. In the central and southern end of the watershed, the principle geologic units include the Duchesne River and Uinta formations. These formations are composed of Oligocene sandstone, siltstone, conglomerate, and shale layers. These formations occupy the majority of this management area. These give way on the south and west to the Eocene calcareous siltstones and shales of the Green River Formation.

Landtype mapping has been completed on only 20 percent of this management area. Available data indicates the following landtypes are found here: stream canyon; tectonic mountain; structurally controlled shale; structurally controlled sandstone and limestone; plateauland; mountain foothill; landslide; and glacially scoured upland, canyon, and moraines. Soil mapping has been completed on about 30 percent of this management area. This mapping indicates argixerolls, palecryolls, palecryalfs, rock, argicryolls, haploxerolls, endoaqualls, haplocryolls, and eutrocryepts are the most common soils. Most of these soils have loam textured topsoils with a high gravel or cobble content. Some clay loam and sandy loam textured topsoils also occur. Subsoils are typically loam to clay loam, some with a high sand and clay content, and often gravelly, very gravelly, or very cobbly. Soil depths range from shallow to very deep. Permeability of these soils is moderate to slow. Most of these soils are well drained. Disturbed erosion hazard ranges from slight to severe. Soil productivity varies from relatively good to low.

WATER AND WATERSHED

Description

Yearly precipitation in the management area varies from approximately 19 inches near Strawberry Reservoir to over 30 inches at higher elevations. Water for livestock and irrigation are the biggest water uses within the management area. Water from the area is also used for domestic, power, and storage purposes. The management area is a part of north central Utah's upper Strawberry River system and part of the Colorado River system, flowing into the Duchesne River, which is a tributary to the Green River,

which ultimately flows into the Colorado River. There are 132 miles of perennial streams and 235 miles of intermittent streams found within this management area.

Historical water diversions, overgrazing, elimination of riparian species through herbicide spraying, trapping of beaver, and removal of beaver dams have all caused detrimental impacts to the hydrology and fluvial geomorphology of the Strawberry Valley rivers and streams in the past. The system is recovering slowly as upland, riparian, and stream channel conditions are still not at their desired future condition. Grazing has been eliminated on the Strawberry Project lands until vegetative conditions improve, though the State of Utah continues to trap beaver in the valley and the dewatering of streams and rivers still occurs. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-38. Miles of Stream by Riparian Habitat Conservation Area Class in the Strawberry Reservoir Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	83
Class II	3
Class III	281
Total Miles	367

* Miles are rounded to the nearest 1 mile.

Desired Future Condition

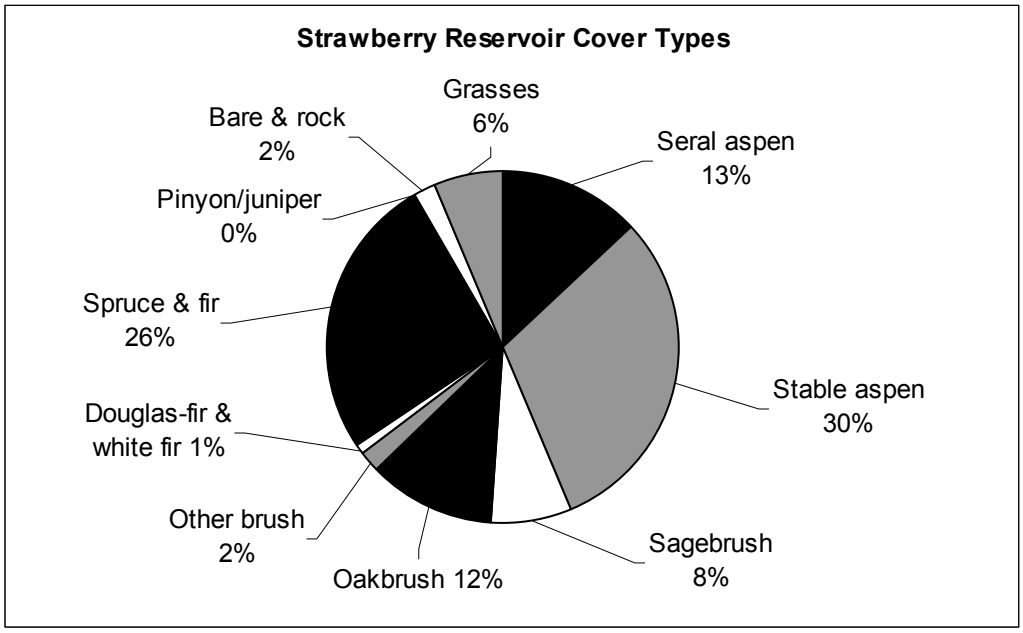
Standards and guidelines outlined for Riparian Habitat Conservation Areas (RHCAs) and aquatic habitat management continue to improve watershed conditions within the management area.

VEGETATION

Description

Vegetative types include sagebrush/grass, mountain brush, aspen, Douglas-fir, lodgepole pine, white fir, spruce/fir, and forb communities. The valley floor is principally open, rolling terrain dominated by the grassland-sagebrush type. Wet meadows are found in the low areas. Various sedges, grasses, and forbs are found along the meandering steams. Willows that were eliminated from riparian areas due to herbicide spraying and overgrazing are being reestablished. The surrounding upland terrain consists of rolling hills with interspersed openings of grasses, sagebrush, and other forbs amidst quaking aspen and Engelmann spruce/subalpine fir stands. Occasional small groups and individual trees of blue spruce, Douglas-fir, and lodgepole pine are scattered throughout the timber stands. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-10. Vegetation Cover Types in the Strawberry Reservoir Management Area



Several timber sales have been offered in this area as a management tool for dealing with bark beetle outbreaks and to supply local mills with sawtimber for forest products. Approximately 1,350 acres, primarily in the spruce/fir type, have been harvested within the management area using commercial timber sales since 1970. Approximately 80 of these acres have been in the aspen type.

One sensitive plant, Garrett's bladderpod (*Lesquerella garrettii*), is located within this area. This management area contains infestations of Canada thistle, whitetop, spotted knapweed, and tamarisk, and large infestations of musk thistle.

Desired Future Condition

Approximately 55,300 acres of this management area are comprised of forested vegetation. Those areas within the 5.2 management prescription, Forest Vegetation – Vegetation Management, are managed to maintain or restore vegetation to achieve multiple resource values while providing for multiple uses and attaining goals and objectives for timber commodity production. While timber harvest may be used in areas outside of the 5.2 prescription, these areas are not managed to promote growth and yield – vegetation management in these areas is conducted for stewardship purposes only but may include commercial timber sales, prescribed fire, or other mechanical treatments

Vegetation in this management area is being treated using prescribed fire in the upper elevation aspen and sagebrush. Mechanical treatments are being utilized in the lower elevation sagebrush associated with greater sage grouse habitat improvement projects

and fuels reduction near recreation residences and private developments. An estimated 6,000 to 13,000 acres, split roughly fifty-fifty between the aspen and sagebrush types, are being treated. This will create a significant early seral component in the aspen and sagebrush types, setting the stage for long-term recovery of vegetative conditions within the management area.

AQUATICS

Description

Fish. The Strawberry Reservoir Management Area is located within the Northeastern Geographic Management Unit for Colorado River cutthroat trout. Streams in the management area were historically inhabited by Colorado River cutthroat trout. Colorado River cutthroat trout are a Region 4 and state sensitive species, and were petitioned for listing under the Endangered Species Act in December 1999. Findings for the petition have not yet been determined. Conservation agreements with the UDWR have been developed for this species. The construction of Strawberry Reservoir fragmented and isolated headwater populations of this species, and subsequent "fisheries enhancement" activities and the introduction of non-native fish species may have eliminated any remnant genetically pure Colorado River cutthroat trout populations within the Strawberry Reservoir drainage. No conservation or persistence populations for Colorado River cutthroat trout have been identified within the management area.

Bonneville cutthroat trout have been introduced into the Strawberry Reservoir drainage and strong populations occur within several of the major stream systems. Bonneville cutthroat trout are a Region 4 and state sensitive species and were petitioned for listing under the Endangered Species Act in February 1998. This petition was found not warranted in October 2001. Conservation agreements with the UDWR have been developed for this species; however, no conservation or persistence populations for Bonneville cutthroat trout have been identified within the management area.

The management area is located within the identified historic range for leatherside chub, a native species that is a state listed sensitive species. The life history and habitat requirements of this species are poorly understood and its current distribution and abundance is not well known. Other native fish species present within the management area may include mottled sculpin, mountain sucker, mountain whitefish, redside shiner, speckled dace, and Utah chub.

Non-native kokanee salmon (*Oncorhynchus nerka*), Yellowstone cutthroat trout (*Oncorhynchus bouvieri*), and brown, rainbow, and brook trout have been introduced into the management area. However, following an extensive rotenone treatment of the Strawberry River drainage during the 1980s, these species are believed to be no longer present within the drainage. Sterile rainbow trout are currently stocked by the UDWR to supplement popular recreational fisheries in some locations within the management area, while hatchery operations by the UDWR on the Strawberry River support popular recreational fisheries for both cutthroat trout and kokanee in Strawberry Reservoir.

Amphibians. The distribution of amphibian species within the management area is not well documented, though the boreal toad has been documented to occur within the management area. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains critical value habitat for boreal chorus frog, boreal toad, Great Basin spadefoot toad, Great Plains toad, northern leopard frog, tiger salamander, and Woodhouse's toad.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, one species of rare aquatic snail, glossy valvata, has been documented to occur within the management area.

Threatened, Endangered, and Sensitive (TES) Species. Colorado River cutthroat trout and Bonneville cutthroat trout are the only TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. The Strawberry Reservoir Management Area contains a wide variety of valuable wildlife habitats. The primary habitat types include aspen forest, conifer forest (primarily spruce/fir), oak/maple, sagebrush, and wet meadows. Large areas of important riparian habitat occur along Strawberry River, Willow Creek, Bjorkman Creek, Co-op Creek, Clyde Creek, Mud Creek, Indian Creek, Trail Hollow, and other streams.

Threatened, Endangered, and Sensitive (TES) Species. Northern goshawks are known to nest in this management area, and flammulated owls potentially nest here. Although sage grouse were once abundant in Strawberry Valley, they currently persist in very low numbers. Habitat degradation caused by past aerial herbicide spraying and historic overgrazing and habitat loss caused by reservoir enlargement were likely factors that caused the decline of sage grouse. Red foxes expanded their range into Strawberry Valley during the 1980s and have become an important predator on sage grouse. Strawberry Valley sage grouse migrate to lower-elevation sagebrush habitats to the east during the winter as snows get too deep, and habitat loss and degradation on their winter range may be complicating population recovery. Wet meadows located within Strawberry Valley provide nesting habitat for sandhill cranes and foraging habitat for many species including sage grouse. There is one historic record of Canada lynx from Strawberry Valley in 1966 (UDNR 2002c).

Big Game Species and Other Wildlife. This management area provides large areas of summer and transitional big game range for elk, mule deer, and moose. A small area southeast of Strawberry Reservoir is considered high value elk winter range. The aquatic habitats in Strawberry Reservoir provide important breeding habitat for many species including western grebes, Clark's grebes, eared grebes, Canada geese, coots, mallards, gadwalls, pintails, cinnamon teal, and green-winged teal.

RECREATION

Description

Outdoor recreation, fishing, and big game hunting in the Strawberry Reservoir Management Area are major attractions for a great number of people. Recreation is enhanced by the area's general beauty. The area has excellent recreational facilities developed through mitigation with the Bureau of Reclamation as part of the development of Soldier Creek Dam and later the enlarged Strawberry Reservoir. These developed sites attract a high number of users. Dispersed recreation is also a major activity with in the management area. Some sites are showing resource damage as the result of extensive use. Some dispersed sites have been hardened to minimize resource impacts.

Current recreational activities include viewing scenery and wildlife, hiking, walking, mountain biking, horseback riding, camping, nature studies, boating, picnicking, camping, OHV use, cross-country skiing, snowshoeing, snowmobiling, sailing, water skiing, and fishing. The fishery in Strawberry Reservoir is phenomenal and thus attracts more anglers than any other body of water in the state. Due to the openness of the area it also attracts a large number of snowmobilers. There are a number of groomed trails for both snowmobiling and cross-country skiing. To handle the large number of winter users, additional parking lots that are plowed during the winter have been developed. Several services in the area are provided by special use permits, including marinas, a lodge, outfitter and guide services, and snowmobile guiding. The Strawberry Reservoir area has become a popular area for native seed collection. A small portion of the Great Western Trail, a National Millennium Trail, crosses the southwestern corner of the management area.

The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-39. Recreation Opportunity Spectrum (ROS) Classes in the Strawberry Reservoir Management Area

ROS Class	Acres*
Semi-Primitive Motorized	35,370
Roaded Natural	69,160
Roaded Modified	21,100

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

A mix of recreation opportunities is provided throughout the area. The entire area is open to various forms of motorized and non-motorized recreation. Summer motorized recreation is limited to those roads and trails designated and appropriately signed for

this use. Dispersed campsites along heavily used road corridors have been hardened and signed to concentrate use and reduce the impacts to other resources. Campgrounds, boat launches, and other recreation facilities are managed to maintain current levels of use. Development of additional recreational facilities may be allowed. The non-motorized winter use trail system in the Daniels Summit/Dock Flat area is expanded. The Great Western Trail is managed to maintain its designation as a National Millennium Trail.

HERITAGE RESOURCES

Description

This area contains a wide variety of archaeological and historical sites, many of which reflect themes important to both local and national history. The management area contains a number of ancient American Indian campsites, and the area was also important to historic Utes (those using the area in the last 150 years). Dominguez and Escalante passed through here with their Ute guides in 1776, although there are no known archaeological sites left from that expedition. Important historic sites include the campsite of an 1888 military training expedition, which was among the first such maneuvers held in the Intermountain West by the U.S. Army. There are other military sites in the valley related to military training, transport, and the security of the original Uintah and Ouray Ute Indian Reservation.

Remains of perhaps the first trans-basin ditch system in the nation are located in both the northern and western portions of the management area. This site no longer conveys water, and is currently being restored to a more natural state. Its history will be preserved through brochures, signs, and an interpretive trail. Other historic sites remain from logging, livestock grazing, and recreation use; several of these sites are eligible for the National Register of Historic Places. Few sites remain from the original Strawberry Project, the first reclamation project of its kind in the nation. Most associated sites were removed or covered by the waters of the enlarged Strawberry Reservoir in the 1970s and 1980s. Cabins within the Bryants Fork recreation residence tract will become potentially eligible for the National Register during the next 10 years.

The entire management area is within the original boundaries of the Uintah and Ouray Ute Indian Reservation. The area continues to be of interest to Tribal members, particularly for some of its native plant populations. In addition, a portion of the current Uintah and Ouray Ute Indian Reservation lies immediately adjacent to this management area to the south near Soldier Creek Reservoir.

Desired Future Condition

An interpretation plan for the historic Strawberry military site is developed and implemented. Other heritage sites are also preserved, and heritage information is included in environmental education and interpretation programs. Historical information continues to play a role in ecological restoration efforts. The Northern Ute Indian Tribe is an active partner in both project planning and long-term management of the area.

RANGE

Description

The following allotments lie entirely within the management area: Mill B, Mud Creek, Bryants Fork, Squaw Creek, Streeper Creek North, Streeper Creek South, Trail Hollow, and Chipman sheep allotments, and the Mud Creek cattle allotment.

Portions of the following allotments are within the management area: Strawberry, Twin Peaks, Center Canyon, Broad Hollow, Trout Creek, and Red Ledge sheep allotments, and the East Daniels and West Daniels cattle allotments.

No livestock are permitted to graze within the Strawberry Project lands, which are immediately adjacent to and northwest of Strawberry Reservoir. These lands have been unavailable for grazing for the past several years as part of the watershed and vegetation restoration management strategy for the Project lands.

Desired Future Condition

The portion of this management area known as the Strawberry Project lands continues to be closed to livestock grazing. Willows and other riparian vegetation once eliminated because of heavy grazing activity and herbicide use are showing consistent signs of rehabilitation. Livestock grazing activities continue to be permitted on the other allotments within this management area.

MINERALS

Description

The Strawberry Management Area is located within an area known as the overthurst belt, which is expected to contain a large amount of oil and gas. Oil and gas leasing and seismic prospecting has occurred throughout the management area. The Strawberry Water Users Association continues to hold the rights to mineral, oil and gas, and coal on the Strawberry Project lands located within the management area, and has leased rights to major oil companies.

FIRE

Description

In the past 10 years there have been 55 small fires (under 10 acres each) in the Strawberry Reservoir Management Area. Cumulatively these fires have burned 275 acres, or 0.21 percent of the entire management area. Fires have been kept small in size due to high precipitation, moderate seasonal temperatures, and aggressive suppression action. Urban interface areas are located between Strawberry and Soldier Creek Reservoirs.

LANDS AND SPECIAL USES

Description

Very little private land exists in the management area. There is a power substation on the northeast side of Strawberry Reservoir. There is a tract of recreation residences located in Bryants Fork, established through mitigation under the Central Utah Project, that is managed through the issuance of individual lot special use permits. Several utility corridors exist throughout this management area. The following table displays the land ownership of the management area.

Table 5-40. Acres within the Strawberry Reservoir Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	125,630
State of Utah	250
Private	1,590
Total Acres	127,470

Desired Future Condition

The Bryants Fork recreation residence tract is managed as a recreation special use development area. Any vacant lots in this tract will not be permitted. A utility corridor exists along U.S. Highway 40, which runs through the area. Vegetation management is limited to that consistent with installation and maintenance of the utility line and efforts employed to mitigate erosion and minimize visual quality impacts. Similar management strategies are employed on the mineral sites located within this area.

TRANSPORTATION

Description

U.S. Highway 40 passes through this management area and is used by recreationists as the primary access to Strawberry Reservoir. This highway is the only highway access from Heber Valley to Duchesne. This management area is accessible by 207 miles of classified roads. Approximately 40 miles of inventoried trails are also used to access the Forest for recreation and resource management purposes. The primary arterial routes are the West Side Strawberry Road (#131), Indian Creek Road (#042), and Co-op Creek Road (#082). Portions of the Devils Notch Road (#090) from U.S. Highway 189 to the Soldier Creek Dam are under jurisdiction of Wasatch County.

Desired Future Condition

The Indian Creek Road (#042) is reconstructed providing continuous passenger car road access from State Highway 6 to Strawberry Reservoir. Access to private land via

the Devils Notch Road is maintained; this road is under jurisdiction of a public road authority from the Soldier Creek Dam to the Forest boundary.

Management Prescriptions Map – Strawberry Reservoir Management Area

JPG (215 KB)

PDF (1,908 KB)

Recreation Opportunity Spectrum Classes Map – Strawberry Reservoir Management Area

JPG (223 KB)

PDF (734 KB)

Visual Quality Objectives Map – Strawberry Reservoir Management Area

JPG (214 KB)

PDF (710 KB)

THISTLE MANAGEMENT AREA

LOCATION

The Thistle Management Area is located primarily in Utah County, with small portions in Juab and Sanpete Counties. The management area is bounded by the Forest boundary on the east and by the natural boundaries of the Thistle Creek watershed on the west. The management prescriptions applied within the management area are summarized in the following table.

Table 5-41. Management Prescriptions in the Thistle Management Area

Management Prescription	Acres*
1.5 Recommended Wilderness	70
2.5 Scenic Byways	2,480
3.3 Aquatic and Terrestrial Habitat	1,050
4.4 Dispersed Recreation	5,370
4.5 Developed Recreation	240
5.1 Forested Ecosystems – Limited Development	26,110
5.2 Forested Ecosystems – Vegetation Management	1,300
7.0 Wildland Urban Interface	60†
8.2 Utility Corridor/Communication Sites	50
Total Acres	36,670

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

† These acres are not included in the total as they are duplicated in other prescriptions.

SPECIAL FEATURES

Description

All or portions of the following four roadless areas lie within this management area: Birdseye (#418026), Payson (#418027), Golden Ridge (#418028), and Nephi (#418029). These roadless areas total approximately 35,870 acres, or 98 percent of the management area.

GEOLOGY AND SOILS

Description

The Thistle Management Area lies on the east flank of Mount Nebo, the southernmost extension of the Wasatch Mountains. These mountains are a product of several episodes of folding and faulting. Mount Nebo is composed largely of the Paleozoic limestone and shale of the Oquirrh formation. Ancient glaciers carved cirques and mountain valleys on the upper elevations of Mount Nebo and Loafer Mountain within this management area. Large alluvial fans lie along the base of this range.

Stream canyon (occupying 55 percent of the management area), tectonic mountain (occupying 28 percent), and landslide (7 percent) landtypes are the most common in the management area. Structurally controlled sandstone and limestone, mountain foothill, glacially scoured upland, and glacial moraine landtypes also occur, but none occupy more than 5 percent of the area. The most common soils are Argic pachic cryoboroll (3 percent), Agassiz (4 percent), Bezzant (22 percent), Flygore-Starley-Rock (6 percent), pachic haploxeroll (5 percent), pachic cryoboroll (26 percent), typic haploboroll (12 percent), and Yeates Hollow-Rock (13 percent). These soils generally have loam topsoils, most with a high or very high gravel or stone content. Subsoils are typically loam or clay loam, but some have a clay or sandy loam subsoil, and most have a high gravel, cobble, or stone content. These soils formed from limestone, shale, sandstone, quartzite, conglomerate, or volcanic parent materials. Soil depths range from non-existent to very deep. Soil permeabilities range from moderately rapid to slow. Erosion hazard ranges from slight to moderate. Soil productivity varies from moderate to low.

WATER AND WATERSHED

Description

Annual precipitation for the entire Nebo Unit, which consists of the Payson, Mona, Nephi, and Thistle Management Areas, ranges from 15 to over 30 inches in the higher elevations. The majority of the precipitation within the area falls as snow during the months of October through April. There are 38 miles of perennial streams and 75 miles of intermittent streams located within this management area. Bennie and Nebo Creeks are the major drainages within the management area, both draining to Thistle Creek and eventually to the Spanish Fork River. Water uses within the Thistle Management Area include domestic, irrigation, stock, and well water. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-42. Miles of Stream by Riparian Habitat Conservation Area Class in the Thistle Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	12
Class II	2
Class III	99
Total Miles	113

* Miles are rounded to the nearest 1 mile.

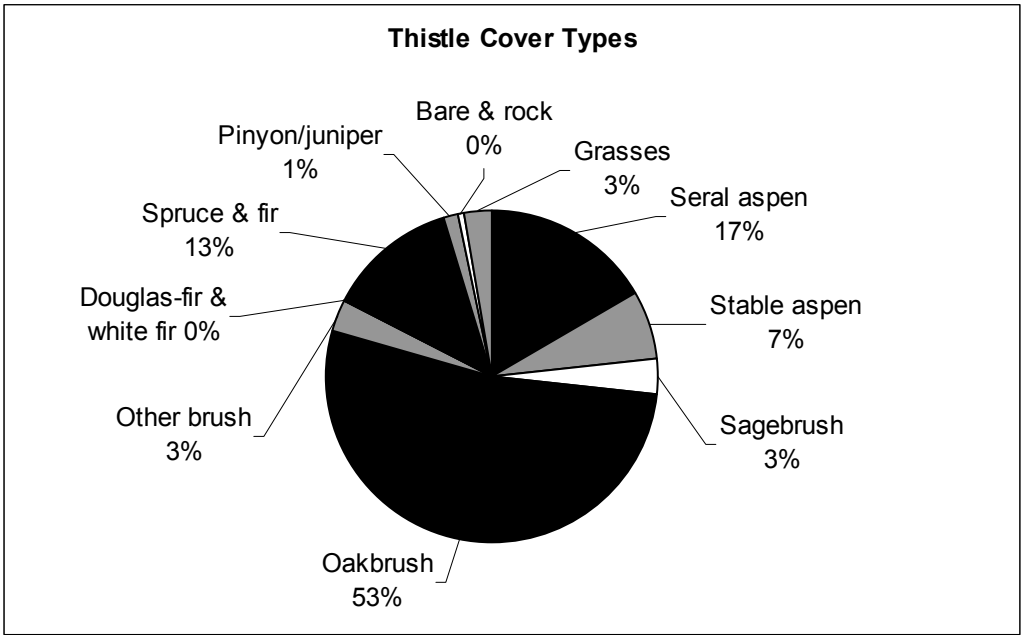
VEGETATION

Description

Vegetation in this management area is consistent with that found in the Payson and Nephi Management Areas. Oak, maple, and mountain brush can be found along the

eastern boundary, and aspen and mixed conifer stands can be found nearer the Mount Nebo National Scenic Byway. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-11. Vegetation Cover Types in the Thistle Management Area



Approximately 155 acres, primarily in the Douglas-fir/white fir type, have been harvested within the management area using commercial timber sales since 1970.

No TES plant species are documented in this management area. Tamarisk has been found to have infested at least two locations in the area.

Desired Future Condition

Approximately 25,700 acres within the management area are comprised of forested vegetation. These lands are managed to maintain or restore vegetation to achieve multiple resource values while providing for multiple uses and attaining goals and objectives for timber. Timber harvest may be used on approximately 400 of these acres to accomplish these goals. While timber harvest may be used, these lands are not managed to promote growth and yield.

AQUATICS

Description

Fish. The Thistle Management Area is located within the Northern Bonneville Geographic Management Unit for Bonneville cutthroat trout. Streams within the management area were historically inhabited by Bonneville cutthroat trout and some

genetically pure populations may still reside in isolated stream reaches. Bonneville cutthroat trout are a Region 4 and state sensitive species and were petitioned for listing under the Endangered Species Act in February 1998. This petition was found not warranted in October 2001. Conservation agreements with the UDWR have been developed for this species. Populations of Bonneville cutthroat trout have been identified as conservation populations in Nebo and Holman Creeks. Mottled sculpin is the only other native species known to inhabit the management area.

Non-native brown and rainbow trout have been introduced into and still occupy suitable habitat within the management area. These species present a risk to the recovery and future viability of cutthroat trout populations within the management area. Brown and rainbow trout are self-sustaining within the management area. Rainbow trout are currently stocked by the UDWR to supplement popular recreational fisheries within the management area.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality. However, it is assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains high value habitat for northern leopard frog and substantial value habitat for boreal chorus frog, boreal toad, Great Basin spadefoot toad, Great Plains toad, tiger salamander, and Woodhouse's toad.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, no observations of state listed rare or imperiled aquatic macroinvertebrates have been reported for the management area.

Threatened, Endangered, and Sensitive (TES) Species. Bonneville cutthroat trout is the only TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. The primary habitat types within the Thistle Management Area are oak/maple, aspen forest, and conifer forest (primarily spruce/fir). Important riparian habitat is found along Bennie and Nebo Creeks.

Threatened, Endangered, and Sensitive (TES) Species. Northern goshawks are known to nest in this management area, and flammulated owls potentially nest here.

Big Game Species and Other Wildlife. This management area provides high value deer winter range and critical and high value elk winter range on the east side in addition to summer and transitional big game range.

RECREATION

Description

Blackhawk Campground is the only developed campground in the management area. This campground has one loop designed primarily to accommodate equestrian use. In 1997, to accommodate those with physical limitations, an accessible ramp/transfer station was installed to aid in the use of the campground and trails. This management area is rural in nature, providing excellent opportunities for dispersed camping, hiking, biking, and horseback riding. Single-track motorized trail opportunities also exist. Some of the small tributaries to Thistle Creek provide a sport fishery. Big game hunting is an important activity within the area. The area is limited to availability for motorized use, though some trails are available to motorized two-wheeled vehicles.

The western boundary of the management area is defined by the Mount Nebo National Scenic Byway. This scenic loop receives substantial recreational use during the summer season and during the autumn as the leaves begin to change colors.

The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-43. Recreation Opportunity Spectrum (ROS) Classes in the Thistle Management Area

ROS Class	Acres*
Semi-Primitive Non-Motorized	3,970
Semi-Primitive Motorized	27,030
Roaded Natural	2,920
Roaded Modified	2,750

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

The area is open to various forms of motorized and non-motorized recreation. Summer motorized recreation is limited to those roads and trails designated and appropriately signed for this use. Dispersed campsites along the Mount Nebo National Scenic Byway have been hardened and signed to concentrate use and reduce the impacts to other resources. Additional trails may be constructed to accommodate appropriate use consistent with resource needs and public demand. Development of additional

recreational facilities may be allowed. The Bennie and Nebo Creek Roads provide public access to the area.

HERITAGE RESOURCES

Description

Archaeological sites in this area include ancient American Indian campsites. The area was an important travel route for historic Utes (those using the area in the last 150 years) moving between Utah and Sanpete Valleys. Historic European American sites are expected in the area though none have been documented, including those related to livestock grazing, logging, and Forest Service management.

RANGE

Description

This management area encompasses approximately half of the area within the Payson and Nephi-Salt Creek cattle allotments. Only the extreme northeast corner of this management area, the Loafer Mountain/Mahogany Ridge area, is not within an established allotment.

Desired Future Condition

Livestock grazing activities continue to be permitted on the allotments within this management area.

FIRE

Description

In the past 10 years there have been 21 small fires (under 10 acres each) and one large fire, the Nebo Creek Fire in 2001 (approximately 1,930 acres), in the Thistle Management Area. Cumulatively these fires have burned 2,035 acres, or 5.52 percent of the entire management area. Seventeen percent of the Nebo Creek Fire burned at high intensity. Aggressive rehabilitation treatments have been conducted to reduce flood flows that could damage soils, vegetation, wildlife habitat, and private and public infrastructure.

Desired Future Condition

Increased development on the large tracts of private land adjacent to the northern, southern, and eastern portions of the management area could result in an expansion of the urban interface areas.

LANDS AND SPECIAL USES

Description

There is one energy corridor that runs through the area. Questar Corporation operates the pipeline installed in this corridor through a special use permit. In 2001, an additional pipeline was buried within this corridor, after which the entire area was put back to slope and seed. The following table displays the land ownership of the management area.

Table 5-44. Acres within the Thistle Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	36,670
State of Utah	0
Private	160
Total Acres	36,830

Desired Future Condition

The Questar pipeline is no longer a visual impact to the scenery along the corridor. Access across private land to the National Forest boundary has been acquired through proper easements.

TRANSPORTATION

Description

This management area contains 18 miles of classified roads and 42 miles of inventoried trails used to access the Forest for recreation and resource management purposes. The majority of roads in this area are managed for passage by high clearance vehicles.

Management Prescriptions Map – Thistle Management Area

JPG (171 KB)

PDF (797 KB)

Recreation Opportunity Spectrum Classes Map – Thistle Management Area

JPG (147 KB)

PDF (290 KB)

Visual Quality Objectives Map – Thistle Management Area

JPG (157 KB)

PDF (280 KB)

UPPER PROVO MANAGEMENT AREA

LOCATION

The Upper Provo Management Area is located within Wasatch County. The management area is bounded by the Wasatch-Cache National Forest on the north, the Ashley National Forest to the east, non-federal land to the west, and by the West Fork Duchesne Management Area to the south. State Highway 35, the Wolf Creek Highway, traverses the management area. The management prescriptions applied within the management area are summarized in the following table.

Table 5-45. Management Prescriptions in the Upper Provo Management Area

Management Prescription	Acres*
3.3 Aquatic and Terrestrial Habitat	50,000
4.4 Dispersed Recreation	3,570
4.5 Developed Recreation	70
7.0 Wildland Urban Interface	7,110†
8.2 Utility Corridor/Communication Sites	110
8.3 Administrative Sites	4
Total Acres	53,754

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

† These acres are not included in the total as they are duplicated in other prescriptions.

SPECIAL FEATURES

Description

All or portions of the following three roadless areas lie within this management area: Nobletts (#418001), Little South Fork (#418002), and West Fork (#418003). These roadless areas total approximately 24,490 acres, or 46 percent of the management area.

GEOLOGY AND SOILS

Description

The Upper Provo Management Area lies on the west slope of the Uinta Mountains, part of the Colorado Plateau. The Uinta Mountains are a long east-west anticline faulted along the edges. Sedimentary sandstone, shale, and limestone rocks dominate the northeastern part of this management area. The southwestern part of this management area is composed of rocks formed from Tertiary deposits of igneous lava, breccia, and tuff that flowed into the gap between the Uinta Mountains and the Wasatch Mountains. Numerous faults, including an active east-west fault, extend through the area. Solution caverning and karst formation (e.g., caverns, sinks, and sinking springs) have altered some of the landscapes associated with limestone rocks in the Soapstone Basin area.

