

CHAPTER 1

INTRODUCTION

1.1 PURPOSE AND NEED

1.1.1 PURPOSE

The purpose and scope of this document is to amend the Garfield County General Plan by creating a Resource Management Section addressing public land issues. It is intended, to the maximum extent allowed by law, to establish criteria, policies, and requirements to be met in the various federal land planning processes and to provide consistency across agency boundaries while preserving and enhancing the County's custom, culture, resources, and socioeconomic base. This Plan is based on objective science, public input, multiple use/sustained yield principles, a Recreation Opportunity Spectrum (ROS) process consistent with federal guidelines, Visual Resource Management (VRM) analysis, agency directives, procedures and standards applied in a consistent, objective, interdisciplinary manner across agency boundaries.

Garfield County bases its land use plan on quantifiable data, scientific information, and known science. Where land management agencies are developing land use plans, and where quantified data is not available, professional judgment must defer to policies and objectives outlined in the Garfield County Resource Management Plan. Where in the absence of quantifiable data, scientific facts, and known proven results, professional judgment is used to establish planning actions that are not in agreement with Garfield County's Plan, they are deemed to be inconsistent to the maximum extent allowed by law and are considered arbitrary and capricious.

1.1.2 NEED

Garfield County (Map 1.1) consists of various units of federal, state, local government and private lands. The federal, state and local government entities have various planning requirements conducted within the laws, regulations and procedures for each agency. No two entities' requirements are exactly identical. However, they all rely, to a greater or lesser extent, on the local government plan as a basis for a) consistency, b) preserving the health, safety, welfare, custom, culture, and heritage of an area and c) meeting the needs of local communities and the public at large. Some agencies are required – to the maximum extent allowed by law – to be consistent with local plans, and other agencies are required to give deference to such plans; but all agencies are required to coordinate their plans with local government.

In the past, federal agencies have been reluctant to include Garfield County as a full partner in the public lands planning process. Recently, Garfield County has taken a more active role in establishing baseline policies and communicating County needs in public land planning. That involvement has led the County to conclude that the Garfield County General Management Plan needs to be amended / augmented with a Resource Management Section to provide clear direction, objectives, goals, and criteria that can be applied consistently across agency boundaries and that can protect the custom, culture and welfare of Garfield County's visitors and residents while providing for the conservation, development, use and / or enjoyment of its resources.

As the only governmental entity with some level of jurisdiction and planning responsibility for

all lands within the planning boundaries, Garfield County needs all agencies, to the maximum extent allowed by law, to adopt the direction, objectives, goals, policies, and criteria identified herein. Findings documented in the General Management Plan and the Resource Management Section are baseline conditions for all analysis. Where existing law is silent on a particular issue or where an agency is given discretion, Garfield County's position must be given deference. If land managers feel alternate management scenarios are justified, detailed documentation needs to be provided and the County's concurrence needs to be sought. Absent such concurrence, and barring established law to the contrary, direction, objectives, goals, policies, and criteria identified in the County plans must be adopted.

1.2 DESCRIPTION OF PLANNING BOUNDARIES

The planning area consists of all lands located within the legally established boundaries of Garfield County. All lands within the County are considered, regardless of ownership. Legally established municipalities consist primarily of private lands and comprise a small percentage of the County's land base. Conditions in and impacts to municipalities are considered in the planning process. However, management direction for lands within municipal boundaries is deferred to the individual town or city.

1.3 PLANNING PROCESS

1.3.1 RELATIONSHIP TO OTHER PLANS

It is recognized that land managers conduct many programs that are beneficial to Garfield County. However, this plan is focused on areas in need of change. No attempt has been made to delineate the resources that are being appropriately managed. The plan is written in a genuine cooperative spirit of partnership that will meet the goals of public land management agencies and Garfield County while a) encouraging productive and enjoyable harmony between man and his environment, b) promoting efforts which will prevent or eliminate damage to the environment and biosphere, and c) stimulating the health and welfare of man.

For analysis purposes, the region of comparison is that area comprised by the State of Utah, the Colorado Plateau and Anasazi dwelling units. (Map 1.2)

1.3.2 MONITORING, MAINTENANCE, AMENDMENT, AND REVISION

Monitoring and Evaluation

The plan shall be monitored and evaluated at regular intervals based on the sensitivity of the resource to the decisions involved and shall consider whether there is a change in conditions or whether there is new data of significance to the plan. The County shall be responsible for monitoring and evaluating the plan at intervals not to exceed 5 years and at other times as appropriate to determine whether there is sufficient cause to warrant amendment or revision of the plan.

Plan Maintenance

The Garfield County Resource Management Plan and supporting components shall be maintained as necessary to reflect minor changes in data. Such maintenance is limited to further refining or documenting a previously approved decision incorporated in the plan. Maintenance shall not result in expansion in the scope of resource uses or restrictions, or change the terms,

conditions, and decisions of the approved plan. Maintenance is not considered a plan amendment and shall not require formal public involvement and coordination or the preparation of a completely new document. Maintenance shall be recorded in the plan and supporting records.

Amendment

The Garfield County Resource Management may be changed through amendment. An amendment may be initiated to consider monitoring and evaluation results, new data, new or revised policy, a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan. An amendment shall be made through a public process similar to that required for initial development of the plan. The effect of the amendment on the health and welfare of the County and its resources shall be considered. If the amendment is being considered in response to a specific proposal, the analysis required for the proposal and for the amendment may occur simultaneously. Approved plan amendments shall carry the same validity as if originally included in the plan.

Revision

Revision to the Garfield County Resource Management Plan will be conducted as follows:

Public			
Commission			
Proposed Change	Action	Comment	Approval
Current Setting	Plan Maintenance	No	Yes
Desired Conditions	Plan Amendment	Yes	Yes
Need for Management Change	Plan Amendment	Yes	Yes
Policies, Goals, Objectives, & Criteria	Plan Amendment	Yes	Yes
Findings	Plan Amendment	Yes	Yes
Land Use	Plan Amendment	Yes	Yes
Data Correction	Plan Maintenance	No	Yes
Appendix Information	Plan Maintenance	No	Yes
Appendix Augmentation	Plan Maintenance	No	Yes
Map Correction	Plan Maintenance	No	Yes
Grammar/Typographic	Plan Maintenance	No	No

Clarification of the intent, position, and/or policies contained herein shall be at the discretion of the County and may be provide upon request.

1.4 AUTHORITIES

In addition to authorities granted by the State of Utah to govern private lands within its boundaries, Garfield County asserts the Constitution of the United States has bestowed considerable power and authority to local governments which direct and influence the federal agency land use planning process for existing and future management of lands within federal agency boundaries. In the Federalist Papers: 45, James Madison discusses “alleged dangers” the federal government poses to state governments. Among other things the papers assure States of the following:

Within every district to which a federal collector would be allotted, there would not be less than thirty or forty, or even more, officers of different descriptions, and many of them persons of character and weight, whose influence would lie on the side of the State. The powers delegated by the proposed Constitution to the federal government are few and defined. Those which are to remain in the State governments are numerous and indefinite. The former will be exercised principally on external objects, as war, peace, negotiation, and foreign commerce; with which last the power of taxation will, for the most part, be connected.

The powers reserved to the several States will extend to all the objects which, in the ordinary course of affairs, concern the lives, liberties, and properties of the people, and the internal order, improvement, and prosperity of the State. The operations of the federal government will be most extensive and important in times of war and danger; those of the State governments, in times of peace and security. As the former periods will probably bear a small proportion to the latter, the State governments will here enjoy another advantage over the federal government.

Utah State Statute directs the development of county-level plans. Section 17-27a-401 of the Utah Code provides:

“...each County shall prepare and adopt a comprehensive, long range general plan.”

Specific components which are required to be addressed within these plans include: land use, transportation, environmental issues, public services and facilities, rehabilitation and redevelopment, economic concerns, recommendations for plan implementation, and "any other elements that the county considers appropriate".

In 2015, the Utah Legislature amended Title 17-27a-401 to also require that County General Plans include a “Resource Management Plan” to provide a basis for communicating and coordinating with the federal government on land and resource management issues. This Resource Management Plan is the fulfillment of those requirements.

Major federal laws that influence land planning in Garfield County include but are not limited to:

- The Federal Land Policy and Management Act (FLPMA)
- The National Forest Management Act (NFMA)
- The National Environmental Policy Act (NEPA)
- The Wild and Scenic Rivers Act (WSRA)
- The Endangered Species Act (ESA)
- Archaeological Resources Protection Act (1979)
- The Wilderness Act (1964)
- The National Trails Systems Act (1968)
- The National Historic Preservation Act
- The Data Quality Act
- The Regulatory Flexibility Act
- The Clean Air Act

- The Clean Water Act
- The Resource Conservation and Recovery Act

The federal government also recognizes the role of state, local and tribal governments in planning processes. Generally under NEPA's purpose of achieving productive and enjoyable harmony between man and his environment, CEQ Regulations, the U.S. Code, the Code of Federal Regulations and individual agency manuals direct and mandate federal agencies to consult, coordinate, and cooperate with state, local and tribal governments and to achieve the maximum possible consistency between federal and non-federal plans. Language in the authorizing statutes/documents is often identical for state and local governments and for tribal governments. Agency implementation guidance is also frequently identical for the three levels of non-federal government. However, some agencies provide greater detailed guidance for Native American Tribes, especially in Alaska. Wherever authorizing language is similar/identical, or absent specific federal law to the contrary, Garfield County adopts consistency, consultation, coordination and cooperation requirements as described in Executive Order 12866 and Executive Order 13175 identical for state, local and tribal entities.

1.4.1 NATIONAL PARK SERVICE

Garfield County contains three National Park Service (NPS) managed Parks and one National Recreation Area. The National Park Service was created on August 25, 1916 through its Organic Act located at Title 16 of the United States Code, and Garfield County's National Parks were later established "*for the expressed purpose to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.*" Glen Canyon National Recreation Area was established in 1972 "*in order to provide for public outdoor recreation, use and enjoyment of Lake Powell and lands adjacent thereto and to preserve scenic, scientific, and historic features contributing to public use of the area.*" The NRA's General Management Plan identifies maximizing the recreational experience and the number of opportunities for enjoying the area as one of its primary objectives. In determining what is an appropriate use of a National Park or National Recreation Area, NPS Planning and decision making procedures are used to engage interested governmental entities and the public. Processes also require the best scientific information must be considered.

The criteria for determining whether a particular use is appropriate in a park are set forth in the Federal Code. In applying the criteria, the responsible NPS Manager must use good judgment to ensure that uses will not create an unacceptable impact, be inconsistent with park purposes or values, unreasonably interfere with park programs or activities, disrupt the operation of park concessions or contractors, create an unsafe or unhealthful environment for visitors or employees, result in significant conflict with other appropriate uses, or diminish opportunities for current or future generations to enjoy park resources or values. In short, Park Service Managers have a great deal of discretion in the planning process, so long as it meets criteria mentioned above. This Resource Management Plan provides direction and standards for use in applying Park Service discretion.

Under NEPA's implementing regulations (40 CFR 1500 – 1508) and the Code of Federal Regulations (43 CFR Subtitle A Part 46.155), the NPS and other federal agencies are required to

consult, coordinate, and cooperate with State and local governments, to the fullest extent possible, concerning environmental effects of any federal action within the jurisdictions or related to the interests of the non-federal entities.

1.4.2 NATIONAL FOREST SERVICE

National Forests operate under the Department of Agriculture and have a similar obligation as Department of Interior agencies to comply with CEQ's implementing regulations for NEPA and other applicable federal law. Consistency, consultation, coordination and cooperation requirements are identified in federal statutes and regulations for states, local governments and recognized Native American tribes.

Furthermore, the National Forest Management Act obligates Forest Service land managers to provide for community stability including: a) establishing coordination procedures with the County prior to selection of a preferred alternative, b) coordinating with County planning efforts, considering alternatives in light of any conflicts with respect to County plans, c) displaying results of County plan reviews in environmental documents, and d) monitoring how the Forest Service Plan affects nearby communities.

Additionally, 16 U.S.C 1604 requires:

"...the Secretary of Agriculture shall develop, maintain, and, as appropriate, revise land and resource management plans for units of the National Forest System, coordinated with the land and resource management planning processes of State and local governments and other Federal agencies."

This Land Management Plan is prepared according to the National Forest Management Act (NFMA) and other laws and regulations. Current plans for the Dixie and Fishlake National Forest were approved in 1986. NFMA regulations require that each plan be revised at least every 15 years (36 CFR 219.7(a) (4)). The current revision is being prepared to meet that requirement.

1.4.3 BUREAU OF LAND MANAGEMENT

In addition to CEQ Regulations and the Code of Federal Regulations cited above, the Federal Land Policy and Management Act (FLPMA) also obligates the BLM to coordinate its land use plans with County plans, and take all practical measures to resolve conflicts between them as follows:

Section 202(a) - The Secretary shall, with public involvement and consistent with the terms and conditions of this Act, develop, maintain, and when appropriate, revise land use plans.

Section 202(c) - In the development and revision of land use plans the Secretary shall:

(1) use and observe the principles of multiple use and sustained yield set forth in this and other applicable laws.

(2) use a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences.

(9) to the extent consistent with the laws governing the administration of the public lands, coordinate the land use inventory, planning, and management activities of or for such lands with the land use planning and management programs of other Federal departments and agencies and of the States and local governments within which the lands are located ... considering the policies of approved State and tribal land resource management programs.

Subsection (9) goes on to state:

“Land use plans of the Secretary under this section shall be consistent with State and local plans to the maximum extent he finds consistent with Federal law and the purposes of this Act.”

Title VII, Section 701(a) is also important to this County Planning Revision in that it states, *“Nothing in this Act, or in any amendment made by this Act, shall be construed as terminating any valid lease, permit, patent, right-of-way or other land use right or authorization existing on the date of approval of this act.”*

1.4.4 JURISDICTION FOR HEALTH, SAFETY AND WELFARE

The United States Constitution is the most important document in American governance and is the source of all federal law. It is the cornerstone and the foundation upon which is built the relationship between the citizens and their government. The Constitution defines the rights, privileges and responsibilities of the people and limits government authority over the people. It is a contract between the people and the government. The people are bound by the laws of the government, and the government is bound by the provisions and principles of the Constitution.

Our government is one of enumerated powers, and it can only exercise powers granted to it. Article I of Section 8 grants to Congress the authority to make laws regarding specific subjects. The powers not specifically delegated to the United States by the Constitution, nor prohibited by it to the states, are reserved to the states or the people. Other laws may deal with matters not specifically considered in the Constitution, but no law, be it state or federal, can conflict with the Constitution.

The Tenth Amendment reserves the power not expressly given to the federal government in the Constitution to the States or to the people. In section 8 of Article I, *Exclusive* federal jurisdiction is established over forts and several other specifically defined federal facilities. Section 3 of Article IV gives Congress the power to make rules and regulations regarding the territory and other property belonging to the United States. However, the primary source of authority and jurisdiction for federal land management agencies is federal statutes. Some federal statutes (called enabling legislation) provide authority for specific federal agencies to adopt regulations to implement their statutory authority. Enabling legislation authorizes an agency to adopt regulations for those areas specified in the statute. Outside the limits set in its enabling legislation, a federal agency does not have authority to adopt regulations.

Jurisdiction over federal lands consists of a) what authority an agency has over lands under its management and b) the geographical limits of its authority, which are generally set at the

agency's boundaries. Along with other considerations, the method and terms of the acquisition of the property determine the type of federal jurisdiction that applies to that particular parcel of land. The basic types of federal jurisdiction are exclusive, concurrent, partial, and proprietary.

In areas of exclusive jurisdiction, only the federal government has law enforcement authority. This occurs when the federal government has received, through state legislative action (called "ceding" or "cession") all of the authority of the state on a certain tract of land contained within the state's borders. With exclusive jurisdiction, no reservations have been made to the state, except that state and local officers have the authority to serve criminal and civil process, such as arrest warrants, resulting from activities that occurred outside the area of exclusive jurisdiction.

Concurrent jurisdiction exists when both the state and federal governments have authority over a particular area. Usually this occurs when a state has ceded land to the United States, but has reserved to itself the right to exercise its state authority. In these jurisdictions, both the state and federal governments may enforce their respective criminal laws and prosecute those who violate their respective laws.

Partial jurisdiction occurs in areas where some of the jurisdiction normally held by the state is ceded to the federal government and some of the state's jurisdiction is retained. Those portions ceded to the federal government would be similar to exclusive jurisdiction; and those portions retained would be similar to proprietorial jurisdiction.

Proprietary jurisdiction is primarily state jurisdiction, with exceptions for federal laws of general application and federal laws and regulations specifically applicable to the particular type of land involved. Proprietary jurisdiction exists when the United States has acquired some right or title to an area within a state's borders, but has not acquired any measure of the state's authority over the area. In essence, the United States has rights generally equivalent to a private landowner. In these situations, state law applies within the proprietary area to the same extent that it does throughout the remainder of the state. However, under the Supremacy and Property Clauses of the United States Constitution, federal statutes or regulations enacted to protect these proprietary areas may also be enforced.

Jurisdictional status for lands managed the various federal agencies are maintained by the General Services Administration (GSA). GSA's formal responses to Freedom of Information Act Requests indicate the following jurisdictional classifications for federal lands in Garfield County:

<u>Entity</u>	<u>Jurisdiction</u>
Bryce Canyon National Park	Proprietorial
Capitol Reef National Park	Proprietorial
Canyonlands National Park	Proprietorial
Glen Canyon National Recreation Area	Proprietorial
Grand Staircase-Escalante National Monument	Proprietorial
BLM, Kanab Field Office	Proprietorial
BLM, Richfield Field Office	Proprietorial

There may be other federally owned lands that exist in Garfield County, but they are believed to be of minimal acreage when compared with the properties listed above. It is also believed that there may be a post office within Escalante Town limits that may be under exclusive jurisdiction. However, it is undeniable that the entities listed above are limited

1.4.5 COORDINATION, COOPERATION & CONSISTENCY

INTRODUCTION

Since the 1970s, Congress has required federal agencies to manage their lands through land use plans. These plans are park-wide, field office wide, district-wide or forest-wide documents that determine how the resources for a given area of Park Service, BLM or Forest Service land will be used and managed over an extended period of time. Typically, land use plans are scheduled for revision every 15 to 20 years, but often are in place for much longer periods of time. Federal land use plans provide the basis for on the ground actions an agency may take. Because of their far-reaching impact on both man and his environment, land use plans must be accompanied by an environmental impact statement (EIS) as required by the National Environmental Policy Act (NEPA).

Local governments also use land use plans to identify acceptable uses of lands within their boundaries. Congress has recognized local entities' health, safety, welfare, custom, culture, heritage and socio-economic wellbeing are intimately tied to the management of the surrounding federal lands and has recognized state's, local governments' and tribal governments' roles in the federal land use planning and management process. Federal agencies may have supremacy where federal law provides for specific jurisdiction, but many federal statutes recognize state responsibilities for air, water, roads, law enforcement, emergency services, noxious weeds, cultural resources, wildlife, solid & hazardous waste and other issues, in addition to local responsibilities for the health, safety and welfare of the citizens. And, where federal law is silent, state, local and tribal laws, plans, policies and programs may take precedence over discretionary federal actions. Federal statutes and regulations also require federal agencies to: a) achieve a productive and enjoyable harmony between man and his environment (often termed consistency with state, local and tribal plans, policies and programs); b) provide meaningful opportunities for cooperation between federal agencies and states, local governments and tribes; and c) coordinate federal actions with the plans, policies and programs of affected states, local and tribal governments. Moreover, counties are required by Utah law to oversee the economic, social, and general wellbeing of the people and resources within their jurisdictions and to provide general and resource management plans to serve as the basis for consistency, cooperation and coordination with federal agencies managing lands within the county's boundaries.

Aside from specific expectations for federal land management, local land use plans may also include information about an area's history, economic base, custom, culture, heritage, and traditional ethnographic uses (both extractive and recreational) on federal lands, as well as the local government's plans, policies and programs. Depending on the plan, a variety of other expectations, requirements and background information may be included. But ultimately, all local land use plans have the same purpose: to serve as an officially adopted baseline document

identifying acceptable management approaches on federal and non-federal lands within the local government's boundaries.

COORDINATION

Coordination is a congressionally mandated process that requires federal agencies to work with local governments to seek consistency and cooperation between federal land use planning actions and local land use plans and policies. Coordination requires federal agencies do more than just inform local governments of their future management plans and decisions, and it requires that federal agencies do more than merely solicit comments from local government entities. Coordination calls for negotiation on a government-to government basis that seeks to ensure officially approved local plans and policies are accommodated by planning and management decisions on federal lands. The mandate to coordinate comes from NEPA, CEQ Regulations, FLPMA, NFMA, NPS policy, and other federal guidance regulating planning activities of federal agencies.

Coordination is not limited to the process of bringing federal and local land use plans into harmony with each other. Coordination goes beyond comprehensive land use plans, both on the part of the local government and the federal agencies. Coordination also considers policies, resolutions, ordinances, and programs adopted by local governments which relate to the management of federal lands. Coordination requires an ongoing process in which a local government interacts with a federal agency on a regular basis to discuss anticipated management actions on federal land, and continually balances those actions against the local government's land use plan or policies. BLM statute, regulations, and applicable case law recognize that coordination applies to BLM management activities as well as to land use plans. Forest Service statutes and regulations explicitly recognize that coordination applies to land use plans, resource management plans and planning related to roads, trails and areas. Park Service regulations require information regarding the process used to coordinate with local governments as part of every environmental impact statement. And implementation of NEPA requires cooperative alignment of federal and non-federal programs.

Coordination is not optional. FLPMA and NFMA require the BLM and the Forest Service to coordinate land use planning actions with local government plans and policies. NEPA regulations adopted by the Department of the Interior have similar coordination requirements for NPS units (see National Park Service NEPA Handbook, 2015). However, the agencies' governing statutes and regulations explain coordination with varying degrees of detail.

FLPMA provides a detailed baseline for the coordination process and identifies at least four specific BLM actions: 1) Remain informed of local land use plans; 2) Guarantee that local land use plans are given proper consideration; 3) Attempt to resolve inconsistencies between local and BLM land use plans; and 4) Provide meaningful involvement for local entities early and throughout the decision making process.