Some paleolandslides occur within the management area, most on Paleozoic Manning Canyon shale. All the upper elevations of the Uinta Mountains, including areas within this management area, have been glaciated.

The tectonic mountain (occupying 32 percent of the area), stream canyon (occupying 30 percent), structurally controlled shale (12 percent), landslide (9 percent), plateauland (less than 1 percent), and glacially scoured canyon, upland, and moraine (16 percent) landtypes occur within the management area. The soils in this management area vary widely due to the diversity of parent materials, geologic processes, and elevations. Soil mapping has been completed for the Soapstone area, which represents about 13 percent of this management area. This limited mapping indicates typic cryocrept (found on about 3 percent of the management area), lithic cryoboroll (1 percent), argic pachic cryoboroll (1 percent), Lithic cryorthent (1 percent), typic cryoboralf (1 percent), and rock (1 percent) are the most common soils in the Soapstone area. These soils are medium to fine textured and formed from limestone, Mancos shale, and glacial till. Due to their texture, many of these soils become soft when wet. Topsoils are loam, clay loam, or fine sandy loam. Most topsoils have a high gravel or cobble content and some are calcareous. Subsoils, where present, have a high gravel or cobble content and sandy loam or clay textures. Soil depths, productivities, and drainage vary considerably. Most soils in the Soapstone area have moderate to high inherent erosiveness, and moderate to very high disturbed erosion potential. Permeability of most soils in the Soapstone area is slow to moderate. Potential for mass movement ranges from very low to very high, but most soils have low potentials.

WATER AND WATERSHED

Description

The Provo River and its tributaries flow south and west to Utah Lake. The South Fork of the Provo River and Soapstone Creek are the major drainages within the management area. Average annual precipitation ranges from 20 to over 30 inches per year with the majority of the precipitation occurring as snow between the months of October and April. Most of the remainder of the precipitation occurs during summer thunderstorms. Runoff is dominated by spring snowmelt. Approximately two-thirds of the total annual runoff occurs during the period from April 15 to July 30. Average annual floods from streams in the area average about 14 cfs per square mile of watershed area, or slightly less than twice the average for most streams in northern Utah. Runoff from this area is an important source of water for the state of Utah and provides water for domestic, irrigation, municipal, stock, well, and storage water. The municipal water rights are owned by the Bureau of Reclamation.

There are approximately 66 miles of perennial streams and 69 miles of intermittent streams within the management area. Water quality is generally good. The main impact on water quality is from fine sediment, which can result from the spring runoff described above, landslides, roads and other disturbed sites, local areas of streambank erosion, and areas with poor ground cover. Streams tend to be highly alkaline and productive in terms of aquatic life. The following table displays the miles of stream in

the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-46. Miles of Stream by Riparian Habitat Conservation Area Class in the Upper Provo Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	26
Class II	4
Class III	105
Total Miles	135

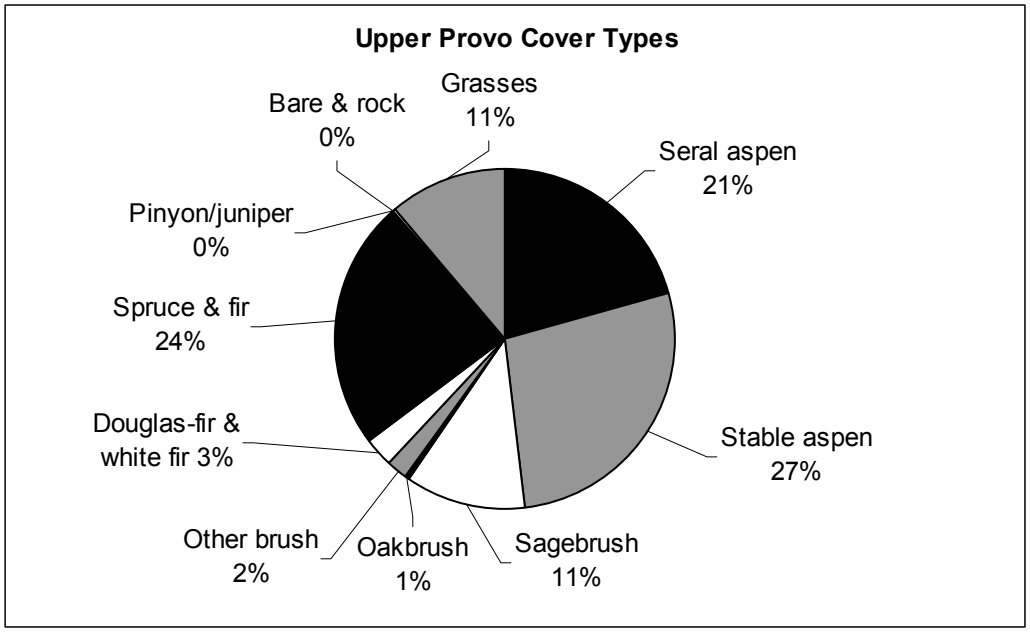
* Miles are rounded to the nearest 1 mile.

VEGETATION

Description

Aspen and mixed aspen vegetation dominates the landscape. Spruce/fir stands are common throughout the area, and are the next most common vegetation type. There are small areas of sagebrush/grass, open grass meadow parks, moist to wet meadows, and tall forb types interspersed as well. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-12. Vegetation Cover Types in the Upper Provo Management Area



Timber harvest activities have been conducted in this area for management of insect and/or disease in conifer stands, and general timber resource and wildlife habitat maintenance and improvement. Approximately 5,590 acres, primarily in the spruce/fir type, have been harvested within the management area using commercial timber sales since 1970. Approximately 200 of these acres have been in the aspen type.

Dainty moonwort (*Botrychium crenulatum*), a sensitive plant species, is found within the management area. There are no other known TES plant species within the management area. Scattered infestations of musk thistle and Canada thistle are found in the area.

Desired Future Condition

Vegetation management activities are initiated primarily to maintain or improve habitat conditions for Canada lynx and other wildlife species associated with late-seral conifer forests. Vegetation management also focuses on maintaining forest health, such as reducing risks of spruce beetle epidemics.

AQUATICS

Description

Fish. The Upper Provo Management Area is located within the Northern Bonneville Geographic Management Unit for Bonneville cutthroat trout. Streams within the management area were historically inhabited by Bonneville cutthroat trout and some genetically pure populations may still reside in isolated stream reaches. Bonneville cutthroat trout are a Region 4 and state sensitive species and were petitioned for listing under the Endangered Species Act in February 1998. This petition was found not warranted in October 2001. Conservation agreements with the UDWR have been developed for this species. Bonneville cutthroat trout populations have been identified as conservation populations in the Little South Fork of the Provo River and as persistence populations in Bench Creek, Upper South Fork of the Provo River, and Soapstone Creek. Other native fish species that may occur within the management area include mottled sculpin, mountain sucker, and Utah chub.

Non-native brown, brook, and rainbow trout have been introduced into and may still occupy suitable habitat within the management area. These species present a risk to the recovery and future viability of cutthroat trout populations within the management area.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality. However, it is assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented; however, Columbia spotted frog have been document to occur in habitat areas immediately adjacent to the management area and this species is

assumed to occur within the management area. Results from the Utah GAP Analysis (1997) indicate that the management area contains high value habitat for Great Basin spadefoot toad and northern leopard frog, with substantial value habitat for boreal chorus frog and boreal toad.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, three species of rare aquatic insect (American emerald, mountain emerald, and Hudsonian whiteface) have been documented to occur within the management area.

Threatened, Endangered, and Sensitive (TES) Species. Bonneville cutthroat trout is the only TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. The Upper Provo Management Area is an important area for terrestrial wildlife species because this area provides connectivity to large forested areas on the Wasatch-Cache and Ashley National Forests in the Uinta Mountains. The primary habitat types are aspen forest, conifer forest (primarily spruce/fir), and sagebrush. Riparian habitat occurs along the South Fork Provo River, the Little South Fork, and Soapstone Creek. Important wet meadow habitat occurs at Silver Meadows. The spruce/fir forests in this management area have been logged since the early 1900s. In addition to selectively harvested stands, several areas within the management area were clearcut in the 1950s and 1960s.

Threatened, Endangered, and Sensitive (TES) Species. The boundaries of the Upper Provo Management Area correspond with those of one the Uinta National Forest's two Lynx Analysis Units (LAUs). After the Canada lynx was declared a threatened species under the Endangered Species Act in 2000, the Upper Provo Management Area and the adjacent West Fork Duchesne Management Area to the south were selected as LAUs because these watersheds contain much of the Uinta National Forest's spruce/fir forest, and because of their connectivity to high-elevation conifer forests to the north and northeast in the Uinta Mountains where lynx occurred historically. Designation of LAUs in Utah was made in coordination among the Uinta, Ashley, and Wasatch-Cache National Forests, UDWR, and the U.S. Fish and Wildlife Service. A lynx was killed along Soapstone Creek within the Upper Provo Management Area in 1962. In addition, a female lynx was collected along the North Fork of the Provo River just north of Soapstone Basin, and lynx tracks were observed nearby along the West Fork of the Duchesne River in 1962 (UDNR 2002c). Lynx were recorded in the Uinta Mountains in 1980 and 1982, and the most recent lynx record is from the Manti-La Sal National Forest in 2001. Boreal owls occur in this management area; one boreal owl nest was found in a cavity in an aspen tree in Soapstone Basin in 2001. A great gray owl was heard calling near Wolf Creek Summit in recent years. Three-toed woodpeckers are regularly detected within this management area. A few abandoned

mines located within the management area may provide roosting habitat for Townsend's big-eared bats, spotted bats, and other bat species.

Big Game Species and Other Wildlife. Because of its higher elevations, this management area is considered primarily summer and transitional range for big game, although high value elk winter range is located at the northwest corner of the management area.

RECREATION

Description

Views of high mountain meadows and aspen make this area quite scenic. Recreation use is moderate. Recreation activities include dispersed camping, hunting, and fishing, as well as snowmobiling during winter months. There is a limited trail system within the area that provides motorized opportunities for ATV and motorcycle use. The Mill Hollow Campground and Wolf Creek Summit Campground are located within the management area. Recreation use is anticipated to increase over the next several years, with driving for pleasure being a key recreational activity.

The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-47. Recreation Opportunity Spectrum (ROS) Classes in the Upper Provo Management Area

ROS Class	Acres*
Semi-Primitive Motorized	24,830
Roaded Natural	23,230
Roaded Modified	5,700

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

Dispersed recreation activities occur throughout the management area, primarily associated with hunting, fishing, and camping. Mill Hollow Campground and Wolf Creek Summit are the only developed recreational facilities in the area. Winter motorized opportunities are maintained at their current level on groomed trails and at designated snowplay areas.

HERITAGE RESOURCES

Description

Ancient American Indian use of this area is evidenced by a number of campsites. Known historic European American sites include sawmills, an iron mine, logging camps, and the camps of livestock grazers; some of these sites are eligible for the National Register of Historic Places.

RANGE

Description

There are ten grazing allotments that are entirely within this management area: Camp Hollow, Upper Little South Fork, Lower Little South Fork, Dip Hollow, Willow Hollow, Nobletts, Neeley Basin, South Fork Provo River, Dry Hollow, and Soapstone sheep allotments. A small portion of the Wolf Creek sheep allotment is also within this management area, though the majority of this allotment is in the adjacent West Fork Duchesne Management Area.

Desired Future Condition

Livestock grazing activities continue to be permitted on the allotments within this management area.

FIRE

Description

In the past 10 years there have been 54 small fires (under 10 acres each) and one large fire (the South Hollow Fire in 2001, approximately 2,120 acres) in the Upper Provo Management Area. Cumulatively these fires have burned 2,390 acres, or 4.21 percent of the entire management area. Emergency rehabilitation treatments have been conducted on the South Hollow Fire to prevent soil erosion and sedimentation of streams. Due to developments on private lands along U.S. Highway 35 on the northwestern side of the management area, the area along the highway is identified as an urban interface area, as is a small portion in the southwest near Lake Creek Road.

Desired Future Condition

Increased development on private land adjacent to U.S. Highway 35 and Lake Creek Road could result in an expansion of the urban interface areas.

LANDS AND SPECIAL USES

Description

This area is dominated by National Forest System lands, which make up about 95 percent of the land base, with some private land along the Provo River and the South Fork of the Provo. These private lands and the western side of the management area

are being developed and have a potential for encroachments. The Chevron Corporation pipeline bisects the management area, generally following the Wolf Creek Highway. The Forest Service's Soapstone Repeater Site is located on the southern edge of the area. Two organizational camps, the Mill Hollow Outdoor Education Center (managed by the Granite School District) and Piuta Camp, are located in this management area. These facilities provide environmental education opportunities for youth groups. Both are managed through the issuance of special use permits. The following table displays the land ownership of the management area.

Table 5-48. Acres within the Upper Provo Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	53,750
State of Utah	0
Private	2,820
Total Acres	56,570

Desired Future Condition

The Forest boundary has been surveyed and posted to discourage encroachments. A utility corridor is located along the existing Chevron Corporation pipeline. The Forest continues to maintain and use the Soapstone Repeater Site. Vegetation management in these locations is limited to that consistent with the installation and maintenance of the facility. Incidental dispersed recreation use may occur in these areas. The Piuta Camp and the Granite School District facility continue to provide environmental education to youth groups.

TRANSPORTATION

Description

State Highway 35, the Wolf Creek Highway, traverses the management area. This management area contains 126 miles of classified roads used to access the Forest for recreation and resource management purposes. The primary arterial route in this area is the Mill Hollow-Duchesne Ridge Road (#054); from the Wolf Creek Highway to Mill Hollow Reservoir this road is narrow and encroaches upon the stream. The majority of roads in this area are managed for passage by high clearance vehicles.

Desired Future Condition

The Mill Hollow Road (#054) from the Wolf Creek Highway to Mill Hollow Reservoir is reconstructed, providing safe and dependable access to the Granite School District facility, Mill Hollow Campground, and Reservoir, and providing consistent connectivity through the Forest.

Management Prescriptions Map – Upper Provo Management Area

JPG (165 KB)

PDF (901 KB)

Recreation Opportunity Spectrum Classes Map – Upper Provo Management Area

JPG (165 KB)

PDF (384 KB)

Visual Quality Objectives Map – Upper Provo Management Area

JPG (164 KB)

PDF (366 KB)

UPPER SPANISH FORK CANYON MANAGEMENT AREA

LOCATION

The Upper Spanish Fork Canyon Management Area is bounded on the north by the natural boundary of the Soldier Creek watershed and on the south by U.S. Highway 6. There are four small parcels that extend beyond Highway 6: two in the area of the Red Narrows, and two near Billies Mountain. The management prescriptions applied within the management area are summarized in the following table.

Table 5-49. Management Prescriptions in the Upper Spanish Fork Canyon Management Area

Management Prescription	Acres*
3.1 Aquatic, Terrestrial, and Hydrologic Resources	140
3.3 Aquatic and Terrestrial Habitat	27,110
4.4 Dispersed Recreation	4,350
5.2 Forested Ecosystems – Vegetation Management	40
6.1 Non-forested Ecosystems	11,320
8.2 Utility Corridor/Communication Sites	1,360
Total Acres	44,320

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

SPECIAL FEATURES

Description

All or portions of the following five roadless areas lie within this management area: Chipman Creek (#418008), Willow Creek (#418009), Strawberry Ridge (#418015), Diamond Fork (#418016), and Tie Fork (#418017). These roadless areas total approximately 28,450 acres, or 64 percent of the management area.

GEOLOGY AND SOILS

Description

The Upper Spanish Fork Canyon Management Area lies in the area where the Wasatch Mountains to the west intersect with the Wasatch plateaus to the south and east. The Wasatch Mountains are a product of several episodes of folding and faulting. Eocene calcareous mudstones, siltstones, and shales of the Green River formation underlie most of this management area. Tertiary conglomerate rocks from the North Horn formation surface at the Narrows on Highway 6, and extend through the west end of the management area. Eocene sandstone and siltstone rocks from the Duchesne River/Uinta formations extend into the north end of the management area. Numerous active and paleolandslides exist within the area, primarily on the Uinta and Green River formations.

Most soils in this management area were derived from siltstones, sandstones, shales, and conglomerates. The stream canyon (occupying 47 percent of the area), tectonic mountain (occupying 39 percent), and structurally controlled shales (12 percent) are the most common landtypes. Minor areas (occupying less than 2 percent each) of landslide and plateauland landtypes have also been mapped here. The most common soils are Argic (10 percent) and pachic (5 percent) cryoboroll; pachic udic haploboroll (3 percent); typic hapludoll (19 percent); pachic argiustoll (12 percent); entic halustoll (11 percent); lithic cryorthent (4 percent); typic cryoboralf (6 percent); and typic and mollic eutroboralf (18 percent). These soils are medium to fine textured, many with a fairly high clay content. Topsoils are typically loam, silt loam, silty clay, gravelly loam, gravelly silt loam, or cobbly loam textures. Subsoils are calcareous, and have high gravel, cobble, or stone contents, and medium or fine textures. Subsoils have fine sandy loam, sandy clay loam, clay loam, silty clay loam, silt loam, or silty clay textures. Soil depths vary, but many of these soils are moderately deep. Most of these soils are slow to moderately permeable. Drainage varies from poor to well drained. Many of these soils become very soft and slick when wet. Inherent erosiveness for most of these soils is moderate, and disturbed erosion hazard is generally high or very high. Many of these soils have moderate to high potential for mass movement. Soil productivity ranges from relatively good to low depending upon soil depth, slope, and depth to clay or calcareous layers.

WATER AND WATERSHED

Description

Part of the northern side of the river corridor is within the Uinta National Forest, although very little of the current stream channel is actually on the Forest. Most of Soldier Creek is on private land. Precipitation and mean annual precipitation varies between 15 inches at the lower elevations and 25 inches on higher ridges. Most of the precipitation is received in the form of snow. The wettest months occur between December and May, depending upon the location and elevation. June and July are the driest months. High intensity summer thunderstorms are common during July and August. This management area includes the Sheep Creek and Tie Fork drainages, both of which drain into the Spanish Fork River complex and eventually into Utah Lake. There are approximately 25 miles of perennial and 130 miles of intermittent streams within the management area. Water uses served by this management area include domestic, stock, and irrigation water. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-50. Miles of Stream by Riparian Habitat Conservation Area Class in the Upper Spanish Fork Canyon Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	8
Class II	0
Class III	147
Total Miles	155

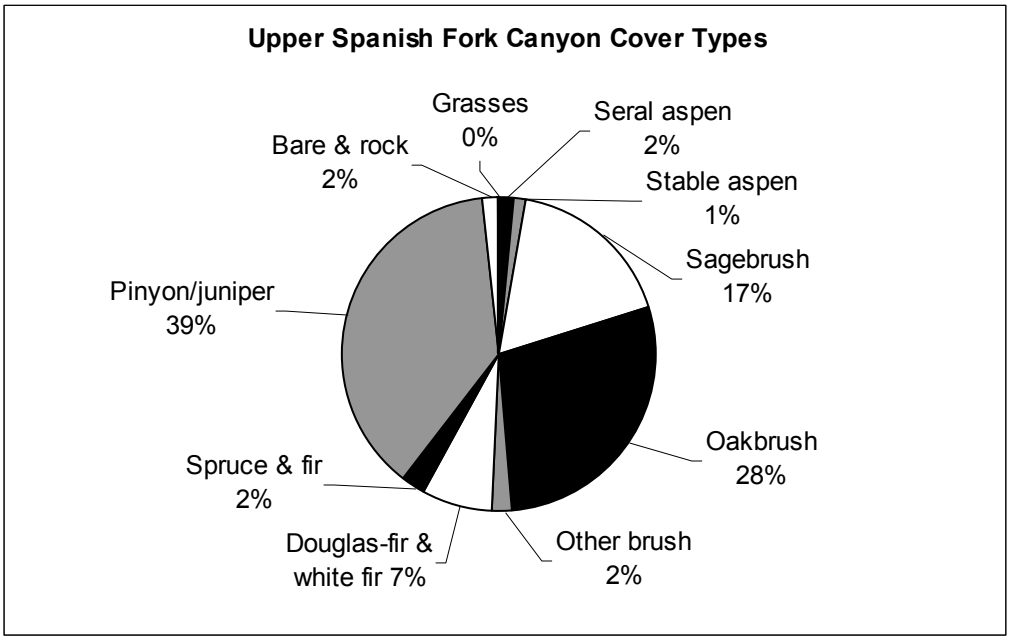
Miles are rounded to the nearest 1 mile.

VEGETATION

Description

Spanish Fork Canyon is well known among ecologists for its inverted elevational sequence of vegetation. Typically in the Wasatch Mountains, pinyon/juniper communities are found at the lowest elevations (usually along the foothills near the mouths of the canyons). The mountain brush zone becomes best developed above the pinyon/juniper, with oak, maple, and other shrubs dominating the elevations between pinyon/juniper and the aspen above. In Spanish Fork Canyon, however, this zonation is reversed with the mountain brush well developed from the mouth of the canyon all the way to Sheep Creek. From this point to the top of the canyon at Soldier Summit, pinyon/juniper is the dominant vegetation. The Upper Spanish Fork Canyon Management Area comprises the middle of this elevational sequence of vegetation. Pinyon/juniper is the predominant vegetation type. Oak and mountain brush occur on the lower elevation south-facing slopes, and Douglas-fir/white fire occur on the upper elevation north-facing slopes. Some sagebrush occurs throughout the area. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-13. Vegetation Cover Types in the Upper Spanish Fork Canyon Management Area



Several small patches of pinyon/juniper were chained in the Sheep Creek-Tie Fork area between 1990 and 1994 for big game winter range enhancement and watershed improvement.

Two TES plant species have been found to occur in or near Spanish Fork Canyon. Clay phacelia (*Phacelia argillacea*) occurs within the canyon outside the National Forest boundary. Habitat for this plant exists on National Forest System lands in the management area, though no populations have been found to exist on the Forest. Although no populations of Ute ladies'-tresses (S*piranthes diluvialis*) have been found in this management area, populations have been located in the Diamond Fork Management Area to the north. Habitat for Ute ladies'-tresses does exist in this management area. Repand twinpod (*Physaria repanda*) and dragon milkvetch (*Astragalus lutosus*), both Utah species of concern, have been documented in the area. Noxious and invasive weeds in the management area consist mostly of stands of whitetop. Musk thistle and Canada thistle have also been found. Tamarisk occurs in the riparian zone at the west end of the management area.

Desired Future Condition

Habitat for the endangered clay phacelia, as identified by Harper and Armstrong (1992), is managed to maintain its integrity. A habitat management strategy for clay phacelia is in place.

AQUATICS

Description

Fish. The management area is located within the Northern Bonneville Geographic Management Unit for Bonneville cutthroat trout. Streams within the management area were historically inhabited by Bonneville cutthroat trout and some genetically pure populations may still reside in isolated stream reaches. Bonneville cutthroat trout are a Region 4 and state sensitive species and were petitioned for listing under the Endangered Species Act in February 1998. This petition was found not warranted in October 2001. Conservation agreements with the UDWR have been developed for this species. Bonneville cutthroat trout populations have been identified as conservation populations on Tie Fork and as persistence populations on Soldier Creek.

The management area is located within the identified historic range for leatherside chub, a native species that is a state listed sensitive species. The life history and habitat requirements of this species are poorly understood and its current distribution and abundance is not well known. Other native fish species that may occur within the management area include mottled sculpin, mountain sucker, and speckled dace.

Non-native brown and rainbow trout have been introduced into and may still occupy suitable habitat within the management area. These species present a risk to the recovery and future viability of cutthroat trout populations within the management area.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality. However, it is assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains high value habitat for Great Basin spadefoot toad and northern leopard frog, with substantial value habitat for boreal chorus frog, boreal toad, Great Plains toad, tiger salamander, and Woodhouse's toad.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, no observations of state listed rare or imperiled aquatic macroinvertebrates have been reported for the management area.

Threatened, Endangered, and Sensitive (TES) Species. Bonneville cutthroat trout is the only TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. The primary habitat types in this management area include pinyon/juniper, oak/maple, sagebrush, and conifer forest (primarily Douglas-fir/white fir). Also, important riparian wildlife habitat is found in the Sheep Creek, Tie Fork, and Indian Creek drainages.

Threatened, Endangered, and Sensitive (TES) Species. Bald eagles occur within this management area during the winter. At least one northern goshawk has been found within this management area.

Big Game Species and Other Wildlife. The Upper Spanish Fork Management Area provides large areas of critical and high value winter range for elk and mule deer. Rocky Mountain bighorn sheep were common within this area before the late 1800s, but overhunting and disease transmission and competition from domestic sheep led to their extirpation. Golden eagles nest within the management area along Spanish Fork Canyon.

RECREATION

Description

Local residents use the area for general dispersed recreation including fishing, hiking, driving for pleasure, and general wildlife viewing. Other activities include hunting and winter recreation (snowmobiling) in Sheep Creek. There are no developed recreation facilities in this management area. The Great Western Trail, a National Millennium Trail, is located along the eastern boundary of the management area.

The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-51. Recreation Opportunity Spectrum (ROS) Classes in the Upper Spanish Fork Canyon Management Area

ROS Class	Acres*
Semi-Primitive Motorized	29,230
Roaded Natural	3,920
Roaded Modified	11,170

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

Summer motorized use is permitted on designated routes throughout the management area. Motorized loop trails are developed to enable users to travel between this

management area and the Diamond Fork Management Area. Heavily-used dispersed recreation sites have been hardened and vegetation and soil protection has been established. The Sheep Creek Road is managed as an important forest access route. Dispersed recreation opportunities are available throughout the management area; however, active management is focused along the road corridors. The Great Western Trail is managed to maintain its designation as a National Millennium Trail.

HERITAGE RESOURCES

Description

A wide variety of archaeological and historical sites reflect the breadth of human uses of this area through time. There are a few ancient American Indian sites, some of which are eligible for the National Register of Historic Places. Historic period sites include those related to logging, railroad tie cutting, homesteading, rock quarrying, mining, recreation, and charcoal preparation. Many of these sites were developed as a result of their close proximity of the railroad (completed in 1883) and its small service towns in Spanish Fork Canyon. A cemetery is located at Mill Fork at the southern edge of the management area. The cemetery is outside of the proclaimed boundary of the Uinta National Forest, but represents the importance of the railroad and its towns to canyon history.

RANGE

Description

The Jacob-Baldy sheep allotment is located entirely within the management area. The southern portion of the Diamond Fork cattle allotment is within this management area, as are about half each of the Billies Mountain cattle allotment and the Davis sheep allotment. The portion of the Diamond Fork Allotment within this management area is not grazed as intensively as the rest of the allotment due to its geographic location and management emphasis on big game winter range habitat. Livestock use in the Sheep Creek and Tie Fork areas is limited to the upper elevations above Tie Fork to the northwest, and the Indian Creek Drainage to the east of Tie Fork.

Desired Future Condition

Livestock grazing activities continue to be permitted on the allotments within this management area.

FIRE

Description

In the past 10 years there have been 44 small fires under 10 acres each in the Upper Spanish Fork Canyon Management Area. Cumulatively these fires have burned 220 acres, or 0.49 percent of the entire management area. There is a small amount of urban interface in the area.

Desired Future Condition

Fuels reduction treatments are focused along the utility corridors along U.S. Highway 6.

LANDS AND SPECIAL USES

Description

This management area is comprised predominately of National Forest System land, with several small inholdings. The largest block of private land is south of Billies Mountain; the next largest block is a series of patent mining claims at the head of Partridge Canyon and Mine Hollow. Along Highway 40 the Forest is adjoined by private land. As they are developed, these areas could become a source of trespasses and encroachments. There are utility corridors on the southern edge of the management area along the highway. Additionally, the Deseret Generating and Transmission line crosses the management area. The Teat Mountain electronic site is adjacent to the Diamond Fork roadless area (#418016). There is also a buried electric transmission line from Sheep Creek to Teat Mountain. The Forest Service has a repeater site on Teat Mountain, which also provides the Utah County Sheriff's Office with communication ability in the canyon. The following table displays the land ownership of the management area.

Table 5-52. Acres within the Upper Spanish Fork Canyon Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	44,320
State of Utah	0
Private	2,290
Total Acres	46,610

Desired Future Condition

When opportunities that are in the public interest for land transaction become available, the Forest Service works towards acquisition to block up National Forest System lands and protect public access. Utility corridors run the length of the management area on the southern side. An electronic site serviced by an underground cable is located on Teat Mountain. A utility corridor for the Deseret Generating and Transmission line crosses the midpoint of the management area. Vegetation management in these locations is limited to that consistent with the installation and maintenance of the facility. Incidental dispersed recreation use may occur in these areas.

TRANSPORTATION

Description

State Highway 6, in Spanish Fork Canyon, borders the southern portion of the management area. There are approximately 46 miles of classified roads within the management area providing access for recreational and management activities. The Sheep Creek/Rays Valley Road (#051) and the Indian Creek Road (#042) are heavily used arterial used providing access to the Forest.

Desired Future Condition

The Indian Creek Road (#042) is reconstructed providing continuous passenger car road access from State Highway 6 to Strawberry Reservoir.

Management Prescriptions Map – Upper Spanish Fork Canyon Management Area

JPG (154 KB)

PDF (1,117 KB)

Recreation Opportunity Spectrum Classes Map – Upper Spanish Fork Canyon Management Area

JPG (145 KB)

PDF (392 KB)

Visual Quality Objectives Map – Upper Spanish Fork Canyon Management Area

JPG (154 KB)

PDF (388 KB)

VERNON MANAGEMENT AREA

LOCATION

The Vernon Management Area is located primarily within Tooele County, with a small portion located in Juab County. The management area is surrounded by lands administered by the Bureau of Land Management (BLM) and some private property. The Sheeprock Mountain Range separates the Vernon Management Area from the West Sheeprock Management Area, which lies to the southwest. Both areas are similar in vegetative and geologic characteristics, and are different only in their aspects. The Vernon Management Area faces northeast and is part of the Rush Valley watershed.

The following table summarizes the management prescriptions applied to this management area.

Table 5-53. Management Prescriptions in the Vernon Management Area

Management Prescription	Acres*
3.1 Aquatic, Terrestrial, and Hydrologic Resources	33,290
3.3 Aquatic and Terrestrial Habitat	19,250
4.5 Developed Recreation	50
6.1 Non-forested Ecosystems	12,400
8.2 Utility Corridors/Communication Sites	570
8.3 Administrative Sites	10
Total Acres	65,570

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

SPECIAL FEATURES

Description

There are portions of two roadless areas within this management area: Vernon (#418022) and Red Pine Mountain (#418031). These roadless areas total approximately 17,400 acres, or 27 percent of the management area.

GEOLOGY AND SOILS

Description

The Vernon Management Area lies within the Sheeprock Mountains. These mountains are part of a northwest to north-trending horst of metamorphosed Pre-Cambrian and Paleozoic sedimentary (i.e., sandstone and shale), metamorphic (i.e., quartzite), and igneous (i.e., granitic) rocks. The Sheeprock Mountains are transitional between the fold-thrust belt to the east and the open folds, metamorphic core complexes, and extensional structures to the west. The internal structure of the range is dominated by a number of low-angle faults and the Pole Canyon anticline. Tertiary igneous volcanic

and intrusive rocks, containing some minerals, are found in the southeast part of the range. There is also possible evidence of glaciation in the North Oak Brush Canyon area. Ancient Lake Bonneville left lacustrine deposits in the lower elevation parts of this management area.

Stream canyon, mountain foothill, fault block mountain, and lacustrine landtype associations are found within this management area. The most common soils are Borvant (occupying 12 percent of the management area), Erda (occupying 10 percent), Kapod (9 percent), Lodar-Lundy (6 percent), Podmor-Onaqui (18 percent), Reywat-Broad (17 percent), and Taylorsflat (12 percent). Most soils are mollisols or aridisols. In general, these soils have loam or silt loam topsoils often with a high gravel or cobble content. Subsoils are typically loam, some with a high sand or clay content, and often gravelly, very gravelly, or very cobbly. Soil depths range from shallow to very deep. Permeability of these soils is moderate or moderately slow. Most of these soils are well drained. Erosion hazard ranges from slight to severe. Soil productivity varies from relatively good to low.