Federal responsibilities regarding the Forest Service's coordination with local governments is less descriptive than explained in FLPMA. However, coordination with the Forest Service is still a substantive process. The Forest Service is explicitly directed in NFMA to coordinate with local governments, and the agency must engage in a process that involves some level of mutual

accommodation that is significantly more than a mere perusal of the local plan. NFMA does not specify how the process of coordination is to be accomplished, but the Forest Service is expected to engage in a meaningful process with local governments and to seek to harmonize local and Forest Service plans and decisions. Specifically, Forest Service regulations require:

- a) Responsible officials coordinate with local governments.
- b) Responsible officials shall review local plans and policies that are relevant to the federal plan. The review will consider the objectives of local plans, the compatibility and interrelated impacts between local and federal plans, opportunities to address impacts and contribute to joint objectives, and opportunities to resolve or reduce conflicts. This review must be included in the accompanying federal environmental document.
- c) The responsible official will not direct or control management of lands outside of the planning boundary.

Coordination between local government and the Forest Service must be a substantive process, and the federal agency should seek interaction with on a regular basis, share planning information as early as possible, and engage in a good faith effort to harmonize Forest Service plans with local land use plans and policies.

NPS coordination requirements are outlined in Department of Interior regulations implementing NEPA and in NPS specific guidance. NPS units and programs are expected to consult, cooperate, and coordinate with other federal, state, local, and tribal governments and other bureaus and federal agencies whenever possible (43 CFR 46.155).

Policy: Garfield County demands Coordination to the maximum extent allowed by federal law.

Finding: Garfield County finds Coordination is a basic process necessary for achieving the national policy of encouraging productive and enjoyable harmony between man and his environment.

COOPERATION

Cooperation between federal land managers and local governments is often related to *Cooperating Agency Status* as defined in Council on Environmental Quality Regulations implementing NEPA. These regulations apply to all federal agencies and recognize the special status of states, local governments and tribes. Statutes authorizing Cooperating Agency roles are identical for states, local governments and tribal governments and in some cases federal entities. Additional clarification has been added in the form of desk guides, handbooks, executive orders and court rulings. There is no known law requiring any differentiation between the various levels of eligible entities. Unless prohibited by law, Garfield County demands treatment as a Cooperating Agency equal to other federal entities, states and tribal governments.

In addition to providing meaningful involvement early and often through cooperating agency status, federal agencies are to harmonize their planning process with local plans, policies and programs as indicated by the companion terms of coordination and consistency. Read as a whole, congressional mandates clearly support local government's influence on federal planning processes.

Cooperating agency status only occurs in the context of specific environmental analysis conducted under NEPA and ends when the NEPA process is completed. Cooperating agencies are members of the interdisciplinary NEPA team, can recommend that the lead agency undertake certain scientific studies, and recommend existing research for inclusion in the analysis.

Policy: Unless prohibited by law, Garfield County demands treatment as a Cooperating Agency equal to other federal entities, states and tribal governments.

Policy: Garfield County demands Cooperation and inclusion as a Cooperating Agency to the maximum extent allowed by federal law.

Finding: Garfield County finds Cooperation is a basic process necessary for achieving the national policy of encouraging productive and enjoyable harmony between man and his environment.

Finding: Garfield County finds that cooperating agency status must be offered at the earliest possible date and prior to scoping. Earliest possible date means no later than when a federal agency initially considers an undertaking, when a federal agency identifies a project lead or members of an interdisciplinary team, or when an agency is notified of funding to perform an undertaking, whichever occurs first.

Policy: Garfield County demands meaningful involvement as a Cooperating Agency to the maximum extent allowed by federal law.

CONSISTENCY

Consistency between federal, state, local and tribal plans is the desired outcome for the coordination and cooperation processes required of federal agencies. It is unreasonable and contrary to law that federal agencies would attempt to manage federal lands interspersed with state and private lands without considering the impact federal actions have on other entities and without considering the impacts the non-federal agencies have on them. Two of the purposes of NEPA are: 1) encourage productive and enjoyable harmony between man and his environment; and 2) stimulate the health and welfare of man. In fact, the Merriam-Webster dictionary defines consistency as a) *agreement or harmony of parts or features to one another or a whole* and b) *harmony of conduct or practice with profession* (emphasis added). Harmony and consistency are synonymous and constitute the ability of an act to be completed without contradiction.

Local officials are charged with the responsibility of promoting and preserving the health, safety and welfare of their citizens – the “man” component of NEPA. Federal agencies are charged with the responsibility of managing land and resources – the “environment” component of NEPA. It logically follows, in order to achieve the national policy outlined in NEPA, federal plans must be consistent with non-federal plans unless authorized by laws circumventing NEPA. Congress further emphasized the national policy of consistency/harmony by requiring federal agencies to coordinate under FLPMA and NFMA and to cooperate under CEQ Regulations.

The failure of a federal plan or action to be consistent with a local land use plan can only be justified by reference to a resulting violation of federal law. In other words, where federal land use plans are inconsistent with local land use plans, the burden is on the federal agency to show how adhering to the local plan would result in a violation of federal law. Moreover, NEPA, federal regulations and agency directives clearly indicate consistency (or harmony) is a strong requirement in and of itself.

Finding: Garfield County finds the only/optimal way to comply with national policy of encouraging productive and enjoyable harmony between man and his environment established in NEPA is for federal agencies to be consistent (in harmony) with state, local and tribal plans to the maximum extent allowed by federal law.

Finding: Garfield County finds federal plans that are inconsistent with local plans – unless specifically mandated by federal law – violate national, statutory policy outlined in NEPA.

Policy: Garfield County will coordinate and cooperate with federal agencies to achieve consistency between federal and local plans in order to encourage and obtain the productive and enjoyable harmony between man and his environment outlined in NEPA.

Policy: Garfield County demands federal agencies achieve consistency between federal and local plans in order to encourage and obtain the productive and enjoyable harmony between man and his environment outlined in NEPA.

Policy: Garfield County adopts an “Equal, Not Subordinate” standard for coordination, cooperation and consistency associated with federal, state and local planning.

Finding: Garfield County finds and declares federal agencies that fail to achieve consistency with local plans, unless mandated to the contrary by specific federal statute, are in violation of NEPA and local law.

Policy: Where federal land use plans are inconsistent with local land use plans, the burden is on the federal agency to demonstrate how adhering to the local plan will result in a violation of federal law.

Policy: “Consistent” means federal plans will adhere to the terms, conditions, and decisions of officially approved and adopted local resource management plans, or in their absence, with policies and programs, subject to the provisions of federal law.

1.5 ENVIRONMENTAL CONSEQUENCES

The overriding authority for this planning effort is CEQ’s implementation of the National Environmental Policy Act which outlines significant federal requirements for consistency, consultation, coordination, and cooperation. In addition, NEPA requires federal agencies consider and document the cumulative impacts associated with all federal actions (in this case agency planning and implementation efforts by BLM, US Forest Service and the National Park Service) to include impacts to not only local land bases and environments, but also the economic and social impacts that will result from decisions arising from federal planning efforts.

The National Environmental Policy Act also requires that all major federal actions be subject to environmental analysis before they are undertaken to determine the consequences of the proposed action. The analysis must include direct, indirect and cumulative effects of the proposed actions and must consider a reasonable range of alternatives including a no action alternative. The process must also consider relevant state and local plans and provide meaningful involvement for state, local and tribal governments.

Over the past few decades federal land management practices and their associated environmental documentation have failed to properly incorporate consistency, consultation, coordination and cooperation and have failed to accurately account for negative impacts affecting the custom, culture, and socioeconomic viability of the County. In addition, these documents fail to consider the cumulative effects across agency boundaries and the total aggregate effect on County visitors and residents. This is evidenced by a declining enrollment in Garfield County Public Schools and the declining population in a State that is rapidly growing. Failure to accurately depict the socioeconomic impact of prescriptive land management decisions has resulted in the loss of traditional industries and a one-dimensional, recreation oriented economy. Although income derived from tourism has increased, revenues derived from recreation, especially from the lands reserved for primitive recreation, have failed to provide sufficient income to sustain families and local communities.

Federal agencies must accurately depict direct, indirect, and cumulative impacts across the entire County in their environmental analysis. Where Garfield County has established baseline figures, data, impact analysis, revenue rates, or other established positions regarding custom, culture, or socioeconomic information, the data must be used in environmental analysis. Agencies which fail to use the information or which substitute other findings without concurrence of Garfield County are inconsistent with the Garfield County General Management Plan, arbitrary, capricious, and fail to accurately depict environmental consequences of proposed actions.

Environmental analysis of proposed actions that are demonstrated to be inaccurate by more than 10% after three years should be reevaluated, reviewed, and revised in order to meet the intent of plan monitoring and maintenance. Failure to perform such re-evaluation processes constitutes a failure to monitor and maintain existing plans and is considered to be irresponsible agency action.

1.6 POLICIES

Finding: The powers delegated by the Constitution to the federal government are few and defined. Those which remain in the State government are numerous and indefinite. Any federal supremacy is strictly limited to that defined by the U.S. Constitution and federal law. Federal authority is also limited to the minimum authorized under the appropriate jurisdiction (exclusive, concurrent, partial, or proprietorial).

Finding: Garfield County's duly elected officers represent and speak for the local public to the maximum extent allowed by law.

Policy: It is Garfield County’s policy to maximize the health, safety, welfare, custom, culture, heritage and socio-economic well-being of the citizens and visitors of Garfield County.

Policy: It is Garfield County’s policy to maximize influence over federal agencies through consistency, cooperation and coordination.

Policy: It is Garfield County’s policy to demand consideration of cooperating agency status for all federal actions. Federal agencies are required to offer such status at the earliest possible time and before scoping. Garfield County finds “earliest possible time” means as soon as an agency considers an action and includes data gathering, NFMA, pre-NEPA, and other preliminary stages.

Policy: Garfield County finds meaningful involvement includes but is not limited to complete access to federal process consistent with interdisciplinary team membership; attendance at meetings; access to preliminary, draft and other documents; access to data, maps and reports; submission of information; and participation as a full partner in the agency environmental process.

Policy: Federal management plans and actions shall be consistent with state and local plans to the maximum extent allowed by law.

Policy: Although authorities among agencies may differ, all federal agencies shall perform discretionary functions consistent with Garfield County’s plan, program and policy to the maximum extent allowed by law.

Finding: All federal lands in Garfield County affect the County’s mission and responsibility for health, safety, welfare, custom, culture, heritage, and socio-economic well-being. Among other resources, air, water, wildlife, pollen, soil, wildlife, smoke, seeds, cultural resources, and paleontological resources do not confine themselves only to federal land. Activities that rely on resources including but not limited to hunting, rock hounding, fishing, recreation, mining, livestock grazing, sightseeing, and camping are intricately connected to public lands and impact the custom, culture and heritage of the County. Any action, activity, process or plan taken by federal land management agencies in Garfield County impacts the county and is subject to coordination, cooperation and consistency requirements.

Policy: Cooperating Agency Status is authorized in federal statute for states, local governments and tribal governments. There is no know law requiring differentiation between the various levels of non-federal entities. Garfield County demands treatment as a Cooperating Agency equal to other federal entities, states and tribal governments, until such time as it is prohibited by law.

Policy: Garfield County asserts jurisdiction by law and expertise on all federal projects within the county and files a permanent request for Cooperating Agency Status. There may be circumstances where the County chooses not to participate as a cooperating agency. Such instances will be identified on a case by case basis.

1.7 Severability: This Resource Management Plan shall be severable to the maximum extent allowed by law. Should any court, arbitrator or government agency of competent jurisdiction declare or determine any of the provisions of this RMP to be illegal, invalid or unenforceable, those provisions shall be severed and the remaining parts, terms or provisions shall not be affected thereby and shall remain legal, valid and enforceable.

SOURCES

National Environmental Policy Act
Glen Canyon National Recreation Area Enabling legislation
Homeland Security, FLETC, Legal Division Handbook, 2012
Report of The Interdepartmental Committee For The Study Of Jurisdiction Over Federal Areas Within The States, 1956
FLPMA
NFMA
National Park Service NEPA Handbook, 2015
43 CFR Part 46

CHAPTER 2

Resource Management

2.1 AUTHORITIES

This section is intentionally left blank. The plan complies with existing Federal, State, and local law as described in Section 1.4. A complete Authorities Section has not been completed. It is intended that the Authorities Section will be completed, subject to public comment, and adopted at some point in the future.

2.2 AIR QUALITY

This section is intentionally left blank. Management direction for this Resource / Resource Use has not been completed. It is intended that management direction for this Resource / Resource Use will be completed, subject to public comment, and adopted at some point in the future.

2.2 AIR QUALITY

Introduction

This section outlines the existing condition and management of air quality in the County. Air quality impacts and is impacted by several resources and potential resource uses. Visibility, air quality standards, and sources of pollution will be addressed in this section. This section will provide decision makers with a better understanding of the air quality in Garfield County and how air resources could be impacted from land use decisions. This section also identifies direction and information that serves as a baseline for consistency and coordination with Garfield County's plan, program and policy. This section contains the latest and best data available as of January 1, 2016. Should additional data become available it shall be submitted to Garfield County for confirmatory analysis. Baseline and background information will be updated as new information becomes available. Information in this section relies heavily on the 2015 Utah Division of Air Quality (DAQ) Annual Report. The report and this section are subject change as information becomes available.

Ambient air quality in Garfield County is not exceeding standards; visibility is typical of clear skies associated with remote areas in the western United States; and atmospheric deposition levels are below federal levels of concern

Current Setting

The Utah Division of Air Quality is responsible for regulating and monitoring air quality in Utah in compliance with the Clean Air Act (CAA), except where local regulations mandate more stringent standards. Measurements are typically taken only in urban areas where ambient pollution levels are expected to be the highest and where data is required to assess attainment status. No air quality monitoring stations are located in or near Garfield County. The closest monitoring stations are the Santaquin, Utah station and a recently developed site in Hurricane, Utah. Even in areas where air quality data is collected, the variability of site specific conditions creates uncertainty, subjectivity and generalizations regarding air quality over larger areas. Air quality can be impacted by precipitation, wind, temperature, topography along with a host of biogenic and human factors.

The Utah air quality rules define the Utah air quality program. Implementation of the rules requires the DAQs interaction with industry, local government agencies and the public. The state air quality program is responsible for the implementation of the federal standards under the CAA, as well as state rules for pollution sources not regulated by the CAA. Local governments are authorized under the CAA and have similar responsibilities within their jurisdiction. The CAA directs all federal agencies to comply with state and local air quality regulations to the extent they meet or exceed national standards and is administered by the U.S. Environmental Protection Agency (EPA) in coordination with state, local and tribal governments.

The CAA requires the EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment and allows state and local entities to set rules for pollution sources not regulated by the CAA. The CAA establishes two types of air quality standards: primary and secondary. Primary standards are set to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards are set to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

Standards are composed of a numerical value and a form. The form may be a statistical value, such as the 98th percentile calculation or a rolling average over a designated period of time that is then compared against the numerical value.

The EPA has established health-based NAAQS for six pollutants known as criteria pollutants. These are carbon monoxide, nitrogen dioxide, ozone, particulate matter, sulfur dioxide, and lead. Table 2.2.1 provides a brief description of each criteria pollutant and Table 2.2.2 provides a brief description of each criteria pollutant's primary and secondary NAAQS. The EPA establishes the primary health standards after considering both the concentration level and the duration of exposure that can cause adverse health effects. Pollutant concentrations that exceed the NAAQS are considered unhealthy for some portion of the population. At concentrations between 1.0 and 1.5 times the standard, while the general public is not expected to be affected by the pollutant, the most sensitive portion of the population may be adversely affected. However, at levels above 1.5 times the standard, even healthy people will see adverse effects. The DAQ monitors each of these criteria pollutants, as well as several non-criteria pollutants for special studies at various monitoring sites throughout the state.

Areas of the state that are not in compliance with the NAAQS are referred to as nonattainment areas. A maintenance area is an area that was once designated as nonattainment, and which subsequently demonstrated to the EPA statistically that it would attain and maintain a particular standard for a period of 10 years. Attainment areas meet NAAQS standards. Garfield County is designated as either attainment or unclassified with respect to National Ambient Air Quality Standards for all criteria pollutants.

In addition to classification under the NAAQS, air quality is managed to prevent significant deterioration (often referred to as PSD). Significant deterioration is defined in terms of a system of area classifications and permissible concentration increases called increments. The maximum allowable increases in concentrations in Class I, Class II, and Class III areas are those increments specified in Utah Air Conservation Rule R307-405-4. In Class I areas, which

are the most highly protected areas, only small increases in predicted PM₁₀, SO₂, and NO₂ concentrations are permitted. In Class II areas, larger concentration increases would be permitted. Class III areas, which are the least protected, assure that any increase will not result in concentrations that are higher than the lowest applicable NAAQS. PSD also requires that certain new, major stationary sources and major modifications be subject to a preconstruction review, which includes an ambient air quality analysis. The process of reviewing proposals to construct major new sources or modifications is the principal means of carrying out the PSD program. Sources having emissions below the PSD major source threshold are subject to New Source Review (NSR) permitting with the State of Utah. Such sources are required to demonstrate that they will not cause or contribute to a violation of the ambient air quality standards (Utah Air Conservation Rule R307- 405-6).

Much of Garfield County and many of the surrounding lands have been designated as a Prevention of Significant Deterioration (PSD), Class II Airsheds. This classification permits moderate deterioration that normally accompanies well-controlled growth. National Parks and designated Wilderness are identified by EPA as mandatory Class I Airsheds and are subject to restrictions on allowable air quality deterioration. The Box-Death Hollow Wilderness, Capitol Reef National Park, Canyonlands National Park, and Bryce Canyon National Park are designated Class I Airsheds.

Table 2.2.1 EPA Designated Criteria Pollutants

Name	Sources	Health Effects	Welfare Effects
Carbon Monoxide (CO); a clear, colorless, odorless gas	Burning of gasoline, wood, natural gas, coal, oil, etc.	Reduces the ability of blood to transport oxygen to body cells and tissues. May be particularly hazardous to people who have heart or circulatory (blood vessel) problems and people who have damaged lungs or breathing passages.	
Nitrogen Dioxide (NO ₂) (one component of NO _x); smog-forming chemical	Burning of gasoline, natural gas, coal, oil, and other fuels; Cars are also an important source of NO ₂ .	Can cause lung damage, illnesses of breathing passages and lungs (respiratory system).	Ingredient of acid rain (acid aerosols), which can damage trees, lakes, flora and fauna. Acid aerosols can also reduce visibility.
Ozone (O ₃) (ground-level ozone is the principal component of smog)	Chemical reaction of pollutants; Volatile Organic Compounds (VOCs) and NO _x .	Can cause breathing problems, reduced lung function, asthma, irritated eyes, stuffy noses, and reduced resistance to colds and other infections. It may also speed up aging of lung tissue.	Can damage plants and trees; smog can cause reduced visibility.

Particulate Matter (PM ₁₀ , PM _{2.5}); dust, smoke, soot	Burning of gasoline, natural gas, coal, oil and other fuels; industrial plants; agriculture (plowing or burning fields); unpaved roads, mining, construction activities. Particles are also formed from the reaction of VOCs, NO _x , SO _x and other pollutants in the air.	Can cause nose and throat irritation, lung damage, bronchitis, and early death.	Main source of haze that reduces visibility.
Sulfur Dioxide (SO ₂)	Burning of coal and oil (including diesel and gasoline); industrial processes.	Can cause breathing problems and may cause permanent damage to lungs.	Ingredient in acid rain (acid aerosols), which can damage trees, lakes, flora and fauna. Acid aerosols can also reduce visibility.
Lead (Pb)	Paint (houses, cars), smelters (metal refineries); manufacture of lead storage batteries; note: burning leaded gasoline was the primary source of lead pollution in the U.S. until the federal government mandated unleaded gasoline.	Damages nervous systems, including brains, and causes digestive system damage. Children are at special risk. Some lead-containing chemicals cause cancer in animals.	Can harm wildlife.

Table 2.2.2 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	Primary/Secondary	Standard	Form
Ozone (O ₃)	8 Hour	Primary Secondary	and 0.070 ppm	Annual fourth-highest daily maximum 8-hr concentration, averaged over three years
Respirable Particulate Matter (PM ₁₀)	24 Hour	Primary Secondary	and 150 µg/m ³	Not to be exceeded more than once per year on average over three years
Fine Particulate Matter (PM _{2.5})	24 Hour	Primary Secondary	and 35 µg/m ³	98th percentile, averaged over three years
	Annual	Primary Secondary	12 µg/m ³ 15 µg/m ³	Annual mean, averaged over three years Annual mean, averaged over three years
Carbon Monoxide (CO)	1 Hour	Primary	35 ppm	Not to be exceeded more than once per year
	8 Hour	Primary	9 ppm	Not to be exceeded more than once per year
Nitrogen Dioxide (NO ₂)	1 Hour	Primary Secondary	and 0.1 ppm	98th percentile, averaged over three years
	Annual	Primary Secondary	and 0.053 ppm	Annual Mean
Sulfur Dioxide (SO ₂)	1 Hour	Primary	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over three years
	3 Hour	Secondary	0.5 ppm	Not to be exceeded more than once per year

Lead (Pb)	Rolling 3 month average	Primary Secondary	and 0.15 µg/m ³	Not to be exceeded

The Division of Air Quality Air Monitoring Section operates a network of monitoring stations throughout Utah. The monitors are generally situated in nonattainment areas or areas of concern and are established to measure air quality in both neighborhoods and industrial areas. Monitoring stations are established in Santaquin, and Hurricane, but no monitoring stations are operated by DAQ that provide reliable data for Garfield County. Some park service units conduct specialized air quality monitoring, but given the vastness of the County, data is insufficient to accurately describe county wide or site specific conditions. The following paragraphs describe criteria air pollutants measured by DAQ and managed by federal, state and local authorities.

Carbon Monoxide (CO)

Carbon monoxide is a colorless and odorless gas formed by the incomplete combustion of carbon-based fuel. In urban areas carbon monoxide is primarily produced from on-road motor vehicle emissions. However, in rural areas, wild and prescribed fire have been known to produce as much CO as the annual emission of all of the vehicles in that state. Other significant sources of carbon monoxide emissions can be wood burning stoves and fireplaces. Smaller emissions come from industrial facilities, construction equipment, miscellaneous mobile sources and other types of space heating. Because motor vehicle emissions are not as concentrated as urban areas and there are few sources of industrial emissions, the greatest potential for major sources of carbon monoxide in Garfield County are forests and woodlands that are subject to wildland and prescribed fire.