WATER AND WATERSHED

Description

Precipitation throughout the Vernon Management Area is characteristic of high desert ranges, with total precipitation averaging around 14 inches in the lower elevations and over 25 inches at the upper elevation along the Sheeprock Mountain Range. The majority of this moisture falls as snow, with the remainder falling during the spring and summer months as thunderstorms. June is the driest month; March and April are commonly the wettest. There are approximately 20 miles of perennial streams and 238 miles of intermittent streams in the management area. The majority of free-flowing water, which originates in the Sheeprock Mountains, was diverted for irrigation purposes when the area was first settled in the early to mid-1800s. Water from Vernon, Little Valley, and Bennion Creeks is diverted to the Vernon Reservoir for irrigation use, leaving several miles of natural stream course dewatered through the year. Water from Harker Creek is diverted to the Harker Ditch and is also used for irrigation purposes. In addition to irrigation, water uses within the management area include water for domestic, well, and stock water.

Water quality was sampled extensively during the summer of 2000. Results indicate that, as a result of past mining activity and naturally occurring mineralization of parent rock formations, isolated areas exist where metals exceed State of Utah clean water standards. A preliminary assessment of the situation is currently being prepared; action will be taken if it is determined that a significant risk to the public, wildlife, or the environment exists. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-54. Miles of Stream by Riparian Habitat Conservation Area Class in the Vernon Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	4
Class II	3
Class III	251
Total Miles	258

* Miles are rounded to the nearest 1 mile.

Desired Future Condition

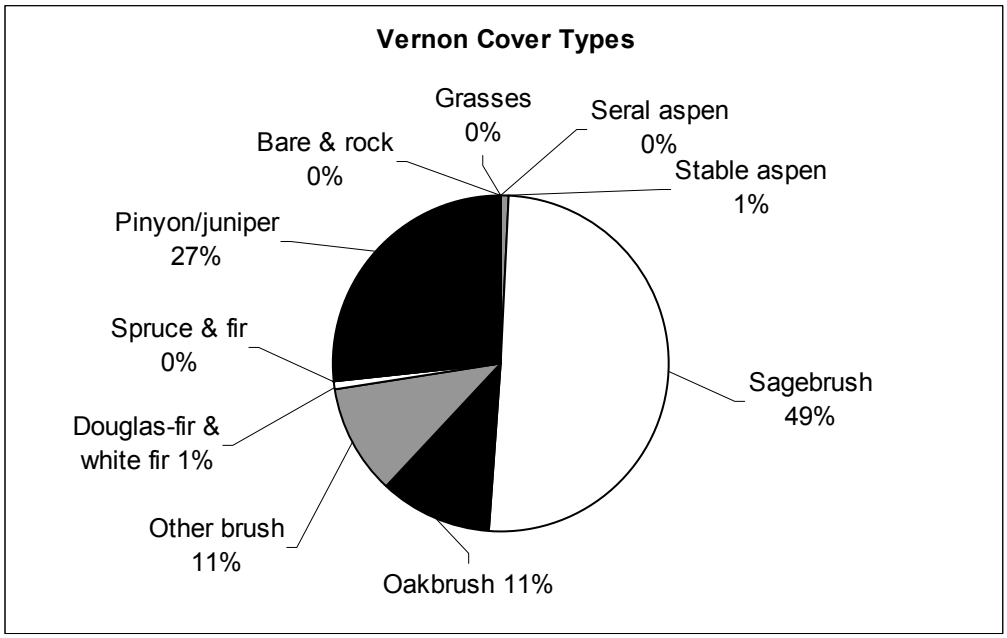
Riparian Habitat Conservation Areas (RHCAs) within the management area are maintained and improved through improved water development designs and overall livestock management. Waters impacted from past mining activity are improved where risk to the public and the resource warrants. Water developments are maintained to provide for both livestock and wildlife species. New water developments are designed to ensure spring and seep sources are not dewatered, and that habitat is maintained for aquatic species. Sources that feed streams are developed to ensure riparian areas are not adversely impacted from diversion for water development.

VEGETATION

Description

The management area lies within the Bonneville Basin Ecosection and is representative of desert sagebrush/grass, mountain brush, and juniper habitats found throughout the Intermountain Region. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-14. Vegetation Cover Types in the Vernon Management Area



There are no suitable timberlands in the Vernon Management Area. Juniper stands have expanded to cover areas that were historically maintained as sagebrush/grass vegetation types under historical fire regimes. Post and pole cutting of some of these juniper stands has occurred, but not at high enough levels to reverse the trend. There are no known populations of TES plant species in the management area. Pohl's milkvetch (*Astragalus lentiginosus* var. *pohlii*), a state-identified rare plant, has been documented in the area (UDNR 1998e, p. 35). Various species of knapweeds occur nearby outside the Forest boundary.

Desired Future Condition

Non-forested ecosystems exhibit improvement through establishment of native grass and forb species in areas previously seeded to crested wheatgrass. No commercial timber harvest activities occur within this area. Limited harvest of Christmas trees for personal use occurs.

AQUATICS

Description

Fish. The Vernon Management Area is located in the West Desert Geographic Management Unit for Bonneville cutthroat trout. Streams within the management area were historically inhabited by Bonneville cutthroat trout; however, these populations are no longer present. Other native fish species that may be present within the management area include mottled sculpin.

Non-native brown and rainbow trout have been introduced into and may still occupy suitable habitat within the management area. Rainbow trout are currently stocked by the UDWR to supplement recreational fisheries in Vernon Reservoir and Little Valley Creek. A naturalized population of brown trout has become established in Little Valley Creek and the lower reaches of Vernon Creek.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality. However, it is assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains high value habitat for Great Basin spadefoot toad and northern leopard frog, with substantial value habitat for boreal chorus frog and Woodhouse's toad.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, no observations of state listed rare or imperiled aquatic macroinvertebrates have been reported for the management area.

Threatened, Endangered, and Sensitive (TES) Species. There are no TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. The primary habitat types of this area are sagebrush, pinyon/juniper woodland, oak/maple, and mountain brush. Riparian habitat occurs along Vernon Creek, Bennion Creek, Harker Canyon, and Little Valley Creek. Wildfires within this management area in 1990, 1994, and 1996 burned large areas of sagebrush and pinyon/juniper vegetation types (see page 5-175 for more information on fire in this area).

Threatened, Endangered, and Sensitive (TES) Species. The Vernon Management Area provides habitat for one of two populations of greater sage grouse that occur on the Uinta National Forest. Lek counts from the primary lek within this management area have fluctuated greatly, but the overall population trend has been stable between 1968, when the UDWR began conducting lek counts, and the present. Mormon crickets periodically become very abundant within this area and have significant impacts on vegetation. Bald eagles migrate to the area during the winter. The ferruginous hawk, which is a state threatened species, nests within this management area. Abandoned mines within the management area provide potential roosting habitat for Townsend's big-eared bats, spotted bats, and other bat species.

Big Game Species and Other Wildlife. Pronghorn antelope occur at low densities in the Vernon and West Sheeprock Management Areas. Introduced wild turkeys also occur in these two management areas.

RECREATION

Description

Recreation use in the Vernon Management Area is moderate, centered on the Vernon Reservoir and upper Vernon and Little Valley Creeks. The majority of use is from residents of Salt Lake Valley. The Forest Service installed developed facilities at the reservoir to address adverse impacts on water and soil resources as a result of heavy use. These facilities include 10 concrete pads with tables and fire rings, three vault toilets, and an improved access road to the west side of the reservoir. The reservoir itself is under the jurisdiction of the Vernon Irrigation Company. Big game (deer) hunting seasons generally increase the recreation use in the area in the form of dispersed camping and general hunting activity. ATV use is prevalent around the Vernon Reservoir and has caused problems related to off-road impacts to both National Forest System and private lands. ATV users who recreate at the Little Sahara Recreation Area (administered by the BLM) travel through the National Forest on the Main Canyon Road from the Recreation Area to the town of Vernon. This high level of use contributes to the wear and tear of the road facilities.

The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-55. Recreation Opportunity Spectrum (ROS) Classes in the Vernon Management Area

ROS Class	Acres*
Semi-Primitive Motorized	10,840
Roaded Natural	54,730

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

Developed recreation facilities continue to provide recreational opportunities in the area surrounding the Vernon Reservoir. Motorized recreation opportunities are limited to use of existing roads. No off-road or off-trail motorized opportunities are provided. Camping and fishing are the primary recreational activities, followed by fall hunting activities. The Sheeprock Mountain Range Trail and access trails are designated for motorized recreational opportunities.

HERITAGE RESOURCES

Description

Ancient American Indians used this area extensively for hunting, plant gathering, and winter camps. As a result, there are more archaeological sites from this time period in this management area than in any other part of the Uinta National Forest. Many of these sites are eligible for the National Register of Historic Places, despite the fact that many of them have also been impacted by past vegetation manipulation projects and illegal artifact collecting. The area was also home to a number of Goshute families during the period of early European settlement (1860-90). The Skull Valley Goshute Reservation is located about 22 miles to the northwest of the Vernon Management Area.

European American homesteading began in this area in 1857, and there are a number of archaeological sites that record this endeavor. Many are eligible for the National Register, representing an important theme in both local and Utah history. Other historic sites include mines, water diversion structures, and the camps of livestock herders, railroad workers, and recreationists. Some of these sites have also been impacted by past vegetation manipulation projects and wildfires. Nonetheless, many of the sites, including the mines, are eligible for the National Register.

Desired Future Condition

Sites are treated with respect by visitors and are protected from illegal artifact collecting through law enforcement, education, and volunteer site stewards. Visual reminders of historic activities are preserved as a legacy to the future. Human activities are included in all environmental education and interpretation programs. The Skull Valley Band of Goshute Indians and the Confederated Tribes of the Goshute Reservation actively participate in both project and long-term planning efforts.

RANGE

Description

Public use within the Vernon Management Area consists predominantly of livestock grazing that supports local ranches and farms. All allotments are utilized as spring, summer, and/or fall range. There are nine grazing allotments within this management area: Vernon, Benmore, Bennion, Little Valley-Vernon, Ault, Ault BLM, Sharps Valley, and Sabie Mountain cattle allotments, and the Dunbar sheep allotment,. This management area has been impacted a great deal by human use, including rangeland improvements such as juniper and sagebrush chaining, sagebrush discing, and discing and seeding activities. Experimental range studies have focused on measuring livestock grazing impacts on vegetation. Evidence of some of the more intensive of these activities is still visible on the landscape in the forms of terraces, near monocultures of crested wheatgrass, and the continued diversion of surface water for irrigation.

Desired Future Condition

Livestock grazing activities continue to be permitted on the allotments within this management area.

MINERALS

Description

Mining activities in this management area have a long history dating back into the late 1800s. Ore bodies included silver, lead, gold, and perhaps other minor metals. Mining activities occurred on and off National Forest System lands, and there are many private and patent mining lands within the area. Between the Vernon and West Sheeprock Management Areas, there are currently 13 active mines including the Desert, Dunces, Wrong Way, Contact, Blue Beauty, and Crystal. Over the last several years the Forest has worked with the State of Utah and private landowners in closing dangerous mine adits and drifts. These features include obscure vertical and deep shafts, which create a hazard to the general public engaging in recreation opportunities in the area. Old and abandoned tailing piles from excavated mines are being evaluated for high levels of hazardous minerals and other deleterious materials that may cause environmental damage.

Desired Future Condition

This management area will continue to be of interest to future prospectors. Should ore become more economical viable, more prospecting activity is expected to occur. Abandoned and open mine shafts will continue to be closed for safety reasons. Evaluation of abandoned tailing piles will continue.

FIRE

Description

Wildland fire incidents in 1990, 1994, and 1996 burned nearly 14,400 acres of the management area. Cumulatively these fires have burned 26.37 percent of the entire management area. The majority of the juniper stands that existed on the slopes of Sabie Mountain and in the Bennion and Harker Creek drainages were burned. Recovery of vegetation has been good, with both native and seeded grasses and shrubs re-establishing on the sites. Initial attack responsibility for wildland fire management for the entire area is assigned to the Bureau of Land Management (BLM).

Desired Future Condition

Wildland fire use is coordinated with the BLM and meets resource management needs for both agencies.

LANDS AND SPECIAL USES

Description

This management area contains several large private land inholdings. It is in the public interest to work with these landowners to acquire road and trail easement to ensure the public access across the trail system. Land acquisition will not be a priority except to maintain open trail systems. A Union Pacific Railroad line runs along the extreme eastern portion of the area. A Qwest (formerly U S WEST) fiber-optic communications line follows the same corridor. The Forest Service maintains a communications repeater on Dutch Peak.

The Benmore Guard Station has been used to house employees while they conduct management activities in the area. The Uinta National Forest's horse stock has been pastured during winter months at this administrative site. Materials and supplies used for project activities in the area are usually stored at this facility as well. The guard station is potentially eligible for the National Register of Historic Places. The following table displays the land ownership of the management area.

Table 5-56. Acres within the Vernon Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	65,560
State of Utah	0
Private	7,080
Total Acres	72,640

Desired Future Condition

The motorized and non-motorized trail systems that cross private land have easements or granted right-of-ways. Easements will be acquired where reasonable for water transmission lines that serve public need. Trespasses and encroachments will have been identified and resolved. A Union Pacific Railroad line continues to be used along the extreme eastern portion of the area. The Qwest fiber-optic communications line continues to be maintained in this same corridor. The Forest Service continues to maintain and use the Dutch Peak Repeater Site. The Benmore Guard Station is used as a remote site for field work, winter horse pasturage, and general equipment and materials storage in support of management activities in the Vernon area.

TRANSPORTATION

Description

There are approximately 165 miles of classified roads within the management area providing access for recreational and management activities.

Management Prescriptions Map – Vernon Management Area

JPG (144 KB)

PDF (667 KB)

Recreation Opportunity Spectrum Classes Map – Vernon Management Area

JPG (164 KB)

PDF (242 KB)

Visual Quality Objectives Map – Vernon Management Area

JPG (169 KB)

PDF (236 KB)

WEST FORK DUCHESNE MANAGEMENT AREA

LOCATION

The West Fork Duchesne Management Area is located in the northeastern portion of the Heber Ranger District, and is dominated by the West Fork Duchesne River drainage. The management area lies entirely within Wasatch County. The management prescriptions applied within the management area are summarized in the table below.

Table 5-57. Management Prescriptions in the West Fork Duchesne Management Area

Management Prescription	Acres*
3.3 Aquatic and Terrestrial Habitat	39,520
4.4 Dispersed Recreation	1,980
8.2 Utility Corridor/Communication Sites	110
Total Acres	41,610

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

SPECIAL FEATURES

Description

All or portions of the following four roadless areas lie within this management area: West Fork (#418003), Vat Creek (#418004), White Ledge (#418034), and Coyote Ridge (#418042). These roadless areas total approximately 27,460 acres, or 66 percent of the management area.

GEOLOGY AND SOILS

Description

The West Fork Duchesne Management Area lies on the south slope of the Uinta Mountains, part of the Colorado Plateau. The Uinta Mountains are a long east-west anticline faulted along the edges. This management area lies in an area of faulting and contains numerous geologic formations. This area is dominated by Mesozoic sedimentary rocks which dip to the south. In the northwest corner of this area Tertiary volcanics occur. The upper elevations of the Uinta Mountains, including areas within this management area on Red Creek Mountain and Duchesne Ridge, have been glaciated. Some active and paleolandslides occur within the area.

Many soils in this management area developed from glacial deposits of quartzite, sandstone, or other rocks. The stream canyon (occupying 53 percent of the management area), plateauland (occupying 13 percent), mountain foothill (7 percent), and glacially scoured canyons, uplands, and moraines (20 percent) are the most

common landtypes. Minor areas (occupying less than 5 percent each) of landslide, mountain foothill, structurally controlled limestone, and tectonic mountain landtypes also occur here. The most common soils are typic (31 percent) and pachic (27 percent) cryoboroll; pachic argiboroll (4 percent); mollic (5 percent) and andeptic (4 percent) cryoboralf; and typic cryorthent (4 percent). These soils are medium to fine textured. Due to their texture and structure, some of these soils become very soft when wet. Topsoils are predominantly loam or fine sandy loam, but some soils have loamy sand, silt loam, or clay loam textures. Most topsoils have a high gravel or cobble content. Subsoils generally have high gravel or cobble contents, and most have loam, clay loam, or fine sandy loam textures. Some subsoils have sand, sandy loam, or clay textures. Most soils are moderately deep, and have moderately rapid permeability. Drainage varies from poor to well drained. Inherent erosiveness is low to moderate, and disturbed erosion hazard is moderate to very high for most soils. Potential for mass movement ranges from very low to very high, but most soils have moderate to high potentials. Most soils are moderately productive, but some have a low productivity.

WATER AND WATERSHED

Description

Average annual precipitation in the West Fork Duchesne Management Area ranges from 25 to over 30 inches per year, with the majority of the precipitation occurring as snow between October and April. Most of the remainder of the precipitation occurs as summer thunderstorms. Of the approximately 119 miles of stream within the area, approximately 75 miles are perennial streams and 44 miles are intermittent streams. The West Fork Duchesne River and its tributaries flow south and east into the Uinta Basin and the Colorado River.

Central Utah Project (CUP) related facilities within this area include the Vat Creek Diversion and Tunnel that divert water from the West Fork of the Duchesne River and Wolf Creek to Currant Creek Reservoir. This diversion is located in the eastern end of the river drainage, approximately 2.3 miles east of the Forest boundary. Water uses served by this management area include domestic, irrigation, municipal, stock, and power. The Bureau of Reclamation and other small entities own municipal water rights in the management area. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-58. Miles of Stream by Riparian Habitat Conservation Area Class in the West Fork Duchesne Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	26
Class II	0
Class III	93
Total Miles	119

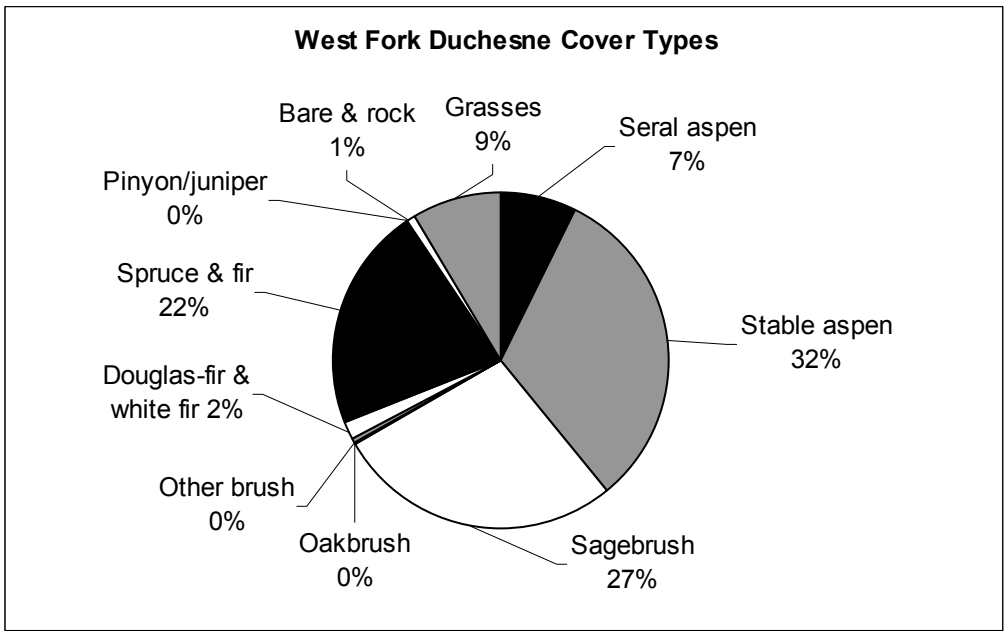
* Miles are rounded to the nearest 1 mile.

VEGETATION

Description

Vegetation is comprised primarily of aspen and sagebrush communities. Spruce/fir stands are the next most common vegetation, with stands occurring in the western portion of the management area. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-15. Vegetation Cover Types in the West Fork Duchesne Management Area



Timber harvest activities have been conducted primarily for insect and disease control and wildlife habitat improvement. These activities have been generally limited to the upper headwater areas of this drainage. Approximately 3,535 acres, primarily in the spruce/fir type, have been harvested within the management area using commercial

timber sales since 1970. Some of the largest reserves of potential old growth spruce/fir habitat on the Heber Ranger District occur in this management area in the Little West Fork drainage.

There are no known TES plant species found in the management area, although Duchesne River twinpod (*Physaria stylosa*), a state-identified rare plant, has been documented in the area (UDNR 1998e, p. 98-99). Scattered infestations of musk and Canada thistle are found in this management area.

Desired Future Condition

Vegetation management activities are initiated to maintain or improve habitat conditions for Canada lynx and other wildlife species associated with late-seral conifer forests. Vegetation management also focuses on maintaining forest health, such as reducing risks of spruce beetle epidemics.

AQUATICS

Description

Fish. The management area is located within the South Slope Uinta Subunit of the Northeastern Geographic Management Unit for Colorado River cutthroat trout. Streams in the management area provide important habitat for maintenance and recovery of Colorado River cutthroat trout populations within the state of Utah. Colorado River cutthroat trout are a Region 4 and state sensitive species, and were petitioned for listing under the Endangered Species Act in December 1999. Findings for the petition have not yet been determined. Conservation agreements with the UDWR have been developed for this species.

Populations of Colorado River cutthroat trout within the area have been identified as conservation populations in the West Fork of the Duchesne River, Little West Fork of the Duchesne River, and Vat Creek. These three populations have further been identified as a metapopulation for Colorado River cutthroat trout and are managed accordingly.

Other native fish species that may occur within the management area include bluehead sucker, mottled sculpin, mountain sucker, mountain whitefish, speckled dace, and Utah chub.

Non-native brown, brook, and rainbow trout have been introduced into and may still occupy suitable habitat within the management area. These species present a risk to the recovery and future viability of cutthroat trout populations within the management area. Brown and rainbow trout are currently stocked by the UDWR to supplement popular recreational fisheries within the management area.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality. However, it is

assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains high value habitat for Great Basin spadefoot toad and northern leopard frog, with substantial value habitat for boreal chorus frog and boreal toad.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, no observations of state listed rare or imperiled aquatic macroinvertebrates have been reported for the management area.

Threatened, Endangered, and Sensitive (TES) Species. Colorado River cutthroat trout is the only TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. The primary habitat types found in this management area are aspen forest, sagebrush, and conifer forest (primarily spruce/fir). Inventoried old growth spruce/fir stands occur within this management area. The West Fork Duchesne River and Vat Creek drainages also provide valuable riparian habitat.

Threatened, Endangered, and Sensitive (TES) Species. The boundaries of the West Fork Duchesne Management Area correspond with those of one the Uinta National Forest's two Lynx Analysis Units (LAUs). After the Canada lynx was declared a threatened species under the Endangered Species Act in 2000, the West Fork Duchesne Management Area and the adjacent Upper Provo Management Area to the north were selected as LAUs because these watersheds contain much of the Uinta National Forest's spruce/fir forest, and because of their connectivity to high-elevation conifer forests to the north and northeast in the Uinta Mountains where lynx occurred historically. Designation of LAUs in Utah was made in coordination among the Uinta, Ashley, and Wasatch-Cache National Forests, the UDWR, and the U.S. Fish and Wildlife Service. Northern goshawks have nested in this management area in the past. A great gray owl has been detected at Wolf Creek Summit in past years, and potential habitat for boreal owls and three-toed woodpeckers occur within the management area. Abandoned mines within the management area may provide roosting habitat for Townsend's big-eared bats, spotted bats, and other bat species.

Big Game Species and Other Wildlife. This management area contains summer and transitional range for big game, in addition to critical elk winter range on the eastern end.

RECREATION

Description

Recreation activities and opportunities are generally related to hunting, fishing, and camping, and some driving for pleasure. There are no developed recreational facilities within the management area. The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-59. Recreation Opportunity Spectrum (ROS) Classes in the West Fork Duchesne Management Area

ROS Class	Acres*
Semi-Primitive Motorized	21,700
Roaded Natural	12,670
Roaded Modified	7,240

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

Dispersed recreation activities are emphasized to address anticipated increases in activities associated with access through the Forest, and particularly within this management area. Recreation activities and opportunities continue to be focused on management of dispersed use. No developed facilities are provided. Winter motorized opportunities are maintained at their current level on groomed trails and at designated snowplay areas. Hunting, fishing, and camping are the main recreational activities. Dispersed recreation occurs throughout the area, but is actively managed along the National Forest System Road 054 corridor along the west edge of the management area. This road is part of a dispersed recreation management corridor that provides access between, but not including, Spanish Fork Canyon and State Highway 35 (Wolf Creek Highway).

HERITAGE RESOURCES

Description

A number of ancient American Indian campsites have been identified, reflecting the significance of this area to people as both a travelway and a place to hunt, gather wild plants, and carry out other facets of their lives. One of these sites was excavated in the 1990s, revealing important information on this high elevation use. The area was also used by historic Utes (those using the area in the last 150 years) as a travel route between the Uintah and Ouray Ute Indian Reservation and Heber Valley. The entire management area was originally part of the Uintah and Ouray Ute Indian Reservation. Historic European American sites include those related to logging, livestock grazing, and Forest Service management.

RANGE

Description

There are eight allotments within this management area: Heber Mountain, Little West Fork, Indian Springs, Red Creek Mountain, Little Sand Creek, and Pass Creek sheep allotments, and the West Fork cattle allotment.

Desired Future Condition

Livestock grazing activities continue to be permitted on the allotments within this management area.

FIRE

Description

In the past 10 years there have been 21 small fires under 10 acres each in the West Fork Duchesne Management Area. Cumulatively these fires have burned 105 acres, or 0.25 percent of the entire management area. Limited fuels treatments have consisted of slash and pile burns. There are limited urban interface areas.

LANDS AND SPECIAL USES

Description

There is only a small area of private land within this management area where the Duchesne River leaves the Uinta National Forest. There is a designated utility corridor located along the eastern portion of this management area occupied by Chevron Corporation. A water transmission line on the eastern side of the management area transfers water from Wolf Creek to the West Fork Duchesne River. A Bureau of Reclamation water transmission tunnel is beneath the area, with a portal on the West Fork Duchesne River. The following table displays the land ownership of the management area.

Table 5-60. Acres within the West Fork Duchesne Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	41,610
State of Utah	0
Private	70
Total Acres	41,680

Desired Future Condition

All encumbrances are granted through easements or under permit. The Chevron Corporation gas pipeline corridor is maintained.

TRANSPORTATION

Description

There are approximately 79 miles of roads within the management area, the majority of which are maintained for high clearance vehicles. The primary arterial route is Lake Creek Road (#083). The West Fork Duchesne Road (#050) parallels the West Fork of the Duchesne River and continues onto the Ashley National Forest.

Desired Future Condition

Opportunities to relocate or harden portions of the West Fork Duchesne Road (#050) are completed, thereby improving aquatic, water, and watershed resources.

Management Prescriptions Map – West Fork Duchesne Management Area

JPG (176 KB)

PDF (1,068 KB)

Recreation Opportunity Spectrum Classes Map – West Fork Duchesne Management Area

JPG (173 KB)

PDF (439 KB)

Visual Quality Objectives Map – West Fork Duchesne Management Area

JPG (182 KB)

PDF (422 KB)

WEST SHEEPROCK MANAGEMENT AREA

LOCATION

The West Sheeprock Management Area is located entirely within Tooele County. Elevations vary from 5,500 feet in the valleys to 8,964 feet on Dutch Peak. The Sheeprock Mountains separate this management area from the Vernon Management Area, which lies to the northeast. Both areas are similar in vegetative and geologic characteristics, and are different only in their aspects. The West Sheeprock Management Area faces southwest and is part of the Sevier River and Government Creek watersheds. The management prescriptions applied within the management area are summarized in the following table.

Table 5-61. Management Prescriptions in the West Sheeprock Management Area

Management Prescription	Acres*
6.1 Non-forested Ecosystems	25,460
Total Acres	25,460

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

SPECIAL FEATURES

Description

There are portions of two roadless areas within this management area: Vernon (#418022) and Red Pine Mountain (#418031). These roadless areas total approximately 19,390 acres, or 76 percent of the management area.

GEOLOGY AND SOILS

Description

The West Sheeprock Management Area lies within the Sheeprock Mountains. These mountains are part of a northwest to north-trending horst of Pre-Cambrian and Paleozoic metamorphosed sedimentary (i.e., sandstone and shale), metamorphic (i.e., quartzite), and igneous (i.e., granitic) rocks. The Sheeprock Mountains are transitional between the fold-thrust belt to the east and the open folds, metamorphic core complexes, and extensional structures to the west. The internal structure of the range is dominated by a number of low-angle faults and the Pole Canyon anticline. Tertiary igneous volcanic and intrusive rocks, containing some minerals, are found in the southeast part of the range. Glacial and lacustrine landforms are not evident within this management area.

Stream canyon, mountain foothill, and fault block mountain landtype associations occur within this management area. The most common soils are Kapod (occupying 25

percent of the management area), Reywat/Broad (occupying 36 percent), and Podmor/Onaqui (25 percent). Most of these soils are mollisols. In general, these soils have cobbly to very cobbly loam topsoils over gravelly or very gravelly loam, sandy loam, or clay loam subsoils. Soil depths range from shallow to deep. Permeability of these soils varies from moderate to moderately slow. These soils are typically well drained. Erosion hazard ranges from moderate to extreme. In general, these soils have relatively low productivities due to the soil's high rock content, the moderate to steep slopes they typically occupy, and the dry climate in which they reside.

WATER AND WATERSHED

Description

Water resources are typical of desert regions in that they are smaller in volume and tend to dry up as the summer progresses. Precipitation throughout the management area is characteristic of high desert ranges, with total precipitation averaging around 14 inches at the lower elevations to over 25 inches at the upper elevations along the Sheeprock Mountains. The majority of this moisture falls as snow, with the remainder falling during the spring and summer months as thunderstorms. June is the driest month; March and April are commonly the wettest. The management area contains 91 miles of streams: 9 miles are classified as perennial and the remaining 83 are classified as intermittent. Live water sources remain free-flowing in natural stream courses. Only one stream, an intermittent unnamed tributary whose headwaters begin in T.9S., R.6W. Section 31, located on the Onaqui Allotment, has its water diverted into Charlies Ditch. This ditch transports water for irrigation to adjacent private lands. Other small diversions exist in the lower portion of streams, but Charlies Ditch diverts water in the upper portion of the stream, and dewaters the stream course for the majority of its length. Water uses within the management area include irrigation, domestic, and stock water.

Water quality was sampled extensively within the management area during the summer of 2000. Results indicate that, due to past mining activity and naturally occurring mineralization of parent rock formations, isolated areas exist where metals exceed State of Utah clean water standards. A preliminary assessment of the situation is currently being prepared; action will be taken if it is determined that a significant risk to the public, wildlife, or the environment exists. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-62. Miles of Stream by Riparian Habitat Conservation Area Class in the West Sheeprock Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	0
Class II	0
Class III	91
Total Miles	91

* Miles are rounded to the nearest 1 mile.

Desired Future Condition

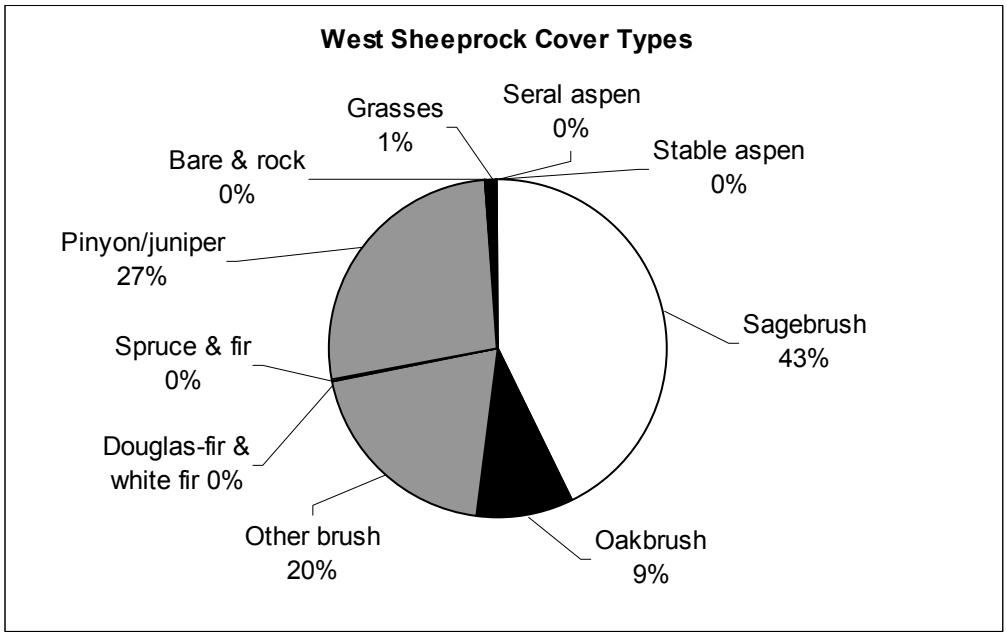
Waters impacted from past mining activity are improved where risk to the public and the resource warrants. RHCAs have been maintained and improved through improved water development designs and overall livestock management. New developments have been designed to ensure spring and seep sources are not dewatered. Sources that feed streams are developed to ensure riparian areas are not adversely impacted by diversion for water development.