Nitrogen Dioxide (NO₂)

During high temperature combustion, nitrogen in the air reacts with oxygen to produce various oxides of nitrogen, or NO_x, a reddish-brown gas. One of the oxides of nitrogen, NO₂, is a criteria pollutant. Oxides of nitrogen react with other air contaminants to form other criteria pollutants. In the summer along the Wasatch Front, and in the winter in the Uinta Basin, photochemical reactions between NO₂ and VOCs lead to the formation of ground-level ozone. In the winter, NO₂ reacts with ammonia to form fine particulate matter (PM_{2.5}). Both of these seasonal scenarios can result in increased pollution. Utah continues to struggle with both the ozone and particulate matter standards in some areas of the state off the Wasatch Front. Garfield County and the DAQ are mindful of NO₂ trends in emissions and continue to express concern over future actions, especially federal Ozone requirements.

Ozone (O₃)

Ozone is a clear, colorless gas composed of molecules of three oxygen atoms. Ground level ozone can be inhaled and is considered a pollutant. Ground-level ozone should not be confused with the stratospheric ozone layer that is located approximately 15 miles above the earth's surface and shields the earth from cancer-causing ultraviolet radiation. Ground level ozone is formed by a complex chemical reaction involving VOCs and oxides of nitrogen in the presence of sunlight.

Ozone production is a year-round phenomenon. However, the highest ozone levels generally occur during the summer when strong sunlight, high temperatures, and stagnant meteorological conditions combine to drive chemical reactions and trap the air within a region for several days. There are unique circumstances where high ozone levels can occur during the wintertime. In Utah, wintertime ozone is associated with temperature inversions and snow cover. Research is on-going to better understand the chemical processes that lead to wintertime ozone production.

Major sources for VOCs and NO_x are often vehicle engine exhaust and emissions from industrial facilities. However Garfield County's VOC emissions are approximately 125% of similar pollutants in Salt Lake County. Almost all of the VOCs in Garfield County are emitted from biogenic sources such as vegetative growth.

Particulate Matter (PM)

Regulated particulate matter is a complex mixture of extremely tiny particles of solid or semi-solid material suspended in the atmosphere and is divided into two categories: PM₁₀ and PM_{2.5}. PM₁₀ is a particulate less than ten micrometers in diameter, which is about one-seventh the width of a strand of human hair. PM_{2.5} is fine particulate that measures 2.5 micrometers in diameter or less. The coarse fraction of PM₁₀, that which is larger than 2.5 microns, is typically made up of "fugitive dust" (sand and dirt blown by winds from rangelands, roadways, fields, and construction sites. Primary PM_{2.5} is directly emitted into the atmosphere from combustion sources such as power plants, cars and trucks, wildland and prescribed fire, fireplaces, and woodstoves. These particles are so small that they can become imbedded in human lung tissue, exacerbating respiratory diseases and cardiovascular problems. Other negative effects are reduced visibility and accelerated deterioration of buildings.

The majority of Utah's PM_{2.5} is called secondary aerosol, meaning that it is not emitted directly as a particle, but is produced when gasses such as Sulfur Dioxide (SO₂), NO_x, and VOCs react with other gasses in the atmosphere, such as ammonia, to become tiny particles. The smallest of particles that make up PM_{2.5} are major contributors to visibility impairment in both urban and rural areas. The DAQ currently operates PM₁₀ and PM_{2.5} monitors throughout the state to assess the ambient air quality with respect to the standards for both PM₁₀ and PM_{2.5}. However, no state monitoring stations are located in Garfield County, and data identifying background PM₁₀ and PM_{2.5} is not available.

Sulfur Dioxide (SO₂)

Sulfur dioxide is a colorless gas with a pungent odor. In the atmosphere, sulfur dioxide is easily converted into sulfates, which are detected as particulates. It is also converted into sulfuric acid, the major acidic component of acid rain. It is emitted primarily from stationary sources that burn fossil fuels (mainly coal and oil) such as power plants and refineries. SO₂ is also a byproduct of copper smelting. Diesel fuel and, to a lesser extent, gasoline contain sulfur and are considered contributors to sulfur dioxide in the atmosphere. Garfield County contains no significant sources of SO₂ emissions.

Lead (Pb)

Lead in the ambient air exists primarily as particulate matter in the respirable size range. Historically, the major source of lead emissions came from the burning of gasoline. However,

because leaded gasoline for automobiles was completely phased out in the U.S. by the end of 1995, lead from gasoline is no longer a significant problem. Currently, the primary source of lead emissions in Utah is the extraction and processing of metallic ores. Exhaust from small aircraft is another source of lead emissions in the state.

Utah has not exceeded the health standard for lead since the late 1970s, and the EPA authorized the discontinuation of lead monitoring in Utah in 2005; however, in both 2008 and 2010, the EPA set new monitoring requirements for lead. The DAQ now monitors for lead at one point source site and one urban non-source monitoring location. Data indicates a continued downward trend of lead emissions.

Every three years, the DAQ collects information about the quantity and characteristics of the various air pollutants released by all emission sources in the state. In addition to these triennial inventories, emissions information is also collected annually from the largest industrial sources. Once collected, the inventory information is reviewed, quality assured, analyzed, stored in the DAQ data system, and made available to the public. The DAQ uses this emissions information to review trends over time, as input data for air. Emission inventories are typically organized into three types of sources: Point, Area, and Mobile.

Point sources are large stationary industrial or commercial facilities such as power plants, steel mills, and manufacturing facilities that emit more than 100 tons per year of a regulated pollutant or are on a list of sources the EPA has determined need to be tracked closely. Air pollutants released from these stationary sources are accounted for on a facility-by-facility basis.

Area sources are generally much smaller stationary sources, and due to their greater number, are generally accounted for as a group. However, as the federal air quality standards become more restrictive, it is becoming necessary to start tracking emissions more closely from smaller industrial sources. In the future, pollution from sources of less than 100 tons per year will be tracked similar to the large point sources. Wildland and prescribed fire and biogenic emissions from vegetation are the largest area sources in Garfield County. Home heating, agricultural burning and harvesting, construction, residential and commercial energy generation, are examples of other area source categories.

Mobile sources consist of emissions from non-stationary sources such as cars, trains, and aircraft. Mobile emissions are further broken down into on-road mobile and off-road mobile categories. On-road mobile sources primarily consist of personal and commercial cars and trucks, and contribute by far the largest part of the mobile source emissions. Off-Road Mobile sources consist of a diverse group of heavy construction equipment, small engines (lawnmowers and snow blowers), trains, and aircraft. Estimating emissions from mobile sources requires an understanding of the various emission characteristics of the many types of vehicles and model years that make up the fleet, an understanding of how and where they are driven, and the distances they travel.

The 2011 triennial inventory is the most recent statewide inventory available. The 2014 triennial inventory will be compiled and made available near the end of 2016. The triennial inventory covers over 550 individual point sources, 133 area sources, and 12 mobile on-road and off-road sources. Table 2.2.3 shows total emissions, by county, of the criteria pollutants, CO, NO_x, PM₁₀, PM_{2.5}, SO_x, and VOCs. Data and figures contained in the Statewide Annual Report should not

be compared to the inventories used in the PM_{2.5} or other SIPs, which are seasonal and area specific. Biogenic and wildfire emissions produced from natural activities are usually estimated as segments within the area source category, but detailed data for these unique pollutants is not available.

In 2012, the EPA approved Utah's Smoke Management Program, which is a key element of the Regional Haze SIP that was required under the CAA. Utah is required, under the approved plan, to manage planned burning in a manner that protects air quality and ascertains air quality impacts locally and regionally. Currently, state and federal land managers attempt to manage air quality prior to controlled burns, but have not developed reliable means or data to accurately assess fire related impacts. For wildfires, many occurring outside Garfield County, no pre-fire or post fire efforts exist to manage air quality.

Any new or modified source of air pollution in Utah is required to obtain an Approval Order (AO) before it is allowed to begin construction. For areas that are not in compliance with the NAAQS, an NSR assures that air quality is not further degraded from the existing levels by new emission sources. In areas that are in compliance with the NAAQS, an NSR assures that new emissions do not significantly worsen air quality. These processes are outlined in both state and federal rules.

Table 2.2.3. 2011 Triennial Inventory (tons/year)

County	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC
Beaver	13,876.11	2,078.78	2,654.91	435.75	75.43	26,490.32
Box Elder	40,011.70	7,365.61	10,313.27	2,121.20	163.36	38,770.82
Cache	22,510.87	3,842.06	10,853.50	1,646.53	171.90	13,437.44
Carbon	11,115.87	7,152.88	4,676.13	1,151.84	8,381.46	17,875.37
Daggett	3,858.12	1,324.00	604.13	94.49	2.42	8,386.19
Davis	38,461.71	9,368.20	7,601.20	1,806.84	474.24	12,718.38
Duchesne	19,793.48	11,934.27	6,911.63	1,081.65	144.44	57,798.47
Emery	30,834.95	22,211.84	5,390.12	1,133.08	7,245.87	36,804.91
Garfield	23,180.30	1,056.79	2,717.87	506.42	16.81	44,847.92
Grand	22,148.98	3,124.67	1,831.09	445.87	26.76	37,252.92
Iron	26,642.81	4,254.25	6,178.28	1,177.85	166.82	37,643.98
Juab	18,322.63	3,319.29	2,845.94	567.19	94.11	26,898.15
Kane	22,008.49	1,264.25	2,226.77	358.35	22.42	43,727.23
Millard	35,525.31	33,160.33	7,269.87	1,889.21	5,084.95	51,878.47
Morgan	5,963.71	2,581.89	2,898.26	377.24	385.47	7,401.38
Garfield	6,527.57	309.09	838.20	145.77	6.43	8,931.86
Rich	7,018.27	547.32	1,421.66	274.58	8.66	8,961.72
Salt Lake	145,225.46	31,940.71	31,873.80	6,747.42	4,207.51	35,626.08
San Juan	36,430.76	3,051.58	6,673.49	952.28	53.40	85,753.34
Sanpete	10,699.55	1,515.50	5,847.13	790.96	85.02	15,801.64
Sevier	12,780.24	2,092.08	6,756.62	916.45	91.36	18,106.24
Summit	15,065.71	4,465.99	7,736.40	1,144.95	215.35	18,903.71
Tooele	37,605.71	8,243.43	8,057.50	2,359.79	223.87	45,444.17
Uinta	26,282.06	12,347.51	9,546.65	1,419.76	228.44	109,809.23

Utah	63,420.55	14,612.66	12,551.21	3,045.32	426.02	30,939.27
Wasatch	8,704.82	1,448.23	3,688.95	596.57	16.39	12,590.25
Washington	39,317.60	6,026.07	11,644.41	1,697.22	91.64	44,442.68
Wayne	10,747.14	528.52	1,439.57	192.13	25.56	22,362.52
Weber	33,034.45	6,811.43	10,331.65	1,815.10	221.75	12,085.62
Statewide County Totals	787,114.94	207,979.20	193,380.23	36,891.84	28,357.85	931,690.27
<i>Point Source Portables</i>	<i>162.73</i>	<i>393.93</i>	<i>86.06</i>	<i>37.50</i>	<i>60.39</i>	<i>39.19</i>
Total	787,277.67	208,373.14	193,466.28	36,929.34	28,418.24	931,729.46

The application for an AO, called a notice of intent (NOI), is reviewed to make sure that the source installs appropriate state-of-the-art emission controls. For areas in attainment of the NAAQS, like Garfield County, state-of-the-art controls are known as the best available control technology (BACT). BACTs are case-by-case determinations of control technology for a specific source. BACT takes into account both the cost and environmental benefits of the control equipment. Wildland and prescribed fire often act like new air pollution sources. The Utah Air Quality Rules specify the criteria indicating which sources must obtain an AO, but do not include land that is subject to wildland or prescribed fire or their impacts. In 1990, Congress created Title V of the Clean Air Act. This Title requires states to issue an operating permit to the larger or “major” sources of air pollution within the state. Utah developed and submitted a program in 1994 and received approval from the EPA in 1995. Operating permits are legally enforceable documents issued to air pollution sources after the source has begun to operate. A primary purpose of the permit is to consolidate the applicable requirements from the many and varied air quality programs.

Another significant objective of the Title V program was to shift the compliance liability from the regulating agency to the permitted source. Each year, the source must certify that it is in compliance with all permit terms and conditions, or indicate non-compliance issues. False reports have criminal implications beyond the civil liabilities of other violations. In addition, sources must report the results of monitoring at least every six months. Permit provisions for monitoring, record keeping, and reporting are added or enhanced to assure compliance with the permit conditions and limits.

Need For Change in Management

1. Garfield County should develop an air quality ordinance to assist land managers in protecting air quality and to serve as a detailed standard for project evaluation.
2. No empirical, site specific data exists for air quality in Garfield County. The Statewide Triennial Emissions Inventory is based on modeling and may not be applicable to site specific conditions. Land managers should be required to develop accurate, objective background data for lands within their jurisdiction. Those findings should be submitted to the Utah Division of Air Quality for inclusion in the Statewide Triennial Emissions Inventory.
3. The Statewide Triennial Emissions Inventory is based on modeling and does not accurately depict PM₁₀ and PM_{2.5} emissions associated with native fugitive dust, drift and other site specific factors. The 2011 inventory indicates there are no naturally occurring PM₁₀ or PM_{2.5} emissions. However, native fugitive dust is irrefutable as evidenced by the presence of

dust in the air in remote areas and variable fugitive dust conditions associated with changing weather events. Land managers should develop ambient background levels for PM₁₀ or PM_{2.5} emissions within their jurisdictions and for drift from their adjacent lands outside Garfield County. Projects on private lands should continue to be managed under existing air quality laws and regulations.

4. The Statewide Triennial Emissions Inventory is based on modeling and does not accurately depict potential emissions from wildland and prescribed fire, from fires that occur outside the County or from such emissions that occurred outside the inventory period. Review of the inventory for areas that experienced fires indicates wildland and prescribed fire are significant contributors to an area's air quality. Federal agencies need to control emissions from wildland and prescribed fire on their own lands prior to implementing restrictive regulations that impact projects deemed to promote socio-economic stability in the County.

5. Revised regulations regarding air quality are under consideration by the federal government. Compliance with these potential regulations is significantly impacted by emissions from biogenic sources, soils, wildfires, and prescribed fires on federal lands in Garfield County and in the region. Federal agencies need to control emissions from sources on their own lands prior to implementing regulations that impact areas of Garfield County under state and local management and prior to negatively impacting federal land projects deemed to promote socio-economic stability in the County.

6. PSD requires that certain new, major stationary sources and major modifications be subject to a preconstruction review, which includes an ambient air quality analysis. Federal agencies do not have accurate, site specific ambient air quality inventories. Such inventories are needed to accurately assess programs associated with wildland and prescribed fires.

7. Smoke emissions resulting from prescribed burning projects or treatments are conducted and managed in compliance with guidelines found in the Utah Smoke Management Plan (SMP) and interagency group program. The purpose of the program and the SMP is to ensure that mitigation measures are taken to reduce the impacts on public health, safety and visibility from prescribed fire and wildland fire used for resource benefits (UDAQ 2004). Compliance with the SMP is the primary mechanism for land managers to implement prescribed burns, but it is insufficient to protect air quality in Garfield County. Often fire management plans cannot adapt to changing conditions fast enough to protect air quality. In addition there is no monitoring of fire related emissions, so agencies cannot fully ascertain the impact of their management ignited fires. The SMP and interagency group program needs to be improved to reduce fire related emissions and protect air quality in Garfield County. BACTs should be developed and implemented prior to authorizing prescribed burning.

8. Regional haze has been an issue of growing concern throughout the west. Regional haze causes visual impairment by obscuring the clarity, color, texture, and form of what can be seen. Haze is significantly impacted by the reaction of VOCs with other air pollutants. The largest source of VOCs in Garfield County is biogenic generation on federal lands, and the largest potential sources of other pollutants are wildland and prescribed fires – also on federal

lands. Federal agencies need to implement BACTs to minimize regional haze on their own lands while advancing projects deemed to promote socio-economic stability in the County.

9. Atmospheric deposition of air pollutants can increase acidity of soils and water resources. Measurements of atmospheric deposition are currently being taken in Class I areas of Grand Canyon National Park, Bryce Canyon National Park, and Canyonlands National Park by the National Acid Deposition Program. The 2004 Annual Performance Report on Air Quality Goals at National Parks indicates rates of atmospheric deposition of nitrogen and sulfur in rain is relatively low in Bryce Canyon National Park, but elevated above natural conditions. Trend analysis shows that nitrogen deposition has slightly increased while sulfur deposition has slightly decreased. Federal agencies in Garfield County should develop similar data, so deposition of air pollutants can be properly analyzed.

10. Ambient air quality in Garfield County is not exceeding standards; visibility is typical of clear skies associated with remote areas in the western United States; and atmospheric deposition levels are below Federal levels of concern. However, the lack of available data limits forecasting trends of air quality. Future changes to air quality conditions will occur according to the intensity and expansion or reduction of activities that produce air pollutants. However, the use of air pollution mitigation techniques can reduce emissions from sources, and in some cases, also minimize air quality impacts. At this time, future impacts to air quality within and affecting the County are uncertain; however, emissions from these existing sources are not anticipated to increase. The County needs accurate baseline information from land managers regarding pollutants and concentrations from existing and proposed activities.

11. Potential adverse impacts are often mitigated through site-specific measures identified in NEPA documents prepared at the time an action is proposed. Mitigation needs to be developed as part of the State permitting process and PSD review. However, federal agencies have excluded County participation in these processes. Federal agencies should include impacted local governments as cooperating agencies in the NEPA process and shall coordinate with Garfield County in accordance with federal law.

12. Land managers that implement prescribed fire or are subject to wildland fire need to be treated as a new or modified source of air pollution and should be required to obtain an Approval Order before initiating prescribed burns. Programmatic agreements identifying required BACTs could facilitate the process, reduce the potential for wildfire and improve air quality.

13. The EPA notes in the Regional Haze Regulations (Federal Register/Vol. 64, No. 126) that fire emissions have a natural and a manmade component. The EPA also recognizes that all kinds of fire (wildfire, prescribed fire, etc.) contribute to regional haze. Land managers need to recognize all fires impact air quality and need to initiate BACTs, including commercial harvesting of excess fuels and other methods for reducing potential fire related air pollutants and for achieving harmony between man and his environment.

14. The EPA recognizes fire is an important emission source to include in air quality impact analysis, but current data do not show that fire is the predominant source of visibility

impairment in Garfield County. Federal agencies need to improve the disclosure and analysis of fire related air quality impacts.

15. Visual resources are a growing tool used by special interests to undermine reasonable projects. Visibility could be impacted by natural suspended particulate matter from wind-blown dust over exposed areas and smoke from wildland fires and prescribed burns just as easily as particulate matter generated by construction activities, vehicles traveling on access roads and off-highway vehicles (OHVs). No site specific data exists to accurately analyze differences between natural/ambient air quality and man-made impacts. Land managers need to analyze the separate and cumulative air quality impacts of natural and human activities.

16. Garfield County is concerned with efforts to restrict beneficial projects in the name of air quality. The County needs to develop an ordinance that assures land managers will accurately depict air quality impacts and will conduct appropriate reviews.

Desired Future Conditions

Garfield County Desires:

- a) Garfield County's air quality be maintained or improved while allowing development of projects needed for socio-economic stability.
- b) Federal agencies quantify and mitigate impacts from drift, fugitive dust and fires prior to restricting projects needed for socio-economic stability.
- c) Natural fugitive dust is reduced through improved vegetative cover, vigor and utilization.
- d) Federal agencies resolve inconsistencies with biogenic pollutants, natural fugitive dust, wildland fire, and prescribed fire prior to restricting projects needed for socio-economic stability.
- e) Air quality be cooperatively managed and coordinated by local, State and Federal agencies.
- f) A County air quality ordinance be developed to assist land managers in protecting air quality and to serve as a detailed standard for project evaluation.
- g) Land managers develop accurate, objective background data for lands within their jurisdiction and those findings be submitted to the Utah Division of Air Quality for inclusion in the Statewide Triennial Emissions Inventory.
- h) Land managers develop ambient background levels for PM₁₀ or PM_{2.5} emissions within their jurisdictions and for drift from their adjacent lands outside Garfield County. Projects on private lands should continue to be managed under existing air quality laws and regulations.
- i) Federal agencies control emissions from sources on their own lands, including wildland and prescribed fire, prior to implementing regulations that impact areas of Garfield

County under state and local management and prior to negatively impacting federal land projects deemed to promote socio-economic stability in the County.

j) Prior to wildland or prescribed fire, land managers analyze and disclose ambient and proposed air quality conditions, including BACTs that can be implemented to reduce air quality impacts.

k) Land managers develop accurate, site specific air quality information to accurately assess programs associated with wildland and prescribed fires.

l) Land managers recognize all fires impact air quality and initiate BACTs, including commercial harvesting of excess fuels and other methods for reducing potential fire related air pollutants and for achieving harmony between man and his environment.

m) Land managers implement BACTs to minimize regional haze on their own lands while advancing projects deemed to promote socio-economic stability in the County.

n) BACTs and other programmatic mitigating measures be implemented and fire related projects be reviewed similar to the state permitting and PSD review process.

o) Land managers implementing prescribed fire or that are subject to wildland fire be treated as a new or modified source of air pollution and be required to obtain an Approval Order before initiating prescribed burns.

p) Land managers improve the disclosure and analysis of fire related air quality impacts.

q) Land managers recognize visibility is impacted by natural suspended particulate matter from wind-blown dust over exposed areas and smoke from wildland fires and prescribed burns just as easily as it is impacted from particulate matter generated by construction activities, vehicles traveling on access roads and off-highway vehicles (OHVs).

r) Land managers need to analyze the separate and cumulative air quality impacts of natural and human activities associated with fire related activities.

s) A County ordinance be developed that assures land managers will accurately depict air quality impacts and will conduct appropriate reviews.

t) Land managers comply with Garfield County Air quality plans, policies, programs and ordinances.

u) Land managers include impacted local governments as cooperating agencies in all NEPA processes and coordinate activities that impact air quality with Garfield County in accordance with federal law.

v) Land managers reduce the risk of air pollution from wildfire by reducing Class II and Class III Pinyon/Juniper woodlands by 25% based on a rolling 10 year average.

Findings, Policies, Goals & Objectives

Goal Assure compliance with the Clean Air Act.

Objective Maintain compliance with the Clean Air Act through the application of the appropriate review process on a case-by-case basis.

Finding: Land use management plans for the various federal agencies in Garfield County are outdated and shall be brought into consistency with this plan to the maximum extent allowed by law.

Finding Currently, there is insufficient air quality data to determine site specific conditions in Garfield County.

Policy Unless waived by the Garfield County Commission after public hearing, land owners and managers shall submit an accurate pollutant criteria inventory prior to January 1, 2018 for lands that:

- Contain more than 5000 contiguous acres
- Are managed as Class I airsheds
- Are adjacent to a Class I airshed and are owned/managed by the same department

Policy BLM and Forest Service units shall develop background data for pollutants identified in the Statewide Emissions inventory for lands under their jurisdiction prior to January 1, 2018.

Finding The SMP and interagency group program are insufficient to protect air quality in Garfield County from fire related emissions.

Policy Federal agencies shall coordinate wildland fire and prescribed fire management, including fuel reduction through commercial harvesting, thinning and vegetation treatments, with Garfield County prior to authorizing fire related emissions.

Finding: Fugitive dust from unpaved roads can cause localized visible dust clouds, but the emissions are expected to have minimal effect on regional haze. PM smaller than 2.5 microns is the primary contributor to visual haze and adverse health effects. Less than 30 percent of the fugitive dust generated from unpaved roads is below 2.5 microns.

Finding: The Statewide Triennial Emissions Inventory is based on modeling and does not accurately depict potential emissions from wildland and prescribed fire, from fires that occur outside the County or from such emissions that occurred outside the inventory period. Wildland and prescribed fire are significant contributors to an area's air quality.

Goal: Maintain or improve Garfield County's air quality while allowing development of projects needed for socio-economic stability.

Policy: Federal agencies quantify and mitigate impacts from drift, fugitive dust and fires prior to restricting projects needed for socio-economic stability.

Finding: Natural fugitive dust is reduced through improved vegetative cover, vigor and utilization.

Policy: Federal agencies resolve inconsistencies with biogenic pollutants, natural fugitive dust, wildland fire, and prescribed fire prior to restricting projects needed for socio-economic stability.

Policy: Air quality shall be cooperatively managed and coordinated by local, State and Federal agencies.

Goal & Implementation Action: A County air quality ordinance shall be developed to assist land managers in protecting air quality and to serve as a detailed standard for project evaluation. Until such time as the ordinance is complete, land managers shall coordinate activities impacting air quality with Garfield County.

Policy: Land managers shall develop accurate, objective background data for lands within their jurisdiction, and those findings shall be submitted to the Utah Division of Air Quality for inclusion in the Statewide Triennial Emissions Inventory.

Policy: Land managers shall develop ambient background levels for PM₁₀ or PM_{2.5} emissions within their jurisdictions and for drift from their adjacent lands outside Garfield County. Projects on private lands shall continue to be managed under existing air quality laws and regulations.

Policy: Federal agencies shall control emissions from sources on their own lands, including wildland and prescribed fire, prior to implementing regulations that impact areas of Garfield County under state and local management and prior to negatively impacting federal land projects deemed to promote socio-economic stability in the County.

Policy: Prior to wildland or prescribed fire, land managers shall analyze and disclose ambient and proposed air quality conditions, including BACTs that can be implemented to reduce air quality impacts.

Policy: Land managers shall develop accurate, site specific air quality information to accurately assess programs associated with wildland and prescribed fires.

Finding: All fires impact air quality

Policy: Land managers shall initiate BACTs, including commercial harvesting of excess fuels and other methods for reducing potential fire related air pollutants and for achieving harmony between man and his environment.

Policy: Land managers shall implement BACTs to minimize regional haze on their own lands while advancing projects deemed to promote socio-economic stability in the County.

Goal & Implementation Action: BACTs and other programmatic mitigating measures shall be implemented and fire related projects shall be reviewed similar to the state permitting and PSD review process.

Policy & Implementation Action: Land managers implementing prescribed fire or that are subject to wildland fire shall be treated as a new or modified source of air pollution and will be required to obtain an Approval Order before initiating prescribed burns.

Goal: Land managers will improve the disclosure and analysis of fire related air quality impacts.

Finding: Visibility is impacted by natural suspended particulate matter from wind-blown dust over exposed areas and smoke from wildland fires and prescribed burns just as easily as it is impacted from particulate matter generated by construction activities, vehicles traveling on access roads and off-highway vehicles (OHVs).

Policy: Land managers shall analyze the separate and cumulative air quality impacts of natural and human activities associated with fire related activities.

Goal: A County ordinance will be developed that assures land managers will accurately depict air quality impacts and will conduct appropriate reviews.

Policy: Land managers comply with Garfield County Air quality plans, policies, programs and ordinances.

Policy: Land managers shall include impacted local governments as cooperating agencies in all NEPA processes and coordinate activities that impact air quality with Garfield County in accordance with federal law.

Policy & Implementation Action: Land managers shall reduce the risk of air pollution resulting from wildfires by reducing Class II and Class III Pinyon/Juniper woodlands by 25% based on a rolling 10 year average.

Appendix 2.2.1 Air Quality Acronyms

Acronyms

AO	Approval Order
AHERA	Asbestos Hazard Emergency Response Act
ATLAS	Air Toxics, Lead-Based Paint, and Asbestos Section
AMS	Air Monitoring Section
BACT	Best Available Control Technology
CAA	Clean Air Act
CAP	Compliance Advisory Panel
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CNG	Compressed Natural Gas
DAQ	Division of Air Quality
DEQ	Department of Environmental Quality
EPA	Environmental Protection Agency
GHG	Green House Gas
HAPs	Hazardous Air Pollutants
MACT	Maximum Available Control Technology
$\mu\text{g}/\text{m}^3$	Micrograms per Cubic Meter
Micron	One Millionth of a Meter
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO ₂	Nitrogen Dioxide
NOV	Notice of Violation
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standard
NSR	New Source Review
O ₃	Ozone
PB	Lead
PM	Particulate Matter
PM ₁₀	Particulate Matter Smaller Than 10 Microns in Diameter
PM _{2.5}	Particulate Matter Smaller Than 2.5 Microns in Diameter
PPB	Parts Per Billion
PPM	Parts Per Million
SBEAP	Small Business Environmental Assistance Program
SCAN	Source Compliance Action Notice
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
SO _x	Sulfur Oxides
TSCA	Toxic Substances Control Act
TSP	Total Suspended Particles
UCAIR	Utah Clean Air Initiative
UAC	Utah Administrative Code
UBWOS	Uinta Basin Wintertime Ozone Study

VOC

Volatile Organic Compounds

References

The Clean Air Act codified at 40 C.F.R. Subchapter C, Parts 50-7

Wikipedia, Clean Air Act, 11/18/16 https://en.wikipedia.org/wiki/Clean_Air_Act_%28United_States%29
Utah Division of Air Quality, 2015 Annual Report

2.3 GEOLOGY, TOPOGRAPHY AND CLIMATE

This section is intentionally left blank. Management direction for this Resource / Resource Use has not been completed. It is intended that management direction for this Resource / Resource Use will be completed, subject to public comment, and adopted at some point in the future.

2.4 SOIL RESOURCES

This section is intentionally left blank. Management direction for this Resource / Resource Use has not been completed. It is intended that management direction for this Resource / Resource Use will be completed, subject to public comment, and adopted at some point in the future.

2.4 SOIL

Introduction Soil is the unconsolidated mineral or organic material on the immediate surface of the Earth that serves as a natural medium for the growth of terrestrial plants. This unconsolidated mineral or organic matter has been subjected to and shows effects of genetic and environmental factors including climate, water, temperature, and macro- and microorganisms, conditioned by relief, acting on parent material over a period of time. Soil differs from the material from which it is derived in many physical, chemical, biological, and morphological properties. It is often characterized by horizons, or layers, that are distinguishable from the initial parent material as a result of additions, losses, transfers, and transformations of energy and matter or the ability to support rooted plants in a natural environment.

The upper limit of soil is the boundary between soil and air, shallow water, live plants, or plant materials that have not begun to decompose. Areas are not considered to have soil if the surface is permanently covered by water too deep for the growth of rooted plants. The lower boundary that separates soil from the non-soil underneath is most difficult to define. Soil consists of horizons near the Earth's surface that, in contrast to the underlying parent material, have been altered by the interactions of climate, relief, and living organisms over time. Commonly, soil changes at its lower boundary to hard rock or to earthy materials virtually devoid of animals, roots, or other marks of biological activity. For purposes of classification, the lower boundary of soil is usually set at approximately 6.5 feet / 78 inches. (See Soil Science Glossary, Soil Science Society of America)

Current Setting

Soil composition helps determine vegetation types, growth and wildlife habitats. Soil types are also related to water quality, salinity, and erosion. Garfield County has considered impacts on soils, including salinity control, water quality, and erosion, in relation to other management decisions and desired conditions. This section provides an overview of soil in Garfield County and serves as a baseline for analysis of resource management alternatives. The Natural Resource Conservation Service

(NRCS) – formerly the Soil Conservation Service - has produced numerous soil reports for Garfield County and other areas in the region. Reports contain detailed data that is too voluminous to be included in this plan, including soil description, soil properties, maps, characteristics and other data. Reports are available to the public through the NRCS websites and include:

Canyonlands National Park, Current

Capitol Reef National Park, 2014

Dixie National Forest, Parts of Garfield, Washington, Iron, Kane, and Wayne Counties, Current

Glen Canyon National Recreation Area, Arizona and Utah, 2010

Grand Staircase-Escalante National Monument, 2005

Fishlake National Forest, East Portion, Parts of Sevier, Piute and Wayne Counties, Current

Henry Mountains Area, Parts of Garfield, Kane, and Wayne Counties, 1990

Loa, Marysvale Area, Parts of Piute, Wayne, and Garfield Counties, Current

Panguitch Area, Parts of Garfield, Iron, Kane, and Piute Counties, 1990

These soil surveys and publications are a joint effort of the United States Department of Agriculture and other federal agencies, state agencies including the Agricultural Experiment Stations, and local agencies. Major fieldwork for the surveys are described in the individual documents. Soil maps may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

The surveys contain information that can be used in land-planning programs and contain predictions of soil behavior for selected land uses. The surveys also highlight limitations and hazards inherent in the soil, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

These soil surveys are designed for many different users. Farmers, ranchers, foresters, and agronomists can use them to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the surveys to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Land managers, teachers,

students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the surveys to help understand, protect, and enhance the environment.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations. These and many other soil properties that affect land use are described in this soil surveys. Broad areas of soils are shown on the general soil maps. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is also given for each soil. Help in using this publications and additional information are available at the local office of NRCS or the Cooperative Extension Service.

Soil management is dependent on a combination of factors, including soil type, climate, intensity of precipitation, geologic setting, and vegetative cover, and how the resources are impacted by multiple uses (e.g., recreation, mineral development, grazing, etc.). Vegetation can be sparse in portions of the County because of the short growing season and distribution of effective moisture in some soils. Rangeland and forest health evaluations have been conducted by the BLM and the Forest Service throughout the area. The evaluations include an assessment of soil condition indicators. The indicators include qualitative evaluations of an area's departure from anticipated ecological conditions, usually obtained from a representative site description. Some of the indicators include rills, gullies, resistance to erosion, compaction layers, evidence of wind erosion, and soil surface loss or degradation. Generally, sites have been classified as none to slight or slight to moderate departure from the site description. These evaluations indicate the landscape-level soil condition within the County is largely properly functioning, although there may be site-specific issues of soil impacts or degradation.

Erosion and compaction are two important factors of concern in the planning area. Several areas of Garfield County may contain soils that are considered to be highly susceptible to erosion. Almost any action that increases vegetation cover or improves soil structure in these areas will be beneficial, resulting in reduced erosion and increased vegetation surface litter.

Erosion is one of the soil related indicators that is examined while determining rangeland health. Erosion indicators such as rills, water flow patterns, bare ground, gullies, litter movement, soil resistance to erosion, and soil surface loss or degradation vary throughout the County. Generally, soils on steeper slopes with longer slope length and less vegetative cover erode more rapidly than soils with flatter slopes, shorter slope length, and more vegetation.

Some Garfield County soils are more prone to erosion than others. These soils usually have several intrinsic properties that make them susceptible to erosion. Such factors as high salt concentrations, fine or coarse textures, shallow depths, or steep slopes can contribute to a soil's erodibility. Soils derived from saline sedimentary

formations tend to be high in salts. High salt accumulations influence the availability of plant nutrients and water for plant growth. Because of the resultant sparse vegetative cover on these soils, soil particles may not be “anchored” in place and may easily be eroded by wind or water. Slope steepness also increases the erosion potential of soils because it increases the rate at which water will flow overland and transport soil particles. Many scientists (Soil Conservation Service 1984) identify slopes of 20-35 percent as potentially contributing to a severe erosion hazard. Soil texture contributes to the credibility of a soil as well. Fine textured soils such as clays or silty clays have slow infiltration rates and high runoff rates. As a result, rills and gullies are easily formed during storm events. Overland flow and sediment transport into streams can be pronounced during intense precipitation events or during periods of severe runoff or snowmelt. In areas of limited vegetative cover, this transport is exacerbated.

Soil compaction can occur as a result of repeated impact or disturbance of the soil surface over a time period. Farm machinery, herbivore trampling, and recreation vehicle traffic, or any activity that repeatedly causes an impact on the soil surface, can cause a compaction layer (Chanasyk and Naeth 1995, Cole 1985, and Thurow et al. 1988). Compaction becomes a problem when it begins to limit plant growth, water infiltration, or nutrient cycling processes (Wallace 1987; Willat and Pullar 1983, Thurow et al. 1988; Hassink et al. 1993). Moist soil is more easily compacted than dry or saturated soil (Hillel 1998). However, some studies indicate recovery processes (e.g., earthworm activity and frost heaving) are generally sufficient to limit compaction by livestock in many upland systems (Thurow et al. 1988). The physical condition of soil is assessed as part of the rangeland health evaluation process and during other activity and implementation level planning.

Biological Soil Crusts Biological soil crusts are recognized as having an influence on terrestrial ecosystems where they occur. These communities are referred to as cryptogamic, cryptobiotic, microbiotic or microphytic soil crusts. These crusts function as a living mulch by retaining soil moisture and discouraging the growth of annual weeds. They can reduce wind and water erosion, fix atmospheric nitrogen into a form useable by plants, and contribute to the soil organic matter. These crusts can be used as indicators of ecological health, as well as indicators of physical disturbance. Biological soil crusts are present on various soil surfaces throughout the region. When present, soil crusts can exist in various forms and are often pervasive over large areas. Surface disturbance can alter the form of the crusts but generally does not create significant mortality. When moisture and temperature conditions are favorable, crust development continues.

Total crust cover is inversely related to vascular plant cover, as less plant cover results in more surface available for colonization and growth of crustal organisms (USDOI 2001). When all crust types are combined (cyanobacterial, moss, lichen), cover is greatest at lower elevation inland sites (due to less vascular plant cover). Biological soil crusts in the area are mostly cyanobacteria (*Microcoleus*) and nitrogen-fixing lichens (*Collema*). These cyanobacteria and nitrogen-fixing lichens are generally

limited and sparse in the County due to relatively high elevations and relatively dense vascular plant cover. Small areas of more dense soil crusts do exist, especially at lower elevations and dry sites with less dense vegetative cover, but crusts are not as prevalent as neighboring counties with even lower elevation, sparser vegetation and sandier soils.

The importance of biological soil crusts is often recognized by the scientific community and by federal agencies. However, science has not determined how much soil crust is needed in a certain soil type, ecological range site or woodland community. No objective science exists indicating at what level ecological processes will operate and promote healthy conditions for soil crust. There is no clear biological crust evaluation tools that can be applied on a site-specific basis to allow sound and reasoned decisions on this subject or to quantify the appropriate amounts and distribution of crusts.

Standard methods to assess the conditions of the range lands involves the use of ecological sites and woodland community descriptions developed for specific soil survey areas in accordance with standards established and developed by the National Resource Conservation Service, U. S. Department of Agriculture (NRCS). These ecological site descriptions generally do not contain specific information as to the quantities of soil crusts that are expected to be on the site.

Prime Farmland Soils The U.S. Department of Agriculture defines prime farmland soils as soils that are best suited to producing food, seed, forage, fiber, and oilseed crops. Such soils have properties that are favorable for the economic production and sustained high yields of crops. Such soils need only to be treated and managed using acceptable farming methods. Adequate moisture and a sufficiently long growing season are also required. Prime farmland soils produce the highest yields with minimal inputs of energy and economic resources, and farming these soils results in the least damage to the environment. Prime farmland soils may presently be in use as croplands, woodlands or pastures. However, developed areas larger than 10 acres, public land, and areas covered with water cannot be considered prime farmland. Soils that have a high water table, are subject to flooding, or are droughty may qualify as prime farmland soils if the limitations are overcome by drainage, flood control, or irrigation.

During the past few decades prime farmland has been converted to residential, commercial and industrial uses in more urbanized areas of the state. Although this trend exists in Garfield County, it is of minimal impact at present. By definition, prime farmland occurs only on private lands and is managed under the County's existing planning and zoning ordinances. No State, Forest Service or BLM lands in Garfield County qualify for prime or unique farmland status. However, some soils could qualify as prime farmland if an adequate and dependable water supply was available. Precipitation is inadequate, and dependable irrigation water is lacking on federal lands. Consequently, no prime, unique or farmlands of statewide or local importance have been identified on any federal lands.

Need for Management Change

- 1) Land managers need to increase, improve and enhance desirable vegetative cover consistent with ecological site descriptions to improve and preserve soil in Garfield County.
- 2) NRCS reports indicate soils are often producing at a rate far below their capacity, approaching only 25% in some cases. Land managers need to improve the vegetative productivity of soils for desirable native and non-native vegetative communities consistent with ecological site descriptions.
- 3) Encroaching conifers and conversion of historic sagebrush/semi-desert grasslands to pinyon/juniper woodlands threatens soil stability and health. Land managers need to actively and aggressively pursue restoration of historical sagebrush/semi-desert grasslands and conversion of Class II and Class III pinyon/juniper woodlands to desirable native and non-native vegetation communities.
- 4) Land managers need to increase the productivity of 80% of the soils in their jurisdiction to a minimum of 50% capacity prior to January 1, 2035 and an additional 1% of capacity per year for the succeeding 10 years.
- 5) Biological soil crusts are being used inappropriately to limit the use and productivity of public lands. Land managers need to reserve not more than 0.1% of their lands for management favoring biologic soil crusts while managing the remainder for optimization of desirable vegetation.
- 6) Soil loss needs to be reduced by land managers performing aggressive and appropriate land and vegetative treatments.

Desired Future Conditions

Garfield County desires:

- a) 80% of the soils in Garfield County are producing at least 60% of their capacity.
- b) Encroaching Class I conifers are managed to limit their extent to pre-European settlement conditions.
- c) Class II and Class III Pinyon/Juniper woodlands are managed to limit their extent to pre-European settlement conditions.
- d) Soils are stabilized through vegetative treatments that utilize an optimum combination of native and non-native species.
- e) Surface disturbing activities are managed consistent with Garfield County's Best Management Practices. (See Appendix 2.4.1)
- f) A reduction of soil loss on watersheds in Garfield County by performing appropriate land treatments and restoration of desirable sagebrush / semi-desert grassland vegetation communities.

g) Surfaces disturbances are reclaimed in a timely manner during or upon completion of authorized activities, as appropriate.

h) Temporary roads be evaluated to determine if continued use provides a benefit to the public without jeopardizing land health.

i) Fragile soils are identified during preparation of project-level plans, and necessary mitigation measures are developed to allow the project to move forward, while minimizing risks and degradation to soil resources.

Goals, Objectives, Policies & Findings

Goal: 80% of the soils in Garfield County are producing a minimum of 50% of their capacity prior to January 1, 2035 and an additional 1% of capacity per year for the succeeding 10 years.

Goal: Encroaching Class I and Class II and Class III Pinyon/Juniper woodlands are managed to limit their extent to pre-European conditions.

Policy: Failure to restore Pinyon/Juniper woodlands to pre-European settlement conditions promotes soil erosion that constitutes non-point source pollution and negatively impacts water quality in Garfield County.

Finding: Consistent with ecological site descriptions, healthy and diverse native and non-native sagebrush / semi-desert grassland communities are the preferred method for stabilizing soils.

Policy: Soil resources are protected when Off Highway Vehicle use is limited to existing or designated OHV routes and 2% to 5% of the County's federally managed land is available for open OHV use.

Policy: For surface disturbing activities, impacts to soils lasting less than 2 growing seasons are immediate; impacts to soils lasting 2 to 5 years are short term; impacts to soils lasting 6 to 20 years are long term; and impacts to soils lasting more than 20 years are considered permanent. For analysis purposes, the duration of impacts shall be measured from the date of disturbance to date designated reclamation actions are substantially complete, measured on an acre by acre basis.

Policy: Impacts on soils from surface disturbing activities will be minimized and mitigated by appropriate implementation of Garfield County's Best Management Practices found in Appendix 2.4.1.

Policy: In order to soil loss in watersheds and improve water quality, land managers must perform appropriate land and vegetation treatments in accordance with the following priorities:

1. Bare Ground
2. Class III Pinyon/Juniper Woodlands

3. Class II Pinyon/Juniper Woodlands
4. Noxious and undesirable invasive weeds
5. Class I Encroaching Conifers and Decadent Vegetative Communities

Policy: Surface disturbances shall be reclaimed, as appropriate, in a timely manner during or upon completion of authorized activities unless otherwise approved by the Garfield County Commission

Policy: Temporary roads shall be evaluated on a case by case basis to see if a public benefit can be derived by leaving the road open without jeopardizing land health. Temporary roads may be closed upon completion of a project if it is determined soil resources will be degraded and no public benefit is derived from leaving the road open.

Policy: Where fragile soils are identified during preparation of project-level plans, necessary mitigation measures shall be developed to allow the project to move forward, while minimizing risks and degradation to soil resources.

Policy: Site -specific restrictions and/or mitigations for activities proposed in fragile soil areas shall be implemented on a case-by-case basis and only where permanent degradation of soil resources will occur without appropriate restrictions or mitigations. Surface disturbing activities shall be allowed in fragile soil areas as long as impacts will be mitigated or disturbance will be beneficial to land health. Land treatments (i.e., vegetation treatment and soil stabilization) shall be allowed in fragile soils where such treatment would reduce erosion and restore watersheds.