VEGETATION

Description

The West Sheeprock Management Area is located within the Bonneville Basin Ecosection. The vegetation is typical of the desert sagebrush/grass, mountain brush, and juniper habitats found throughout the Intermountain Region; however, slopes are more varied and steeper, and the overall climate of the area is hotter and drier due to its southwest aspect. Vegetation is primarily sagebrush and pinyon/juniper. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-16. Vegetation Cover Types in the West Sheeprock Management Area



There are no known populations of TES plant species in the management area. No noxious weeds have been documented in this management area.

Desired Future Condition

Vegetative composition and age class diversity is representative of desired future conditions for the sagebrush/grass, mountain shrub, and juniper community types. Vegetative succession in wildland fire areas is progressing, and shrub and forested ecosystem species are beginning to reestablish on sites they previously occupied. No commercial timber harvest or Christmas tree cutting occurs within this management area.

AQUATICS

Description

Fish. The West Sheeprock Management Area is located within the Southern Bonneville Basin Geographic Management Unit for Bonneville cutthroat trout. Streams within the management area were historically occupied by Bonneville cutthroat trout; however, these populations are no longer present within the management area. Due to the lack of sufficient stream flows, fish habitat is severely limited within the management area. In addition, the occurrence of fish species within the management area is poorly documented. Native fish species that may potentially occur within the management area include mottled sculpin. However, the presence of these or other fish species within the management area is open to speculation.

Amphibians. The distribution of amphibian species within the management unit is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management unit contains high value habitat for Great Basin spadefoot toad and northern leopard frog, with substantial value habitat for boreal chorus frog and Woodhouse's toad.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, one species of rare aquatic snail, desert tyronia, has been documented to occur within the management area.

Threatened, Endangered, and Sensitive (TES) Species. There are no TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. Primary habitat types within the West Sheeprock Management Area include sagebrush, pinyon/juniper, mountain brush, and oak/maple.

Threatened, Endangered, and Sensitive (TES) Species. Greater sage grouse occur within the West Sheeprock Management, but in fewer numbers than in the Vernon Management Area to the east. Pronghorn antelope occur in low densities within the area. Bald eagles occur within the area during the winter. The ferruginous hawk, a state threatened species, nests within this management area. Abandoned mines within the management area provide potential roosting habitat for Townsend's big-eared bats, spotted bats, and other bat species.

Big Game Species and Other Wildlife. Pronghorn antelope occur at low densities in the Vernon and West Sheeprock Management Areas. Introduced wild turkeys also occur in the Vernon and West Sheeprock Management Areas.

RECREATION

Description

The limited amount of recreation use that does occur in this management area is associated with the hunting seasons. There are no developed recreation facilities within this management area. As ATV use along the Wasatch Front is continuing to grow, but opportunities for use are not, this type of use is expected to expand to other locations, most likely to the West Sheeprock Management Area. There is currently some ATV use on existing roads and trails. The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-63. Recreation Opportunity Spectrum (ROS) Classes in the West Sheeprock Management Area

ROS Class	Acres*
Semi-Primitive Motorized	18,120
Roaded Natural	7,340

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

Recreation opportunities are associated with dispersed activities. Hunting and camping are the main recreational activities. No developed recreation facilities are provided. ATV roads and trails are identified; loops are provided that lead to other areas of public land.

HERITAGE RESOURCES

Description

Long-term use of this area by ancient American Indians is evidenced by a large number of archaeological sites. This area is part of the traditional territory of the Goshutes, and the Skull Valley Goshute Reservation is about 21 miles to the north/northwest. Historic European American livestock grazing, homesteading, mining, recreation, and water diversion sites exist in the area. Many of the ancient and historic sites have been impacted by past vegetation manipulation projects and wildfires; nonetheless, many of them are still potentially eligible for the National Register of Historic Places.

Desired Future Condition

Sites are treated with respect by visitors and are protected from illegal artifact collecting through law enforcement, education, and volunteer site stewards. The Skull Valley Band of Goshute Indians and the Confederated Tribes of the Goshute Reservation actively participate in both project and long-term planning efforts.

RANGE

Description

There are three livestock allotments located within this management area: Onaqui, West Cottonwood, and East Cottonwood cattle allotments. Both the West and East Cottonwood Allotments are utilized in conjunction with Bureau of Land Management pastures to round out the permittees' livestock operations. The Uinta National Forest administers the use on both agencies lands on the West Cottonwood Allotment; the BLM administers the use on the East Cottonwood Allotment. Water developments located within this management area provide water for both Forest Service cattle

allotments during the summer months and BLM sheep allotments located further west on the desert toward Delta, Utah, during the winter months.

Desired Future Condition

Livestock grazing activities continue to be permitted on the allotments within this management area.

MINERALS

Description

Mining activities in this management area have a long history dating back into the late 1800s. Ore bodies included silver, lead, gold, and perhaps other minor metals. Mining activities occurred on and off National Forest System lands, and there are many private and patent mining lands within the area. Between the Vernon and West Sheeprock Management Areas, there are currently 13 active mines including the Desert, Dunces, Wrong Way, Contact, Blue Beauty, and Crystal. Over the last several years the Forest has worked with the State of Utah and private landowners in closing dangerous mine adits and drifts. These features include obscure vertical and deep shafts, which create a hazard to the general public engaging in recreation opportunities in the area. Old and abandoned tailing piles from excavated mines are being evaluated for high levels of hazardous minerals and other deleterious materials that may cause environmental damage.

Desired Future Condition

This management area will continue to be of interest to future prospectors. Should ore become more economical viable, more prospecting activity is expected to occur. Abandoned and open mine shafts will continue to be closed for safety reasons. Evaluation of abandoned tailing piles will continue.

FIRE

Description

In the past ten years there has been one large fire, the Harker Complex in 1994, that burned 5,500 acres, or 21.60 percent of the West Sheeprock Management Area. The majority of the juniper stands that existed on the slopes of South Oak Brush, Cottonwood, and South Pine Canyons were burned. Recovery of vegetation has been good, with both native and seeded grasses and shrubs reestablishing. Initial attack responsibility for wildland fire management for the entire area is currently assigned to the BLM.

Desired Future Condition

Wildland fire use is coordinated with the BLM to meet resource management needs of both agencies.

LANDS AND SPECIAL USES

Description

The West Sheeprock Management Area is predominately comprised of public land, with a few inholdings from old patent mining claims. Tooele County has an emergency communication site permitted within the area. The following table displays the land ownership of the management area.

Table 5-64. Acres within the West Sheeprock Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	25,460
State of Utah	0
Private	240
Total Acres	25,700

Desired Future Condition

A travel system is in place that provides the public with an enjoyable experience while maintaining the resource values of the area. Tooele County's emergency site is operating and blends into the landscape. Access across private land has been acquired as needed to provide trail system loop opportunities.

TRANSPORTATION

Description

There are approximately 37 miles of roads within the management area which are used to access the area for recreational and management activities. All classified roads are maintained for high clearance vehicles.

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Management Prescriptions Map – West Sheeprock Management Area

JPG (137 KB)

PDF (558 KB)

Recreation Opportunity Spectrum Classes Map – West Sheeprock Management Area

JPG (130 KB)

PDF (178 KB)

Visual Quality Objectives Map – West Sheeprock Management Area

JPG (171 KB)

PDF (164 KB)

WHITE RIVER MANAGEMENT AREA

LOCATION

The Uinta National Forest boundary marks the east and south edges of the White River Management Area. The natural boundary of the White River watershed forms the north and west boundaries of the management area. The area is heavily dissected with small, steep, V-shaped bottoms at the heads of the drainages. The general aspect is to the south. There are a variety of slopes, aspects, and sharp ridges. The management prescriptions applied within the management area are summarized in the following table.

Table 5-65. Management Prescriptions in the White River Management Area

Management Prescription	Acres*
3.1 Aquatic, Terrestrial, and Hydrologic Resources	25,420
3.3 Aquatic and Terrestrial Habitat	340
Total Acres	25,760

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

SPECIAL FEATURES

Description

All or portions of the following four roadless areas lie within this management area: Willow Creek (#418009), Tie Fork (#418017), White River (#418018), and Soldier Summit (#418019). These roadless areas total approximately 18,400 acres, or 71 percent of the management area.

GEOLOGY AND SOILS

Description

The White River Management Area lies in the vicinity where the Wasatch Mountain to the west and Wasatch plateaus to the south and east come together. Three geologic formations underlie most of the management area. Most of the area is underlain by the Eocene calcareous siltstones and shales of the Green River formation. Near Soldier Summit are Tertiary limestone rocks of the Flagstaff formation, and the Tertiary shale and sandstone rocks of the Colton formation. Numerous active and paleolandslides exist within the area.

Most soils in this management area are derived from calcareous mudstones, siltstones, and shales. Stream canyon (occupying 35 percent of the management area), structurally controlled shale (occupying 52 percent), and tectonic mountain (13 percent) landtypes have been mapped in this area. The most common soils are Argic (9 percent), lithic (27 percent) and argic pachic (27 percent) cryoborolls; typic hapludoll (18

percent); entic halustoll (4 percent); lithic cryorthent (4 percent); and typic cryoboralf (9 percent). These soils are medium to fine textured and have high silt contents. Most have loam or silt loam textured topsoils. Some topsoils are calcareous, have a substantial clay content, and/or have a high gravel or cobble content. Subsoils typically are calcareous and have high gravel contents. Most subsoils have fine sandy loam, silt loam, silty clay loam, or silty clay textures. The depth, drainage, permeability, and productivity of these soils varies. Most soils are moderately deep, moderately well drained, and have moderately slow permeability. These soils generally have low to moderate productivities due to their depth, rock content, and their subsoil's high clay and lime content. Inherent erosiveness for most of these soils is moderate, and disturbed erosion hazard for most soils is very high. Most of these soils become extremely soft and slick when wet.

WATER AND WATERSHED

Description

Precipitation, on average, ranges from 15 inches annually at the lower elevations, to over 30 inches at the higher elevations. Most precipitation comes as winter snow and summer thunderstorm events. The management area includes the Right, Left, and Middle Forks of White River, as well as Tabbyune Creek. These streams drain into the Price River and ultimately into the Colorado River. There are approximately 16 miles of perennial streams and 62 miles of intermittent streams within the management area on National Forest System lands. Water from the management area is utilized for municipal and stock water purposes. Water from the White River is also used for irrigation and industrial purposes around Price, Utah. A 1979 watershed restoration project focused on capital investments designed to reduce runoff and erosion from point sources of sediment such as roads and highly degraded upper watersheds. Approximately 15 miles of roads and trails were closed, although not all of these closures were 100 percent effective. Currently, the White River has occasional problems with high sediment loads. Biotic Condition Index (BCI) data suggests that this sediment may be having negative impacts on stream quality (USDA 2000p). Fluctuations in flow are extreme, indicating that runoff is immediately delivered into the stream with little infiltration into ground water aquifers or filtration of sediment. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-66. Miles of Stream by Riparian Habitat Conservation Area Class in the White River Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	13
Class II	3
Class III	62
Total Miles	78

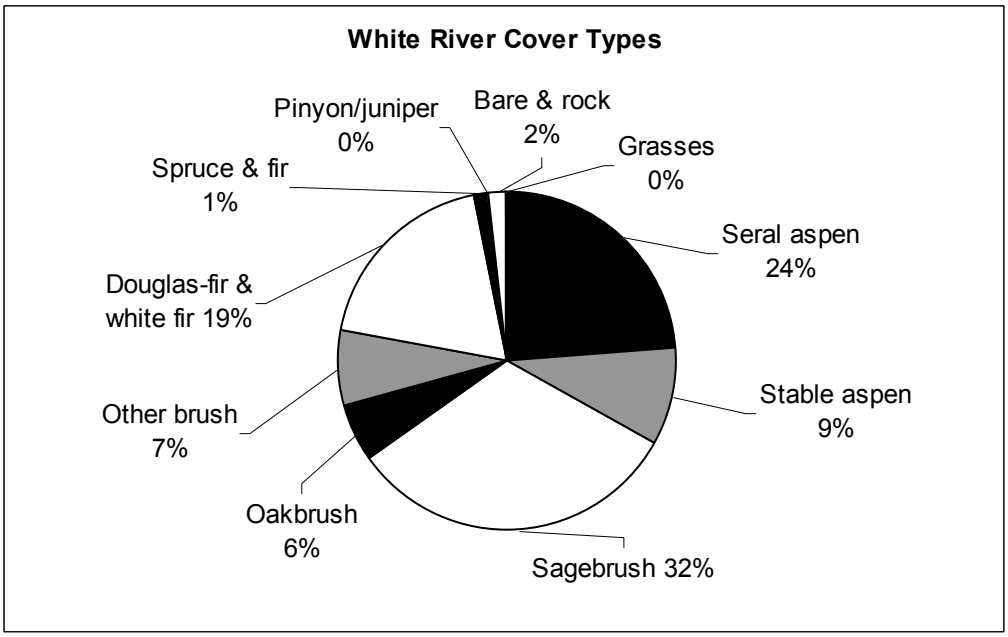
Miles are rounded to the nearest 1 mile.

VEGETATION

Description

Sagebrush is the most common vegetation type in the area, followed by aspen and shrub. Douglas-fir/white fir occurs on many of the upper elevation north-facing slopes. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-17. Vegetation Cover Types in the White River Management Area



The last commercial timber harvest on National Forest System lands in the management area occurred on approximately 50-60 acres during the 1960s, primarily in the Right Fork of White River. Currently, an 800 acre area in the Left Fork of White River is under analysis for possible harvest activities to reduce the risk of insect and disease infestation. Timber harvest activities are occurring on private property in the

southern portion of the management area and must be considered in terms of cumulative effects during the planning and implementation of management activities on National Forest System lands. Although Christmas tree permits have been issued for this area in the past, none have been issued during the past 10 years.

Although the endangered plant clay phacelia (*Phacelia argillacea*) occurs in Spanish Fork Canyon just over the drainage divide west of White River, the species is not known to occur in White River nor are there any historic records of it occurring there. No other federally listed or Forest Service sensitive species are known to occur in this management area. No noxious weed infestations have been inventoried in this management area, but musk thistle, Canada thistle, and whitetop are known to exist here. Past overgrazing in some areas and resultant soil loss have affected vegetative composition. The tall forb component's biodiversity has been greatly reduced. The ability of aspen clones to expand or maintain has been limited. Additionally, the establishment of drought resistant and weedy species has altered vegetative composition. Conditions are improving, but progress on some sites has been slow.

Desired Future Condition

Aspen regeneration activities such as prescribed burning are implemented in order to maintain or increase the aspen vegetative component.

AQUATICS

Description

Fish. The White River Management Area is located within the South Tavaputs Plateau Subunit of the Southeastern Geographic Management Unit for Colorado River cutthroat trout. Streams within the management area were historically inhabited by Colorado River cutthroat trout and some genetically pure populations still reside in isolated stream reaches. Colorado River cutthroat trout are a Region 4 and state sensitive species, and were petitioned for listing under the Endangered Species Act in December 1999. Findings for the petition have not yet been determined. Conservation agreements with the UDWR have been developed for this species. Populations of Colorado River cutthroat trout have been identified as conservation populations in the Left Fork White River, Middle Fork White River, Right Fork of White River, and Tabbyune Creek.

Other native fish species present within the management area may include bluehead sucker, mottled sculpin, mountain sucker, and speckled dace. Additional fish species that are native to Utah and occur elsewhere on the Forest but have been introduced into the management area are redside shiner and Utah chub.

Non-native Yellowstone cutthroat trout and brown, brook, and rainbow trout have been introduced into and may still occupy or have access to suitable habitat within the management area. These species may present a risk to the recovery and future viability of native cutthroat trout populations within the management area. The UDWR currently does not supplement recreational fisheries within the management area.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality. However, it is assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains high value habitat for Great Basin spadefoot toad and northern leopard frog, with substantial value habitat for boreal chorus frog, Great Plains toad, and Woodhouse's toad.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, no observations of state listed rare or imperiled aquatic macroinvertebrates have been reported for the management area.

Threatened, Endangered, and Sensitive (TES) Species. Colorado River cutthroat trout is the only TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. The primary habitat types within the White River Management Area include sagebrush, aspen forest, conifer forest (primarily Douglas-fir/white fir), oak/maple, and mountain brush. Valuable riparian habitat is found along Left Fork, Middle Fork, and Right Fork of White River, and Tabbyune Creek.

Threatened, Endangered, and Sensitive (TES) Species. Bald eagles frequently occur within the area during winter, feeding on jackrabbits and carrion. Northern goshawk nests have not been found in this management area, but potential habitat for goshawks and flammulated owls occur here.

Big Game Species and Other Wildlife. Rocky Mountain bighorn sheep were common within this area before the late 1800s, but overhunting and disease transmission and competition from domestic sheep led to their extirpation. This area provides high value and critical elk winter range in addition to summer and transitional big game range.

RECREATION

Description

Historically, upper White River has been of value to local populations for hunting, fishing, camping, berry picking, hiking, Christmas tree cutting, and wood gathering. In more recent times, additional activities such as the use of ATVs and snowmobiles and driving for pleasure have been occurring in the area. White River does not draw large

numbers of people because it is not inherently unique or distinct. Nonetheless, recreation is the activity that brings the largest number of people into the area. The area is a popular location for big game hunting. An OHV trail in the northern portion of the management area is popular and well used. Use is growing on a groomed snowmobile trail running from Soldier Summit through the Left Fork of White River and on to Strawberry Valley. This trail is part of the Great Western Trail winter section.

The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-67. Recreation Opportunity Spectrum (ROS) Classes in the White River Management Area

ROS Class	Acres*
Semi-Primitive Motorized	15,240
Roaded Natural	10,520

* Acreage estimates are rounded to the nearest 10.

Desired Future Condition

Recreation opportunities are provided for a wide variety of users. Dispersed recreation activities are available throughout the management area, with an emphasis on active management of dispersed recreation focused along road corridors. No developed recreation opportunities are provided in this management area. Summer motorized use is allowed on designated roads and trails.

HERITAGE RESOURCES

Description

The variety of past activities in this area have resulted a number of archaeological sites, including ancient American Indian campsites, a dam and ditch system on the Right Fork, a sawmill, and historic recreation camps. The area was also heavily prospected for ozokerite (a hydrocarbon), and several mines exist on National Forest System lands. Many of the archaeological sites in the area are eligible for the National Register of Historic Places.

RANGE

Description

Four allotments are within the management area: Ingram-Soldier, Gremo, Indian-Trail, and Tabbyune sheep allotments. Although numbers of livestock have been reduced and intensive management practices implemented, impacts from the earlier grazing era are extensive and still evident.

Desired Future Condition

Livestock grazing activities continue to be permitted on the allotments within this management area.

FIRE

Description

In the past 10 years there have been five small fires (under 10 acres each) and one large prescribed fire (approximately 5,000 acres) in the White River Management Area. Cumulatively these fires have burned approximately 5,025 acres, or 19.51 percent of the entire management area. The prescribed fire thinned spruce stands, rejuvenated aspen, and provided a mix of brush age classes across the landscape. There is limited urban interface in the management area.

LANDS AND SPECIAL USES

Description

Approximately 25 percent of the management area is made up of private inholdings. Several of the roads on the Forest pass through these private lands, raising the potential for restrictions on access. The management area needs to be surveyed to ensure there are no encroachments by private landowners. There are no utility corridors within the management area. The following table displays the land ownership of the management area.

Table 5-68. Acres within the White River Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	25,760
State of Utah	0
Private	8,490
Total Acres	34,250

Desired Future Condition

All issues related to trespasses and encroachments have been addressed. The National Forest boundary is surveyed and signed. Access through private lands is secured.

TRANSPORTATION

Description

The management area contains 36 miles of classified roads used to access the Forest for recreation and resource management purposes. The majority of roads are

maintained for high clearance vehicles. The Right Fork of White River Road (#081) and Left Fork of White River Road (#079) provide the primary access across this area. Both roads access and cross private lands.

Desired Future Condition

Portions of the Left and Right Fork of White River Roads have been hardened with an aggregate surface to meet desired health and safety and water quality standards.

Management Prescriptions Map – White River Management Area

JPG (139 KB)

PDF (447 KB)

Recreation Opportunity Spectrum Classes Map – White River Management Area

JPG (143 KB)

PDF (174 KB)

Visual Quality Objectives Map – White River Management Area

JPG (170 KB)

PDF (176 KB)

WILLOW CREEK MANAGEMENT AREA

LOCATION

The Willow Creek Management Area is located southeast of the Strawberry Valley. Waters from Willow Creek and its tributaries flow into the Strawberry River and provide water to Starvation Reservoir. From its confluence with the Strawberry River, Willow Creek extends upstream in a southwestern direction to its point of origin near Willow Creek Ridge. Elevations within the management area range from approximately 7,860 feet at the Forest boundary to 9,840 feet on the northeastern ridgeline of Willow Creek Ridge. The management prescriptions applied within the management area are summarized in the following table.

Table 5-69. Management Prescriptions in the Willow Creek Management Area

Management Prescription	Acres*
3.1 Aquatic, Terrestrial, and Hydrologic Resources	23,390
6.1 Non-forested Ecosystems	410
8.2 Utility Corridor/Communication Sites	140
8.3 Administrative Sites	10
Total Acres	23,950

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

SPECIAL FEATURES

Description

All or portions of the following four roadless areas lie within this management area: Chipman Creek (#418008), Willow Creek (#418009), Tie Fork (#418017), and White River (#418018). These roadless areas total approximately 18,420 acres, or 77 percent of the management area.

GEOLOGY AND SOILS

Description

The Willow Creek Management Area slopes northeastward into the Uinta Basin, which is part of the Colorado Plateau. The Wasatch Mountains lie to the west, and the Tavaputs Plateau is to the east. No evidence of glaciation is evident within this management area. The principle geologic formations found here are the Uintah and Green River formations. These formations are composed of Tertiary sandstone, siltstone, conglomerate, and shale layers. Some landslides/earthflows exist within the area.

Soils and landtype mapping has been completed only for a very small part of this management area. Available data indicates stream canyon and tectonic mountain

landtypes are found here. Given the topography and underlying geology, it is likely that structurally controlled shale landtypes also occur within this management area. Utah Geological Survey mapping indicates some landslides/earthflows occur within the management area. Soils are generally medium to fine textured and have high silt contents. Some topsoils are calcareous, have a substantial clay content, and/or have a high gravel or cobble content. Subsoils typically are calcareous, and have high gravel contents and medium or fine textures. The depth, drainage, permeability, and productivity of these soils varies. Most soils are moderately deep, moderately well drained, and have moderately slow permeability. These soils generally have low to moderate productivities due to their depth, and their subsoil's high clay and lime content. Inherent erosiveness for most of these soils is moderate, and disturbed erosion hazard for most soils is very high. Many of these soils become soft and slick when wet.

WATER AND WATERSHED

Description

Waters from Willow Creek and its tributaries flow into the Strawberry River and provide water to Starvation Reservoir. From its confluence with the Strawberry River, Willow Creek extends upstream in a southwestern direction to its point of origin near Willow Creek Ridge. Precipitation varies from year to year, but on average ranges from 20 to 25 inches annually at the lower elevations, and from 25 to over 30 inches at the higher elevations. Most of this precipitation comes as winter snow and summer thunderstorm events. Approximately 65 to 75 percent of precipitation occurs during winter months. Streams within the management area include approximately 16 miles of perennial and 50 miles of intermittent streams. Other than Willow Creek, the main drainages within this management area include Racetrack Hollow, Buffalo Canyon, Center Canyon, French Hollow, and Road Hollow. Water within the management area is used for domestic and stock water purposes. The following table displays the miles of stream in the management area on National Forest System lands and their distribution in Riparian Habitat Conservation Area classes.

Table 5-70. Miles of Stream by Riparian Habitat Conservation Area Class in the Willow Creek Management Area

Riparian Habitat Conservation Area	Miles of Stream*
Class I	12
Class II	3
Class III	51
Total Miles	66

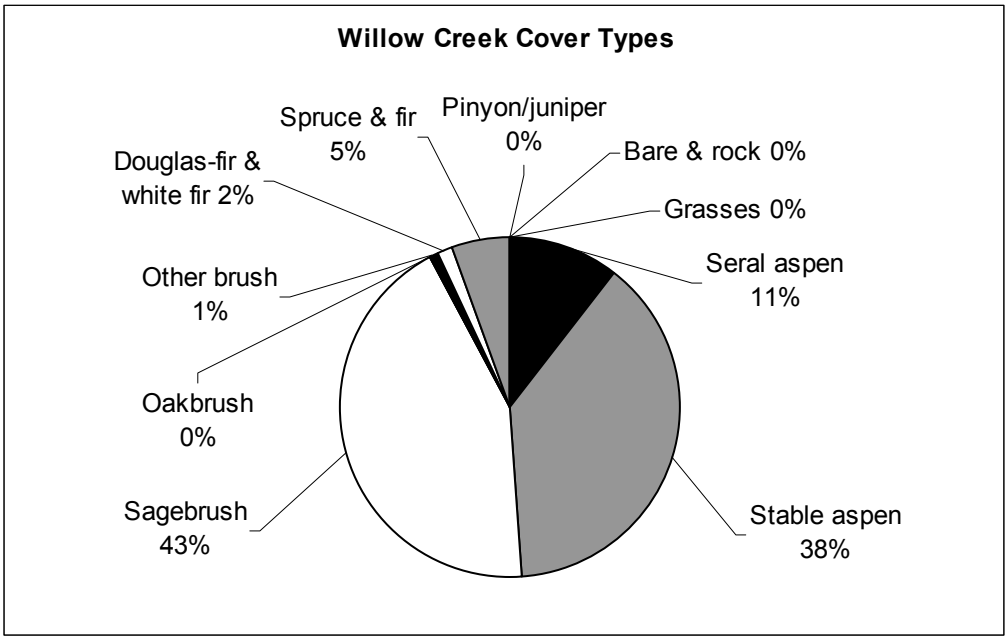
* Miles are rounded to the nearest 1 mile.

VEGETATION

Description

Vegetation consist primarily of aspen and sagebrush. Some subalpine fir occurs on the upper north-facing slopes. The following figure illustrates the composition of the major cover types in the management area.

Figure 5-18. Vegetation Cover Types in the Willow Creek Management Area



Several plant species found on the Utah species of concern list are found in the area: skyline ground-daisy (*Townsendia montana* var. *caelilinensis*), Book Cliffs twinpod (*Physaria acutifolia* var. *purpurea*), dragon milkvetch (*Astragalus lutosus*), and Utah fescue (*Festuca dasyclada*). Musk thistle and Russian knapweed are the only noxious or undesirable invasive weed species that have been documented in this management area.

Desired Future Condition

Aspen habitats are maintained and improved through a variety of management activities, including use of timber harvest, prescribed fire, and wildland fire use (as appropriate).

AQUATICS

Description

Fish. The Willow Creek Management Area is located within the North Tavaputs Plateau Subunit of the Northeastern Geographic Management Unit for Colorado River cutthroat trout. Streams within the management area were historically inhabited by Colorado River cutthroat trout and some genetically pure populations may still reside in isolated stream reaches. Colorado River cutthroat trout are a Region 4 and state sensitive species, and were petitioned for listing under the Endangered Species Act in December 1999. Findings for the petition have not yet been determined. Conservation agreements with the UDWR have been developed for this species. Populations of Colorado River cutthroat trout have been identified as conservation populations in Willow Creek. Other native fish species present within the management area may include mottled sculpin, speckled dace, and Utah chub.

Non-native brown and rainbow trout have access to and may occupy suitable habitat within the management area. These species present a risk to the recovery and future viability of cutthroat trout populations within the management area.

Fish habitat within the management area has not been rigorously assessed and existing data are insufficient to determine trends relative to habitat quality. However, it is assumed that, at a minimum, habitat quality is adequate to maintain existing fish species assemblages at their present level and status.

Amphibians. The distribution of amphibian species within the management area is not well documented. Results from the Utah GAP Analysis (USDI and USU 1997) indicate that the management area contains high value habitat for Great Basin spadefoot toad and northern leopard frog, with substantial value habitat for boreal chorus frog, boreal toad, Great Plains toad, and Woodhouse's toad.

Aquatic Invertebrates. The distribution of aquatic macroinvertebrates considered by the UDWR to be rare or imperiled is not well documented. Observations of these species on the Forest are sporadic and in many cases relatively outdated. However, no observations of state listed rare or imperiled aquatic macroinvertebrates have been reported for the management area.

Threatened, Endangered, and Sensitive (TES) Species. Colorado River cutthroat trout is the only TES aquatic species known to inhabit the management area.

WILDLIFE

Description

Habitats. The primary habitat types within the Willow Creek Management Area are sagebrush and aspen forest, with some conifer forest (primarily spruce/fir). Willow Creek and its tributaries provide extensive riparian wildlife habitat.

Threatened, Endangered, and Sensitive (TES) Species. Potential habitat for northern goshawks and flammulated owls occur within the management area.

Big Game Species and Other Wildlife. This management area provides high value winter range for elk and mule deer in addition to summer and transitional big game range.

RECREATION

Description

The Willow Creek Guard Station, eligible for the National Register of Historic Places, was built in 1931 as an administrative site for Forest Service personnel. It now serves as a warming hut for snowmobile users. The recreational activities taking place in this area consist of hiking, motorcycle riding, mountain biking, and ATV uses. Although most of these activities are offered throughout the year, a majority of the use takes place during the big game hunts. There are no developed recreational facilities within this management area. The Recreation Opportunity Spectrum (ROS) classes applied to the management area are summarized in the table below.

Table 5-71. Recreation Opportunity Spectrum (ROS) Classes in the Willow Creek Management Area

ROS Class	Acres*
Semi-Primitive Motorized	11,930
Roaded Natural	12,030

* Acreage estimates are rounded to the nearest 10 acres. If the sum is less than 5 acres total, the actual acreage is given.

Desired Future Condition

Recreation opportunities include both motorized and non-motorized activities. Summer motorized activities are available on designated roads and trails. The Willow Creek Guard Station continues to be utilized as a warming hut for winter recreationists. Other recreational activities taking place in this area consists of hiking, biking, and ATV uses.

HERITAGE RESOURCES

Description

Several known ancient American Indian campsites document the long-term use of this area. Historic Utes (those using the area in the last 150 years) also frequented the area, and Racetrack Hollow is named after their horse races. The entire management area falls is within the original boundary of the Uintah and Ouray Ute Indian Reservation. Historic European American archaeological sites are mainly related to

livestock grazing. The Willow Creek Guard Station, mentioned above in the recreation section, is eligible for the National Register of Historic Places.

Desired Future Condition

The Willow Creek Guard Station continues to be a well-maintained example of an early Forest Service facility.

RANGE

Description

All or portions of seven allotments are within this management area:
McKinney, Davis, Center Canyon, Broad Hollow, Cabin Springs, Road Hollow, and Beaver sheep allotments. The Beaver allotment is located on both the Uinta and Ashley National Forests, though the majority of the allotment is on the Ashley. The Uinta National Forest administers the use on this allotment

Desired Future Condition

Livestock grazing activities continue to be permitted on the allotments within this management area.

FIRE

Description

In the past ten years there have been no reported fires in the Willow Creek Management Area, likely due to the fact that there are fewer personnel in the area to report a fire and the area contains more green fuels and is of a higher elevation than other areas on the Forest. There are some urban interface areas on the northeastern edge of the management area along the Forest boundary.

Desired Future Condition

Increased development on private land adjacent to the Forest boundary on the northeastern portion of the management area could result in an expansion of the urban interface areas.

LANDS AND SPECIAL USES

Description

This management area is comprised almost entirely of National Forest System lands, with a small piece of private land overlapping from the White River Drainage. The Natural Resource Conservation Service has a snowpack telemetry (SNOTEL) site located just south of Willow Creek Ridge on the headwaters of the Right Fork of the White River. The Deseret Generating and Transmission Company has a major power transmission line that passes through this management area along its northern edge

within a designated utility corridor. The following table displays the land ownership of the management area.

Table 5-72. Acres within the Willow Creek Management Area by Jurisdiction

Jurisdiction	Acres
Forest Service	23,960
State of Utah	0
Private	250
Total Acres	24,210

Desired Future Condition

The SNOTEL site continues to meet the needs of the Natural Resource Conservation Service. The Deseret Generating and Transmission power line continues to be maintained and utilized. Opportunities for expansion of this facility are limited to the existing right-of-way.

TRANSPORTATION

Description

This management area contains 37 miles of classified roads used to access the forest for recreation and resource management purposes. The majority of roads are maintained for high clearance vehicles.

Management Prescriptions Map – Willow Creek Management Area

JPG (156 KB)

PDF (756 KB)

Recreation Opportunity Spectrum Classes Map – Willow Creek Management Area

JPG (172 KB)

PDF (278 KB)

Visual Quality Objectives Map – Willow Creek Management Area

JPG (162 KB)

PDF (290 KB)

CHAPTER 6: MONITORING AND EVALUATION PLAN

CHAPTER 6: MONITORING AND EVALUATION PLAN

Overview

Evaluation and monitoring provide knowledge and information to keep the Land and Resource Management Plan viable. Appropriate selection of indicators, and monitoring and evaluation of key results helps determine if Forest Plan management direction is being met. Evaluation and monitoring also helps determine if there should be changes made to the goals and objectives, or monitoring methods.

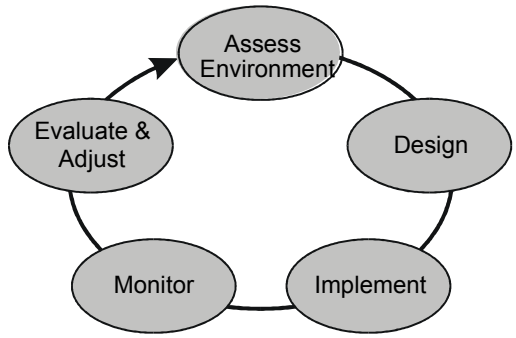
The Uinta National Forest will utilize the concept of adaptive management consistent within the Intermountain Region's Continuous Assessment and Planning (CAP) approach, which is the Region's foundation for planning and management. Forest planning regulation requires that forest plans be revised periodically every 10-15 years after plan approval (36 CFR 219.10(g)). One of the lessons learned from 15+ years of experience with Forest Plan implementation is that plans need to be dynamic to account for changed resource conditions, new information and science, and changed regulation and policies.

Forest Plans may need to be amended frequently, and revision may be required before requirements dictate. Within an adaptive management framework, the need to amend or revise the Forest Plan may result from:

- Recommendations of an interdisciplinary team, based on evaluation and monitoring results.
- Direction stemming from an administrative appeal or legal challenge.
- Planning errors found during forest plan implementation.
- Changes in physical, biological, social, or economic conditions.

Evaluation and monitoring are critical to adaptive management. Other component parts of adaptive management include inventory collection, data management, assessment, planning, and implementation. No single component can be isolated from the whole of adaptive management.

Figure 6-1. An Adaptive Management Learning-Loop



Consider the learning-loop schematic illustrated in Figure 6-1; No matter where we jump into the loop, all phases are needed. This learning-loop can focus on a problem, a forest plan, on process, or any other aspect of an organization. In most of our Forest Plan evaluation and monitoring we

will focus our learning on how effective we are at implementing the plan, how effective our management proves to be in realizing desired future conditions, as well as identifying where improvements may be made to the Plan through amendments or at the time of the next revision.

Adaptive management must be approached in the context of organizational learning. This requires that we keep in mind the workings of complex systems and complex interactions of actors, while trying to manage to take advantage of complexity, novelty, and surprise. The learning focus is on organizational and individual betterment of process, theory, and behavior.

Many of the indicators we identify operate in the context of systems at work on the landscape and/or in social settings. One challenge in evaluation and monitoring is to adequately address such a “systems focus” and to develop stories about the state and progression of systems, highlighting important functions, structure, and composition. As these systems stories are developed, told and retold we are challenged as well to disclose new information or changed conditions compared to reference values or decision criteria used in the Forest Plan Record of Decision.

Evaluation and Monitoring Strategy

Our evaluation and monitoring strategy is straightforward. It will focus on monitoring requirements from National Forest Management Act Regulation, as well as other pertinent law and regulation. Additionally, social and ecological systems in and around the forest will be monitored to make sure that we stay aware of changes in our environment.

The monitoring and evaluation process starts with evaluation. Identifying the questions to be answered and which evaluations are needed to answer them helps to identify information needs, data collection strategies. Focusing information and data needs ensures the correct information is collected to make a determination of whether the Forest Plan direction is “working” as intended. The intent is to gather only as much information as is necessary to make an informed decision regarding Forest Plan implementation and effectiveness without being paralyzed by an overabundance of data that does not add to the overall evaluation of the Forest Plan.

Monitoring supports evaluation by sorting out which indicators need to be watched and then watching them to provide punctuation and validity to evaluation stories. Monitoring questions guide the effort. Some monitoring information is “baseline,” to serve as a basis on which to monitor other information on systems or particular management decisions. Much of this information is ongoing inventory and monitoring programs approved by the Forest Supervisor. However, a significant amount of information comes from other entities and sources. The Forest Supervisor will develop a Forest Monitoring Guide to document the overall Monitoring and Evaluation Program and specifics on method and design.

The Forest Plan monitoring efforts will be broad-based, since the Land and Resource Management Plan is designed around broad vision for the forest. More specific monitoring elements and guidance will be highlighted in the Forest Monitoring Guide. The intent in developing a Forest Monitoring Guide is to provide a vehicle for monitoring that is nimble and flexible, so that we can change monitoring indicators along with other information and knowledge as we learn more.

Forest Land and Resource Plan Evaluation and Reports

Evaluation is more than reporting facts and figures. Forest plan evaluation tells the story or stories of how forest plan decisions have been implemented, how effective the implementation has proved to be in accomplishing outcomes envisioned in the plan, what was learned along the way, and in the long run how valid our assumptions and theories proved to be that led us to develop Forest Plan direction.

The Forest Supervisor will maintain monitoring information for public reviews, including internet-based reports, and will evaluate such on a periodic basis to determine, among other things, need for amendment or revision of the Forest Plan. Formal evaluation and reporting will occur every five years, unless the Forest Supervisor deems it necessary that a shorter timeframe is warranted for some evaluations. The five-year review will provide a comprehensive evaluation of information in response to monitoring questions and regulatory review requirements as depicted in Table 1.

Table 6-1. Forest Plan Evaluation Expectations

Focus of Evaluation	Annual Posting of Results?	Five-Year Evaluation Report?
A program of monitoring and evaluation shall be conducted that includes consideration of the effects of National Forest Management on land, resources, and communities adjacent to or near the National Forest being planned and the effects upon National Forest management from activities on nearby lands managed by other Federal or other government agencies or under the jurisdiction of local governments. (36 CFR 219.7(f))		X
… The Forest Supervisor shall review the conditions on the land covered by the plan at least every 5 years to determine whether conditions or demands of the public have changed significantly. (36 CFR 219.10(g))		X
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))		X

Focus of Evaluation	Annual Posting of Results?	Five-Year Evaluation Report?
Monitoring requirements identified in the forest plan shall provide for—(36 CFR 219.12(k)) [1] A quantitative estimate of performance comparing outputs and services with those projected by the forest plan;	X	
[2]Documentation of the measured prescriptions and effects, including significant changes in productivity of the land; and		X
[3]Documentation of costs associated with carrying out the planned management prescriptions as compared with costs estimated in the forest plan.	X	
[5] A determination of compliance with the following standards: [i] Lands are adequately restocked as specified in the forest plan;		X
[ii] Lands identified as not suited for timber production are examined at least every 10 years to determine if the have become suited; and that, if determined suited, such lands are returned to timber production; {Note: See also 219.14(d): …Designation in the plan of lands not suited for timber production shall be reviewed at least every 10 years. ..}		X
[iii] Maximum size limits for harvest areas are evaluated to determine whether such size limits should be continued; and		X
[iv] Destructive insects and disease organisms do not increase to potentially damaging levels following management activities.		X
(a)(6) Population trends of the management indicator species will be monitored and relationships to habitat changes determined. This monitoring will be done in cooperation with state fish and wildlife agencies, to the extent practicable. (36 CFR 219.19 Fish and wildlife resource)	X	X
Terms and conditions or reasonable and prudent measures which result from consultation under Section (a) of the Endangered Species Act	X	X
Effectiveness of mitigation measures and monitoring of risk factors described in the Record of Decision for the Forest Land and Resource Management Plan		X

Monitoring Elements

Table 2 contains monitoring elements organized around significant monitoring questions. More in-depth details are developed in the Forest Plan Monitoring Guide. The Forest Monitoring Guide will address requirements from 36 CFR 219.12(k)[4], and will include a description of:

(i) The actions, effects, or resources to be measured, and the frequency of measurements;

(ii) Expected precision and reliability of the monitoring process; and

(iii) The time when evaluation will be reported.

Since precision and reliability are tied to specific procedures and methods that change as we learn, we choose to address them in the Forest Monitoring Guide.

Monitoring Strategy

The monitoring strategy contains all relevant Land and Resource Management Plan monitoring called for by the monitoring drivers. The available monitoring budget will in all likelihood require a significantly smaller monitoring program in any given year that the table below presents. It is the monitoring items not the monitoring questions that are the major cost factor. The monitoring item initiates the data collection and a single monitoring item may answer several monitoring questions. Cooperators can greatly expand the annual monitoring program ands stretch a Forest's available monitoring budget many fold.

In almost all cases, it will be necessary for the Forest Leadership Team, in conjunction with resource specialists input, to prioritize what will be monitored in any given year based on the budgets, current issues, monitoring priorities, and results/accomplishments for the previous years' monitoring.

Table 6-2. Terrestrial and Aquatic Wildlife Biological Diversity Monitoring

Monitoring Topic		Terrestrial and Aquatic Wildlife Biological Diversity				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
Effectiveness	(1) Are Forest management activities affecting **Management Indicator Species (MIS)** and what are the population trends and habitat relationships?	**Northern goshawk**: a. Goshawk territory activity b. Habitat conditions <u>Status</u>: Projects in potential habitat are surveyed; known territories have been monitored for activity.	a. At least 1/3 of known territories surveyed annually. b. Habitat cover type, age class, and patch size composition every 5 years.	Results summarized every 5 years	a. Moderate b. Low	a. High b. Moderate
		American beaver: Number of active beaver dams. <u>Status</u>: Selected streams and watersheds have been inventoried. Forest-wide monitoring protocol will be developed.	At least 20% of sample streams/watersheds measured annually.	Every 5 years	Moderate	Moderate

Monitoring Topic		Terrestrial and Aquatic Wildlife Biological Diversity				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
		Three-toed woodpecker: a. Index of population abundance b. Habitat conditions <u>Status</u>: Projects in potential habitat are surveyed; three Breeding Bird Surveys (BBS) are conducted annually on the Forest. Additional Forest-wide monitoring protocol will be developed.	a. Annually for BBS surveys. b. Habitat cover type, age class, and patch size composition every 5 years.	a. Annually b. Every 5 years	a. Moderate b. Moderate	a. High b. Moderate
		Colorado River cutthroat trout: a. Population estimates b. Habitat conditions <u>Status</u>: Selected streams have been inventoried and/or monitored in conjunction with UDWR. Forest-wide monitoring protocol will be developed.	a. At least 33% of sample streams surveyed annually. b. Every 5 years	Every 5 years	Moderate	a. High b. Moderate
		Bonneville cutthroat trout: a. Population estimates b. Habitat conditions <u>Status</u>: Selected streams have been inventoried and/or monitored in conjunction with UDWR. Forest-wide monitoring protocol will be developed.	a. At least 33% of sample streams surveyed annually. b. Every 5 years	Every 5 years	Moderate	a. High b. Moderate

Monitoring Topic		Terrestrial and Aquatic Wildlife Biological Diversity				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
	(2) Is the Forest protecting Federally listed **Threatened and Endangered (T&E) species** and their habitat while implementing the Forest Plan?	**Bald eagle** – Index of winter roosting activity on the Forest. Status: Selected areas where species congregates in winter have been surveyed in conjunction with the UDWR. These surveys will continue.	Annually	Annually	Moderate	Moderate
		Canada lynx – Documentation of observations Status: Forest contains 2 Lynx Analysis Units. Historical sightings there have been documented. Three-year National Lynx Survey completed in 2001. Comment: No longer a listed species in Utah.	Ongoing – Whenever reported sighting occurs	Every 5 years	Moderate	High
		Clay phacelia (*Phacelia argillacea*) – Documentation of observations and project surveys in potential habitat Status: Occurs in Spanish Fork Canyon. Not known to occur on the Forest. Broad habitat-wide surveys have been conducted. Projects in potential habitat are surveyed.	Ongoing – Whenever observations or surveys in potential habitat occur	Every 5 years	High	High

Monitoring Topic		Terrestrial and Aquatic Wildlife Biological Diversity				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
		Ute ladies'-tresses (*Spiranthes diluvialis*) – Documentation of observations and project surveys in potential habitat Status: Known to occur along the Spanish Fork River and Diamond Fork Creek. Projects in potential habitat are surveyed.	Ongoing – Whenever observations or surveys in potential habitat occur	Every 5 years	High	High
		Ute ladies'-tresses (*Spiranthes diluvialis*)– Population trends. Status: Known populations along Diamond Fork Creek are annually surveyed by Central Utah Water Conservancy District.	At least every three years (historically surveys have been conducted annually)	Every 5 years	High	High

Table 6-3. Rangeland Health and Management Monitoring

Monitoring Topic		Rangeland Health and Management				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
Implementation	(4) Is **permitted grazing** in compliance with the Forest Plan? Are Forest Plan **utilization standards** effective in mitigating impacts of grazing?	**Compliance with utilization standards** Status**:** Utilization compliance has been ongoing, but results have not traditionally been summarized.	At least 10% of active allotments annually	Results summarized every 5 years	Moderate to High	High
		Allotments administered to standard Status: Number of allotments administered to standard has been reported annually for several years.	Annually	Annually	High	Moderate
Effectiveness		**Range condition and trend** Status: Surveys of condition and trend have been ongoing for several years on most allotments and on wildlife winter range along the Wasatch Front; however, in many cases protocols have varied over time.	Annually for some portion of the Forest	Results summarized every 5 years	Moderate	High

Monitoring Topic		Rangeland Health and Management				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
		Riparian condition and trend Status: Riparian condition/trend surveys have been ongoing for several years on most allotments; however, in many cases protocols have varied over time.	Annually for some portion of the Forest	Results summarized every 5 years	Moderate	High
Implementation	(5) Are infestations of **noxious weeds** being contained, controlled, or eliminated?	**Application of Plan direction and Project mitigation measures including permit, contractual requirements** Status: Mitigation measures for projects are specified in NEPA decision documents. Monitoring protocol will be developed.	At least 1 vegetation management, 1 special use, and 1 range project or activity annually	Results summarized every 5 years	Moderate to High	Moderate
		Acres of weeds treated Status: Weed treatments have been reported annually for several years.	Annually	Annually	High	High

Monitoring Topic		Rangeland Health and Management				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
Effectiveness		**Estimated acres infested.** Status: Estimated acreage by species reported annually for several years.	Every 5 years	Every 5 years	Low	Low to Moderate

Table 6-4. Soil Productivity Monitoring

Monitoring Topic		Soil Productivity				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
Implementation and Effectiveness	(6) Is long-term **soil productivity** being maintained?	**Detrimental soil disturbance** Status: Protocol will be developed.	At least 1 vegetation management, 1 special use, and 1 range project or activity annually	Results summarized every 5 years	Moderate	Moderate
		Down woody debris Status: Protocol will be developed.	At least 1 vegetation management project or activity annually	Results summarized every 5 years	Moderate	Moderate
		Ground cover Status: Monitored as part of upland condition/trend monitoring. Historical data available on some sites.	Annually for some portion of the Forest	Results summarized every 5 years	Moderate	High

Table 6-5. Watershed Health and Function Monitoring

Monitoring Topic		Watershed Health and Function				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
Implementation	(7) Is **water quality** being adequately protected and meeting desired conditions?	**Application of Best Management Practices designed to protect or improve water quality.** Status: Protocol will be developed.	At least 1 vegetation management, 1 special use, and 1 range project or activity annually	Results summarized every 5 years.	Moderate	Moderate
Effectiveness		**Compliance with water quality standards** Status: Water quality has been monitored for many years on several sites and is annually reported to Utah DEQ.	Annually on at least 20% of Forest water quality monitoring sites	Annually	High	High
		Number of 303(d) listed water bodies Status: State DEQ lists 303(d) listed streams as information indicates the need.	Ongoing	Annually	High	High

Table 6-6. Air Quality Monitoring

Monitoring Topic		Air Quality				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
Implementation	(8) Are **airsheds** on the Forest meeting or trending toward desired conditions?	**Forest Service management activities do/don't result in exceedances from established NAAQS standards.** Status: Forest has complied with the Utah Smoke Management Plan which requires modeling of emissions prior to burning, and obtaining clearance from State DEQ.	Annually on at least some prescribed burn activities.	Results summarized every 5 years	Low to Moderate	Low
Effectiveness		**Degradation of lichen biomonitoring sites.** Status: 11 biomonitoring sites have been established, another 13 are currently being established.	50% of bio-monitoring sites monitored at least once every 5 years.	Results summarized every 5 years	Moderate	Low
		Exceedances from NAAQS standards. Status: State has several monitoring stations along the Wasatch Front, data from these is shared on their website.	State air quality sites monitored annually (by UDAQ).	Results summarized every 5 years	High	Moderate

Table 6-7. Vegetation Health Monitoring

Monitoring Topic		Vegetation Health				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
Implementation	(9) Are **vegetation conditions** stable or moving toward desired future conditions?	**Clearcut size and timber management practices according to Plan direction** Status: Clearcuts are infrequently conducted on the Forest (primarily in aspen). Size monitoring is ongoing as required by NFMA. Timber management practices are annually reported.	Annually	Annually	High	High
		Prescribed fire and wildland fire use according to Plan direction Status: Protocol will be developed.	One fire management project is evaluated annually	Results summarized every 5 years	Moderate	Moderate
		Acres of hazardous fuels treated Status: Hazardous fuel reductions have been reported annually for several years.	Annually	Annually	Moderate to High	High

Monitoring Topic		Vegetation Health				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
		Acreage with approved wildland fire use plan. Status: Wildland fire use plans have been developed. These may need to be updated for the revised Forest Plan.	Every 5 years	Every 5 years	High	High
Effectiveness		**Aspen, spruce/fir, Douglas-fir:** a. Extent of conversion (acres) to younger age classes b. Extent and distribution of old and mature c. Extent of insect/disease infestations. Status: An assessment was completed as part of revision effort. Insect activity is monitored annually.	Every 5 years	Every 5 years	Moderate	High
		Riparian forest types: Extent and distribution of old and mature. Status: An assessment was completed as part of revision effort.	Every 10 years	Every 10 years	Moderate	High

Monitoring Topic		Vegetation Health				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
		Other forest types: **a.** Extent and distribution of old and mature b. Extent of insect/disease infestations. Status: An assessment was completed as part of revision effort. Insect activity is monitored annually.	a. Every 10 years b. Annually	a. Every 10 years b. Every 5 years	Moderate	Moderate
		Sagebrush: Extent and distribution with > 15% sage canopy cover. Status: An assessment was completed as part of revision effort.	Every 10 years	Every 10 years	Moderate	Moderate
		Other rangeland types: Extent, distribution, and trend. Status: An assessment was completed as part of revision effort.	Every 10 years	Every 10 years	Moderate	Low

Table 6-8. Fire Management Monitoring

Monitoring Topic		Fire Management				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
Effectiveness	(10) Are management activities effective in preventing excessive **catastrophic fire** events?	**Acreage of human and naturally ignited wildland fire and wildland fire use.** Status: Reported annually for many years.	Annually	Results summarized every 5 years.	High	High
		Fire condition classes Status: Recently reevaluated.	Every 5 years	Every 5 years	Moderate	Moderate

Table 6-9. Socio-Economic Monitoring

Monitoring Topic		Socio-Economic				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
Implementation	(11) Are **goods and services** being provided in accordance with Forest Plan goals and objectives?	**Allowable Timber Sale Quantity (ASQ)**	Annually	Annually	High	High
		Total Timber Sale Program Quantity	Annually	Annually	High	High
		Other Forest Products (Fuelwood and Christmas Tree Permits)	Annually	Annually	High	High
		Level of permitted livestock grazing	Annually	Annually	High	High
		Acres leased for oil and gas exploration	Annually	Annually	High	High
		Number of Recreation Special Use Permits	Annually	Annually	High	High
		Number of Lands Special Use Permits	Annually	Annually	High	High

Table 6-10. Heritage and Cultural Resources Monitoring

Monitoring Topic		Heritage and Cultural Resources				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
Implementation	(3) Are **National Register eligible sites** and districts being protected?	**Mitigation measures including pre-disturbance surveys applied/not applied** <u>Status</u>: Project areas are surveyed prior to disturbance. Mitigation for potentially affected sites is outlined in NEPA documents.	At least 1 vegetation management, 1 special use and 1 range project or activity annually.	Results summarized every 5 years	Moderate	High
Effectiveness		Unapproved impacts to sites				

Table 6-11. Recreation Monitoring

Monitoring Topic		Recreation				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
Implementation	(12) Are we providing a diversity of **recreational opportunities** while protecting natural resources? Are conflicts between user groups minimal?	**Acreage with approved Travel Management Plan** Status**:** Travel Management Plans will be developed/revised for all portions of the Forest.	Annually	Every 5 years	High	Moderate
		Miles of non-motorized trail Status: Location and mileage of trails are currently being refined.	Annually	Annually	Moderate	High
		Miles of motorized trail and road opportunities Status: Location and mileage of trails are currently being refined.	Annually	Annually	Moderate	High
		Miles of trails groomed for winter use Status: Protocol will be developed.	Annually	Annually	Moderate	Moderate
		Trailheads maintained for winter use Status: Protocol will be developed.	Annually	Annually	High	Low
		Campground capacity Status: Reported annually for many years.	Annually	Annually	High	High

Monitoring Topic		Recreation				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
		Developed recreation sites meeting accessibility (ADA) standards. Status: Has been monitored for several years, but standards have not been constant.	Every 5 years	Every 5 years	Moderate	High
		Day-use developed site capacity Status: Reported annually for many years.	Annually	Annually	High	High
		Scenery Management Objectives compliance Status: Protocol will be developed.	At least 1 vegetation management, 1 special use, and 1 range project or activity annually	Results summarized every 5 years	Moderate	Moderate
Effectiveness		**Compliance with travel management direction** Status: Violation Notices have been reported for several years.	Annually	Every 5 years	Moderate to Low	Moderate
		Compliance with wilderness direction Status: Protocol will be developed. Violation notices have been recorded in data bases.	Every 5 years	Every 5 years	Moderate to Low	Low

Monitoring Topic		Recreation				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
		Non-Forest Service participant assistance in compliance, education and enforcement Status: Protocol will be developed.	Every 5 years	Every 5 years	Moderate	Low

Table 6-12. Roads and Access Monitoring

Monitoring Topic		Roads and Access				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
Implementation	(13) Is adequate **access** to and across the Forest being provided?	**Miles of classified road** Status: Inventory recently updated.	Annually	Annually	High	Moderate
		Miles of classified road open for public use Status: Inventory recently updated. Will change based on revised travel management direction in the Plan.	Every 5 Years	Every 5 Years	High	Moderate
		Miles of new road construction Status: Reported annually for many years.	Annually	Annually	High	High
		Miles of classified roads reconstructed or relocated Status: Reported annually for many years.	Annually	Annually	High	High
		Miles of classified road maintained Status: Protocol will be developed	Annually	Annually	High	Moderate
		Miles of unclassified road decommissioned Status: Reported annually for several years.	Annually	Annually	High	High

Monitoring Topic		Roads and Access				
Type	**Monitoring Question**	**Indicator**	**Measurement Frequency**	**Reporting Frequency**	**Precision and Reliability**	**Monitoring Priority**
Effectiveness		**Miles of unclassified road** Status: Current mileage is a rough estimate. Very dynamic, difficult to develop and maintain an accurate and up-to-date inventory.	Every 10 years	Every 10 years	Low	Moderate

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REFERENCES

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ACRONYMS

ACRONYMS

A & TM	Access and Travel Management
ADA	Americans with Disabilities Act of 1990
ADAG	Americans with Disabilities Act Guidelines
AMP	Allotment Management Plan
AMS	Analysis of the Management Situation
ASQ	Allowable Sale Quantity
ATR	Arterial Travel Route
ATV	All-Terrain Vehicle
AUM	Animal Unit Month
BA	Biological Assessment
BCI	Biotic Condition Index
BE	Biological Evaluation
BLM	Bureau of Land Management
BMP	Best Management Practices
BYU	Brigham Young University
CAP	Continuous Assessment and Planning
CCC	Civilian Conservation Corps
CCF	Hundred Cubic Feet
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Inventoried Site
CFR	Code of Federal Regulations
cfs	Cubic Feet per Second
CSU	Controlled Surface Use
CUP	Central Utah Project
DBH	Diameter at Breast Height
DEQ	Department of Environmental Quality
DFC	Desired Future Condition
DEIS	Draft Environmental Impact Statement
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act of 1973
FEIS	Final Environmental Impact Statement
FERC	Federal Energy Regulatory Commission
FIA	Forest Inventory and Analysis
FMAZ	Fire Management Analysis Zone
FOOGLRA	Federal Onshore Oil and Gas Leasing Reform Act of 1987
FS	Forest Service
FSH	Forest Service Handbook
FSM	Forest Service Manual
FTE	Full Time Equivalent

FY	Fiscal Year
GIS	Geographical Information System
GMU	Geographic Management Unit
HUC	Hydrologic Unit Code
IMPLAN	Impact Analysis for Planning
IMPROVE	Interagency Monitoring of Protected Visual Environments
INFISH	Inland Native Fish Strategy
INFRA	Infrastructure
IPM	Integrated Pest Management
LAC	Limits of Acceptable Change
LAU	Lynx Analysis Unit
LN	Lease Notice
MBF	Thousand Board Feet
MCF	Thousand Cubic Feet
MEL	Most Efficient Level
MIS	Management Indicator Species
MMBF	Million Board Feet
MOU	Memorandum of Understanding
NAAQS	National Ambient Air Quality Standards
NASIS	National Soil Information System
NEPA	National Environmental Policy Act of 1970
NFMA	National Forest Management Act of 1976
NL	No Lease
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
NRA	Natural Resource Agenda
NSO	No Surface Occupancy
NWSRS	National Wild and Scenic Rivers System
OHV	Off-Highway Vehicle
PAOT	People At One Time
PCI	Pavement Condition Index
PFA	Post-Fledging Areas
PFC	Properly Functioning Condition
PILT	Payments in Lieu of Taxes
PM	Particulate Matter
PMS	Pavement Management Survey
RACR	Roadless Area Conservation Rule
RARE II	Roadless Area Review and Evaluation II
RHCA	Riparian Habitat Conservation Area
RIM	Recreation Information Management
RMO	Road Management Objective
RNA	Research Natural Area
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
ROW	Right-of-Way
RPA	Resources Planning Act

RVD	Recreation Visitor Day
R4	Region 4
SAR	Species at Risk
SRSCS	Secure Rural Schools and Community Self-Determination Act of 2000
SLT	Standard Lease Terms
SMS	Scenery Management System
TES	Threatened, Endangered, and Sensitive (Species)
TL	Time Limitation
TSI	Timber Stand Improvement
UDAQ	Utah Division of Air Quality
UDEQ	Utah Department of Environmental Quality
UDOT	Utah Department of Transportation
UDNR	Utah Department of Natural Resources
UDWQ	Utah Division of Water Quality
UDWR	Utah Division of Wildlife Resources
USDA	U.S. Department of Agriculture
USDI	U.S. Department of the Interior
USFWS	U.S. Fish and Wildlife Service
VMS	Visual Management System
VOC	Volatile Organic Carbon
VQO	Visual Quality Objective
VSS	Vegetative Structural Stage
WIN	Watershed Improvement Needs
WSR	Wild and Scenic River

GLOSSARY

GLOSSARY

All words in italics have their own entries in this glossary.

100-year flood
A flood event of such magnitude it occurs, on average, every 100 years (this equates to a 1 percent probability of occurring in any given year).

abiotic
Non-living parts of an *ecosystem* such as air, rocks, and water.

active nest
In regards to northern goshawk habitat, a goshawk nest known to have contained an egg. A nest need not have successfully produced fledglings (USDA 1999k).

active nest area
In regards to northern goshawk habitat, a goshawk nest area containing an *active nest* (USDA 1999k).

age class
An interval (usually ± 20 years) into which the age of trees is divided for classification.

air pollutant
Any substance in air that could, if in a high enough concentration, harm humans, animals, vegetation, or material. Air pollutants may include almost any natural or artificial matter capable of being airborne in the form of solid particles, liquid droplets, gases, or any combination thereof.

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.

airshed
A geographical area that shares the same air mass due to climate, physical and natural features, and atmospheric conditions.

all-terrain vehicle (ATV)
Any motor vehicle 50 inches or less in width, having an unladen dry weight of 800 pounds or less, traveling on three or more low pressure tires, having a seat designed to be straddled by the operator, and designed for or capable of travel over unimproved terrain (UDNR 2001c).

allelopathy
The release of a chemical substance by a plant that inhibits the growth of another plant.

allotment (grazing)
An 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 a forest plan.

alluvial
Silt, sand, gravel, or similar materials transported and deposited by running water.

alternate nest area
In regards to northern goshawk habitat, goshawk *home ranges* often contain two or more nest areas, only one of which will be an *active nest* in a given year. Alternate nest areas are normally historical nest areas (USDA 1999k).

alternative
One of a number of possible options for responding to the purpose and need for action.

Animal Unit Month (AUM)
The amount of *forage* required by a one thousand (1,000) pound cow, or its equivalent, for one month.

aquatic ecosystem
Waters that serve as a *habitat* for interrelated and interacting communities and *populations* of plants and animals.

attainment area
A geographic area in compliance with the National Ambient Air Quality Standards. An area may be an attainment area for one pollutant and a nonattainment area for others. See also *nonattainment area*.

background
See *Visual Quality Objective (VQO)*.

base water flows
That part of the streamflow derived from groundwater or sources such as lakes and *wetlands*. Base water flows do not include direct runoff from precipitation or melting snow.

baseline
The first set of data collected at an established monitoring site, to be compared with subsequent monitoring data from the same location.

benchmark
In forest planning, parameters that define the maximum and minimum amount of resource production that can reasonably be expected under the various management alternatives.

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.

betterment (of a road)
A construction activity that raises the *traffic service level* of a road or improves the *road's* safety or operating efficiency.

Best Management Practices (BMP)
Practices determined by the Utah Division of Water Quality to be the most effective and practical means of preventing or reducing the amount of pollution generated by diffuse sources.

biodiversity (or biological diversity)
The variety and abundance of life and its processes, including 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.

Biotic Condition Index (BCI)
An index developed by R.N. Winget and F.A. Mangum in 1979 to measure the taxonomic diversity in an aquatic ecosystem.

bioprospecting
The search for biochemical and genetic resources in plants, animals, and microorganisms. These resources may be used in food production, pest control, new drug developments, and other biotechnology applications.

biotic
Living parts of an *ecosystem* such as plants and animals.

blowdown
Trees felled or broken off by wind.

breccia
A sedimentary rock made up of angular fragments within a fine-grained matrix such as sand or clay.

canopy
The branches, leaves, or other foliage forming the crowns of trees, shrubs, or other plants. Canopy usually refers to the uppermost layer of foliage, but can be used to describe lower layers in a multi-storied forest. See also *canopy cover.*

canopy cover
The percentage of ground covered by *canopy*. See also *cover*.

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 protection from insects, and disease.

carrying capacity
The maximum number of people a site can accommodate at any given time, usually measured in PAOTs (*People At One Time*).

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* to *caves* or that commonly use *caves* during the completion of their life cycles.

cave resource
Any material or substance occurring naturally in *caves*, such as animal life, plant life, *paleontological* deposits, sediments, minerals, speleogens (relief features on the walls, ceiling, and floor of any cave that are part of the surrounding bedrock), and speleothems (any natural mineral formation or deposit occurring in a cave).