Policy: Land managers shall preclude open and cross-country OHV use in areas identified as fragile soils by designating 2% to 5% of their lands in suitable soils for open OHV use and by authorizing OHV use on existing and designated trails consistent with Garfield County's Transportation and OHV management plan.

Policy: Land managers shall implement agency standards for land health to maintain or improve soil conditions until such time that more effective standards are developed.

Policy: Land managers shall incorporate Best Management Practices (BMPs) and soil protection measures into developments on sensitive soils and on lands occupied by Class II and Class III Pinyon/Juniper woodlands. Measures to stabilize soils and minimize surface water runoff are required for slopes greater than 33 percent and in areas where runoff from Class II and Class III Pinyon/Juniper woodlands is contributing water quality degradation.

Finding: Biologic soil crusts are living, renewable resources that are pervasive on lands where they are located. Individual developmental stages may be sensitive to surface disturbance and may take considerable time to reach maturity, but the basic life forms are resilient and are prone to restoration when environmental conditions are favorable.

Finding: Biologic soil crusts are inversely related to and competing interests with vegetative cover.

Policy: When competing management decisions must be made between vascular plants and biologic soil crusts, land managers shall not designate more than 0.1% of their lands for management options preferring soil crusts over vascular plants.

References

Biological Soil Crusts: Ecology and Management, Technical reference 1730-2, USDI Bureau of Land Management & U.S. Geological Survey, 2001

2.5 WATER RESOURCES

This section is intentionally left blank. Management direction for this Resource / Resource Use has not been completed. It is intended that management direction for this Resource / Resource Use will be completed, subject to public comment, and adopted at some point in the future.

2.5 WATER RESOURCES

Current Setting

Water is one of the most important if not the most important natural resource in Garfield County. More than 93% of Garfield County is federal land, and most of the 3% private lands are concentrated in valley bottoms and along water courses. Consequently, almost all surface water and the majority of watersheds are located on federal land. Garfield County is home to 7 major sub basin watersheds: Upper Sevier, East Fork Sevier, Paria, Escalante, Fremont, Dirty Devil, and Upper Lake Powell. Two of the watersheds, Upper Sevier and East Fork Sevier, develop surface waters which flow north and eventually terminate at Sevier Lake in Millard County. The Sevier watersheds are associated with the Basin & Range physiographic region and receive some the highest annual precipitation in the County. The remaining watersheds flow east or south and eventually reach the Colorado River, with all but the Paria watershed draining into Lake Powell.



Figure 2.5.1. Garfield County Sub Basin Watersheds

The Sevier River, the Escalante River, Panguitch Creek, Boulder Creek, the East Fork of the Sevier River, the Dirty Devil River, and the Paria River and their tributaries are the major sources of surface water in Garfield County. These streams are fed mainly by snowmelt and groundwater discharge from nearby mountains and are augmented by rainfall, especially during the late summer monsoon season. Rainfall in Garfield County is not adequate for the most commonly grown crops and is generally the limiting factor for vegetative cover on state and federal lands. Supplemental irrigation is required to obtain acceptable crop yields, and most irrigation water is diverted from the rivers and streams and stored in reservoirs. Panguitch Lake, Tropic Reservoir, Wide Hollow Reservoir, and Lower Bowns Reservoir are major irrigation reservoirs in the area. In addition, many smaller reservoirs have been built in the area, but they are used mainly for water regulation, rather than large scale storage.

Domestic water comes from natural springs and creeks around the county. According to recent agricultural census, there are about 82,000 acres of farmland (2.5% of the land base) and 22,300 acres of irrigated farmland (0.7% of the land base) in Garfield County. Irrigation water in Garfield County comes primarily from the following surface waters:

Irrigation Community	Water Course
Panguitch & Hatch	Sevier River
Antimony & Tropic	East Fork Sevier River

Cannonville
Henrieville
Escalante
East Valley
Boulder

Paria River, Underground Rights
Henrieville Creek
Escalante River & Wide Hollow Reservoir
Underground Rights
Boulder Cr. & Escalante River Tributaries

Need for Management Change

- 1) Land managers need to continue recognizing the invaluable role of water and optimize scarce water resources.
- 2) Eradication of noxious and invasive weeds, restoration of encroaching conifer woodlands to desirable vegetative communities and minimization of bare ground are needed to maximize beneficial use and quality of scarce water resources.
- 3) To optimize water resources, land managers need to focus on restoration of desirable vegetative communities rather than restricting human activities.

Desired Future Conditions

Garfield County desires:

- a) Scarce water resources are maximized for the beneficial use of man.
- b) Land managers prepare for changing climatic conditions by optimizing land health by while protecting and enhancing multiple use activities.
- c) A greater emphasis be placed on water development projects that optimize use and benefit of scarce water resources.
- d) Land managers eradicate Tamarisk and noxious weeds in Garfield County.
- e) Land managers maximize desirable native and non-native vegetative cover to optimize use of water resources.

Findings, Policies, Goals & Objectives, Criteria

Finding: Water is a scarce commodity and its beneficial use needs to be maximized to promote and achieve a productive and enjoyable harmony between man and his environment.

Policy: Federal, state, local and private land managers shall cooperate and coordinate with Garfield County to maximize beneficial use scarce water resources.

Policy: Land managers shall optimize vegetative cover to improve streambank stabilization and protect upland and rangelands from excessive runoff.

Finding: Consistency with Garfield County's Resource Management Plan optimizes use of water resources and promotes a productive and enjoyable harmony between man and his environment.

Policy, Goal & Objective: To the maximum extent allowed by law, land managers shall be consistent with Garfield County's Resource Management Plan, unless otherwise approved by the Garfield County Commission.

Policy: Garfield County will cooperate and coordinate with private landowners, permittees, state agencies, and federal partners with planning and implementation efforts to improve water quality and quantity on private and public lands.

2.5.1 HYDROLOGY

Current Setting

Hydrology is the science that encompasses the occurrence, distribution, movement and properties of the waters of the earth and their relationship with the environment within each phase of the hydrologic cycle. The hydrologic cycle (also known as the water cycle) is a continuous process by which water is deposited on the land, purified by evaporation and transported from the earth to the atmosphere and then back to the land. There are many pathways the water may take in its continuous cycle of falling as rainfall or snowfall and returning to the atmosphere. It may be captured for millions of years in polar ice caps. It may flow to rivers and finally to the sea. It may soak into the soil to be evaporated directly from the soil surface as it dries or be transpired by growing plants. It may percolate through the soil to groundwater aquifers, or it may flow to wells or springs or back to streams by seepage. The cycle for water may be short, or it may take many years. Nature and man each employ portions of the hydrologic cycle for their own purposes. After use, water is returned to another part of the cycle through discharge, allowing it to soak into the ground or through evaporation. Water that has been in contact with the land is often lower in quality, even after treatment, than that which falls as precipitation.

This section discusses fundamental transport processes as water moves through the cycle and associated watershed management.

Garfield County is an arid environment. Even in mountainous areas of the County where precipitation is higher, water is in limited supply. Generally, western Garfield County is at higher elevation and receives a greater amount of annual precipitation than the eastern portion of the County. Mountain and forested areas in the west generally have sufficient vegetative cover and ground litter to allow infiltration of precipitation, especially during the spring when snowmelt occurs gradually. A notable exception is where encroaching conifers have been allowed to invade and replace historic sagebrush / grassland ecosystems.

The eastern portion of the county is characterized by sparse vegetation, sandier soils and desert like conditions. Intense late summer rain storms often result in flash flood conditions with attendant sediment transport and erosion. Many if not most of the watercourses are ephemeral washes with little or no riparian vegetation. Over the past several years, storm runoff intensity appears to have increased. There has been little to no human development in the area, but banks are not stabilized, and streambeds are often subject to downcutting. Sediment transport is at

unacceptable levels and is impacting water quality. Additionally, many of the watercourses in dryer portions of the County are infested with Tamarisk and Russian Olive. These invasive species replace desirable vegetation and dominate limited water resources.

Need for Management Change

- 1) Land management agencies have no control over timing and quantity of precipitation, so management efforts need to concentrate on activities within their control such as vegetative cover, active stream bank stabilization, water detention, and eradication of undesirable invasive species.
- 2) Many areas of the County lack desirable vegetative ground cover. Land managers need to implement project to increase native and non-native vegetative ground cover percentages to acceptable levels.
- 3) Land managers need to prioritize structural and non-structural projects and best management practices that are designed to reduce stormwater volume, peak flows, and/or nonpoint source pollution through evapotranspiration, infiltration, detention, hydrograph extension, and filtration over restricting human development and multiple use / sustained yield activities.
- 4) Land managers need to implement structural and non-structural perennial, intermittent and ephemeral stream stabilization projects that reduce stream sedimentation and erosion while enhancing riparian areas, wetlands and vegetation for wildlife and livestock.
- 5) Russian Olive and Tamarisk need to be removed and replaced with desirable native and non-native vegetation communities that retain bank stability and provide appropriate channel shade.
- 6) Prior to the first season prone to erosive storms, acceptable ground cover needs to be recruited, established, re-established, or retained after prescribed and wildland fire.
- 7) Land managers need to coordinate programmatic agreements, best management practices and prioritization schedules for improving hydrologic functions and conditions with Garfield County.
- 8) Enhanced programmatic agreements and best management practices associated with prescribed and wildland fire need to be implemented to protect hydrologic function and condition in Garfield County.

Desired Future Conditions

Garfield County desires:

- a) Land management agencies significantly increase implementation of projects to improve vegetative cover, stream bank stabilization, water detention, and eradication of undesirable invasive species.
- b) Land managers increase native and non-native vegetative ground cover percentages to 50% of soil potential by 2025 and 70% by 2050.

- c) Land managers prioritize structural and non-structural projects and best management practices that are designed to reduce stormwater volume, peak flows, and/or nonpoint source pollution through evapotranspiration, infiltration, detention, hydrograph extension, and filtration over restricting human development and multiple use / sustained yield activities.
- d) Land managers implement structural and non-structural perennial, intermittent and ephemeral stream stabilization projects that reduce stream sedimentation and erosion while enhancing riparian areas, wetlands and vegetation for wildlife and livestock.
- e) Russian Olive and Tamarisk are removed and replaced with desirable native and non-native vegetation communities that retain bank stability and provide appropriate channel shade.
- f) Acceptable ground cover is recruited, established, re-established, or retained after prescribed and wildland fire prior to the first season prone to erosive storms,
- g) Land managers coordinate programmatic agreements, best management practices and prioritization schedules for improving hydrologic functions and conditions with Garfield County.
- h) Enhanced programmatic agreements and best management practices associated with prescribed and wildland fire are implemented to protect hydrologic function and condition in Garfield County.

Findings, Policies, Goal & Objectives

Finding: Consistent with ecologic site descriptions, vigorous native and non-native vegetative ground cover is the most influential factor land managers can control to maintain and enhance hydrologic function and condition.

Finding: Many areas of the County lack adequate vegetative ground cover, and projects need to be implemented to increase desirable native and non-native vegetative communities consistent with ecological site descriptions.

Objective: Where capability exists, restore, maintain and improve hydrologic function through reduction of overland flow, increased infiltration, and replacement of invasive species with desirable native and non-native vegetative communities.

Policy: Livestock grazing is compatible with proper hydrologic function when lands are actively managed to optimize land health in accordance with the provisions of this Resource Management Plan. Land managers have sufficient resources and techniques to be consistent with Garfield County's RMP. If sufficient resources and techniques become unavailable, land managers shall – to the maximum extent allowed by law – develop and implement alternate plans in cooperation and coordination with Garfield County and as approved by the County Commission.

Policy: Consistent with this RMP and in cooperation and coordination with Garfield County, land managers shall implement appropriate best management practices and mitigating measures to management actions affecting soil health to decrease wind and water erosion and sedimentation, to achieve and maintain stability, and to support the hydrologic cycle by providing for water capture, storage, and release.

Policy: Vegetative resources shall be managed in a condition that will provide sufficient cover

and litter to protect the soil surface from excessive wind and water erosion, reduce bare ground, promote infiltration, detain surface flow, and reduce soil moisture loss by evaporation. This includes making provisions for a) reducing the percentage of unvegetated ground; b) reducing the percentage of undesirable, invasive or noxious vegetation in relation to desired plant communities; and c) restoration or enhancement of perennial, intermittent and ephemeral watercourses to properly functioning condition.

Finding & Policy: Vegetative cover is more desirable and effective than biologic soils when managing for land health in Garfield County. Desirable native and non-native vegetative cover shall be given preference over biologic soil crusts when ecologic site conditions permit.

Policy: Appropriate native and non-native plant species shall be used for vegetation and reseeding treatments to protect and optimize site stability, hydrological function, and biological integrity. Native only seedings may be used when required by law or when proven to provide greater ecologic benefit than native/non-native mixtures.

Goals & Objectives: Unless otherwise approved by Garfield County and consistent with ecologic site conditions, the following minimum objectives are established when lands experience prescribed or wildland fire:

1. Retain 40 percent ground cover after the burn with recruitment to 60 percent ground cover before the first rainy season following the burn.
2. Do not reduce perennial and intermittent channel shading more than 20 percent of the natural range of variability or by an amount that will take more than three years to recover, whichever is smaller.
3. “Burn” and/or “feeder” piles will not be made in channels or swales within the area occupied when the bank full width is doubled.
4. Burned piles within riparian areas will be left “messy” in order to retain sediment on site.
5. Ignitions will not occur within 15 feet of riparian areas.
6. Any firelines created during burning operations will follow *The Five-D System for Effective Fireline Waterbars* (Hauge et al., 1979).
7. Firelines that need to cross riparian areas will do so perpendicular to the channel and should not have more than 40 feet of hydrologic connectivity.
8. Cupped fire lines should have water gaps every 20 feet to allow captured water to exit.
9. Existing disturbance areas, such as roads and trails, should be used to the extent possible as fire lines.

Goals & Objectives: Unless otherwise approved by Garfield County and consistent with ecologic site conditions, the following minimum objectives are established when lands experience mechanical treatments:

1. Retain a 60 percent ground cover or pre-treatment level ground cover (if less than 60 percent) over the treatment area.
2. Mechanical equipment should not cross live streams or those channels supporting riparian vegetation except at designated crossing sites. Every effort to use existing crossings should be made.

3. Crossings at watercourses should be as close to perpendicular to the channel as possible to limit the area of disturbance.
4. Hydrologic connectivity of crossings should be limited to 20 feet on either side of the stream course wherever possible.
5. Any sediment or debris pushed into the channel to facilitate a crossing shall be removed as soon as practical. The disturbed area will be rehabilitated to reduce erosion within the channel and may include adding mulch, slash or debris from the project area to reduce flow and erosion potential.
6. Mechanical treatments should occur on the contour as much as practical.
7. Mechanical equipment should be limited to areas where slopes are less than 35 percent. Stretches of 100 feet or less on slopes of up to 40 percent may be treated to achieve desired objectives.
8. Mechanical equipment should not operate when the soil exceeds 20 percent moisture content, or when equipment is creating ruts deeper than nine inches in muddy soil.

Goals & Objectives: Unless otherwise approved by Garfield County and consistent with ecologic site conditions, the following minimum objectives are established when lands are treated:

1. No sediment or slash will be introduced into stream channels. Inadvertently introduced material will be removed except where it would cause more damage to retrieve than would occur due to its remaining.
2. Roads, paths, ways, and trails shall be maintained, restored or improved to a condition equal to or better than that which existed at the start of the project.
3. Project related damage to roads and their drainage features shall be repaired before the next rain or the close of the construction season, whichever is sooner.
4. Fueling of drip torches and other equipment shall not occur within riparian areas.

References: Hauge, C.J., M.J. Furniss and F.D. Euphrat. 1979. *Soil Erosion in California's Coast Forest District*. California

2.5.2 WATER RIGHTS & IRRIGATION

Introduction

Utah is one of the driest states in the nation, and water is one of Garfield County's most precious natural resources. Existing water supplies have been carefully managed through established law; and developing any significant new supplies may be difficult and costly.

2.5.2.1 Water Rights

Current Setting

Since the beginning of time, man has used water to sustain life and for his personal needs; and for thousands of years, farmers all over the world have used irrigation—diverting water from streams and rivers to water their fields. The Ancestral Puebloan people in the Four Corners region irrigated small plots of corn, bean, and squash. But the early Utah pioneers of the late 1840's were the first Anglo-Saxons to practice irrigation on an extensive scale in the United States. Being a desert, Utah contained much more cultivable land than could be watered from

the incoming mountain streams. The principle was established that those who first made beneficial use of water should be entitled to continued use in preference to those who came later. This fundamental principal was later sanctioned in law, and is known as the Doctrine of Prior Appropriation. This means those holding water rights with the earliest priority dates, and who have continued beneficial use of the water, have the right to water from a certain source before others with water rights having later priority dates.

In the early territorial days, rights to the use of public streams of water were acquired by physical diversion and application of water to beneficial use, or by legislative grant. A "county courts" water allocation system was enacted in 1852 and was in effect until 1880 when it was replaced by a statute providing for county water commissioners.

The Office of the State Engineer was created in 1897. The State Engineer is the chief water rights administrative officer. A complete "water code" was enacted in 1903 and was revised and reenacted in 1919. This law, with succeeding complete reenactments and amendments is presently in force mostly as Utah Code, Title 73. In 1967 the name of the Office of the State Engineer was changed to the Division of Water Rights with the State Engineer designated as the Director, but the public sometimes still refers to the Division as the State Engineer's Office.

All waters in Utah are public property. A "water right" is a right to divert (remove from its natural source) and beneficially use water. The defining elements of a typical water right will include:

- A defined nature and extent of beneficial use;
- A priority date;
- A defined quantity of water allowed for diversion;
- A specified point of diversion and source of water;
- A specified place of beneficial use.

Rights for water diversion and use established prior to 1903 for surface water or prior to 1935 for groundwater can be established by filing a "diligence claim" with the Division. Such claims are subject to public notice and judicial review and may be barred by court decree in some areas of the state.

All other rights to the use of water in the State of Utah must be established through the appropriation process administered by the Division of Water Rights. The steps to this process for an "Application to Appropriate Water" are as follows:

- An Application to Appropriate Water is filed with the Division.
- The application is advertised and protests may be received and a hearing may be held.
- The State Engineer renders a decision on the application based upon principles established in statute and by prior court decisions.
- If the application is approved, the applicant is allowed a set period of time within which to develop the proposed diversion and use water. When the diversion and use are fully developed, the applicant retains the services of a professional engineer or land surveyor who files "proof" documentation with the Division showing the details of the development.

- Upon verification of acceptably complete proof documentation, the State Engineer issues a Certificate of Appropriation, thus “perfecting” the water right.

Many areas of the state are administratively “closed” to new appropriations of water. In those areas, new diversions and uses of water are established by the modification of existing water rights. Such modifications are accomplished by the filing of “change applications.” These applications are filed and processed in a manner very similar to that described above for Applications to Appropriate Water.

Water appropriation issues in specific geographic areas of the state are often administered using policies and guidelines designed to address local conditions. These policies and guidelines are generally developed for all or part of a defined drainage basin.

The Division of Water Rights is the state agency that regulates the appropriation and distribution of water in the State of Utah. Throughout the United States, the federal government generally acquires water rights under state law. For instance, the United States has numerous stockwatering rights under state law on BLM and national forest lands. The United States has also received partial decrees for state water rights for domestic, irrigation and other uses, such as wildlife, commercial, power, and recreation for Forest Service lands and partial decrees for water uses associated with irrigation on BLM lands. In addition, the United States typically acquires water rights for federal reclamation projects under state law.

In recent years, there has been significant discussion regarding acquisition of water rights by federal land management agencies for livestock grazing, wildlife and other authorized purposes. Some argue the water rights should be in the name of the federal agency. Others assert water rights should be perfected under the name of the permit holder or authorized user.

Federal Reserved Water Rights

In addition to water rights appropriated through the State Engineer’s office, certain federal agencies may also acquire water rights for their primary purposes as described in their enabling legislation. These rights are known as “federal reserved water rights” and may be created when federal lands are withdrawn from the public domain for national parks, wildlife refuges, national forests and other specific uses.

Federal reserved water rights are different from state appropriated water rights. They may apply to instream and out-of-stream water uses, may be created without actual diversion or beneficial use, are not lost by non-use, and have priority dates established as the date the land was withdrawn. Another important aspect of federal reserved water rights is they are limited to the minimum amount of water reasonably necessary to satisfy both existing and foreseeable future uses of water for the primary purposes for which the land is withdrawn. All other water rights for federal purposes must be obtained under state law.

Federal reserved water rights are a judicial creation with the United States Supreme Court first recognizing reserved water rights in the 1908 *Winters v United States* case. Since that time there have been numerous court actions further defining applicable law. Most recently, the State of

Utah and federal agencies have chosen to employ a negotiated approach rather than engage in expensive and often contentious litigation. Negotiated agreements have been reached for Zion National Park, Rainbow Bridge, Hovenweep, Cedar Breaks, and Timpanogos Cave National Monuments; and for the Golden Spike National Historic Site. Negotiations are currently underway for Bryce Canyon National Park.

Need for Management Change

- 1) Adequate water needs to be developed to meet the diverse current and future needs of Garfield County.
- 2) Water related issues need to be coordinated between federal, state, local and private stakeholders.
- 3) Federal, state and local entities need to coordinate definitive resolution of federal reserved water rights.
- 4) The State of Utah needs to resolve issues regarding ownership of water rights on federal lands for wildlife, livestock and other authorized purposes.

Desired Future Conditions

Garfield County desires:

- a) Adequate water is developed to meet the diverse current and future needs of Garfield County.
- b) Water related issues are coordinated with Garfield County and managed consistent with Garfield County's Resource Management Plan.
- c) Federal, state and local entities coordinate definitive resolution of federal reserved water rights consistent with the provisions of this RMP.
- d) The State of Utah develops definitive resolution regarding ownership of water rights on federal lands for wildlife, livestock and other authorized uses.

Findings, Policies, Goal & Objectives

Finding: Water is a scarce resource and needs to be developed to the maximum extent possible to promote productive and enjoyable harmony between man and his environment.

Policy: Water is a vital component in almost all aspects of the environment, and water development is prioritized over other multiple use / sustained yield activities unless otherwise approved by the Garfield County Commission.