CCF (hundred 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 hundred cubic feet. Most measurements are now made using CCF. See also *MMBF*.

cfs (cubic feet per second)
A unit of measurement in cubic feet of the amount of water flowing in an area.

chaining
The dragging of a heavy chain between two vehicles to reduce or clear shrubs or saplings from an area.

classified road
See *road*.

clearcut
A harvest method removing all trees in a *stand*.

Code of Federal Regulations (CFR)
The general and permanent rules published in the Federal Register by the Executive departments and agencies of the federal government.

common variety minerals
See *salable minerals*.

composition (species)
The species that make up a plant or animal community, and their relative abundance.

concessionaire
The owner or operator of a commercial enterprise operating on National Forest System land under permit for the purpose of providing goods and services to the general public.

confirmed killing event (in regards to predator control)
A loss of livestock where the carcass of the animal has been found and evidence indicates the animal was killed by a predator.

connectivity
The degree to which similar but separated vegetation components of a landscape are connected.

conservation agreement
A requirement under section seven of the Endangered Species Act for federal agencies to consult with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service with regard to federal actions that may affect listed *threatened* and *endangered* species or critical *habitat*.

conservation population (of Bonneville or Colorado River cutthroat trout)
A reproducing and recruiting population of Bonneville or Colorado River cutthroat trout that is managed to preserve the historical genome and/or unique genetic, ecological, and/or behavioral characteristics within specific populations and within geographic units (UDWR 2000b, p. 17). See also *persistence population* and *metapopulation*.

Continuous Assessment and Planning (CAP)
An approach to planning that allows for ongoing adjustments to incorporate new technology and scientific knowledge.

control zones (regarding predator control)
Geographic areas based on active sheep allotment boundaries that delineate where and what type of predator control activities are allowed pursuant to the standards in the Forest Plan. The direction applies only to predators preying on livestock. The entire Forest is zoned according to one of the following control zones:

> **coordinated control zone**
> Pre-control authorization is required from the District Ranger to provide for public safety in these areas, which include areas up to one-half mile from roads, trails, and recreation sites located within active sheep allotments.
>
> **control zone**
> All active sheep allotments. Predator control activities are allowed in these areas.
>
> **no control zone – non-wilderness**
> No predator control activities are allowed in these areas outside of active sheep allotments and outside of designated wilderness except in emergencies as authorized by the Regional Forester.
>
> **no control zone – wilderness**
> No predator control activities are allowed in designated wilderness except in emergencies as authorized by the Regional Forester.

Controlled Surface Use (CSU)
See *leasing stipulations*.

cord
A stack of wood 4 x 4 x 8 ft, or 128 ft^3 (1.2 x 1.2 x 2.4m, or 3.6 m^3).

corridor (landscape)
Landscape elements that connect similar patches of *habitat* through an area with different characteristics. For example, streamside vegetation may create a corridor of willows and hardwoods through a forest.

cover
The present vegetation and *litter* of an area. See also *canopy cover*, *effective ground cover*, and *ground cover*.

criteria air pollutants
Pollutants that are common to sites across the U.S. and for which *air quality* criteria have been established: ozone, a principal component of smog; *Volatile Organic Carbon* (VOC), smog-forming chemicals released from the combustion of fossil fuels, solvents, paints, glues, and plastics; carbon monoxide (CO), from automobile emissions, burning of gasoline, natural gas, coal, etc.; nitrogen dioxide, from burning of gasoline, natural gas, coal, automobile emissions; *Particulate Matter* (*PM10, PM2.5*), which includes dust, smoke and soot from the burning of wood, diesel fuel, dust from unpaved *roads*, agricultural burning, etc.; sulfur dioxide, from the burning of coal and oil; lead, from leaded gasoline, metal smelters and the manufacture of lead batteries.

cryptogamic soil or crust
A thin crust made up of mosses, lichens, algae, and bacteria, known collectively as cryptogams. Cryptogams function as soil builders, forming a spongy layer that helps protect soil from erosion, absorbs moisture, and provides nitrogen and other nutrients for plant growth. Also referred to as cryptobiotic or microbiotic soils or crusts.

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.

cut and fill slope
An area of land where soil from the hillslope is removed and placed elsewhere to form a base for a given activity, usually the construction of a road (i.e., convex slopes are excavated and concave slopes are filled).

cuttings (of a plant)
See *plant cuttings*.

decadent
Marked by decay or decline.

decommission
The demolition, dismantling, removal, obliteration, or disposal of a deteriorated or otherwise unneeded asset or component such as a *road* or building, including necessary cleanup work. Portions of an asset or component may remain if they do not cause problems or require maintenance. *Road* decommissioning is defined in 36 CFR 212.1 as “Activities that result in the stabilization and restoration of unneeded *roads* to a more natural state.”

demographic
Relating to the characteristics of human *populations*, including size, density, growth, and distribution, and their effects on social and economic conditions.

Desired Future Condition (DFC)
A description of the land or resource as it is hoped to appear if *goals* and *objectives* are achieved.

detrimental compaction
See FSH 2509.18, R4 Supplement.

detrimental puddling
See FSH 2509.18, R4 Supplement.

detrimental soil displacement
See FSH 2509.18, R4 Supplement.

detrimental soil disturbance
See FSH 2509.18, R4 Supplement.

detrimental soil erosion
See FSH 2509.18, R4 Supplement.

developed recreation
Recreation that requires facilities and results in the concentrated use of an area (e.g., campgrounds or ski resorts).

discing and seeding
The act of plowing soil with one or more heavy, round, concave, sharpened, freely rotating steel disks angled to cut and turn a furrow. Seeds are then placed in the furrows.

dispersed recreation
Recreation that occurs outside a developed setting (e.g., hunting, scenic driving, or backpacking).

distance zones
See *Visual Quality Objective (VQO)*.

disturbance
Any event that alters the *structure*, *composition*, or function of an *ecosystem*, including grazing, human trampling, logging, foraging by wildlife *ungulates*, wind, flood, insects, disease, and fire.

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.

drop structure
A structure for dropping water to a lower elevation and dissipating the surplus energy resulting from the drop.

ecoregion
A continuous geographic area used as an ecological basis for management or planning.

ecosystem
A naturally occurring, self-maintained system of varied living and non-living interacting parts that are organized into biophysical and human dimension components.

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.

effective ground cover
Vegetation, *litter*, and rock fragments larger than three-fourths inch in diameter in contact with the soil. Effective ground cover includes perennial *canopy cover* from the lowest shrubs occupying an area (FSH 2509.18). See also *ground cover*.

endangered species
An animal or plant species designated by the U.S. Fish and Wildlife Service to receive federal protection status because it is in danger of extinction throughout all or a significant portion of its natural range.

endemic
Indigenous or native.

environmental analysis
A comprehensive evaluation of *alternative* actions and their predictable short- and long-term environmental effects, including physical, biological, economic, social, and environmental design factors and their interactions.

environmental assessment (EA)
A concise analysis of the significance of a given project's potential environmental consequences. An EA is required by the *National Environmental Policy Act* (NEPA), and determines if an *Environmental Impact Statement* (EIS) is needed.

environmental impact statement (EIS)
A detailed statement of a given project's environmental consequences, including unavoidable adverse environmental effects, *alternatives* to the proposed action, the relationship between local short-term uses and long-term productivity, and any irreversible or irretrievable commitment of resources.

ephemeral
A stream or portion of a stream that flows only in direct response to precipitation, receiving little or no water from springs and no long continued supply from snow or other sources, and whose channel is at all times above the water table.

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.

fine
Sediment of very small particle sizes (< 2 mm in diameter), including sand, silt, and clay.

floodplain
The land bordering a stream or river subject to overflow flooding during periods of high water level.

fluvial
Of or pertaining to a river.

forage
Plant material (usually grasses, *forbs*, and brush) that is available for animal consumption.

forbs
Broadleaf ground vegetation with little or no woody material.

foreground
See *Visual Quality Objective (VQO)*.

Forest Development Road (FDR)
See *National Forest System road*.

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)*.

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)*.

forest transportation atlas
"An inventory, description, display, and other associated information for those *roads*, trails, and airfields that are important to the management and use of National Forest System lands or to the development and use of resources upon which communities within or adjacent to the National Forests depend" (36 CFR 212.1). Previously called a forest transportation plan.

forest transportation facility
"A *classified road*, designated trail, or designated airfield, including bridges, culverts, parking lots, log transfer facilities, safety devices, and other transportation network appurtenances under Forest Service jurisdiction that is wholly or partially within or adjacent to National Forest System lands" (36 CFR 212.1).

fragmentation
The splitting or isolating of patches of similar *habitat*. Habitat can be fragmented by natural events or development activities.

fuels treatment
Management activities that result in a change in composition and/or arrangement of live and/or dead vegetation.

fuels reduction
Manipulation, including combustion, or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control.

gabion
A wire basket filled with clean rocks used as a retaining structure to stabilize a soil slope or riverbank or to provide support for a bridge.

Geographic Information System (GIS)
An information processing technology to input, store, manipulate, analyze, and display all forms of geographically referenced information.

geomorphology
A science that deals with land and submarine relief features, using principles of both physiography and geology.

girdle
To make an incision through the bark and cambium of a living tree stem to kill the tree.

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.

goods and services
The various products and benefits (both tangible and intangible) produced by forest and rangeland renewable resources.

green (sawtimber, oak, etc.)
Live vegetation.

greenline
The area of (more or less) continuous cover of perennial vegetation parallel to or surrounding a perennial waterbody. The greenline width varies dependent on soil and water features.

ground cover
The herbaceous plants, including grasses and ferns, and the lowest shrubs occupying an area. See also *effective ground cover*.

guideline
The preferred or advisable course of action designed to promote the achievement of *goals* and *objectives*.

habitat
The place where a plant or animal lives and grows under natural conditions.

hardened 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.

helibase
The main location within an incident area for parking, fueling, maintaining, and loading helicopters.

helispot
A temporary landing spot for helicopters.

hiding cover
Sufficient *cover* to conceal an animal

historical losses (as regards predator control)
The annual average of the *Total Reported Sheep Losses to Coyotes* as reported in the USDA Wildlife Services' annual operation activity report.

historical range of variability
The natural fluctuation of the components of a healthy *ecosystem* over time.

home range
In regards to northern 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), a *Post Fledgling Area (PFA)*, and a foraging area (USDA 1999k).

Hydrologic Unit Code (HUC)
A hierarchical system of numbering watersheds initiated by the U.S. Water Resources Council (1970) and expanded by Seaber et al. (1987) for use by water-resource organizations as a standardized base "for locating, storing, retrieving, and exchanging hydrologic data." The U.S., including Alaska, Hawaii, and parts of the Caribbean, is divided into 21 major hydrologic regions, then subdivided into 222 sub-regions, 352 accounting units, and 2,149 cataloging units. At each division, a 2-digit numerical code is added so that each watershed is assigned a unique numerical identifier. For example:

Region	1st Code	Upper Colorado	14
Sub-region	2nd Code	Lower Green River	1406
Accounting Unit	3rd Code	Lower Green, Colorado-Utah	140600
Cataloging Unit	4th Code	Strawberry, Utah	14060004
Watershed	5th Code	Strawberry Valley	1406000401
Sub-watershed	6th Code	Upper Strawberry River	140600040101

It is possible to further sub-divide and delineate watersheds to smaller and smaller scales. All national forests in Regions 1, 2, and 4 have delineated watersheds to at least the 6th level. Some forests have watersheds delineated to the 8th level. On the Uinta National Forest, 7th code watersheds have been delineated for most of the Forest.

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.

hydrophytic species
A plant species that has evolved with adaptations to live in aquatic or very wet *habitats*.

IMPLAN
A contraction for "IMpact analysis for PLANning," IMPLAN is an input-output computer software *modeling* program that estimates the impacts of economic changes in states, counties, or communities.

improvement (of a road)
See *reconstruction (of a road).*

indicators
Any species that, by its presence or *population*, indicates certain attributes about the site or *ecosystem* in which it lives.

inholding
An area of private land within the proclaimed boundary of a national forest.

initial attack
The actions taken by the first resources to arrive at a wildfire to protect lives and property and prevent further extension of the fire.

Interagency Monitoring of Protected Visual Environments (IMPROVE)
A network of approximately 60 monitoring stations established to monitor *air quality* nationwide.

intermittent stream
A stream or portion of a stream that does not flow year-round but only when it receives *base water flow* solely during wet periods, or receives groundwater discharge or protracted contributions from melting snow or other erratic surface and shallow subsurface sources.

inventoried roadless area
An area that meets the Forest Service's criteria for wilderness consideration under the Wilderness Act of 1964 and that was inventoried during the *Roadless Area Review and Evaluation II (RARE II)* process, subsequent assessments, updated inventories, or Forest Plan revisions.

key linkage areas
Critical areas for lynx habitat that provide *connectivity* to other areas of *habitat* or potential dispersal routes. Usually, the factors that place *connectivity* of *habitat* at risk are highways, recreation developments, and/or private land developments. A loss of forested vegetative cover is also of concern in these areas.

landscape analysis
An evaluation of past management direction on a given landscape, and a prediction of future conditions given the current management direction.

landtype
An intermediate level in the ecological classification system based on landform, natural vegetative communities, and soils.

Landtype Association (LTA)
A group of *landtypes*. The *landtypes* in the association are sufficiently homogeneous to be considered as a whole for modeling the future outputs and effects of planned management activities. *Landtype* associations may not follow watershed boundaries, as they are defined on the basis of general similarities in climate, geology, landform, and vegetation.

Lease Notices (LN)
See *leasing stipulations*.

leasable minerals
Minerals subject to exploration and development under leases, permits, and licenses under various mineral leasing acts. Leasable minerals include oil, gas, and coal. The Forest Service determines which lands are available for leasing and under what conditions, while the Bureau of Land Management (BLM) determines whether or not to offer the lease. See also *locatable minerals* and *salable minerals*.

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 any of the other stipulations to identify specific concern(s) that may impact lease operations on a given lease.
>
> **No Lease (NL)**
> No new leases are authorized, or the area is 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. Current environmental protection laws and the Federal Onshore Oil and Gas Leasing Reform Act orders provide the direction for the operation.
>
> **Timing Limitations (TL)**
> Activities are restricted or prohibited during certain time periods.

lek
A specific location where male grouse congregate and strut to attract and breed with female grouse. Most male grouse return to the same lek every year.

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.

linkage areas
See *key linkage areas*.

litter
The vegetative matter comprising the surface layer of the forest floor, usually consisting of leaves, needles, twigs, bark, and other vegetation.

loam
A soil texture containing equal amounts of sand, silt, and clay.

locatable minerals
Minerals subject to appropriation under the General Mining Law of 1872. Locatable minerals include gold, silver, copper, gypsum, and other hard rock minerals. The Bureau of Land Management (BLM) is responsible for the subsurface rights, while the Forest Service is responsible for the surface rights. By agreement with the BLM, the Forest Service administers locatable mining activities on National Forest System lands. See also *leasable minerals* and *salable minerals*.

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.

M-44 device
A mechanical device that projects sodium cyanide powder into the mouth of a predator or any other animal that pulls upward on the device.

macroinvertebrate
An animal having no backbone or internal skeleton, large enough to be seen without magnification.

maintenance level 1 (road)
A classification assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed one year. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level

and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned *road* deterioration may occur at this level. Appropriate traffic management strategies are "prohibit" and "eliminate." *Roads* receiving level 1 maintenance may be of any type, class, or construction standard, and may be managed at any other maintenance level during the time they are open for traffic. However, while being maintained at level 1, they are closed to vehicular traffic but may be open and suitable for non-motorized uses.

maintenance level 2 (road)
A classification assigned to *roads* open for use by high clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted *dispersed recreation*, or other specialized uses. Log haul may occur at this level. Appropriate traffic management strategies are either to 1) discourage or prohibit passenger cars, or 2) accept or discourage high clearance vehicles.

maintenance level 3 (road)
A classification assigned to *roads* open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. *Roads* in this maintenance level are typically low speed, single lane with turnouts and spot surfacing. Some *roads* may be fully surfaced with either native or processed material. Appropriate traffic management strategies are either "encourage" or "accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or users.

maintenance level 4 (road)
A classification assigned to *roads* that provide a moderate degree of user comfort and convenience at moderate travel speeds. Most *roads* are double lane and aggregate surfaced; however, some *roads* may be single lane. Some *roads* may be paved and/or dust abated. The most appropriate traffic management strategy is "encourage;" however, the "prohibit" strategy may apply to specific classes of vehicles or users at certain times.

maintenance level 5 (road)
A classification assigned to *roads* that provide a high degree of user comfort and convenience. These *roads* are normally double lane, paved facilities. Some may be aggregate surfaced and dust abated. The appropriate traffic management strategy is "encourage."

management area
An area with similar management *objectives* based on similar characteristics within the area which help define management direction.

Management Indicator Species (MIS)
Representative species whose *habitat* conditions and *population* changes are used to assess the impacts of management activities on similar species in a particular area.

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, italics added). Management prescriptions provide a description of general direction for the management of a specific area based on the resource emphasis.

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*.

Memorandum of Understanding (MOU)
A formal, written agreement between organizations or agencies that presents the relationship between the entities for purposes of planning and management.

metapopulation (of Bonneville or Colorado River cutthroat trout)
A collection of localized Bonneville or Colorado River cutthroat trout populations that are geographically distinct yet are genetically interconnected through natural movement of individuals among *conservation populations*. The effective population size of metapopulations should generally be at least 1,000 fish (UDWR 2000b, p. 18). See also *conservation population* and *persistence population*.

middleground
See *Visual Quality Objective (VQO)*.

mitigation
Actions that avoid, minimize, reduce, eliminate, or rectify impacts from management practices.

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.

model
An analytical framework based on the past behavior of numeric variables that is able to predict the future behavior of those variables. 10 CFR Part 960.2 defines a model as "a conceptual description and the associated mathematical representation of a system, subsystem, component, or condition that is used to predict changes from a *baseline* state as a function of internal and/or external stimuli and as a function of time and space."

mollisol
A fertile, mineral soil that is dark in color and rich in organic matter.

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.

motorcycle
Any motor vehicle having a saddle for the use of the operator and designed to travel on not more than two tires (UDNR 2001c).

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.

natal
Of or relating to birth.

National Environmental Policy Act of 1969 (NEPA)
An act mandating an *environmental analysis* and public disclosure of federal actions.

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)*.

nest area
The nest tree and stand(s) surrounding a nest that contain prey handling areas, perches, and roosts (USDA 1999k).

no action alternative
The most likely condition expected to exist if current management practices continue unchanged. The analysis of this *alternative* is required for federal actions under the *National Environmental Policy Act of 1969 (NEPA)*.

no control zone – non-wilderness
See *control zones*.

no control zone – wilderness
See *control zones*.

No Lease (NL)
See *leasing stipulations*.

No Surface Occupancy (NSO)
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*.

non-stream or -lake related wetlands
Wetlands that are either permanently inundated with water or have seasonally high water tables that support *wetland* vegetation, but do not derive their water directly from streams or lakes. Examples include seeps, bogs, weeping walls, ponds, and marshes. Also called “depressional wetlands.”

nonattainment area
An area identified by an *air quality* regulatory agency through ambient air monitoring (and designated by the Environmental Protection Agency [EPA]) that presently exceeds the National Ambient Air Quality Standards for one or more *criteria air pollutants*. See also *attainment area*.

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*.

off-highway vehicle (OHV)
Any *snowmobile*, *all-terrain vehicle*, or *motorcycle* (UDNR 2001c).

old growth
"Old growth forests are ecosystems distinguished by old trees and related structural attributes; old growth encompasses the later stages of stand development that typically differ from earlier stages in a variety of characteristics which may include tree size, accumulations of large dead woody material, number of canopy layers, species composition, and ecosystem function" (USDA 1993).

outstandingly remarkable value
As defined by the Wild and Scenic Rivers Act of 1968, an "outstandingly remarkable value" is the 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.

over-the-snow vehicle
See *snowmobile*.

paleontological
Of or relating to past geological periods. Paleontological resources include fossils of shellfish, swamp forests, dinosaurs, and other prehistoric plants and animals.

Passport in Time
A Forest Service volunteer program officially established in 1991. Volunteers work with Forest Service archaeologists and historians on various projects including archaeological excavation, rock art restoration, surveys, archival research, historic structure restoration, the gathering oral histories, or the writing of interpretive brochures.

Particulate Matter 2.5 (PM2.5)
Fine particulate matter in the atmosphere smaller than 2.5 microns. Particles in this size range are most responsible for degradation of visibility. Fine particulates can also cause eye, nose, and throat irritation in humans.

Particulate Matter 10 (PM10)
Fine particulate matter in the atmosphere smaller than 10 microns, including dust and soot from the burning of fossil fuels, wood stoves, burning of agricultural fields, and other sources. Fine particulates can also cause eye, nose, and throat irritation in humans.

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.

persistence population (of Bonneville or Colorado River cutthroat trout)
A population of Bonneville or Colorado River cutthroat trout that is managed for persistence of the species. See also *conservation population* and *metapopulation*.

personal use forest products
Products such as firewood and Christmas trees. Personal use forest products does not include wildlife or fish.

phosphorus
An element of the nitrogen family that occurs widely in combined forms in minerals, soils, natural waters, bones, and teeth.

planning period
The National Forest Management Act of 1976 (NFMA) requires forest plans to be revised every 10-15 years. The planning period refers to the next 10-15 years on the Uinta National Forest under the management of the proposed Forest Plan until the next Forest Plan revision.

plant cuttings
A portion of a live plant cut or broken off in order to propagate a new plant.

play
When referring to oil and gas resources, play is defined as a specific combination of geological features with perceived potential for oil and gas accumulation.

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*).

population
The people, wildlife, fish, or plants inhabiting a specific area.

post and pole harvest
The harvest of trees four to nine inches in diameter, used primarily as fence posts, corral or fence rails, and teepee poles.

Post Fledgling Area (PFA)
In reference to northern goshawk habitat, an area of concentrated use by a goshawk family after the young leave the nest. It encompasses the *active nest*, alternate nest, 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 (USDA 1999k).

prescribed fire
A fire purposefully ignited to meet specific *objectives*. Prior to ignition, a written, approved fire plan must exist and legal requirements must be met.

prescription
A planned series of treatments designed to change the current condition to a condition that meets management goals.

propagule
Any structure having the capacity to reproduce a new plant, whether through sexual or asexual (vegetative) reproduction. Propagules include seeds, spores, rhizomes, and any part of the vegetative body capable of independent growth if detached from the parent.

Properly Functioning Condition (PFC)
An *ecosystem* at any temporal or spatial *scale* when it is dynamic and *resilient* to perturbations to *structure*, *composition*, and processes of its biological or physical components.

puddling
A physical change in soil properties due to *shearing* forces that alters the soil structure and porosity. Puddling occurs when the soil becomes wet and is at or near the liquid limit (FSH 2509.18).

realignment (of a road)
See *reconstruction (of a road)*.

reconstruction (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).

record of decision
A public document associated with an *Environmental Impact Statement* (EIS) that identifies all *alternatives*, provides the final decision, the rationale behind that decision, and commitments to monitoring and *mitigation*.

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 seven classes: Primitive (P), Semi-Primitive Non-Motorized (SPNM), Semi-Primitive Motorized (SPM), Roaded Natural (RN), Roaded Modified (RM), Rural (R), and Urban (U). The Uinta National Forest does not contain any Urban ROS.

recreation residence
A residence on National Forest System lands generally located in an established tract and built for recreation purposes with agency approval. These residences are authorized by special use permit.

Recreation Visitor Day (RVD)
A unit of measurement equaling twelve hours of recreation use in any combination of persons and hours (one person for 12 hours, three persons for four hours, etc.).

replacement nest area
In regards to northern goshawk habitat, forest areas with physiographic characteristics and size similar to suitable goshawk *nest areas*. Replacement areas can have young to mature forests that can be developed into suitable *nest areas* (USDA 1999k).

resilient, resiliency
The ability of a system to respond to *disturbances*. Resiliency is one of the properties that enables a system to persist in many different states of *successional* stages.

Research Natural Area (RNA)
Lands within the National Forest System that are permanently protected as places to conduct research and monitoring, maintain biological diversity, and foster education. The Forest Service Manual (FSM) defines each RNA as “. . . part of a national network of ecological areas designated in perpetuity for research and education and/or to maintain biological diversity on National Forest System lands. Research Natural Areas are for nonmanipulative research, observation, and study. They also may assist in implementing provisions of special acts, such as the Endangered Species Act and the monitoring provision of the National Forest Management Act” (FSM 4063).

Resources Planning Act (RPA)
The Forest and Rangeland Renewable Resources Planning Act of 1974. This act also refers to the National Assessment and Recommended Program developed to fulfill the requirements of the RPA. The assessment is prepared every 10 years and describes the potential of the nation's forests and rangelands to provide a sustained flow of *goods*

and services. The program is prepared every five years to chart the long-term course of the Forest Service's management of the national forests.

Right-of-way (ROW)
The legal right to pass over another owner's land.

riparian
Related to, living, or located in conjunction with a *wetland*, on the bank of a river or stream, or at the edge of a lake or tidewater.

Riparian Habitat Conservation Area (RHCA)
Portions of *watersheds* where *riparian*-dependent resources receive primary emphasis and management activities are subject to specific standards and guidelines. RHCAs include traditional *riparian* corridors, *wetlands*, *perennial* and *intermittent* streams, and other areas that help maintain the integrity of aquatic *ecosystems*. There are three RHCA classes of varying widths offering varying levels of protection: class I with widths extending 300 feet from each edge of the waterbody (600 feet total); class II with widths extending 200 feet from each edge of the waterbody (400 feet total); and class III with widths extending 100 feet from each edge of the waterbody (200 feet total). For a list of the criteria used to determine the RHCA class for each stream or waterbody on the Forest, see Appendix D of the 2003 Forest Plan.

riprap
Rocks, pieces of used concrete, or other material of various sizes placed firmly or loosely on river banks to prevent scouring by the river, or on slopes or road cuts to prevent erosion.

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).

road prism
An area of ground containing a road surface and *cut and fill slope*.

roadless area
An area without any improved roads maintained for travel by standard passenger type vehicles. See also *inventoried roadless area*.

roadless area characteristics
There are nine characteristics used to describe the physical properties of roadless areas. An *environmental assessment* or *environmental impact statement* with the potential to affect a roadless area must evaluate the project's impacts to each of the characteristics, which are:

1. Soil, water, and air
2. Sources of public drinking water
3. Diversity of plant and animal communities
4. Primitive, Semi-Primitive Non-Motorized, and Semi-Primitive Motorized classes of recreation opportunities
5. Reference landscapes
6. Landscape character and scenic integrity
7. Traditional cultural properties, sacred sites, and National Register areas
8. Other locally identified unique characteristics
9. Adjacency, context, size, and shape

Roadless Area Review and Evaluation II (RARE II)
A second review and evaluation begun in 1977 to identify roadless and *undeveloped* land in the National Forest System. This process also determined which of the inventoried areas should be recommended to Congress for inclusion in the National Wilderness Preservation System, which areas should be managed for non-*wilderness* uses, and which areas required further planning before a reasonable decision could be made. See also *inventoried roadless area*.

Rosgen classification system
A geomorphic stream classification system developed by Dave Rosgen in 1985. The information from the classification system can help assess a stream channel's present stability or instability and past conditions, and predict future stream behavior.

rotenone
The chemical compound C23H22O6 used in fish poisons. It is of low toxicity to warm-blooded animals.

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 2000).

salable minerals
Minerals that are sold instead of leased or located. Salable minerals include sand, gravel, clay, and decorative stone. The Forest Service has sole discretion over salable minerals. Also referred to as common variety minerals. See also *leasable minerals* and *locatable minerals*.

salmonid
A fish belonging to the family Salmonidae, which includes salmon and trout.

salvage cutting
Cutting dead or damaged trees to recover economic value that would otherwise be lost.

sanitation cutting
Cutting trees to improve *stand* health by stopping or reducing the spread of insects and disease.

scale
Geographic extent (e.g., regional, sub-regional, or landscape).

scoping
The process used to determine, through public involvement, the range of issues that the planning process should address.

sensitive species
A term to describe selected plant and animal species 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 under the Endangered Species Act.

sensitivity level
See *Visual Quality Objective (VQO)*.

seral
Relating to ecological communities where all *successional* stages of *biotic* development are represented.

severely burned soils
[As applied to prescribed fire and wildland fire use, not wildland fire.] See FSH 2509.18, R4 Supplement.

shearing
A straining resulting from applied force.

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.

significantly
"Significantly" as used per the *National Environmental Policy Act* requires considerations of both context and intensity, as described below:

> Context. The significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.
>
> Intensity. The severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:
>
> - Impacts that may be both beneficial and adverse. A significant effect may exist even if the federal agency believes that on balance the effect will be beneficial.
> - The degree to which the proposed action affects public health or safety.
> - Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
> - The degree to which the effects on the quality of the human environment are likely to be highly controversial.

- The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
- The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
- Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
- The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
- The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
- Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment (40 CFR 1508.27)

significant (relating to caves)
The Federal Cave Resources Protection Act of 1988 requires federal agencies to identify *caves* determined to be significant. To be found significant, a *cave* must meet significance criteria in one of the following six categories: biota; cultural; geologic/mineralogic/paleontologic; hydrologic; recreational; or educational or scientific.

silviculture
The development, establishment, reproduction, and care of forests and woodlands to meet the needs and values of landowners and society on a sustainable basis.

sinuosity
Degree to which a stream channel curves or meanders laterally across the land surface.

slash
Remnant vegetation such as treetops and branches left on the ground following vegetation treatments, generally timber harvest.

slash and pile burn
The burning of piled *slash* to reduce fire danger.

slump
A landslide.

snag
A standing dead tree.

snowmobile
Any motor vehicle designed for travel on snow or ice and steered and supported in whole or in part by skis, belts, cleats, runners, or low pressure tires (UDNR 2001c).

SNOwpack TELemetry (SNOTEL)
An automated system installed, operated, and maintained by the Natural Resources Conservation Service that collects snowpack and related climatic data in the western U.S. Data are relayed daily using meteor burst communications technology; no satellites are used. Data collected from the system can help produce water supply forecasts and warn of natural disasters such as floods. There are over 600 SNOTEL sites in 11 western states. The sites are generally located in remote high-mountain watersheds. The sites are designed to operate unattended; they are battery powered with solar cell recharge.

soil compaction
A physical change in soil properties that results in a decrease in porosity and an increase in soil bulk density and soil strength (FSH 2509.18).

soil displacement
The movement of the forest floor (litter, duff, and humus layers) and surface soil from one place to another by mechanical forces such as a blade used in piling or windrowing. Mixing of surface soil layers by disking, chopping, or bedding operation, are not considered displacement (FSH 2509.18). See also *detrimental soil displacement*.

soil erosion
See FSH 2509.18 and applicable Intermountain Region supplements for .

soil productivity
The inherent capacity of a soil to support the growth of specified plants, plant communities, or a sequence of plant communities. Soil productivity may be expressed in terms of volume or weight/unit area/year, percent plant cover, or other measure of biomass accumulation (FSH 2509.18).

soil puddling
See *puddling*.

source-identified
A certification standard used to describe native or naturalized species seed if the original collection site is known.

staging area
A location set up at an incident where resources can be placed while awaiting a tactical assignment. Most often associated with fire incidents.

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
A required course of action or a level of attainment designed to promote achievement of *goals* and *objectives*.

Standard Lease Terms (SLT)
See *leasing stipulations*.

stewardship purposes
Related to timber harvest for reasons other than producing boards or wood fiber for forest dependant industry.

stream or lake related wetlands
Riparian areas directly related to streams and lakes (as compared to *non-stream or non-lake related wetlands*).

structure
The age and size of the vegetation type in a subject area.

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 community.

suitability
The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the preceding *alternative* uses. An area of land may be suitable for more than one management practice.

sustainability
The ability of a forest, or any portion thereof, to maintain its health, productivity, and diversity, considering the levels of human use.

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.

taxa
A classification of plants and animals according to their presumed natural relationship.

temporary road
See *road*.

threatened species
A designation by the U.S. Fish and Wildlife Service when a plant or animal species is likely to become *endangered* throughout all or a specific portion of its range within the foreseeable future.

tiering
The coverage of broad, general information in *environmental impact statements*, with subsequent site-specific analyses incorporating that general information by reference.

Timber Stand Improvement (TSI)
Treatments (including thinning, pruning, release cutting, prescribed fire, girdling, weeding, or poisoning of unwanted trees) to improve the *composition*, *structure*, condition, health, and growth of tree *stands*.

Timing Limitations (TL)
See *leasing stipulations*.