Finding & Policy: Additional water needs to be developed, to the maximum extent practical and

in accordance with Utah water law.

Policy: Water related issues shall be coordinated with Garfield County and managed consistent with Garfield County's Resource Management Plan to the maximum extent allowed by law.

Goal & Objective: Resolve issues associated with federal reserved water rights in accordance with law and consistent with this RMP.

Goal & Objective: Resolve issues associated with ownership of water rights on federal lands for wildlife, livestock and other authorized uses.

2.5.2.2 Irrigation Current Setting

In July 1847, Utah's pioneers arrived in the arid West from their rainy roots in the East. One of their initial tasks was to divert water from the Salt Lake Valley streams for irrigation use. They realized that irrigation systems were the key to growing crops and surviving in this desert land. As additional people arrived in the harsh climate, scouts were sent out to survey undeveloped land and identify potential water sources before new areas could be settled. Once it was determined that there was water for irrigation, people established self-sufficient agricultural communities and set up "water rights." Garfield County's settlements were formed under this pattern.

An irrigation system must include a water source, a conveyance system and some way to distribute the water to the crops. The source of water may be a reservoir, pond, well, stream or river. A reservoir or pond is a more reliable source of water because it can be managed to retain a desired amount of water. Rivers and streams are more susceptible to fluctuations in weather patterns. In the western United States, there is usually plenty of water running in streams and rivers during the spring, but not nearly enough for crops in the summer and fall. If an irrigation system has some storage capacity, such as a reservoir, water resources may be more easily controlled throughout the year.

The conveyance system allows water to be transferred from a water source to the place of use. This can be achieved with canals, ditches, pipelines or any combination of these. Ditches and canals are usually open to the air and are more susceptible to seepage (leaking) and evaporation than pipes. A ditch or canal can be unlined or lined with concrete, clay or impermeable membranes. Lined canals are much more efficient than unlined canals because they prevent water from seeping into the earth. Irrigation systems are necessary in Garfield County and are a vital part of the area's socio-economic stability

There are two basic types of agricultural irrigation systems: flood and sprinkler. Flood irrigation consists of releasing water over the surface of the land to flood the area. Flood irrigation is the oldest form of irrigation and can be used for any crop. Ideally, the land is slightly sloped, but level enough for the water to distribute evenly over the surface. The more level the land, the more efficient the flooding. On average, flood irrigation systems in Utah have efficiencies of

roughly 35 to 55 percent. These efficiencies take into account the reservoirs, canals and ditches that transport the water to the field, and not just the time when the water is soaking into the plant roots. Most of the inefficiencies in the flood irrigation systems come from evaporation loss and water soaking into the soil in canals and ditches.

Sprinkler irrigation systems utilize pipes and sprinklers to distribute water to the desired area and are usually more efficient than flood irrigation systems. On average, agricultural sprinkler systems in Utah are about 60 percent efficient. But sprinklers are more susceptible to wind than flood systems and can have much lower efficiencies in windy conditions. As technology improves, irrigation systems are becoming increasingly efficient.

Garfield County contains approximately 82,000 acres in farms or ranches with an average size of 355 acres. The County has about 22,300 acres in cropland which are irrigated. Crops are irrigated with sprinkler systems with the most prevalent being wheel lines. In Panguitch, flood irrigation is the most practiced irrigation method. Pivot irrigation systems are becoming increasingly popular in Garfield County. About 50% of the irrigation water available in Garfield County is from the Sevier, Escalante, and Paria rivers. In addition, 45% of the water comes from Panguitch Lake, Tropic Reservoir and Wide Hollow Reservoir. The remaining 5% is drawn from deep wells.

Need for Management Change

- 1) Irrigation is part of Garfield County's custom, culture and heritage and is vital to community and socio-economic stability. Irrigation needs to be preserved, improved and enhanced.
- 2) Land management practices need to support preservation, improvement and enhancement of irrigation resources.
- 3) Land managers need to recognize irrigation as a cultural resource and take management actions on their lands that will result in preserved, improved and enhanced irrigation.
- 4) Land managers need to implement avoidance, minimization and mitigation techniques and best management practices to support irrigation while allowing appropriate multiple use / sustained yield activities to proceed.
- 5) Land managers need to recognize Garfield County is the primary headwaters of the Sevier River and actions in Garfield County impact numerous activities downstream.

Desired Future Conditions:

Garfield County desires:

- a) Irrigation be preserved, improved and enhanced and federal land managers support preservation, improvement and enhancement of irrigation on private lands through appropriate actions on federal lands.

- b) Irrigation be recognized a cultural resource and management actions be taken that will result in preserved, improved and enhanced irrigation.
- c) Land managers implement avoidance, minimization and mitigation techniques and best management practices to support irrigation while allowing appropriate multiple use / sustained yield activities to proceed.
- d) Land managers recognize Garfield County is the primary headwaters of the Sevier River and actions in Garfield County impact numerous activities downstream.
- e) Unimpeded and efficient flow of current and future irrigation waters across federal lands.
- f) Appropriate irrigation related resources be added to the County's list of historic/cultural resources and landmarks.
- g) Removal of encroaching pinyon / juniper woodlands, Tamarisk, Russian Olive, and cheatgrass which negatively impact water quality, water quantity and irrigation resources in Garfield County and for downstream users.
- h) Lands are managed to increase water development and resources.

Findings, Policies, Goals & Objectives

Finding: Irrigation was one of the first beneficial uses for water resources when Garfield County was settled and has become more efficient over the years. Decline of ecosystem health during the last 50 years – especially on federal lands - is a result of failures to implement active management rather than a result of limited human influences associated with multiple use / sustained yield projects.

Finding & Policy: Properly designed human influences including dam construction, irrigation projects, water development, culvert installation, road maintenance and road development improve water quality, water quantity and ecosystem health.

Policy: Garfield County opposes plans and/or policies on federal lands that limit development of or access to water and irrigation resources.

Finding & Policy: Irrigation structures, water and sources are a significant historic, cultural, socio-economic, and ecologic resource and shall be protected, improved and enhanced to the maximum extent allowed by law.

Finding & Policy: Consistent with ecologic site descriptions and based on a 10 year rolling average, land managers shall restore 25% of Class II and Class III pinyon / juniper woodlands to desirable native and/or non-native sagebrush / grassland communities in order to protect, preserve, improve and enhance irrigation resources in Garfield County.

Policy: Garfield County will cooperate and coordinate with water companies, irrigation

companies, conservation districts, state agencies, federal agencies and other partners to manage and develop current and future irrigation and water resources.

Policy: NEPA analysis for projects that impact irrigation resources shall include detailed socio-economic impacts to irrigators, especially small farmers, water companies and municipalities. Provisions of the Regulatory Flexibility Act will serve as a model for such analysis.

2.5.3 Surface Waters

Current Setting

Water is one of the most important if not the most important natural resource in Garfield County. More than 93% of Garfield County is federal land, and most of the 3% private lands are concentrated in valley bottoms and along water courses. Consequently, almost all surface water and the majority of watersheds are located on federal land. Garfield County is home to 7 major sub basin watersheds: Upper Sevier, East Fork Sevier, Paria, Escalante, Fremont, Dirty Devil, and Upper Lake Powell. Two of the watersheds, Upper Sevier and East Fork Sevier, develop surface waters which flow north and eventually terminate at Sevier Lake in Millard County. The Sevier watersheds are associated with the Basin & Range physiographic region and receive some the highest annual precipitation in the County. The remaining watersheds flow east or south and eventually reach the Colorado River, with all but the Paria watershed draining into Lake Powell.

Surface water can be generally described as a river, stream, waterbody, reservoir, lake, pond, or spring. Rivers and streams in natural channels are classified as being perennial, intermittent, or ephemeral. Important rivers and streams in Garfield County include the Sevier River, the Escalante River, Panguitch Creek, Boulder Creek, the East Fork of the Sevier River, the Dirty Devil River, and the Paria River and their tributaries. These streams are fed mainly by snowmelt and groundwater discharge from nearby mountains and are augmented by rainfall, especially during the late summer monsoon season. Rainfall in Garfield County is not adequate for the most commonly grown crops and is generally the limiting factor for vegetative cover on state and federal lands. Panguitch Lake, Tropic Reservoir and Wide Hollow Reservoir are major irrigation reservoirs in the area. In addition, many smaller reservoirs have been built in the area, but they are used mainly for water regulation, rather than large scale storage.

Over the past 50 years ecological conditions associated with many of Garfield County's surface waters have declined. The declines are particularly pronounced on federal lands where pinyon / juniper woodlands have been allowed to encroach on more desirable sagebrush/grassland communities, where seeding maintenance and vegetation projects have been neglected and where Tamarisk and Russian Olive have not been controlled. Often, these conditions occur in sandier soils where sparse vegetative cover is inadequate to prevent soil erosion accompanying intense precipitation events.

Land manager often incorrectly cite human influences (dam construction, irrigation projects, poorly designed culverts, livestock grazing, roads, farming/ranching practices, mining, recreational use, etc.) as the primary cause for the ecologic decline. However, much of the decline is attributable to loss of historic sagebrush / grassland vegetative communities, especially

in lower elevations with sandier soils.

Most human use of the water from rivers, streams, and waterbodies is for agricultural purposes. Other beneficial uses are limited with hiking in the Escalante River and fishing in the East Fork of the Sevier being the most popular. Boulder Creek is used to generate a small amount of hydroelectric power near the Boulder Town boundary.

Historically numerous small springs, seeps and mesic areas were widely scattered across the County, often located on valley margins or mountain blocks but extended throughout various landforms. The small springs and seeps were extremely important for their riparian values, as wildlife habitat, and as drinking water for domestic livestock and wildlife.

Many of these springs have dried over the last several decades as a result of encroaching pinyon / juniper woodlands and invasion of Tamarisk and Russian Olive. Where pinyon / juniper woodlands South of Panguitch have been restored to sagebrush / grassland communities, the springs and seeps are returning and providing water for a variety of wildlife. When needed, the water resources are protected from livestock and wildlife trampling by exclosures and off stream watering practices.

Watersheds on public lands often supply water to communities in Garfield County. Surface water is generally used for irrigation purposes, but watershed health and surface water quality and quantity can impact groundwater resources that are used for municipal domestic water supply. Actions on public lands in these watersheds are likely to affect such factors as water quality, water quantity, erosion rates, and groundwater recharge. There is currently a high degree of interest regarding surface water and other water resources.

Need for Management Change

1) During the last few decades land managers have not implemented active management actions to preserve, enhance, improve or optimize surface water resources. Federal, state and local entities need to cooperate and coordinate surface water management to optimize water quantity, quality and beneficial use.

2) Land managers need to recognize authorities granted under the Clean Water Act to local governments in managing surface waters within their jurisdictions. Federal agencies are subject to and must comply with state, tribal, interstate and local requirements respecting the control and abatement of water pollution. (CWA (33 U.S.C. § 1323)). The CWA's regulations (40 C.F.R. part 131) describe state responsibilities for developing, reviewing, revising, and approving water quality standards, which may be more stringent than those required by federal regulation and include designation of uses of waters, establishment of water quality criteria, and adoption of an anti-degradation policy.

3) Land managers need to comply with cooperation and coordination requirements of federal laws, regulations, rules and manuals (e.g. BLM Manual 7240 and Forest Service Manual 2532) regarding state and local direction of water resource management issues.

4) Surface waters in Garfield County need to be re-evaluated to verify the designated beneficial use is consistent with hydrologic and environmental conditions. The upper reaches of the Escalante River from Boulder Creek confluence to Pine Creek need to be reconsidered for classification as a warm water fishery.

5) Upland soil loss due to lack of desired vegetative ground cover needs to be addressed as the primary source of nonpoint pollution in Garfield County.

6) Until such time as state and federal agencies can coordinate surface water management plans with Garfield County, the provisions of this RMP need to control maintenance, mitigation, enhancement, and improvement of surface water resources in Garfield County.

Desired Future Conditions

Garfield County Desires:

a) Land managers preserve, enhance, improve or optimize surface water resources through active management, especially watershed restoration and improving desirable native and non-native vegetative ground cover.

b) The regulatory control of surface waters under the Clean Water Act needs to be recognized and implemented.

c) Land managers need to cooperate and coordinate in accordance with federal laws, regulations, rules, and manuals regarding state and local direction of water resource management issues.

d) Surface waters be re-evaluated to verify the designated beneficial use is consistent with hydrologic and environmental conditions. The upper reaches of the Escalante River from Boulder Creek confluence to Pine Creek need to be reconsidered for classification as a warm water fishery.

e) Upland soil loss due to lack of desired vegetative ground cover be recognized as the primary source of nonpoint pollution in Garfield County.

f) The provisions of this RMP be accepted as the controlling maintenance, mitigation, enhancement, and improvement standard for surface water resources in Garfield County, until such time as state and federal agencies coordinate surface water management and implementation plans with Garfield County.

g) Invasion and encroachment of Tamaris, Russian Olive, pinyon / juniper woodlands and other undesirable species is recognized as negatively impacting surface waters to a much greater extent than human development and impacts from man.

Findings, Policies, Goals & Objectives

Finding: Statistically, human development is extremely limited on the 93% of the land in Garfield County that is managed by federal agencies.

Finding: Land managers have not implemented active management to preserve, enhance, improve, or optimize surface water resources. Federal, state and local entities need to cooperate and coordinate surface water management to optimize water quantity, quality and beneficial use.

Goal: Maintain, improve or enhance surface water resources, while complying with applicable federal, state and local water quality standards.

Objective: Protect, restore and maintain the chemical, physical, and biological (ecological) services of surface waters to support multiple use / sustained yield resource management needs.

Objective: Protect, restore and maintain the hydrologic regime (i.e., timing, magnitude, recharge, duration, stream network/groundwater connectivity, temperature, and spatial distribution of peak, high, and low flows) of surface and groundwater, through management of vegetation in upland, riparian, aquatic, and wetland habitats.

Policy: Until such time as total maximum daily loads are determined for individual perennial, intermittent and ephemeral streams in Garfield County, land managers shall control non-point source pollution, including sediment, by: a) optimizing desirable upland, riparian, aquatic, and wetland vegetation; b) restoring 25% of Class II and Class III pinyon / juniper woodlands to desirable sagebrush semi-desert grasslands, based on a 10 year rolling average; c) eliminating noxious weeds, Tamarisk and Russian Olive; and d) using desirable non-native biological equivalents when soil retention and vegetative performance is better than native species.

Policy: Land managers shall comply with applicable federal law, and to the extent applicable under the provisions of the Clean Water Act (specifically 33 U.S.C. 1323), state, tribal, and local water laws and regulations.

Policy: Garfield County shall coordinate, cooperate, and consult with federal, tribal, state, and local agencies, private landowners, and stakeholder organizations to foster a watershed-based approach to water resource stewardship.

Policy: Consistent with federal, state and local water quality programs, federal actions shall include at least one alternative that incorporates a science-based watershed approach for water quality protection and restoration, including assessment methods, monitoring and reduction of non-point pollution through vegetative restoration.

Finding: Modification and pollution of surface-water, wetlands, riparian habitats, seeps, and springs in Garfield County are more influenced by vegetative cover, prescribed fire and wildland fire than by mitigated impacts from residential, commercial, and urban development, roadway and bridge construction, oil and gas development, livestock grazing, hydroelectric, wind and solar energy development, geothermal exploration and plant development, pipeline and transmission line construction, and other human activities.

Finding & Policy: New water developments are beneficial to all forms of life. In priority wildlife management areas new water developments shall be allowed if it is demonstrated, among other benefits, the improved water resources will benefit the prioritized species.

Finding: The Escalante River basin provides naturally fragmented habitat for native Colorado River cutthroat trout. Warm temperatures and high sediment loads restrict native cutthroat use of the main river for much of the year, and allow only limited connectivity between tributaries. The existing salmonid fish distribution and habitat conditions suggest the Escalante River provides seasonal fish passage to tributaries, but does not support year-round cold water fish use.

Policy & Goal: Priorities for improving water quality in the Escalante River watershed are: 1) enhancement of desirable upland and riparian vegetative cover; 2) elimination of Tamarisk and Russian Olive; and 3) enhance channel bank vegetation, riparian forest buffers and herbaceous cover, streambank protection, and channel stabilization.

Policy: Prior to adopting best management practices for surface waters in Garfield County, federal agencies shall coordinate proposed practices with Garfield County and shall comply to the maximum extent allowed by law with the County's plans, policies and programs.

Finding: Forests, grasslands and rangelands are capable of producing high-quality water, especially when the ecosystems are healthy and functioning properly. Water quality is influenced by the pattern, magnitude, intensity, and location of land use and management activities. Excess sediment (turbidity and bedload), nutrients, and their resulting effects on water chemistry and aquatic habitats, are the most significant water quality issues resulting from land uses and management activities on Garfield County's forests, rangelands and grasslands

Policy: Preventing negative water quality impacts is more efficient than attempting to restore the damage. To ensure water quality is protected, land managers shall develop procedures, methods, and controls, consistent with federal, state and local requirements, to address sedimentation and potential pollutants at their source. Implementation and monitoring of Best Management Practices (BMPs) is a fundamental basis of water quality management programs to protect, restore, or mitigate water quality impacts from activities on Garfield County lands.

Policy: Garfield County's policy for control of nonpoint source pollution is to a) enhance desirable vegetative cover wherever possible; b) apply appropriate adaptive management principles; and c) implement effective site specific best management practices.

Goal: Avoid, minimize or mitigate adverse effects to soil, water quality, and riparian resources that may result from prescribed or wildland fire.

Objective: Rehabilitate watershed features and functions damaged by wildland fire control and suppression related activities to avoid, minimize, or mitigate long-term adverse effects to soil, water quality, and riparian resources.

Objective: Avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources by managing vegetative resources and upland sites to maintain desirable ground cover, maintain soil quality and control runoff to minimize the discharge of nonpoint source pollutants

and maintain streambank and riparian area integrity.

Goal: Retain 40 percent ground cover after prescribed or wildland fire with recruitment to 60 percent ground cover before the first rainy season following the burn.

References:

Utah Statewide Nonpoint Source Pollution Management Plan, Utah Department of Environmental Quality, May 2014

Escalante River Watershed Water Quality Management Plan, Utah Division of Water Quality / Millennium Science & Engineering, Inc., Circa 2003

National Best Management Practices for Water Quality Management on National Forest System Lands, United States Department of Agriculture Forest Service, April 2012

Federal Land Policy and Management Act of 1976 (FLPMA); 43 U.S.C. §§ 1701-1785).

Clean Water Act (CWA) of 1977 as amended.

Safe Drinking Water Act (SDWA) of 1974 (42 U.S.C. §§ 300f-300j).

Resource Conservation and Recovery Act of 1976 (RCRA) (42 U.S.C. § 6901 et seq.).

National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. § 4321 et seq.).

2.5.3.1 Ditches & Canals

Current Setting

Ditches and canals are open waterways whose purpose is to carry water from one place to another. Canals generally refer to main waterways supplying water to one or more farms or distribution points. Ditches are smaller systems and convey water from farm entrances to irrigated fields. At times the nomenclature for ditches and canals is used interchangeably.

For thousands of years, farmers all over the world have used irrigation—diverting water from streams and rivers to water their fields. The Ancestral Puebloan in the Four Corners region irrigated small plots of corn, bean, and squash. But the Mormons settling in Utah were the first to use irrigation on a large scale in the American West. They established the first irrigation-based economy in the Western Hemisphere in modern times. One of the first things the settlers in Salt Lake Valley did in July 1947 was to dam City Creek so the overflowing waters would soften the soil, and they could plant potatoes. By 1865, approximately 1,000 miles of canals had been established in Utah.

In the last two decades of the 19th century, private companies attempted to replicate the early settler’s irrigation techniques and established irrigation companies in an attempt to provide more land for agriculture. The attempts were met with limited success. In 1902, the U.S. Congress passed the Federal Reclamation Act and began building big dams in the West. The act

encouraged the development of larger water storage and conveyance projects. The resulting dams, reservoirs and water pipelines allowed for bigger cities and larger agricultural, industrial, and recreation endeavors.

Garfield County's development of canals and ditches paralleled that of other communities in Utah. Ditches and irrigation canals were dug in and around agricultural interests near communities and in outlying valleys. The small amount of private land and the rugged, remote nature of many of the federal lands limited the extent to which ditches and canals could be constructed. However, natural conveyance systems (riverbeds, creeks and streams) were used to transport water from natural sources and storage facilities to locations where it was regulated and allowed to enter the developed distribution system. Most populated areas of Garfield County and associated agricultural activities had ditches and canals constructed early in the community's development, and they remained relatively unchanged for approximately 100 years. During these years ditches and canals served dual purposes of conveying irrigation water and providing an outlet for dispersing flood waters resulting from frequent high intensity storms common to the area.

In the latter third of the 20th century, improved techniques and construction methods led to the conversion of earth-lined ditches to lined canals and pipelines. Although more efficient in the use of water, the developments resulted in many historic ditches falling into disrepair and the loss of flood control capabilities. Many of the larger conveyance networks have remained operational and provide continued service, while many of the smaller facilities associated with individual farms and irrigation companies have been replaced by pipelines.

In Utah, like most parts of the arid West, water often has to be conveyed a long distance between the source and the place of use. Accordingly, there are numerous ditches, canals, and pipelines that cross one person's private property in order to convey water to another private party. The person using the ditch, canal, or pipeline generally has an easement, either by prescription or by an express grant of easement. Whether prescriptive or express, the easement includes the right to maintain the ditch, canal, or pipeline.

Utah case law establishes that the easement holder has the right to enter upon the land of the other party in order to maintain, clean, and/or repair the ditch, canal, or pipeline--provided that the easement holder does not cause any unnecessary damage or create additional burdens on the land. Additionally, the easement holder has the right to improve the method of carrying the water; i.e., the easement holder generally has the right to convert an unlined ditch into a lined ditch, or convert an open canal to a pipeline.

The property owner cannot limit the easement holder's access to the easement for maintenance and repairs. For example, the property owner should not "fence out" the easement holder with locked gates, unless the property owner provides the easement holder with keys for the locks.

The underlying property owner also does not have the right to interfere with the easement holder's use of the easement. For example, the property owner cannot change the course of the ditch or canal without the easement holder's consent. The property owner also cannot construct facilities on or in the easement that would restrict the easement holder's access to or use of the

easement.