Total Boundary Management
A system of establishing national forest boundaries that emphasizes the maintenance of existing boundary marking, and identification, investigation, and resolution of encroachments and other unauthorized uses of National Forest System lands.

total soil resource commitment
Areas of land such as roads, parking areas, and building sites devoted to long-term occupancy that results in a complete loss of soil productivity during such occupancy. Also referred to as "long-term soil commitment."

traffic service level
A road classification based on traffic and user characteristics.

transect
A sample area of vegetation, often in the form of a narrow contiguous strip, used for study, analysis, profiling, and inventorying. Also referred to as a “greenline.”

unclassified road
See *road*.

undeveloped area
According to the Wilderness Act of 1964, an area that “generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable . . .” An area with no cultural features; however, some exceptions are listed in the Wilderness Act.

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*.

ungulate
A hooved mammal such as a deer or elk.

useful life
The estimated length of time a structure will remain safe and viable.

variety class
See *Visual Quality Objective (VQO)*.

Vegetative Structural Stage (VSS)
A generalized description of forest growth and aging stages based on the size of the majority of trees in the subject stand. VSS-1 is the grass-forb or grass-forb-shrub stage; Vss-2 is the seedling/sapling stage; VSS-3 is the young forest stage; VSS-4 is the mid-aged forest stage; VSS-5 is the mature stage; and VSS-6 is the old stage of stand development (USDA 1999k).

Visual Quality Objective (VQO)
The degree of acceptable visual alteration of the landscape defined as a desired level of scenic excellence based on physical and sociological characteristics of an area. Typically, more stringent VQOs are incorporated to protect the most highly visible and frequently seen areas that have the greatest amount of variety in vegetation and other features that occur naturally. The five VQO categories applicable to this Forest Plan are described below:

> **Preservation**
> Allows for ecological changes only. Management activities, except for very low visual impact recreation facilities, are prohibited.
>
> **Retention**
> Management activities may only repeat form, line, color, and texture that are frequently found in the characteristic landscape. Changes should not be evident to the casual forest visitor, and all retention activities to restore the area to a naturally appearing condition should be accomplished either during the operation or immediately thereafter.
>
> **Partial Retention**
> Management activities remain visually subordinate to the characteristic landscape. Management activities should repeat form, line, color, or texture common to the characteristic landscape; however, structures can introduce form,

line, color, or texture that are found infrequently or not at all in the characteristic landscape. Reduction in form, line, color, and texture to meet Partial Retention should be accomplished as soon after project completion as possible or, at a minimum, within the first year after project completion.

Modification
Management activities may visually dominate the original characteristic landscape; however, activities of vegetative and landform alteration must borrow from naturally established form, line, color, or texture so completely and at such a scale that its visual characteristics are those of natural occurrences within the surrounding area or character type. Additional parts of these activities such as structures and roads must remain visually subordinate to the proposed composition.

Maximum Modification
Management activities of vegetative and landform alterations may dominate the characteristic landscape; however, when viewed as *background*, the visual characteristics must be those of natural occurrences within the surrounding area or character type. When viewed as *foreground* or *middleground*, they may not appear to completely borrow from naturally established form, line, color, or texture. Alterations may also be out of scale or contain detail that is incongruent with natural occurrences as seen in *foreground* or *middleground*.

In addition, the following terms are used in the context of Visual Quality Objectives:

background
The distant part of a landscape or surroundings, especially that behind something which provides harmony or contrast. Background is usually located three to five miles from the observer.

distance zones
Areas of landscapes (*foreground*, *middleground*, or *background*) denoted by specific distances from the observer. Distance zones are used as a frame of reference in which to discuss landscape characteristics or activities of humans.

foreground
The detailed landscape typically found within zero to one-fourth through one-half mile of the observer.

middleground
The space between the *foreground* and *background* in a viewed landscape. The area is usually located from one-fourth through one-half to three through five miles from the observer.

sensitivity level

A particular degree or measure of viewer interest in the scenic qualities of the landscape.

variety class
A particular level of visual variety or diversity of landscape character.

Volatile Organic Carbon (VOC)
Smog-forming chemicals released from the combustion of fossil fuels, solvents, paints, glues, and plastics.

Wasatch Front
A geographic region in Utah along the base of the Wasatch Mountains, generally extending from Ogden on the north end to Nephi on the south end. More than 50 percent of the population of the state resides along the Wasatch Front, which includes the cities of Layton, Salt Lake City, West Valley City, American Fork, Orem, Provo, Spanish Fork, and Payson.

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 Draft Environmental Impact Statement 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 supports vegetation requiring these conditions for growth and reproduction. See also *non-stream or -lake related wetlands* and *stream or lake related wetlands*.

wild cave
A cave that lacks developments to facilitate public use. These developments can include access roads, parking areas, trails, safety barriers, and sewage and sanitation facilities.

wilderness
As defined by the Wilderness Act of 1964, "an area where earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of *undeveloped* federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces

of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value" (16 U.S.C. 1131).

wilderness area
An area designated by Congress as part of the National Wilderness Preservation System, according to the criteria established in the Wilderness Act of 1964.

wildland fire
Any nonstructural fire, other than prescribed fire, that occurs in an area under the fire management jurisdiction of a land management agency. This term encompasses fires previously called both "wildfires" and "prescribed natural fires."

Wildland Fire Situation Analysis (WFSA)
A decision-making process that evaluates alternative suppression strategies against selected environmental, social, political, and economic criteria. The analysis provides a record of decisions.

wildland fire use
The management of naturally-ignited *wildland fires* to accomplish specific pre-stated resource management *objectives* in pre-defined geographic areas outlined in fire management plans.

APPENDIX A:
APPLICABLE MANAGEMENT DIRECTION AND GUIDANCE

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APPLICABLE MANAGEMENT DIRECTION AND GUIDANCE

This list is not intended to be all inclusive. As new laws, regulations, agency policies, and information generated from scientific study and technology developments are developed, they may be applied as appropriate.

FOREST SERVICE MANUALS AND HANDBOOKS

Agency policy articulated in the Forest Service directives system (Forest Service Manuals and Handbooks) is hereby incorporated in its entirety as direction in this Forest Plan. Some of the more commonly referenced objectives are found at the following locations:

American Indians 1563
Noxious Weed Management 2080
Solid Waste Management 2130.2
Pesticide Management 2150.2
Energy Management 2170.2
Range Management 2202.1
Grazing and Livestock Use Permit System 2230.2
Range Improvements 2240.2
Structural Range Improvement 2242.02
Maintenance of Improvement 2244.02
Range Improvement Investment 2246.02
Recreation 2302
National Wilderness Preservation System 2320.2
Recreation in Wilderness 2323.11
Range in Wilderness 2323.21
Wildlife and Fish Management in Wilderness 2323.31
Stocking Methods 2323.34b
Stocking Policy 2323.34c
Soil and Water in Wilderness 2323.41
Forest Cover in Wilderness 2323.51
Air Resource in Wilderness 2323.61
Minerals in Wilderness 2323.72
Insects and Disease in Wilderness 2324.11
Fire Management in Wilderness 2324.21
Structures and Improvements in Wilderness 2324.31
Research in Wilderness 2324.41
Motorized Equipment in Wilderness 2326.02
Publicly Managed Recreation Opportunities 2330.2
Privately Provided Recreation Opportunities 2340.2
Concession Uses Involving Privately Developed Facilities 2343.02

Research Natural Areas 4063.02
Fire Management 5102
Fire Suppression 5130.2
Prescribed Fire 5140.2
Fuel Management 5150.2
Landownership Adjustment 5402
Land Purchases and Donations 5420.2
Land Exchange 5430.2
Partial Interest Acquisition 5440.2
National Forest System Modification 5450.2
Right-of-Way Acquisition 5460.2
Reservations and Outstanding Rights 5470.2
Condemnation 5480.2
Land Surveying 7151.02
Landline Location Program 7152.02
Sign and Poster Program 7160.2
Potable Water Supply 7420.2
Wastewater Collection Systems and Treatment Works 7430.2
Transportation System 7702
Transportation Planning 7710.2
Development 7720.2
Operation and Maintenance 7730
Highway Safety Program 7733.02
Federal Lands Highway Program 7740

OTHER FOREST SERVICE DIRECTION

Heritage – It's About Time!: A National Strategy, August 2000.

Built Environment Image Guide for the National Forests and Grasslands, December 2001.

NATIONAL DIRECTION

National Energy Policy, May 2001
National Fire Plan, August 2000
President Bush's Healthy Forests Initiative, August 2002

STATUTES

American Indian Religious Freedom Act, Act of August 11, 1978
Americans with Disabilities Act of 1990
Anderson-Mansfield Reforestation and Revegetation, Act of October 11, 1949
Antiquities Act, Act of June 8, 1906

Archaeological Resources Protection Act of 1979, as amended 1988, Act of October 31, 1979
Architectural Barriers, Act of 1968
Bankhead-Jones Farm Tenant Act of 1937, Act of July 22, 1937
Clarke-McNary Act of 1924, Act of June 7, 1924
Clean Air Act Amendments of 1977, Act of August 7, 1977
Clean Water Act of 1977
Clean Water Amendments (Federal Water Pollutions Control Act Amendments of l972), Act of October 18, 1972
Color of Title, Act of December 22, 1928
Common Varieties of Mineral Materials, Act of July 31, 1947
Comprehensive Environmental Response, Compensation and Liability Act, as amended, Act of December 11, 1980
Cooperative Forestry Assistance Act of 1978, Act of July 1, 1978
Disaster Relief Act of 1974, Act of May 22, 1974
Economy Act of 1932, Act of June 30, 1932
Emergency Flood Prevention (Agricultural Credit Act of 1978), Act of August 4, 1978
Endangered American Wilderness Act of 1978
Endangered Species Act of 1973, Act of December 28, 1973
Energy Security Act, Act of June 30, 1980
Environmental Quality Act of 1970
Federal Advisory Committee Act of 1972, Act of October 6, 1972
Federal Cave Resources Protection Act of 1988, Act of November 18, 1988
Federal Coal Leasing Amendments Act of 1975, Act of August 4, 1976
Federal Insecticide, Rodenticide, and Fungicide Act, Act of October 21, 1972
Federal Land Policy and Management Act of 1976, Act of October 21, 1976
Federal Noxious Weed Act of 1974, Act of January 3, 1975
Federal Onshore Oil and Gas Leasing Reform Act of 1987, Act of December 22, 1987
Federal Power Act of 1920, Act of June 10, 1920
Federal-State Cooperation for Soil Conservation, Act of December 22, 1944
Federal Water Pollution Control Act of 1956, as amended (Water Quality Act of1965, Clean Water Restoration Act of 1966), Act of July 9, 1956
Federal Water Project Recreation Act of 1965, Act of July 9, 1965
Fish and Wildlife Conservation, Act of September 15, 1960
Fish and Wildlife Coordination Act, Act of March 10, 1934
Forest Highways, Act of August 27, 1958
Forest and Rangeland Renewable Resources Planning Act of 1974, Act of August 17, 1974
Forest and Rangeland Renewable Resources Research Act of 1978, Act of June 30, 1978
Freedom of Information Act, Act of November 21, 1974
General Exchange Act of 1922
General Mining Law of May 10, 1872
Granger-Thye Act, Act of April 24, 1950
Historic Preservation Act, Act of October 15, 1966
Intermodal Surface Transportation Efficiency Act, Act of December 18, 1991

Joint Surveys of Watershed Areas Act of 1962, Act of September 5, 1962
Knutson-Vandenberg Act, Act of June 9, 1930
Land Acquisition, Act of March 3, 1925
Land Acquisition-Declaration of Taking, Act of February 26, 1931
Land Acquisition-Title Adjustment, Act of July 8, 1943
Land and Water Conservation Fund Act of 1965, Act of September 3, 1964
Law Enforcement Authority, Act of March 3, 1905
Leases Around Reservoirs, Act of March 3, 1962
Mineral Act of July 31, 1947
Mineral Leasing Act, Act of February 25, 1920
Mineral Leasing Act for Acquired Lands, Act of August 7, 1947
Mineral Resources on Weeks Law Lands, Act of March 4, 1917
Mineral Springs Leasing, Act of February 28, 1899
Mining Claims Rights Restoration Act of 1955, Act of August 11, 1955
Mining and Minerals Policy Act of 1970, Act of December 31, 1970
Multiple Use Mining Act of July 23, 1955
Multiple-Use Sustained-Yield Act of 1960, Act of June 12, 1960
National Environmental Policy Act of 1969, Act of January 1, 1970
National Forest Management Act of 1976, Act of October 22, 1976
National Forest Roads and Trails Act, Act of October 13, 1964
National Historic Preservation Act, Act of October 15, 1966
National Historic Preservation Act Amendments of 1980 and 1992, Act of December 12, 1980
National Trails System Act, Act of October 2, 1968
Native American Graves Protection and Repatriation Act
Occupancy Permits, Act of March 4, 1915
Organic Administration Act of 1897, Act of June 4, 1897
Payment in Lieu of Taxes Act
Petrified Wood, Act of September 28, 1962
Pipelines, Act of February 25, 1920
Preservation of Historical and Archaeological Data, Act of May 24, 1974
Public Land Surveys, Act of March 3, 1899
Public Rangelands Improvement Act of 1978, Act of October 25, 1978
Rehabilitation, Act of 1973, as amended
Renewable Resources Extension Act of 1978, Act of June 30, 1978
Research Grants, Act of September 6, 1958
Right of Eminent Domain, Act of August 1, 1888
Rural Development Act of 1972, Act of August 30, 1972
Safe Drinking Water Amendments on 1977, Act of November 16, 1977
Secure Rural Schools and Community Self-Determination Act of 2000
Sikes Act, Act of October 18, 1974
Sisk Act of 1967
Small Tracts Act, Act of January 22, 1983
Smokey Bear Act, Act of May 23, 1952
Soil and Water Resources Conservation Act of 1977, Act of November 18, 1977

Solid Waste Disposal (Resource Conservation and Recovery Act of 1976), Act of October 21, 1976
Supplemental National Forest Reforestation Fund, Act of September 18, 1972
Surface Mining Control And Reclamation Act of 1977, Act of August 3, 1977
Sustained Yield Forest Management, Act of March 29, 1944
Timber Export, Act of March 4, 1917
Timber Exportation, Act of April 12, 1926
Title Adjustment, Act of April 28, 1930
Toxic Substances Control Act, Act of October 11, 1976
Transfer Act, Act of February 1, 1905
Twenty-Five Percent Fund, Act of May 23, 1908
Uniform Federal Accessibility Standards (in accordance with the Architectural Act of 1968)
U.S. Criminal Code (Title 18, United States Code, Chapter 91, Public Lands), Act of June 25, 1948
U.S. Mining Laws (Public Domain Lands), Act of May 10, 1872
Utah Noxious Weed Act of 1994
Utah Wilderness Act of 1984
Volunteers in the National Forests Act of 1972, Act of May 18, 1972
Water Quality Improvement Act of 1965, Act of April 3, 1965
Water Resources Planning Act, Act of July 22, 1965
Watershed Protection and Flood Prevention Act of 1954, Act of August 4, 1954
Weeks Act Status for Certain Lands, Act of September 2, 1958
Weeks Act of 1911, Act of March 1, 1911
Wild and Scenic Rivers Act, Act of October 2, 1968
Wilderness Act of 1964, Act of September 3, 1964
Wildlife Game Refuges, Act of August 11, 1916
Wood Residue Utilization Act of 1980, Act of December 19, 1980
Woodsy Owl/Smokey Bear Act, Act of June 22, 1974
Youth Conservation Corps, Act of August 13, 1970

REGULATIONS

36 CFR 60	National Register of Historic Places
36 CFR 212	Forest Development Transportation System
36 CFR 213	Administration Under Bank-Jones Act
36 CFR 219	Planning
36 CFR 221	Timber Management Planning
36 CFR 222	Range Management
36 CFR 223	Sale and Disposal of NFS Timber
36 CFR 228	Minerals
36 CFR 241	Fish and Wildlife
36 CFR 251	Land Uses
36 CFR 254	Landownership Adjustments
36 CFR 261	Prohibitions

36 CFR 291	Occupancy and Use of Developed Sites and Areas of Concentrated Public Use
36 CFR 292	National Recreation Areas
36 CFR 293	Wilderness - Primitive Areas
36 CFR 294	Special Areas
36 CFR 295	Use of Motor Vehicles off Forest Development Roads
36 CFR 296	Protection of Archaeological Resources
36 CFR 297	Wild and Scenic Rivers
36 CFR 800	Advisory Council on Historic Preservation
40 CFR 1500-1508	Council on Environmental Quality

National Electrical Code
National Fire Code
Uniform Building Code
Uniform Mechanical Code
Uniform Plumbing Code

EXECUTIVE ORDERS

E.O. 11593	Protection and Enhancement of Cultural Environment
E.O. 11990	Protection of Wetlands
E.O. 11644/11989	Use of Off-Road Vehicles
E.O. 11988	Floodplain Management
E.O. 12113	Independent Water Project Review

BEST MANAGEMENT PRACTICES (BMPS) FOR THE STATE OF UTAH

Best Management Practices (BMPs) for the state are found in the *Utah Nonpoint Source Management Plan* (Bureau of Water Pollution Control 1989).

Additional direction for hydrologic modifications is found in the *Utah Nonpoint Source Management Plan for Hydrologic Modification* addendum, 1995 (Robinson 1995).

Additional direction for silvicultural activities is found in the *Utah Nonpoint Source Management Plan for Silvicultural Activities* addendum, 1998 (Silvicultural Addendum Subcommittee 1998).

GUIDANCE AND DIRECTION SPECIFIC TO THE UINTA NATIONAL FOREST

Colorado River Cutthroat Trout 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. April.

Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.

Raptor Research Foundation. 1996. Suggested practices for raptor protection on power lines: The state of the art in 1996. Edison Electric Institute: Washington D.C.

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, Montana. August.

U.S. Department of Agriculture. Forest Service. Intermountain Region. Date unknown. Soil quality standards and guidelines.

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U.S. Department of the Interior. Fish and Wildlife Service. 1998. Razorback Sucker (*Xyrauchen texanus*) recovery plan. Denver, Colorado.

———. 1999. June sucker (*Chasmistes liorus*) recovery plan. June.

———. 2002. Utah Field Office guidelines for raptor protection from human and land use disturbances: January 2002 update. Salt Lake City, Utah.

Utah Department of Natural Resources. Division of Wildlife Resources. 1997. Conservation agreement and strategy for Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*) in the state of Utah. Prepared by Leo Lentsch and Yvette Converse. Publication number 97-20. March.

———. 2000. Range-wide conservation agreement and strategy for Bonneville cutthroat trout (*Oncorhynchus clarki pleuriticus*). Leo D. Lentsch, Catherine A. Toline, Jeff Kershner, J. Michael Hudson, and Janet Mizzi. Publication number 00-19. December.

Utah Sage Grouse Working Group. 2001. Utah sage grouse conservation plan. Fourth draft. 12 March.

Utah Wilderness Act of 1984. 16 USC 1132.

APPENDIX B: MANAGEMENT INDICATOR SPECIES

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Table B-1. Management Indicator Species on the Uinta National Forest

Management Indicator Species		
Common Name	**Scientific Name**	**Management Indicator Community**
Northern goshawk	*Accipiter gentilis*	Aspen/conifer
Three-toed woodpecker	*Picoides tridactylus*	Conifer
American beaver	*Castor canadensis*	Riparian
Bonneville cutthroat trout	*Oncorhynchus clarki utah*	Aquatic
Colorado River cutthroat trout	*Oncorhynchus clarki pleuriticus*	Aquatic

APPENDIX C: RECOMMENDED RAPTOR BUFFERS

APPENDIX C: RECOMMENDED RAPTOR BUFFERS

Table C-1. Nesting Periods and Recommended Buffers for Raptors in Utah

Species	Spatial Buffer (miles)	Seasonal Buffer (month/day)	Incubation (# of Days)	Brooding (# of Days Post-hatch)	Fledgling (# of Days Post-hatch)	Post-fledgling Dependency to Nest (# of Days)[1]
Bald eagle	1.0	01/01-08/31	34-36	21-28	70-80	14-20
Golden eagle	0.5	01/01-08/31	43-45	30-40	66-75	14-20
Northern goshawk[2]	0.5	03/01-08/15	36-38	20-22	34-41	20-22
Northern harrier	0.5	04/01-08/15	32-38	21-28	42	7
Cooper's hawk	0.5	03/15-08/31	32-36	14	27-34	10
Ferruginous hawk	0.5	03/01-08/01	32-33	21	38-48	7-10
Red-tailed hawk	0.5	03/15-08/15	30-35	35	45-46	14-18
Sharp-shinned hawk	0.5	03/15-08/31	32-35	15	24-27	12-16
Swainson's hawk	0.5	03/01-08/31	33-36	20	36-40	14
Turkey vulture	0.5	05/01-08/15	38-41	14	63-88	10-12
California condor	1.0	NN[3]	56-58	5-8 weeks	5-6 months	2 months
Peregrine falcon	1.0	02/01-08/31	33-35	14-21	35-49	21
Prairie falcon	0.25	04/01-08/31	29-33	28	35-42	7-14
Merlin	0.5	04/01-08/31	28-32	7	30-35	7-19
American kestrel	NN[4]	04/01-08/15	26-32	8-10	27-30	12
Osprey	0.5	04/01-08/31	37-38	30-35	48-59	45-50
Boreal owl	0.25	02/01-07/31	25-32	20-24	28-36	12-14
Burrowing owl	0.25	03/01-08/31	27-30	20-22	40-45	21-28
Flammulated owl	0.25	04/01-09/30	21-22	12	22-25	7-14
Great horned owl	0.25	12/01-09/31	30-35	21-28	40-50	7-14
Long-eared owl	0.25	02/01-08/15	26-28	20-26	30-40	7-14
Northern saw-whet owl	0.25	03/01-08/31	26-28	20-22	27-34	7-14
Short-eared owl	0.25	03/01-08/01	24-29	12-18	24-27	7-14
Mexican spotted owl	0.5	03/01-08/31	28-32	14-21	34-36	10-12
Northern pygmy owl	0.25	04/01-08/01	27-31	10-14	28-30	7-14
Western screech owl	0.25	03/01-08/15	21-30	10-14	30-32	7-14
Common barn owl	NN[4]	02/01-09/15	30-34	20-22	56-62	7-14

Source: U.S. Fish and Wildlife Service, Utah Field Office. 2002. Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances (January 2002 update).

[1] Actual length of post-fledging dependency period to parents is longer than reported in this table. Reported dependency periods reflect the amount of time the young are still dependent on the nest site (i.e., they return to the nest for feeding).

[2] Direction specific to northern goshawk nest area protection on the Uinta National Forest is found in guidelines WL&F-8 and WL&F-10 and standard WL&F-9 in chapter 3 of this Forest Plan.

[3] NN=Not necessary.

[4] NN=Not necessary; due to apparent high population densities and ability to adapt to human activity, a spatial buffer is not currently considered necessary for maintenance of American kestrel or common barn owl populations. Actions resulting in direct mortality of individual birds or take of known nest sites is unlawful.

APPENDIX D:
RIPARIAN HABITAT CONSERVATION AREA CRITERIA

APPENDIX D:
RIPARIAN HABITAT CONSERVATION AREA CRITERIA

Riparian Habitat Conservation Areas (RHCAs) are areas within watersheds where riparian-dependent resources receive primary emphasis and management activities are subject to specific standards and guidelines. RHCAs include traditional riparian corridors, wetlands, intermittent streams, and other areas that help maintain the integrity of aquatic ecosystems.

Each perennial stream and waterbody on the Forest is in one of three RHCA classes: Class I, affording the highest level of protection; Class II, affording a high level of protection; or Class III, affording a moderate level of protection. This appendix explains the criteria for determining into which class each stream or waterbody is placed.

Table D-1. Riparian Habitat Conservation Area Criteria

Classification Criteria	Class I (300 foot buffer)	Class II (200 foot buffer)	Class III (100 foot buffer)
Along perennial streams identified as recovery streams for Bonneville or Colorado River cutthroat trout, regardless of the area's management prescription.	X		
Along perennial streams with adjacent populations of Ute ladies'-tresses (*Spiranthes diluvialis*).	X		
Perennial waterbodies in areas with management prescription 3.2, Watershed Emphasis.	X		
Perennial waterbodies within management prescription 3.1, Aquatic, Terrestrial, and Hydrologic Resources, not previously classified as a Class I RHCA.		X[1]	
Identified as a locally significant sport fishery, or provides important fish spawning habitat for reservoirs, or high riparian or fisheries potential.	X		
A moderate sport fishery, or moderate to high riparian or fisheries potential.		X	
Associated with major drainages where volumes of base water flows are at least 10 cubic feet per second (cfs).	X		
Associated with drainages where volumes of base water flows are 3 to 10 cfs.		X	
Used directly for culinary or municipal water.	X		
Within management prescription 2.1, Wild and Scenic Rivers - Wild, 2.2, Wild and Scenic Rivers - Scenic, 2.3, Wild and Scenic Rivers - Recreational, 2.4, Research Natural Areas, 1.4, Wilderness, or 1.5, Recommended Wilderness.	X		
Along waterbodies that are used indirectly for culinary or municipal water, or could indirectly affect management prescriptions 2.1, Wild and Scenic Rivers - Wild, 2.2, Wild and Scenic Rivers - Scenic, 2.3, Wild and Scenic Rivers - Recreational, 2.4, Research Natural Areas, 1.4, Wilderness, or 1.5, Recommended Wilderness.		X	
Within or directly adjacent to an outstanding local recreational resource (i.e., one that is significant to recreation users throughout northern Utah and is a destination site).	X		
Within or directly adjacent to a moderately important local recreational resource (i.e., most recreation users do not typically travel great distances to use this resource).		X	
Contains critical or limiting habitat for threatened or endangered species.	X		
Contains limiting habitat for a dependent Management Indicator Species (MIS).	X		
Characterized by excellent vertical and horizontal diversity as representative of the surrounding vegetation community.	X		
Characterized by good vertical and horizontal diversity as representative of the surrounding vegetation community.		X	
Presence of a Forest Service sensitive species.		X	
All perennial waterbodies not identified as Class I or Class II areas, and lands adjoining wetlands greater than one acre in size.			X
Lands that lie within 50 feet of seasonally flowing or intermittent streams, and wetlands less than one acre in size.			X

Note: Buffers are measured from each edge of the stream or waterbody. A 300 foot buffer would extend from each side of the stream, for a total RHCA width of 600 feet.

[1] Generally, streams in this management prescription were classified as Class I streams using the criteria brought forward from the Rangeland Ecosystem Amendment to the 1984 Forest Plan (USDA 1992). However, those streams that were not identified as recovery streams for Bonneville or Colorado River cutthroat trout were only given a buffer width of 200 feet on each side of the stream. This is the only situation where a Class I stream contains a buffer width other than 300 feet.

APPENDIX E: MAPS

Deer Winter Range (11 x 17”)

JPG (205 KB)

PDF (230 KB)

Elk Winter Range (11 x 17”)

JPG (205 KB)

PDF (229 KB)

Greater Sage Grouse Habitat (11 x 17”)

JPG (225 KB)

PDF (252 KB)

Lynx Analysis Units and Key Linkage Areas (11 x 17”)

JPG (197 KB)

PDF (161 KB)

Recreation Opportunity Spectrum (11 x 17”)

JPG (281 KB)

PDF (465 KB)

Over-the-snow Vehicle Use Opportunities (11 x 17”)

JPG (228 KB)

PDF (220 KB)

Visual Quality Objectives (11 x 17”)

JPG (286 KB)

PDF (478 KB)

Timber Suitability (11 x 17”)

JPG (188 KB)

PDF (287 KB)

Watersheds Where Wildland Fire Use is Restricted (8 ½ x 11”)

JPG (85 KB)

PDF (157 KB)

Management Prescriptions (24 x 18”)

JPG (1,069 KB)

PDF (6,086 KB)

APPENDIX F:
FINAL ANALYSIS OF THE MANAGEMENT SITUATION

INTRODUCTION

The Analysis of the Management Situation (AMS) is a compilation of information that describes implementation of the current Uinta National Forest Land and Resource Management Plan (also called the Forest Plan), as amended,[1] and resulting management conditions on the Forest. The AMS summarized here was developed through a comprehensive review of the 1984 Forest Plan. The AMS identified changed conditions and new information, including new public issues and changed public attitudes affecting the appropriateness of the existing management situation. The National Forest Management Act of 1976 (NFMA) required that an AMS be prepared when the 1984 Forest Plan was written. According to NFMA, the objectives of an AMS are:

- To determine the ability of the planning area covered by the Forest Plan to supply goods and services in response to society's demands,
- To determine the need to establish or change management direction,
- To provide a basis for formulating a broad range of alternatives for Forest Plan revision, and
- To define the range within which alternatives can be constructed.

A Preliminary AMS was released in August 1999. It summarized the current biological, physical, and social and economic conditions pertinent to the Forest. The AMS prepared in the early 1980s as part of the initial forest planning process was used as a source of baseline information to validate whether management direction in the current Forest Plan was effective in addressing needs identified in the 1980s. Additionally, information was used and cited from many other documents. A complete list of those sources is found in the References section at the end of the Preliminary Analysis of the Management Situation (USDA 1999g).

DETERMINING NEEDS FOR CHANGE

The final outcome of the AMS process is the identification of the needs for change to be addressed during the revision of the Forest Plan. In order to identify the needs for change in management direction on the Forest, a four-step process was initiated that considered national, regional, and local direction and strategies for natural resource management. This process included:

1. A review of monitoring items in Chapter IV of the 1984 Forest Plan,
2. A review of existing legislation, regulations, and Forest Service Manual policy and direction,

[1] Whenever the 1984 Forest Plan is referenced, it is implied that it is the 1984 Forest Plan, as amended.

3. A review of management direction in the 1984 Forest Plan, and
4. An assessment of existing conditions.

This process resulted in an initial list of needs for change. The Forest Plan Revision Team then compared this list against the six decisions made in Forest Plans to identify the topics that were planning-related and those that were project-level issues. The six decisions made in Forest Plans are listed below.

1. Establishment of forest-wide multiple-use goals and objectives, including a description of the desired future condition of the national forest as required by 36 CFR 219.11 (b).
2. Establishment of forest-wide management standards and guidelines to fulfill the requirements of 36 CFR 219.13 through 219.27.
3. Establishment of management areas and management prescriptions as required by 36 CFR 219.11 (c).
4. Establishment of lands suitable for the production of timber as required by 36 CFR 219.14.
5. Establishment of monitoring and evaluation requirements as required by 36 CFR 219.11 (d).
6. Recommendations to Congress of areas eligible for wilderness designation as required by 36 CFR 219.17 (a), and rivers eligible for inclusion in the National Wild and Scenic Rivers System as required by 16 USC 1271-1287, 36 CFR 297, and 47 FR 39454.

The Preliminary AMS released in 1999 documented this process and provided an initial identification of the areas where management direction in the Forest Plan needed to be changed or new direction established.

WHAT HAS CHANGED SINCE PUBLICATION OF THE PRELIMINARY AMS

Proposed new federal rules and regulations and internal agency-generated policy changes have occurred since release of the Preliminary AMS. These items have been considered and actions taken to incorporate applicable direction for natural resource management as appropriate. The following list details the specific items involved and how they have affected development of the revised Forest Plan. Additionally, two Forest Plan amendments have been completed and incorporated in the planning process for this revision.

LISTING OF THE CANADA LYNX AS A THREATENED SPECIES

On March 21, 2000, the U.S. Fish and Wildlife Service listed the Canada lynx in the contiguous United States as threatened under the Endangered Species Act of 1973. The lynx is found predominantly on federal lands, particularly in the western portion of the U.S. The U.S. Fish and Wildlife Service concluded that one threat to lynx in the contiguous U.S. is lack of guidance to conserve the species in current federal land management plans. The Forest Service has signed a Conservation Strategy that would affect the forest plans of forests containing lynx habitat.

The Uinta National Forest, in response to the lynx listing, identified two Lynx Analysis Units (LAUs) on the Forest based on potential habitat. These LAUs were incorporated into the Forest Plan revision with direction that they would be managed to ensure quality habitat is maintained for the species. Applicable standards and guidelines were developed to address the conservation agreement direction.

NORTHERN GOSHAWK AMENDMENT

This Forest Plan amendment, released in March 2000, was prepared to address potential impacts to this state of Utah sensitive species in an attempt to prevent the species from being listed as a threatened species. The amendment was incorporated into the Forest Plans for all six national forests in Utah.