In the late 1800s and early 1900s several laws were enacted granting ditch and water companies easements for their conveyance systems across federal lands. Given the distances between water sources and areas of beneficial use, many of the ditches and canals were located in natural water courses. Those watercourses continue to be use today as primary conveyance systems connecting lakes and reservoirs with private irrigation systems.

Need for Management Change

- 1) Ditches and Canals need to be maintained in order to perform dual functions of water conveyance and flood control.
- 2) Where ditches and canals exist on federal lands, appropriate authorizations need to be executed to preserve their function.
- 3) Ditches and canals need to be recognized as important historic and current cultural resources.
- 4) Ditches and canals need to be preserved, enhanced and improved to benefit man and his environment.

Desired Future Conditions

Garfield County desires:

- a) Existing ditches be preserved, enhanced and improved to permit the unimpeded flow of water.
- b) Ditches and canals be recognized as important cultural resources and their function be preserved, enhanced and improved.

Findings, Policies, Goals & Objectives

Finding: Ditches and canals were an important component of settling Garfield County and continue to have functional, historic and cultural value.

Finding: Ditches and canals are generally private property rights managed and controlled by individuals or private irrigation companies.

Policy: Garfield County supports the continued safe and efficient use and maintenance of ditches and canals in accordance with law and private property rights.

Policy: Ditch and canal use, maintenance and improvements shall be protected in accordance with existing law and best management practices. Consistent with law, safety and efficiency, Garfield County supports the unimpeded flow of water in ditches and canals.

Policy: Ditches and canals shall be managed for safety, efficiency and conservation.

Policy: Garfield County supports efforts by irrigation companies, water conservancy districts and others to protect, facilitate and improve the efficient supply of water.

Policy: Ditches and canals shall be protected, used and managed in compliance with law.

Policy: Private ditches and canals may be used for flood control when the need exists.

Finding: U.C.A. 73-5-7 authorizes the State Engineer to inspect canals and ditches and order necessary repairs to protect public safety.

Finding & Policy: The State Engineer is required to inventory all open, human made water conveyance systems prior to July 1, 2017. The State Engineer's inventory is incorporated by reference.

References

<http://ilovehistory.utah.gov/topics/water/irrigation.html>, September, 2016

Jeff Gittins, <http://utahwaterrights.blogspot.com/2011/04/does-easement-for-ditch-include-right.html>, September 8, 2016

2.5.3.2 Rivers & Streams

Garfield County is traversed by numerous small rivers, streams and tributaries that eventually flow into two major rivers: the Sevier River and the Colorado River.

The Sevier River flows generally from south to north and has its origins in the Dixie National Forest near Panguitch Lake and near the Kane County / Garfield County line. Major tributaries in Garfield County that feed into the Sevier River include Mammoth Creek, Panguitch Creek, East Fork of the Sevier, and Antimony Creek.

The Colorado River forms the eastern boundary of Garfield County and is the most well-known river in the region. Its watershed includes the largest portion of the County and drains lands in the Dixie National Forest, Bryce Canyon National Park, Grand Staircase-Escalante National Monument, Henry Mountains Resource Area, Capitol Reef National Park, Glen Canyon National Recreation Area and Canyonlands National Park. Major tributaries include the Paria River, Escalante River, Dirty Devil River, Bullfrog Creek and many other lesser known sources.

Both the Sevier and Colorado Rivers are fed from mountain snowmelt and runoff. Additionally they receive major flows from annual late summer thundershowers. Rivers and streams make up

a very minute percentage of the land base but are influenced by conditions in their much larger watersheds. There are no known point sources that are discharging directly into Garfield County's rivers and streams. Pollution is primarily erosional sediments resulting from insufficient or undesirable vegetative ground cover. Discharge from human developments is controlled by a) implementation of stormwater regulations applied to municipalities and communities or b) implementation of best management practices on sparsely placed developed uses of federal lands.

Need for Management Change

- 1) More aggressive vegetative management needs to be implemented to improve Garfield County's rivers and streams and in their associated watersheds to optimize and protect water resources.
- 2) Land managers need to be consistent with Garfield County's plans, programs and policies for resources impacting rivers and streams, including but not limited to actions for vegetation, water quality, pinyon/juniper reduction, fish & wildlife, livestock grazing, special status species, and soil resources.
- 3) Wild, scenic and recreational river evaluations and designations need to be consistent with Garfield County's criteria, plans, programs and policies.
- 4) Increased access needs to be provided to rivers and streams on public lands, including but not limited to access for law enforcement and emergency medical services, solid waste collection services, human waste collection services, recreation, and for the general public.
- 5) Impaired waters in the Escalante River need to be reclassified to include only those tributaries with native targeted fish populations and conditions suitable for cold water fisheries.
- 6) Class II and Class III pinyon/juniper woodlands need to be replaced with desirable vegetative communities to reduce erosion and impacts to the County's rivers and streams.
- 7) Additional structural (dams, reservoirs, impoundments, etc.) and non-structural improvements need to be constructed to improve the efficiency of Garfield County's rivers and streams.
- 8) Transplantation of beavers needs to be limited to areas approved by the Garfield County Commission and that will not impede the free flow of water.
- 9) Tamarisk, Russian Olive and noxious weeds need to be eradicated from all of Garfield County's public land rivers and streams and their associated riparian zones.
- 10) A new reservoir needs to be built upstream from Wide Hollow Reservoir to reduce stream sedimentation and protect water resources.

Desired Future Conditions

- a) The beneficial use of Garfield County's rivers and streams be maximized through protection and development of water quantity and quality and through more aggressive vegetative management in watersheds and other areas impacting rivers and streams.
- b) Land managers are consistent with Garfield County's plans, programs and policies for resources impacting rivers and streams, including but not limited to actions for vegetation, water quality, pinyon/juniper reduction, fish & wildlife, livestock grazing, special status species, and soil resources to the maximum extent allowed by law.
- c) Wild, scenic and recreational river evaluations and designations are consistent with Garfield County's criteria, plans, programs and policies.
- d) Increased access for law enforcement and emergency medical services, solid waste collection services, human waste collection services, recreation, and the general public is provided to Garfield County's rivers and streams, especially on public lands.
- e) Impaired waters in the Escalante River are reclassified to include only those tributaries with native targeted fish populations and conditions suitable for cold water fisheries.
- f) Class II and Class III pinyon/juniper woodlands are reduced by 25% on a rolling 10 year average and replaced with desirable vegetative communities to reduce erosion and impacts to the County's rivers and streams.
- g) Additional structural (dams, reservoirs, impoundments, etc.) and non-structural improvements are constructed to improve the efficiency of Garfield County's rivers and streams.
- h) Transplantation of beavers are limited to areas approved by the Garfield County Commission and that will not impede the free flow of water.
- i) Tamarisk, Russian Olive and noxious weeds are eradicated from all of Garfield County's public land rivers and streams and their associated riparian zones.
- j) A new reservoir needs to be built upstream from Wide Hollow Reservoir to reduce stream sedimentation and protect water resources.

Findings, Policies, Goals & Objectives

Finding: Garfield County's rivers and streams are important natural resources and are a vital component of the County's health, safety, welfare, custom, culture, heritage, community viability and socio-economic stability.

Policy, Goal & Objective: Land managers shall recognize Garfield County’s jurisdictional role over rivers and streams and shall comply with the County’s plans, programs and policies to the maximum extent allowed by law.

Policy & Implementation Action: The beneficial use of Garfield County’s rivers and streams shall be maximized through protection and development of water quantity and quality and through more aggressive vegetative management in watersheds and other areas impacting rivers and streams.

Policy: Land managers shall be consistent with Garfield County’s plans, programs and policies for resources impacting rivers and streams to the maximum extent allowed by law, including but not limited to actions for vegetation, water quality, pinyon/juniper reduction, fish & wildlife, livestock grazing, special status species, and soil resources.

Policy: Wild, scenic and recreational river evaluations and designations shall be consistent with Garfield County’s criteria, plans, programs and policies.

Policy, Goal & Objective: Increased access for law enforcement, emergency medical services, solid waste collection services, human waste collection services, recreation, and the general public shall be developed for Garfield County’s rivers and streams, especially on public lands.

Policy & Objective: Impaired waters in the Escalante River will be reclassified to include only those tributaries with native targeted fish populations and conditions suitable for cold water fisheries at the earliest possible date.

Policy, Goal & Objective: Class II and Class III pinyon/juniper woodlands shall be reduced by 25% on a rolling 10 year average and replaced with desirable vegetative communities to reduce erosion and impacts to the County’s rivers and streams.

Policy, Goal & Objective: Additional structural (dams, reservoirs, impoundments, etc.) and non-structural improvements shall be constructed to improve the efficiency of Garfield County’s rivers and streams.

Policy: Transplantation of beavers is limited to areas approved by the Garfield County Commission and that will not impede the free flow of water.

Policy, Goal & Objective: Tamarisk, Russian Olive and noxious weeds shall be eradicated from all of Garfield County’s public land rivers and streams and their associated riparian zones. Land managers shall reduce Tamarisk, Russian Olive and noxious weeds within 200 feet of Garfield County’s live rivers and streams by 25% based on a rolling 5 year average.

Policy, Goal & Objective: A new reservoir will be built upstream from Wide Hollow Reservoir to reduce stream sedimentation and protect water resources at the earliest possible date and prior to 2025.

2.5.3.3 Flood Plains & River Terraces

Introduction

A floodplain or flood plain is an area of land adjacent to a stream or river that stretches from the banks of its primary channel to the topographic elevation marking the historic high water line and encompasses an area that experiences flooding during periods of high discharge. It includes the floodway, which consists of the stream channel and adjacent areas that actively carry flood flows downstream as well as the flood fringe. Floodplains are overflow areas which are inundated by flooding, but which do not necessarily experience a strong current.

Flood plains are made by river meanders eroding sideways as they travel downstream. When a river breaks its banks and floods, it leaves behind layers of material called alluvium. These layers gradually build up to create the floor of the flood plain. Floodplains generally contain unconsolidated sediments comprised of sand, gravel, loam, silt, and/or clay, often extending below the bed of the stream. These accumulations often create aquifers, and the water drawn from them is usually of a higher quality when compared to the water in the river.

Geologically ancient floodplains are often represented in the landscape by older deposits known as river terraces. These terraces are old floodplains that remain relatively high above the present floodplain and indicate former courses of a stream. In simple terms, a floodplain is an area near a river or a stream which floods during high water, and river terraces are benches or steps that extend along the side of a valley and represents a former level of the valley floor.

The floodplain during its formation is marked by meandering streams, oxbows, wetlands or small pools and is occasionally completely covered by water. When the drainage system has ceased to act or is entirely diverted for any reason, the floodplain may become a level area of great fertility, similar in appearance to the floor of an old lake. The floodplain differs, however, because it is not altogether flat. It has a gentle slope downstream, and often, for a distance, from its exterior to its center.

Floodplains are a natural place for a river to dissipate its energy. Meanders form over the floodplain to slow down the flow of water, and when the channel is at capacity water spills over the floodplain where it is temporarily stored. In terms of flood management the upper part of the floodplain (piedmont zone) is the area where natural flood water control begins. Channelization in this zone may increase velocities and have significant impact on downstream flooding.

Floodplains can support particularly rich ecosystems (known as riparian zones), both in quantity and diversity. A floodplain can contain more than 100 times as many species as a river. Wetting of the floodplain soil releases an immediate surge of nutrients, including those left over from the last flood and those that result from the rapid decomposition of organic matter accumulated in the floodplain. Microscopic organisms thrive, and larger species enter a rapid breeding cycle. Opportunistic feeders (particularly birds) move in to take advantage. The production of nutrients peaks and falls quickly; however the surge of new growth endures for some time. This makes floodplains particularly valuable for wildlife and agriculture.

Current Setting

Historically, towns in rural Utah have been built in close proximity to rivers and their floodplains, where water was readily available for irrigation and landforms were conducive to agriculture. Garfield County is no exception. Communities in the County have been located near rivers. Early on, pioneers recognized the problems associated with locating homes and structures too close to flood prone rivers, but in recent years an increased desire for recreational homes and riverfront property has resulted in added pressure to make floodplains available for development.

In cooperation with local government, the Federal Emergency Management Agency (FEMA) manages development in flood prone areas through the National Flood Insurance Program (NFIP). The program typically focuses on delineation of the 100-year flood zone, also known as the Special Flood Hazard Area. Where a detailed study of a waterway has been done, the 100-year floodplain will also include the floodway, the critical portion of the

floodplain which includes the stream channel and any adjacent areas that must be kept free of encroachments that might block flood flows or restrict storage of flood waters.

In order for flood-prone property to qualify for government-subsidized insurance, a local community must adopt an ordinance that protects the floodway and requires that new residential structures built in Special Flood Hazard Areas be elevated to at least the level of the 100-year flood. Commercial structures can be elevated or flood proofed to or above this level. In some areas without detailed study information, structures may be required to be elevated to at least two feet above the surrounding grade. Many State and local governments have, in addition, adopted local floodplain construction regulations which are more restrictive than those mandated by the NFIP.

Communities in Garfield County generally participate with FEMA in managing floodplains and often adopt more stringent requirements for human development in the floodplain. However, maps are not always accurate and alterations of the watershed upstream of the point in question can potentially affect the ability of the watershed to handle water, and thus potentially affects the levels of the periodic floods. But the maps are rarely revisited, and are frequently ineffective at accurately predicting areas of flooding or flood levels. Notwithstanding, developments in floodplains and on river terraces on private lands are being adequately managed through local planning and zoning ordinances and local building codes.

Impacts to floodplains and river terraces on developed state and federal lands are similar to controls used in community and private settings. Best management practices are employed to mitigate any detrimental effects, so limited human developments associated with authorized multiple use activities have little to no effect on floodplains and river terraces.

Large expanses of undeveloped federal land in Garfield County are not afforded similar protection. Passive land management, conversion of historical vegetative communities to Class II and Class III conifer woodlands, increased bare ground, altered fire regimes, and other factors have resulted in modified watersheds and degraded upland conditions. Some estimates indicated uplands comprise as much as 95% of the federal lands not occupied by water bodies in Garfield County. Degraded conditions in dominant uplands, largely as a result of encroaching conifers, have resulted in increased surface flows and expanding flooding in remote floodplains. Sparsely vegetated sandy soils have responded with increased erosion, downcutting of primary channels and steepening of banks. These unstable conditions are characteristic of formative floodplains that have not reached equilibrium.

Impacts associated with upland induced, unstable floodplains are exacerbated by natural hydrologic cycles typical of the Colorado Plateau. Flooding generally occurs from two distinct events: spring runoff from melting snowpacks and intense summer thundershowers. While either event can trigger flooding, the dynamics are different. Snowmelt is a relatively predictable occurrence dependent on the amounts of winter snowpack and the timing of rising spring temperatures. Large accumulations of snowpack melting in the spring contributes to some localized flooding, usually in the larger drainage basins. In contrast, summer cloudbursts cause site specific and localized flooding events in otherwise dry washes and canyons. Both kinds of events can have profound impacts on the floodplains and hydrologic systems. But the thunderstorms often occur in soils that are more susceptible to erosion and create incised channels without functioning floodplains.

Wildland and prescribed fire are secondary causes of flooding. When vegetation is burned, soils are exposed to erosion. Debris flows below fire scars is a considerable risk until vegetation is reestablished. Planning for revegetation through seeding and other mitigation efforts after fires are addressed in resources management documents and in agency practices.

For the most part, flooding is a natural process that supports channel maintenance, ecological processes, and riparian vegetation. However, flooding in areas without properly functioning floodplains has the opposite effect as nature tries to reach equilibrium by widening banks and decreasing the hydrologic grade.

Need For Management Change

- 1) Floodplains, especially on undeveloped federal lands, need to be restored to properly functioning conditions.

- 2) Coordinated, strategic planning is needed to outline a plan of attack to restore uplands, floodplains and vegetation and to improve rangeland health.
- 3) Structural and non-structural improvements need to be made to degraded watercourses and floodplains.
- 4) The role of upland watershed management needs to be recognized and incorporated in floodplain management and restoration.
- 5) Structural and non-structural improvements need to be made to degraded uplands to a) replace Class II and Class III pinyon/juniper woodlands with desirable historic vegetative communities, b) reduce runoff and c) reduce the amount of bare ground.
- 6) Check dams need to be installed to arrest downcutting and to restore natural stream grade.
- 7) Active management and restoration projects on federal lands need to be implemented to restore sinuosity, vegetation and floodplain function which mimic the natural hydrologic system.
- 8) Long term hydrologic function needs to be prioritized over short term ground disturbance.
- 9) Analysis/approval processes for floodplain restoration need to be simplified and authorized as categorical exclusions under NEPA. Corps of Engineers and other federal agency involvement needs to be reduced to the minimum required under law.

Desired Future Conditions

Garfield County desires:

- a) Floodplains, especially on undeveloped federal lands, are restored to properly functioning conditions.
- b) Coordinated, strategic planning is implemented to outline a plan of attack to restore uplands, floodplains and vegetation and to improve rangeland health.
- c) Structural and non-structural improvements are made to degraded watercourses and floodplains.
- d) The role of upland watershed management is recognized and incorporated in floodplain management and restoration.
- e) Structural and non-structural improvements are made to degraded uplands to a) replace Class II and Class III pinyon/juniper woodlands with desirable historic vegetative communities, b) reduce runoff and c) reduce the amount of bare ground.
- f) Check dams and restoration projects are implemented to arrest downcutting and to restore natural stream grade and sinuosity.
- g) Active management and restoration projects on federal lands are implemented to restore sinuosity, vegetation and floodplain function which mimic the natural hydrologic system.
- h) Long term hydrologic function is prioritized over short term ground disturbance.
- i) Analysis/approval processes for floodplain restoration are simplified and authorized as categorical exclusions under NEPA. Corps of Engineers and other federal agency involvement are eliminated or reduced to the minimum required under law.

j) Land managers restore to properly functioning condition at least 1% or 10 miles of non-functioning floodplains per year.

Findings, Policies, Goals & Objectives

Policy: Long term hydrologic function is prioritized over short term ground disturbance.

Finding: Floodplains, especially on undeveloped federal lands, need active structural and non-structural modifications to restore properly functioning and desirable conditions.

Finding: Upland vegetative conditions have a significant impact on floodplain function in any given watershed.

Finding & Policy: A coordinated, strategic plan recognizing the condition of Garfield County's floodplains, especially on undeveloped federal land, does not exist. Land managers shall include a coordinated floodplain restoration and improvement program in agency resource management plans during the next regular planning cycle or prior to January 2021, whichever occurs first.

Finding: Structural and non-structural deficiencies in floodplains, river terraces and associated watersheds are present in Garfield County, especially on undeveloped federal lands and threaten a) harmony between man and his environment, b) resources and resource uses, c) enjoyment of resources by current and future generations, d) rangeland health, e) water quality, and f) the County's custom, culture, heritage, and socio-economic stability.

Policy: Land managers, especially of undeveloped federal lands, shall implement an active program of structural and non-structural improvements to deficient floodplains, river terraces and associated watersheds - including uplands - to protect a) harmony between man and his environment, b) resources and resource uses, c) enjoyment of resources by current and future generations, d) rangeland health, e) water quality, and f) the County's custom, culture, heritage, and socio-economic stability.

Policy, Goal & Objective: Analysis/approval processes for floodplain restoration shall be simplified to the maximum extent allowed by law and shall be authorized as categorical exclusions under NEPA wherever possible. Corps of Engineers and other federal agency involvement shall be eliminated or reduced to the minimum required under law.

Goal & Objective: Active floodplain management and restoration, especially on undeveloped federal lands, are implemented to restore sinuosity, vegetation and floodplain function which mimic natural hydrologic conditions on 25% of the non-functioning floodplains prior to 2040.

Policy: Land managers, especially of undeveloped federal lands, shall restore to properly functioning condition at least 1% or 10 miles of non-functioning floodplains per year. Floodplain restoration shall include structural and non-structural topographic and vegetative improvements which mimic natural, stable conditions. Check dams and restoration projects that arrest downcutting and/or restore natural grade, cross section and sinuosity shall be augmented with appropriate native and non-native vegetation.

Finding & Policy: Land managers in Garfield County have little if any control over climate change or impacts attendant thereto. Land managers shall prioritize management actions on activities that improve the productivity of resources and resource uses under their management control. Restoration of invasive conifers to desirable vegetative communities, maintenance of seedlings, vegetation projects to reduce bare ground, appropriate use of prescribed fire and response to wildfire, structural projects to restore floodplains to historical topographic and ecological conditions and other pro-active solutions shall be implemented prior to prescriptive actions associated with climate change.

Policy, Goal & Objective: Based on a 10 year rolling average and consistent with ecologic site descriptions, land managers shall restore 25% of Class II and Class III pinyon/juniper woodlands to desirable sagebrush/grassland vegetation communities.

Finding: For some agencies, as much as 95% of the land is classified as upland. Failure to restore uplands to desirable vegetative conditions prevents reasonable restoration of non-functioning floodplains in the associated watershed.

Policy: Where land managers are unable to restore 1% or 10 miles of non-functioning floodplain due to associated substandard upland conditions, floodplain restoration may postponed for up to three years.

References

<https://en.wikipedia.org/wiki/Floodplain>, February 2017

2.5.3.4 Dry Washes & Ephemeral Streams

For this Resource Management Plan, dry washes and ephemeral streams are defined as: *a watercourse or portion of a watercourse which flows briefly in direct response to precipitation in the immediate vicinity, and whose channel is dry for significant periods of time throughout the year.* Riparian areas are defined as: *the strip of vegetation along an ephemeral, intermittent, or perennial stream, which is of distinct composition and density from the surrounding uplands.*

Dry washes and ephemeral streams make up a significant portion of the hydrologic system in Garfield County and the arid southwest. According to the U.S. Geological Survey National Hydrography Dataset, ephemeral and intermittent (a stream where portions flow continuously only at certain times of the year) streams make up approximately 79% of all streams in Utah and over 81% in the arid and semi-arid Southwest. (Arizona, New Mexico, Nevada, Utah, Colorado and California). They are often the hydrologic sources and upper-most headwaters for major tributaries and perennial streams in the Southwest.