The management direction developed for the Northern Goshawk Amendment was reviewed and included in the development of Forest Plan standards and guidelines for management activities on the Uinta National Forest, as appropriate.

UTAH FIRE AMENDMENT

This Forest Plan amendment, released in April 2001, was prepared to allow wildland fire use as a tool in areas of the forests, other than established wilderness areas, which may have wilderness fire plans in place. The intent is to move toward reestablishment of fire as a natural process in the ecosystem. Additionally, the Fire Amendment modified suppression strategies for fire management to allow flexibility in selecting the appropriate suppression response commensurate with the values/resources at risk, and resource management goals.

The revised Forest Plan incorporates appropriate direction from this amendment into the standards and guidelines. The amendment was also used to develop Desired Future Conditions (DFCs) for management areas and management prescriptions. Information from the amendment was utilized to identify urban/wildland interface area areas at risk and specify standards and guidelines to increase protection of these areas from wildland fire.

QUESTAR PIPELINE AMENDMENT

This Forest Plan amendment, released on July 5, 2001, adjusted the boundaries of the Payson Utility Corridor to allow construction of the Questar natural gas pipeline. Except at Pete Winward Reservoir, the new corridor parallels the existing pipeline alignment within the existing corridor. At the reservoir, the pipeline is routed along a different alignment for approximately 2,000 feet, until it rejoins the existing alignment. The new corridor route bypasses Pete Winward Reservoir. The decision did not change the special use permits for the existing natural gas pipeline.

The revised Forest Plan carried forward the change in the corridor location. The new alignment around the reservoir is included in Management Prescription 8.2, Utility Corridor/Communication Site Emphasis.

REVISED PLANNING REGULATIONS

Revised planning regulations released in November 2000 (USDA 2000g) required national forests that had initiated their revision under the 1982 Planning Regulations to complete their revision under the new regulations if they did not publish a Notice of Availability for their Draft Revised Land and Resource Management Plan in the Federal Register by May 9, 2000. The Uinta National Forest released their draft on May 5, 2000.

After extensive review, the 2000 planning regulations were never implemented as it was determined they would be difficult to implement and they did not clarify the programmatic nature of land and resource management planning (USDA 2002a, p. 72,770). In December 2002 a new proposed rule was published to improve on the 2000 rule. These most recent regulations are currently under review. Regardless of the status of these revised regulations, the Uinta has revised their Forest Plan under the 1982 regulations.

Although the new planning regulations have been delayed from implementation, the concepts of ecosystem-based natural resource management contained therein were considered and incorporated in the development of management direction contained in the goals and objectives, standards and guidelines, and desired future conditions for the Uinta National Forest. The Forest approached revision of the Forest Plan with an emphasis on ecosystems and the health of watersheds and associated resources. Management activities and various levels of multiple uses were considered appropriate within the capability of the resources to be maintained. Specifically, forest-wide goals were developed that: 1) emphasize providing biologically diverse, sustainable ecosystems that maintain or enhance habitats for native flora and fauna, forest rangeland health, and watershed health, and 2) provide clarification and emphasis for ensuring that suitable commodity uses would be provided in an environmentally-sustainable and acceptable manner to contribute to the social and economic sustainability and diversity of local communities.

To respond to the issue of effective and efficient monitoring, the Uinta National Forest has developed a monitoring and evaluation strategy that considered realistic budgets and workforce availability. Monitoring activities were designed to address ecosystem-related items, as well as accounting for forest outputs. Forest Plan amendments may be used to address changes in scientific knowledge that might affect how natural resources are managed on the forest, and respond to monitoring results to ensure that forest-wide and resource specific goals and objectives are being met.

TRANSPORTATION RULE

The Transportation Rule was released in January 2001 (USDA 2001c), but was in its draft stage in 1999 when the Uinta National Forest developed its Preliminary AMS. The rule outlined a process for development of roads management that focused on:

- Completion of scientifically-based road analysis procedures at appropriate scales and levels coordinated with other ecosystem analysis, which includes extensive public involvement at the local level,
- More careful consideration and screening of proposals for new roads,
- Consideration of available funding for maintenance and operation in new road construction decisions, and
- Emphasis on decommissioning or conversion of unneeded roads to other uses after analysis and public involvement at the local level.

In response to this rule, the Uinta National Forest has developed specific objectives tied to road management, including completion of an inventory and determination of future use for all roads on the Forest. This inventory and determination will be completed following approval of the revised Forest Plan through the Continuous Assessment and Planning (CAP) process.

ROADLESS AREA CONSERVATION RULE

The Roadless Area Conservation Rule (RACR) was released in November 2000, and the Record of Decision implementing the rule was signed in January 2001 (USDA 2001f). This rule provided specific direction for management and protection of inventoried roadless areas. In anticipation of this rule, the Uinta National Forest developed management direction that would have been consistent with the rule, and developed five of the six alternatives included in the Draft Environmental Impact Statement (DEIS) to be consistent with the proposed direction. Specifically, the draft revised Forest Plan proposed to place limits on timber harvest and road construction and reconstruction within inventoried roadless areas, and included standards and guidelines that specifically restricted development activities within inventoried roadless areas.

Following release of the DEIS and draft revised Forest Plan, the Forest Service was enjoined from implementation of RACR. As of the date of this printing, RACR has yet to be implemented. The Uinta National Forest originally designed five of the six alternatives included in the DEIS to be consistent with RACR: Alternatives B, C, D, E, F, and G. The Final Environmental Impact Statement (FEIS) retains the proposed direction for those original alternatives, and applies it to one additional public identified alternative (Alternative G). The proposed alternative, Alternative H, retains some of the intent of RACR, but allows minimal development to enable the Forest to address and implement ecosystem-based land management planning without undue restrictions on the types of tools available for initiating management activities (e.g., use of roads and timber harvest to affect needed changes).

TIMPANOGOS INTERAGENCY LAND EXCHANGE ACT

On December 6, 2002, the Timpanogos Interagency Land Exchange Act authorized the proposed exchange of 266 acres of federal land (including other federal lands not part of the Uinta National Forest) for 37 acres of non-federal land to allow for the construction of an interagency visitor center. The parcel that would be acquired is located at the mouth of American Fork Canyon in the city of Highland. The visitor center that will be constructed on the acquired land will house both the administrative office of the Pleasant Grove Ranger District and the visitor center and administrative office of Timpanogos Cave National Monument. This interagency approach between the Forest Service and the National Park Service will facilitate interagency coordination, better serve the public, and improve cost effectiveness.

Approximately 245 acres of the Uinta National Forest will be conveyed out of federal ownership upon completion of the exchange, while 37 acres will be added, resulting in a net decrease of 208 acres to the total Forest acreage. This act did not result in the exchange of any lands; rather, the act authorizes the proposed exchange to be initiated.

MOUNT NEBO WILDERNESS BOUNDARY ADJUSTMENT ACT

The Mount Nebo Wilderness Boundary Adjustment Act, signed by the President on December 16, 2002, authorized the adjustment of the Mount Nebo Wilderness Area boundary to exclude approximately 279 acres and incorporate 293 acres, resulting in a net increase of 14 acres to the wilderness area.

The Mount Nebo Wilderness Area was designated by Congress through the passage of the Utah Wilderness Act of 1984. The wilderness area boundary that had been recommended by the Uinta National Forest, however, was not the boundary adopted by Congress, which incorporated many non-conforming uses, including private land and city water developments which require maintained access. This act of 2002 excluded these areas from the wilderness, while incorporating areas on the southern end of the wilderness area that will provide a high quality wilderness experience.

The total acreage of the Forest was not affected by this act, but the distribution of acres by management prescription was changed. This legislation was enacted just prior to publication of this document, therefore, the adjusted boundaries and updated management prescriptions were not considered in the forest plan revision process nor are they reflected in any of the maps in this Forest Plan or the associated FEIS. Two management areas, Mona and Nephi, are affected by the adjustments; in the future the maps of these management areas will need to be corrected to reflect the new boundaries.

SUMMARY OF THE FINAL AMS

After assessing what new information and new strategies were needed to better manage National Forest System lands and resources, the Forest Plan Revision Team considered environmental conditions, historical use and occupancy of the Forest, and past and current inventories. Forest staff communicated with other agencies, Native American Tribes, and the public regarding the management and condition of National Forest System lands and resources. Through this communication, preliminary public issues and management concerns were identified.

Chapter 3 of the Preliminary AMS describes the implementation of the 1984 Forest Plan and resulting management conditions on the Forest. Additional detail and updated data are also available in the Affected Environment portions of Chapter 3 of the FEIS for the revised Forest Plan.

NEEDS FOR CHANGE

The needs for change were identified following an examination of the information discussed above. Each need for change was placed in one of three categories: appropriate for inclusion in the revision; able to be postponed and addressed at a later date through the Continuous Assessment and Planning (CAP) process; or not requiring attention. The following criteria were used in the process of review and identification applied to each need for change.

- Legally mandated revision topics,
- Topics where the existing Forest Plan poses problems in our ability to implement on-the-ground management due to conflicts between Forest Plan direction and generally accepted resource management practices,
- Topics where the Forest Plan is proving inadequate in its direction, or where clarification is needed to provide an umbrella under which project-level decisions could be tiered,
- Topics where improvements could be made in overall usability, providing clarification of minor points that are not otherwise posing barriers to Forest Plan implementation,

- Topics which do not fall under one of the six decisions made in a forest plan, but could be dealt with through Continuous Assessment and Planning (CAP) or site-specific analysis,
- Topics where direction could be improved but is not posing major barriers to Forest Plan implementation, and where addressing these topics would require more time and personnel commitment than is available to meet revision time frames. These topics would likely be dealt with through later Forest Plan amendments, and
- Topics where it was determined no change was necessary.

Only those needs for change that were considered appropriate for inclusion in the revision are discussed below. For a more complete discussion of all topics considered, refer to Chapter 4 of the Preliminary AMS. The needs for change that were included in the revision process and are presented below are divided into four categories: topics which must be addressed in the forest plan revision; topics where monitoring indicates existing direction is inconsistent with achieving forest plan, ecosystem management, or natural resource agenda goals; topics where the current forest plan insufficiently articulates management intent; and topics where corrections would not require significant revision resources.

Topics Which Must Be Addressed in the Forest Plan Revision

- Establish direction to provide interim protection for the four river segments eligible for the National Wild and Scenic Rivers System as required by the Wild and Scenic Rivers Act of 1968.
- Evaluate and consider recommending roadless areas for wilderness designation as required by Forest Service policy, federal regulations, and the Utah Wilderness Act of 1984.
- Reevaluate lands suited for timber production as required by the National Forest Management Act of 1976 (NFMA). More accurate technology will help assess and define land appropriate for timber management. Changes in land status and uses over the past 15 years will also be taken into account in determining suitability.
- Determine areas where change may be needed based on information from monitoring reports, insight from Forest Service employees, issues raised by the public and other government agencies, requirements in Forest Service Handbooks and Manuals, and employment of new direction and policy.

Topics Where Monitoring Indicates Existing Direction Is Inconsistent with Achieving Forest Plan, Ecosystem Management, or Natural Resource Agenda Goals

Experience in implementing the Forest Plan indicates existing management direction for the following topics is too limited or is inappropriate. Forest Plan direction could be changed on a project-by-project basis through various amendments; however,

addressing these topics through the revision would eliminate the need for several future site-specific amendments and would facilitate achievement of ecosystem management and Natural Resource Agenda goals.

- Revise timber practices by expanding the array of silvicultural systems and harvest methods that may be used.
- Eliminate the guideline that allows off-road and off-trail motorized vehicle use to retrieve legally-taken big game animals. This guideline is resulting in resource damage and is inconsistent with other local national forests and other Uinta National Forest policies.
- Expand management direction for areas of heavy dispersed recreation use by developing Limits of Acceptable Change (LAC) guidelines and using Meaningful Measures. Increased dispersed recreation is resulting in resource damage and user conflicts in some areas. LAC guidelines will determine the levels of unacceptable impacts to resources, while Meaningful Measures, another set of criteria developed by the Forest Service, will define recreation management objectives.
- Revise fuelwood harvest levels to more accurately reflect demand. The 1984 Forest Plan projected an annual fuelwood program of 18,000 cords, while the actual annual demand is approximately 1,000 cords.
- Update/revise the list of Management Indicator Species (MIS). Many of the current MIS are difficult to monitor accurately, and/or their population trends may be affected by factors other than forest management. A revised list will better indicate the effects of management activities on fish and wildlife.
- Shift emphasis from adding developed recreation capacity to managing and (when necessary) reconstructing existing developed recreation facilities. Inadequate funding and limited personnel have restricted both new construction and the expansion of existing facilities.
- Remove post and pole harvest objectives to provide post and poles to the public as a service. The limited post-and-pole-sized stands of timber that exist on the Uinta National Forest provide valuable wildlife habitat.

Topics Where the Current Forest Plan Insufficiently Articulates Management Intent

Experience has shown that the lack of specificity or direction in the following areas has hampered implementation of the Forest Plan. Addressing these topics, while not required, would provide the necessary over-arching framework to allow effective implementation of the Forest Plan.

- Refine management area boundaries to better reflect ecosystems on the Forest. Only seven management areas exist in the 1984 Forest Plan, and they are not directly related to ecological units such as watersheds. Eighteen management areas delineated by watershed are proposed.

- Define management prescriptions for each area on the Forest. The current Forest Plan only identifies general management prescriptions (management practices and intensities to be applied to an area) for large areas of the Forest. Twenty specific prescriptions divided into eight general themes are proposed for application on specific, defined areas of the Forest.
- Identify Desired Future Conditions (DFCs) for all ecosystems. A DFC describes the land, resources, and social and economic conditions that are expected for each management area in 50-100 years if certain objectives are achieved. As new management area boundaries are being proposed, new corresponding DFCs will be developed. Many of the current DFCs are vague or do not address all components of the ecosystem. The revised DFCs will be developed to address all affected ecosystems.
- Identify desired recreation environments using the Recreation Opportunity Spectrum (ROS). ROS is a framework for stratifying and defining different types of outdoor recreation environments, activities, and experience opportunities. The ROS allocations in the current Forest Plan are incomplete. Alternatives B, C, D, E, and F identify the ROS allocation for each area on the forest, and incorporate that information into the Desired Future Conditions (DFCs) for each management area.
- Identify desired scenery management objectives. The visual quality objectives in the 1984 Forest Plan are incomplete and outdated. The 1974 Visual Management System used in the Forest Plan was replaced in 1995 with the Scenery Management System (SMS). As fully implementing SMS is not feasible for this revision process given staffing and funding limitations, Alternatives B, C, D, E, and F will initiate SMS implementation by identifying the desired scenery management objectives across the forest.
- Delineate areas suitable for livestock grazing. The current Forest Plan identifies grazing capability and suitability in Animal Unit Months of forage (AUMs) instead of in acres. Additionally, the various alternatives delineate varying acreages as suitable. Alternatives A and F allow grazing on lands only where it is currently authorized. Alternatives B, C, and E classify two vacant allotments on the Pleasant Grove Ranger District and the Strawberry Project lands as not suited for grazing. Alternative D allows for grazing to be considered on the two vacant allotments dependent on demand, and the Strawberry Project lands dependent on resource conditions.
- Establish direction for managing cave resources. The Federal Cave Resources Protection Act of 1988 was implemented after the Forest Plan was approved. As the Forest Plan provides no direction for managing cave resources, Alternatives B, C, D, E, and F will incorporate direction for accessing and managing cave resources on the Forest. Management under Alternative A would be required to comply with the stipulations of the Federal Cave Resources Protection Act.

Topics Where Corrections Would Not Require Significant Revision Resources

Addressing these topics in the Forest Plan revision would simplify and clarify the intent of the Forest Plan and would not likely require significant resource expenditures.

- Remove administrative or procedural direction. Alternatives B, C, D, E, and F remove information that is redundant or is not related to land and resource management planning or one of the six decisions made in forest plans. This type of direction can be found in Forest Service Handbooks or Manuals or other reference materials.
- Correct typographical and description errors. These editorial corrections, clarifications, and updates will result in a more accurate Forest Plan.
- Correct and clarify direction for 3-pasture rest rotation. As currently written, the 3-pasture rest rotation is normally the only livestock management strategy that may be used. Clarification will show the 3-pasture rest rotation to be one of several management options.
- Clarify existing minerals standards and guidelines. The current Forest Plan standards and guidelines for minerals management do no specify if they refer to leasable, locatable, or salable minerals. Because management of these minerals is governed by different laws and regulations, Alternatives B, C, D, E, and F refine management direction to specify to which mineral resources they apply.
- Incorporate Best Management Practices (BMPs) for water and air quality standards. BMPs have been developed in cooperation with the Utah Department of Environmental Quality and other state and federal agencies as part of a statewide *Non-Point Source Management Plan for Silvicultural Activities* (Silvicultural Addendum Subcommittee 1998). This plan identifies standard management practices to reduce non-point source pollution from silvicultural activities.
- Remove direction for afforestation of oak woodlands. Past afforestation practices on the Forest have included the planting of tree species on oak sites where such species would not have established otherwise. Alternatives B, C, D, E, and F eliminate this direction and manage areas using vegetation native to the site.
- Eliminate objectives and implementation schedules that are not required. Many of the objectives and schedules in the existing Forest Plan are not required and are quickly out-of-date. Alternatives B, C, D, E, and F eliminate those objectives and implementation schedules that are not required by law or regulation.
- Update property management goals and terminology. Right-of-Way and Land Adjustment Plans for the Forest have been updated since the Forest Plan was completed. Alternatives B, C, D, E, and F incorporate the updated goals, objectives, and terminology from these plans.
- Remove direction allowing horse use during hunting season in all developed sites. The Forest Plan allowed this practice for the period of 1980-90, but gave

no direction for after 1990. This practice was discontinued after 1990. Alternatives B, C, D, E, and F eliminate this direction.

- Identify the Jumpoff Research Natural Area (RNA) and its management direction. Although the Chief of the Forest Service signed the Establishment Record designating the Jumpoff RNA in 1988, the Forest Plan was never amended to recognize the RNA. Alternatives B, C, D, E, and F identify the Jumpoff RNA and develop a corresponding management prescription and appropriate management direction.
- Differentiate standards from guidelines. The Forest Plan does not distinguish standards, which must be followed, from guidelines, which generally should be followed. Alternatives B, C, D, E, and F clearly identify standards and guidelines.
- Revise/correct the section describing amendment of the Forest Plan. It is made clear in Alternatives B, C, D, E, and F that Forest Plan amendments are needed only when one of the six decisions made in the Forest Plan must be adjusted. Currently, the Forest Plan implies that amendments are needed when the list of proposed projects must be altered.
- Eliminate redundant monitoring requirements. The Forest Plan requires many individual resource areas to monitor the same information, such as riparian habitat and water quality. Alternatives B, C, D, E, and F eliminate redundant monitoring.
- Correct the monitoring frequency for timber suitability. The Forest Plan incorrectly states that suitability is to be monitored every year, when it is only to be completed every 10 years.
- Update acreages and other “Current Situation” data in the Forest Plan. Alternatives B, C, D, E, and F update this section of the Forest Plan to reflect changes that have occurred since 1984 such as land adjustments, effects from the Central Utah Project (CUP), and natural events such as wildfire.
- Use People at One Time (PAOTs) instead of Recreation Visitor Days (RVDs) for developed recreation objectives. PAOTs are used to define capacity, while RVDs are used to define use; despite this distinction, the Forest Plan uses RVDs for both. As using PAOTs to define capacity is more accurate, Alternatives B, C, D, E, and F revise objectives for developed recreation capacity using PAOTs instead of RVDs.

NEEDS FOR CHANGE IDENTIFIED THROUGH PUBLIC COMMENT ON THE PRELIMINARY AMS

Many of the public comments confirmed the needs for change identified in the Preliminary AMS; however, a number of comments did not point toward a need for change in the management direction provided by the 1984 Forest Plan. Some comments expressed preferences as to the management direction implemented to address the needs for change, while others revealed concerns about the potential for

undesirable impacts of changes in Forest Plan direction as a result of the revision process. The full range of concerns expressed by the public, as well as the needs for change, were used to expand the issue statements in the Draft Environmental Impact Statement (DEIS) for the revised Forest Plan. These issue statements served to guide the development of various alternatives for the revision of the Forest Plan and/or were considered in the analysis of alternatives.

Needs for change that were submitted through the public comment process, but will not be addressed in this revision, are presented below. They have been categorized by the rationale for not including them in this revision.

Items Not Included Because Existing Forest Plan Direction Will Be Retained

Viability/Biodiversity:

- ***Reevaluate utilization standards for grazing in riparian areas and high value spawning tributaries to allow recovery of these habitats.*** Monitoring has not identified a forest-wide problem with existing standards, therefore, changing these standards was not identified as a need for change. However, the need for recovery or protection of these types of habitats is considered on an allotment-by-allotment basis through the allotment management planning process. If warranted, more stringent standards can be adopted through this process and still be consistent with the Forest Plan.
- ***Recommend the rate of change for riparian area condition be specified.*** As riparian area conditions vary by site, the time frames specified in the Rangeland Ecosystem Amendment will not be incorporated in the revised Forest Plan.
- ***Evaluate grazing against criteria for Properly Functioning Conditions (PFCs) of the rangeland.*** The NOI noted that direction for rangeland management would not be addressed. Direction from the 1992 Rangeland Ecosystem Amendment would be retained and brought forward in the revised Forest Plan. Evaluating grazing against PFC was not identified as a need for change.
- ***Assessments should be conducted to determine if Utah water quality standards are being met and whether grazing is consistent with riparian and spring protection measures. Appropriate best management practices should be applied if water quality or aquatic and riparian habitat conditions are less than desirable.*** Monitoring and assessment of water quality is ongoing and is a monitoring requirement in the current Forest Plan. State water quality standards are utilized and water quality data is shared with the State annually. The revised Forest Plan will incorporate revised best management practices. [See the first bullet under this section on page F-13 for related information.]
- ***End all predator control activities.*** USDA Wildlife Services, the federal agency responsible for conducting predator control, works in coordination with the Forest Service and the Utah Division of Wildlife Resources. Some predator populations are managed by the Utah Division of Wildlife Resources in accordance with the

hunting regulations of the state. The Predator Control Environmental Assessment for the Uinta National Forest was completed on February 20, 1991, at which time it was incorporated in the Forest Plan to provide direction on appropriate control methods, areas, and approval procedures. As no needs for change were identified regarding predator control, management will continue as in the current Forest Plan.

- ***Rehabilitation of populations and habitat for threatened or endangered species should have specific plans for recovery.*** Applicable measures in approved conservation strategies and/or recovery plans will be incorporated into the revision. Measures in draft conservation strategies and/or recovery plans will be considered for inclusion in the revision. If strategies and plans do not exist, conservation measures will be incorporated into the Forest Plan through Continuous Assessment and Planning (CAP) once conservation strategies and/or recovery plans become available.
- ***Incorporate the northern goshawk guidelines into the Forest Plan revision.*** On March 14, 2000, the Forest Plan was amended to incorporate the management direction from the Utah Northern Goshawk Project. This direction will be included in the revised Forest Plan.

Other:

- ***Identify areas suitable and available for energy development.*** The Forest Plan will determine availability for oil and gas leasing decisions for low to moderate potential areas of the Forest. Availability for moderate to high areas of the Forest made as a result of the Western Uinta Basin Oil and Gas Leasing EIS (USDA 1997b) will be brought forward in the Forest Plan revision except when inconsistent with land allocation decisions made in response to other issues.
- ***At least 85 rivers on this National Forest should be included in the National Wild and Scenic Rivers System. Wild and Scenic River suitability determinations should be made in the Forest Plan.*** An inventory of the rivers on the Uinta National Forest was completed in January 1998 in accordance with the National Wild and Scenic Rivers Act. Based on this inventory, four segments on the Uinta were found eligible for inclusion. The National Wild and Scenic Rivers Act allows for the suitability determination to be accomplished though a separate analysis conducted at a later date rather than as part of the Forest Plan revision. Until this analysis can be addressed through CAP, the revised Forest Plan will provide for protection of the eligible river segments until the suitability determinations can be made and, if appropriate, designations are accomplished.

Items Not Included Because They Are Outside the Scope of the Forest Plan Revision

Viability/Biodiversity:

- ***Suitability analyses of grazing allotments should be completed. Areas not suitable for grazing should be delineated and areas needing restoration***

should be rehabilitated. An analysis of lands suitable for grazing has be completed for each alternative considered in the revision. Designating the Strawberry Project lands and lands within two existing allotments on the Pleasant Grove Ranger District as not suited for domestic livestock grazing was identified as a need for change in the Preliminary AMS. Alternative A, D, and F classify the Strawberry Project lands as suitable for grazing, but closed for resource protection until vegetative conditions reach Desired Future Conditions (DFCs). Once DFCs are reached, the Strawberry Project lands would be made available for grazing. Also under these three alternatives, the two vacant allotments would remain open. Alternatives B, C, and E classify the Strawberry Project lands and the two vacant allotments as not suited for grazing. Although there are some localized areas needing rehabilitation and protection from grazing, monitoring (as summarized in the AMS) does not indicate a need for total allotment-wide removal of grazing. Therefore, widespread elimination of grazing was not identified as a need for change. Localized protection/rehabilitation needs are appropriately dealt with through the allotment management planning and allotment administration process.

- ***The Forest Plan should prohibit issuance of new grazing permits, and permit renewal should be given appropriate environmental analysis.*** Grazing permits are only re-issued after appropriate environmental analysis, except as provided for under H.R. 1375 (popular name – Rescission Bill, April 3, 1995) or other legislation. These analyses are outside the scope of the revision. Only Alternative D considers grazing on lands other than where grazing is currently authorized. Alternatives A and F restrict grazing to lands where grazing is currently authorized. Alternatives B, C, and E reduce the areas where grazing is authorized (see the previous bullet).
- ***Vegetative improvement projects focusing on ground cover densities and invasive species management should be considered in conjunction with grazing strategies.*** These are site-specific decisions and are outside the scope of the Forest Plan revision.
- ***Reduce the number of deer licenses.*** The State of Utah, not the Forest Service, has the authority for issuing deer licenses. This is outside the scope of the Forest Plan revision.
- ***Habitat for Threatened, Endangered, and Sensitive (TES) species should be permanently protected as a Habitat Sanctuary Preserve.*** Management prescription 3.3, Aquatic and Terrestrial Habitat Emphasis, will be proposed where appropriate to protect Threatened, Endangered, and Sensitive (TES) habitats.
- ***Recommend a no grazing and/or no logging alternative.*** Both of these alternatives were considered in the development of the 1984 Forest Plan. The revision is an update of the 1984 Forest Plan, and the scope of the revision is limited to areas identified (through analysis and experience with Forest Plan implementation) as needs for change. As explained in the AMS, the only need for change pertinent to this issue is classifying the Strawberry Project lands and

two allotments on the Pleasant Grove Ranger District as not suited for grazing. Alternative Z proposed to eliminate grazing and timber harvest activities but was eliminated from detailed analysis because it was outside the scope of the revision.

Recreation/Recreation Access:

- ***Fees for recreation use are appropriate and should be tailored to match the level of support by the Forest Service for maintaining these recreational opportunities.*** The Forest Plan identifies goals and objectives for land management and outlines environmental measures to achieve these goals; however, the Forest Plan does not prescribe administrative actions such as if and/or how fees should be assessed.
- ***Travel management (closure of specific trails, allocation of uses on trails, trail maps, signing, etc.).*** The Forest Plan revision will identify general areas of the Forest where various types of uses are appropriate (e.g., motorized verses non-motorized use). The Forest Plan does not make site-specific (i.e., travel route or trail specific) determinations as to which specific routes are open or closed: this determination is made through the travel management planning process. The travel management plan must be consistent with the broad area direction established in the Forest Plan, therefore, the travel management plan may need to be updated following revision to be consistent with the revised Forest Plan.
- ***Specific trail maintenance needs (e.g., relocate the Mud Hollow Trail, redesign the new Loafer Mountain Trail, etc.).*** The Forest Plan is a programmatic document and sets forest-wide and management area goals and objectives and environmental standards. These types of issues are site-specific and are not appropriate to address in the Forest Plan revision.
- ***Use of all-terrain vehicle registration fees.*** These fees are collected and administered by the State, not the Forest Service.
- ***Involve user groups in trail maintenance and law enforcement***. The Forest Plan is a programmatic document and sets forest-wide and management area goals and objectives and environmental standards. These types of issues (involving user groups) are administrative aspects of implementing the Forest Plan, but are not appropriate for inclusion in the Forest Plan itself.
- ***Inadequate law enforcement.*** The Forest Plan is a programmatic document and sets forest-wide and management area goals and objectives and environmental standards. The Forest Plan does contain an estimate of budget needs for such things as law enforcement, but the Forest Plan itself has a very limited ability to influence whether sufficient resources for law enforcement are funded.

Roadless/Wilderness:

- ***Issues related to the Roadless Area Conservation Rule (RACR).*** Although the rule, pending a final decision on implementation, impacts the decisions made in the Forest Plan, the analysis of the rule itself is outside the scope of the Forest Plan revision.
- ***Need to establish Wilderness Study Areas.*** The Forest Service has no Wilderness Study Areas in Utah. The proposed revision can recommend areas for wilderness, provide for the protection of those areas, and provide other forms of protection to preserve wilderness qualities in inventoried roadless areas.

Other:

- ***Need to maintain access to irrigation ditches and water collection systems.*** Maintaining access to these systems will be considered in determining land management allocations in the Forest Plan. At least one alternative will not close any roads. All alternatives will allow access in accordance with valid existing rights. In addition, these issues are addressed in the applicable special use permit.
- ***Control of cattle in Payson Canyon.*** This is a site-specific issue to be addressed through administration of the grazing permit and allotment management plan. Controlling cattle is outside the scope of the Forest Plan, which is a programmatic document that sets forest-wide and management area goals and objectives and environmental standards.
- ***Provide information on any cultural resource sites found in the Wasatch Range.*** In order to protect and preserve cultural resources, the location of cultural resource sites is protected information and may not be disclosed to the general public. However, in accordance with the National Historic Preservation Act and other pertinent laws, this information is shared with Tribal and State Historic Preservation Officers.
- ***Money collected at Payson Lakes should be made available to the city for the clean-up for which it is responsible.*** This is an administrative detail and is outside the scope of the Forest Plan, which is a programmatic document that sets forest-wide and management area goals and objectives and environmental standards.
- ***Requests for developments in specific areas (e.g., need for a developed site in the Pete Winward area, etc.).*** The Preliminary AMS discusses the recreation supply and demand situation and the Forest's experience in managing developed recreation areas. Based on this information, a need for change was identified to de-emphasize development of new developed recreation sites. Alternative A calls for additional development in some areas. Proposals for development outside of areas identified for developed recreation in the revision can still be proposed for development at a later time should funding become available. Proposals would be analyzed and, if adopted, the revised Forest Plan would be amended.

- ***Recommendations that the Forest Service abandon application of the Multiple-Use Sustained-Yield Act of 1960.*** Application of the Multiple-Use Sustained-Yield Act is law; the Forest Service will abide by this act.
- ***Management area boundaries should be extended beyond the boundaries of the National Forest.*** The Forest Service does not have the authority to regulate land use activities on non-National Forest System lands. Land management planning decisions on neighboring non-National Forest System lands will be considered, however, in order to avoid conflicting land allocations. Cumulative affects of proposed management practices on lands outside of National Forest boundaries are considered in the DEIS for this revised Forest Plan.

CONTINUOUS ASSESSMENT AND PLANNING (CAP)

The first round of planning in the early 1980s required that each forest build a plan from scratch. This effort required large budgets, many employees, and a great amount of time. It became a literally all-consuming task for the Forest Service. Now that the agency has begun the process of revising the first generation plans, the planning philosophy has evolved to fit the task at hand and the budget and work force available.

It is important to remember that the Uinta National Forest is proposing changes to a Forest Plan that has already been developed and implemented. In addition, ten amendments and two corrections to the Forest Plan have been made over the last 15 years.

Through development of the AMS, some topics were identified where existing management direction may need to be clarified, refined, or changed. However addressing these topics in the Forest Plan revision would require significant resources. These are topics where implementation can usually proceed and be consistent with existing Forest Plan direction. Additional, more specific direction can be developed and implemented through site-specific decisions for these topics and be within the decision space provided for in existing Forest Plan direction (i.e., no amendments would be necessary). These topics can be addressed using the principles of Continuous Assessment and Planning (CAP). More detail about the topics that will be addressed through CAP can be found in Chapter 4 of the Preliminary AMS.

APPENDIX G: NOTES

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