Ephemeral streams and dry washes provide essentially the same ecological and hydrological functions as perennial streams by moving water, nutrients, and sediment throughout the watershed. When functioning properly, these dry streams provide landscape hydrologic connections; stream energy dissipation during high-water flows to reduce erosion and improve water quality; surface and subsurface water storage and exchange; ground-water recharge and discharge; sediment transport, storage, and deposition to aid in floodplain maintenance and

development; nutrient storage and cycling; wildlife habitat and migration corridors; support for vegetation communities to help stabilize stream banks and provide wildlife services; and water supply and water-quality filtering. In varying degrees, they provide a wide array of ecological functions including forage, cover, nesting, and movement corridors for wildlife. Depending on the frequency and availability of water, vegetation and wildlife abundance and diversity in and near them may be proportionally higher than in the surrounding uplands. In other locations streambank conditions may be nearly identical to adjacent uplands. Consideration of the site specific and cumulative influence of these streams is critical in watershed-based assessments and land management decisions to maintain overall watershed health and water quality.

Dry washes and ephemeral streams are connected to perennial stream systems and other “waters of the United States” as protected under the Clean Water Act (CWA). The CWA was established to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” Its goal is to prevent pollution of waters of the U.S., and to ensure that citizens have safe, clean water. In recent years, there have been numerous discussions as to whether dry washes and ephemeral streams are “waters of the United States” under the Act, and if the Act applies to those streams. A broad reading of the definition of waters of the U.S. would include any land on which precipitation fell and that precipitation eventually reached a stream or waterbody. Under such a reading there would be no ground anywhere in the United States and the entire land surface would be a “water of the U.S.”

Dry washes and ephemeral streams are the defining characteristic of many public land watersheds in Garfield County, especially outside high precipitation forests and densely vegetated lands. Individual washes and ephemeral stream segments are not generally examined in isolation for landscape level planning purposes. However, site specific projects often rely on the impacts associated with individual watercourses.

Dry washes and ephemeral streams are found across the Earth’s land surface in arid and semiarid regions that are commonly referred to as “drylands.” Approximately one-third of the Earth’s land surface is classified as arid or semi-arid, including significant portions of Garfield County. These lands are characterized by low and highly variable annual precipitation, where evapotranspiration exceeds precipitation. Riparian ecosystems associated with dry washes and ephemeral streams occupy a very small portion of the landscape, yet they may exert substantial influence on hydrologic, geomorphic, and ecological processes of a watershed.

Dry washes and ephemeral streams are unique in that they lack permanent flow except in response to rainfall events but may perform the same critical hydrologic functions as perennial streams. Although arid and semi-arid region streams perform the same functions as perennial streams, their hydrology and sediment transport characteristics cannot be reliably predicted. This is due to a much higher degree of spatial and temporal variability in hydrologic processes and also in the resulting erosion and sedimentation processes than are higher than near perennial streams. Desert environments typically produce more runoff and erosion per unit area than in temperate regions for a given intensity of rainfall due to sparse vegetation cover and poorly developed soils with little organic matter. The variability of flood magnitudes is also much greater for dry washes and ephemeral stream channels as compared to that of perennial stream systems.

Floods in dry washes and ephemeral streams often occur as flash floods, single-peak events, multiple-peak events and seasonal floods. The highly variable stream flow in ephemeral and dry washes most often occurs as a flash flood, lasting only minutes or hours. Flash floods may occur any time of the year in response to a short-duration high-intensity precipitation event, and after the watershed has received enough precipitation to generate runoff.

Water flowing in normally dry stream channels is subject to two key forces: (1) gravity that moves the water downslope and (2) friction between the water and channel boundaries that resists the downslope movement. These two forces determine, to a large degree, the ability of the water to modify the channel geometry and transport debris. In addition, channel roughness, slope, and depth determine the velocity of the flowing water. Channel slopes in Garfield County are often large, so when flows do occur they have high velocities and consequently significant energy and erosive power. Dissipation of energy in channels can occur due to vegetation, curvature (stream sinuosity), obstructions (rocks, debris, dams), and the size, character and configuration of material in the bed and banks.

As noted previously, although ephemeral streams do not flow at all times, they still perform the major functions of a stream: the transportation of water, nutrients, and sediment. However, unlike perennial streams that continuously move sediment through the watershed, sediment movement in non-perennial stream channels generally occurs as a pulse in response to runoff generated by the short duration, high intensity thunderstorms that are typical of the area. These thunderstorms often result in flash floods and yield rapidly rising runoff. Normally dry channels tend to have deep sediments that are mostly sands and gravels, with only widely scattered shrubs that are resistant to violent flood waters. The unconsolidated sediments can be easily mobilized during flows, unlike the clay bedded, vegetated or armored channels in perennial streams. These deep sediments cause large bed and bank losses in the downstream direction, resulting in reduced flow volume and velocity over the length of the stream, and subsequent deposition of bed load materials and coarser suspended sediments. In simple terms, dry washes and ephemeral streams are usually erosive and unstable.

Because the small, uppermost channels of a drainage network are important in determining the amount of sediment transported downstream during storm events, they influence sedimentation rates in downstream channels. Increased sediment load can have negative effects on channel stability, fish, invertebrates, and overall stream productivity.

Desert washes can be easily recognizable when their dense corridor of vegetation is in strongly contrasted with more sparsely vegetated uplands. Where vegetative communities exist along dry washes and ephemeral streams, they provide structural elements of food, cover, nesting and breeding habitat, and movement/migration corridors for wildlife that are not as available in adjacent uplands. Functional services of these communities include moderating soil and air temperatures, stabilizing channel banks and interfluvies, seed banking and trapping of silt and fine sediment favorable to the establishment of diverse floral and faunal species, and dissipating stream energy which aids in flood management.

Generally in Garfield County, dry washes and ephemeral streams do not exhibit dominant riparian vegetation characteristics. Often there is little differentiation between upland vegetation

and bank vegetation. Structural, biologic and ecological functions do not exist; and banks and streambeds are prone to erosion.

Vegetation in arid and semi-arid regions is largely controlled by the availability of water, with flood disturbance and soil conditions further shaping plant distribution patterns. Depending on attributes of the particular dry watercourse, the highest density of vegetation may occur along the stream bank or within the channel bed. By providing channel and stream bank roughness through standing or downed material, vegetation can influence flow velocities, flow depths, bank and floodplain erosion, and sediment transport and deposition, and can be a major factor contributing both to channel stability and to channel instability.

Vegetation along the stream bank stabilizes the soil through the reinforcing nature of their roots, and prevents erosion. In dry washes and ephemeral stream channels, vegetation may establish on sand bars, and subsequently initiate the formation of various depositional features such as small current shadows, bars, benches, ridges, or islands. Spatially extensive assemblages of any plant species have the potential to alter geomorphology and geomorphic processes through disturbance of sedimentary deposits, alteration of nutrient or fire cycles, and patterns of succession.

The goal of the CWA is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters, and to prevent pollution of those waters. Historically, major desert washes have sometimes been considered to be jurisdictional under the CWA. However, as a result of Supreme Court decisions, the definition of the Nation's waters or jurisdictional waters of the United States under the CWA has required additional clarification, specifically with respect to tributaries that are "not relatively permanent" (i.e. dry washes and ephemeral streams). Recent guidance from the U.S. EPA and Army Corps of Engineers requires that a significant nexus exist between a dry washes or ephemeral stream and a traditional navigable water of the United States for the dry washes or ephemeral streams to be jurisdictional under the CWA. This significant nexus evaluation must consider flow characteristics and functions of the tributary to determine if it has a significant effect on the chemical, physical, and biological integrity of downstream traditional navigable waters.

Need for Management Change

- 1) Dry washes and ephemeral stream, especially on undeveloped federal lands, need to be restored to properly functioning conditions.
- 2) Coordinated, strategic planning is needed to restore dry washes and ephemeral stream to improve rangeland health.
- 3) Structural and non-structural improvements need to be made to degraded dry washes and ephemeral stream.
- 4) The role of upland watershed management needs to be recognized and incorporated in dry wash and ephemeral stream restoration.
- 5) Structural and non-structural improvements need to be made to degraded uplands to a) replace Class II and Class III pinyon/juniper woodlands with desirable historic vegetative communities, b) reduce runoff and c) reduce the amount of bare ground.

- 6) Check dams need to be installed to arrest downcutting and to restore natural stream grade in dry washes and ephemeral streams.
- 7) Active management and restoration projects on federal lands need to be implemented to restore grade control, sinuosity and vegetation which mimic the natural hydrologic system in dry washes and ephemeral streams.
- 8) Long term hydrologic function needs to be prioritized over short term ground disturbance.
- 9) Analysis/approval processes for dry wash and ephemeral stream restoration need to be simplified and authorized as categorical exclusions under NEPA.
- 10) Corps of Engineers and other federal agency involvement needs to be reduced to the minimum required under law. Dry washes and ephemeral streams need to be recognized as outside Corps of Engineers jurisdiction.

Desired Future Conditions

Garfield County desires:

- a) Dry washes and ephemeral streams, especially on undeveloped federal lands, are restored to properly functioning conditions.
- b) Coordinated, strategic planning is implemented to restore uplands, vegetation and to improve rangeland health associated with dry washes and ephemeral streams.
- c) Structural and non-structural improvements are made to degraded watercourses, dry washes and ephemeral streams.
- d) The role of upland watershed management is recognized and incorporated in dry wash and ephemeral stream management and restoration.
- e) Structural and non-structural improvements are made to degraded uplands to a) replace Class II and Class III pinyon/juniper woodlands with desirable historic vegetative communities, b) reduce runoff and c) reduce the amount of bare ground.
- f) Check dams and restoration projects are implemented to arrest downcutting and to restore natural grade, vegetation, cross section, and sinuosity in dry washes and ephemeral streams.
- g) Active management and restoration projects on federal lands are implemented to restore sinuosity, vegetation and floodplain function which mimic the natural hydrologic system.
- h) Long term hydrologic function is prioritized over short term ground disturbance.
- i) Analysis/approval processes for dry wash and ephemeral stream restoration are simplified and authorized as categorical exclusions under NEPA. Corps of Engineers and other federal agency involvement are eliminated or reduced to the minimum required under law.
- j) Land managers restore to properly functioning condition at least 2% of non-functioning dry washes and ephemeral streams per year.

Findings, Policies, Goals & Objectives

Policy: Long term hydrologic function is prioritized over short term ground disturbance.

Finding: Dry washes and ephemeral streams, especially on undeveloped federal lands, need active structural and non-structural modifications to restore properly functioning and desirable conditions.

Finding: Upland vegetative conditions have a significant impact on dry wash and ephemeral stream function in any given watershed.

Finding & Policy: A coordinated, strategic plan recognizing the condition of Garfield County's dry washes and ephemeral streams, especially on undeveloped federal land, does not exist. Land managers shall include a coordinated dry wash and ephemeral stream restoration and improvement program in agency resource management plans during the next regular planning cycle or prior to January 2021, whichever occurs first.

Finding: Structural and non-structural deficiencies in dry washes, ephemeral streams and associated watersheds are present in Garfield County, especially on undeveloped federal lands and threaten a) harmony between man and his environment, b) resources and resource uses, c) enjoyment of resources by current and future generations, d) rangeland health, e) water quality, and f) the County's custom, culture, heritage, and socio-economic stability.

Policy: Land managers, especially of undeveloped federal lands, shall implement an active program of structural and non-structural improvements to deficient dry washes, ephemeral streams and associated watersheds - including uplands - to protect a) harmony between man and his environment, b) resources and resource uses, c) enjoyment of resources by current and future generations, d) rangeland health, e) water quality, and f) the County's custom, culture, heritage, and socio-economic stability.

Policy, Goal & Objective: Analysis/approval processes for dry wash and ephemeral stream restoration shall be simplified to the maximum extent allowed by law and shall be authorized as categorical exclusions under NEPA wherever possible. Corps of Engineers and other federal agency involvement shall be eliminated or reduced to the minimum required under law.

Goal & Objective: Active dry wash and ephemeral stream management and restoration, especially on undeveloped federal lands, are implemented to restore sinuosity, vegetation and floodplain function which mimic natural hydrologic conditions on 25% of the non-functioning floodplains prior to 2040.

Policy: Land managers, especially of undeveloped federal lands, shall restore to properly functioning condition at least 1% of non-functioning dry washes and ephemeral streams per year. Dry wash and ephemeral stream restoration shall include structural and non-structural topographic and vegetative improvements which mimic natural, stable conditions. Check dams and restoration projects that arrest downcutting and/or restore natural grade, cross section and sinuosity shall be augmented with appropriate native and non-native vegetation.

Finding & Policy: Land managers in Garfield County have little if any control over climate change or impacts attendant thereto. Land managers shall prioritize management actions on activities that improve the productivity of resources and resource uses under their management control. Restoration of invasive conifers to desirable vegetative communities, maintenance of

seedings, vegetation projects to reduce bare ground, appropriate use of prescribed fire and response to wildfire, structural projects to restore dry washes and ephemeral streams to historical topographic and ecological conditions and other pro-active solutions shall be implemented prior to prescriptive actions associated with climate change.

Policy, Goal & Objective: Based on a 10 year rolling average and consistent with ecologic site descriptions, land managers shall restore 25% of Class II and Class III pinyon/juniper woodlands to desirable sagebrush/grassland vegetation communities.

Finding: For some agencies, as much as 95% of the land is classified as upland. Failure to restore uplands to desirable vegetative conditions prevents reasonable restoration of non-functioning dry washes and ephemeral streams in the associated watershed.

Policy: Where land managers are unable to restore 1% of non-functioning floodplain due to associated substandard upland conditions, dry wash and ephemeral stream restoration may postponed for up to three years.

Finding & Policy: All lands receiving precipitation are ecologically and hydrologically connected to downstream waters. However, not all lands have a significant effect on the chemical, physical, and biological integrity of those waters. Dry washes and ephemeral streams are primarily dry lands similar to uplands and do not qualify as watercourses having a significant effect on the chemical, physical, and biological integrity of waters of the U.S.

Finding & Policy: Ecologically responsible land management attempts to meet economic and social objectives while maintaining environmental health. NEPA analysis requires cumulative analysis, but individual site specific impacts may not have statistical or scientific significance. Dry washes and ephemeral streams that a) provide less than 0.1 % of the end resource's physical, biological or chemical components or b) are in properly functioning condition are deemed not to impact the end resource.

References

The Ecological and Hydrological Significance of Dry washes and ephemeral streams in the Arid and Semi-arid American Southwest, EPA/600/R-08/134, ARS/233046, November 2008

2.5.4 Groundwater

Introduction

Groundwater is the water found underground in cracks and spaces in soil, sand and rock. It is stored in and moves slowly through geologic formations called aquifers. Aquifers are typically made up of gravel, sand, sandstone, or fractured rock. Water moves through these materials in the connected spaces that make them permeable. The speed at which groundwater flows depends on the size of the spaces in the soil or rock and how well the spaces are connected.

Groundwater can be found almost everywhere. The depth of groundwater below the surface is known as the water table and may rise or fall depending on many natural and human induced factors. Groundwater supplies are recharged by rain and snow melt that infiltrates into the earth's

surface.

Water in aquifers is brought to the surface naturally through a spring or can be discharged into lakes and streams. Groundwater can also be extracted through wells drilled into the aquifer. Some wells, called artesian wells, do not need a pump because of natural pressures that force the water up and out of the well.

In areas where material above an aquifer is permeable, pollutants deposited on the surface can readily sink into groundwater supplies, making them unfit for specific uses, including drinking water. Groundwater can be polluted by landfills, septic tanks, leaky underground gas tanks, and from overuse of fertilizers and pesticides.

Current Setting

Groundwater is the County's principal reserve of fresh water and represents much of its potential future water supply. Groundwater on federal lands is a major contributor to flow in many streams and rivers and has a strong influence on the health and diversity of plant and animal species in forests, rangelands, grasslands, riparian areas, lakes, wetlands, and springs. It also provides drinking water for all of the public water systems and is connected to many of the private water systems in Garfield County.

Awareness of groundwater's importance, the need for safe drinking water and requirements to maintain healthy ecosystems are increasing. Many of the concerns about groundwater resources on private and public lands involve questions regarding dependability of long term supply, depletion of groundwater storage, reductions in streamflow, potential loss of groundwater-dependent ecosystems, and changes in groundwater quality. The effects human activities common to more populated areas, land subsidence and saltwater intrusion are not applicable to Garfield County. Contamination from landfills, septic tanks, leaky underground gas tanks, and from overuse of fertilizers and pesticides is prevented and controlled through various federal, state and local regulatory mechanisms.

Groundwater and surface water are interconnected and interdependent in almost all ecosystems. Groundwater plays a significant role in sustaining the flow, chemistry, and temperature of streams, lakes, springs, wetlands, and other hydrologic systems, while surface waters provide valuable recharge to groundwater resources. Groundwater has a major influence on rock weathering, streambank erosion, and the progression of stream channels. In steep terrain, it governs slope stability; in flat terrain, it limits soil compaction and land subsidence. Pumping of groundwater can reduce river flows, lower lake levels, and reduce or eliminate discharges to wetlands and springs. Pumping can also influence the sustainability of drinking-water supplies and maintenance of critical groundwater-dependent habitats.

Groundwater wells in the County are utilized primarily for drinking water and livestock watering with a limited amount used for irrigation. Due to the low amount of oil and gas development in Garfield County and requirements that all wells be drilled in accordance with the standards of the Utah State Engineer's Office and implement best management practices, groundwater quality has not been identified as a major concern for aquifers and recharge zones underlying the County.

Potential drawdown of groundwater resources is managed by the Utah State Engineer. As of

March 19, 1997, the Sevier River Basin was closed to all new appropriations. All new groundwater development is based on the acquisition and changing of existing valid water rights from surface (including direct flow and reservoir storage) and underground sources. As of January 1, 2017 areas of the Paria, Escalante, Fremont, Dirty Devil, and Upper Lake Powell drainage basins in Garfield County are on “Restricted” status.

Ground water is a valuable commodity and its use is increasingly important. Federal lands contain substantial ground water resources, for which stewardship and protection are mandated by various congressional acts. Many other natural resources rely, directly or indirectly, on ground water and could be damaged or destroyed if that water were depleted or contaminated. Generally, groundwater resources in Garfield County are relatively deep and have little impact on surface resources. However, overuse of ground water may impact streams, wetlands, riparian areas, forest stands, meadows, grasslands, seeps, springs, and livestock and wildlife watering holes on a site specific basis. Reduced water-table levels near the earth’s surface can impact biota that depend on ground water, particularly in riparian and wetland ecosystems.

Groundwater quality is highly variable and is dependent on the formation in which the aquifer is located, potential pollutants and the recharge mechanism. Groundwater quality is classified by the Utah Water Quality Board based primarily on the amount of total dissolved solids (TDS). Lower amounts of TDSs indicate higher water quality. Potential pollution from private lands has been reduced in recent years with greater knowledge, conversion of flood irrigation to sprinkler and added emphasis on groundwater quality. Limited development and pollution sources on federal lands suggests a low risk, except for wildland and prescribed fire which still have the potential to affect groundwater and primary sources of culinary water in the County.

Need for Management Change

- 1) Inventories of the quantity and quality of ground water on federal land are needed to provide sufficient information to appraise the value and provide appropriate stewardship of these ground water resources, especially in landscape level planning.
- 2) Protection and sustainable development of ground water resources are appropriate components of land and resource management planning for federal lands and need to be included in future planning processes.
- 3) Land managers need to ensure adequate groundwater resources are available for authorized purposes and to support local communities.
- 4) Land managers need to prevent or minimize adverse impacts to groundwater resources through appropriate vegetative treatments that optimize forest and rangeland health.
- 5) Land managers need to comply with federal, state and local requirements for well head protection and sole source aquifer use. Managers also need to ensure all public water systems on their lands comply with applicable groundwater regulations.

6) Land managers need to protect ecological processes and biodiversity of groundwater dependent ecosystems by a) maintaining natural patterns of recharge and discharge, and minimizing disruption to ground water levels that are critical for ecosystems; b) not polluting or causing significant changes in ground water quality; and c) rehabilitating degraded ground water systems where possible.

7) Land managers need to manage groundwater dependent ecosystems under principles of multiple use and sustained yield, while emphasizing protection and improvement of soil, water and vegetation.

8) Based on site specific characteristics of water, geology, flora and fauna, land managers need to identify, inventory and determine boundaries of groundwater dependent ecosystems as part of land use planning processes.

9) Humans need to be recognized as a subset of groundwater dependent fauna and development of resources for their use needs to be given priority.

Desired Future Conditions

Garfield County desires:

a) Groundwater resources are preserved, improved and developed for the use of man while supporting multiple use and sustained yield principles.

b) Land managers comply with current and future laws and regulations promulgated by federal, state and local entities.

c) Land managers optimize forest and rangeland health and vegetative cover as a means of preserving and protecting groundwater resources.

d) Watersheds that are the source of supply for community and culinary water systems be managed for resistance and resilience to fire.

e) Groundwater resources are managed under the principles of multiple use and sustained yield, with community and culinary water systems as the highest priority.

f) Groundwater resources are protected through appropriate implementation of best management practices applied to human and multiple use/sustained yield activities.

Findings, Policies, Goals & Objectives

Finding: Protection, enhancement and development of groundwater resources is vital to the health, safety and welfare of residents and visitors of Garfield County.

Finding: Under the concept of climate change, scientists expect more severe storms, larger wildfires and an increase in invasive species. Land manager must counteract these problems with increased active management and restoration of desirable plant communities to protect

groundwater resources.

Goal: Maintain, improve and develop groundwater resources, while complying with applicable federal, state and local water quality standards; improve water quality where practical.

Policy: Garfield County will cooperate and coordinate with federal, state and local land managers to implement active management and vegetative restoration projects to preserve and improve groundwater resources.

Goal: Minimize adverse groundwater impacts through active management and optimization of vegetative resources that support hydrologic function.

Policy: Groundwater resources are preserved and protected when at least 25% of Class II and Class III pinyon juniper woodlands are restored to sagebrush – grassland vegetative communities base on a 10 year rolling average.

Finding: Pine forests with more than 160 trees per acre and spruce/fir forests with more than 320 trees per acre are not resistant or resilient to fire and put groundwater resources at risk.

Finding & Goal: Groundwater resources are best preserved and protected when the following minimum objectives are established when lands experience prescribed or wildland fire:

1. Retain 40 percent ground cover after the burn with recruitment to 60 percent ground cover before the first rainy season following the burn.
2. Do not reduce perennial and intermittent channel shading more than 20 percent of the natural range of variability or by an amount that will take more than three years to recover, whichever is smaller.
3. “Burn” and/or “feeder” piles will not be made in channels or swales within the area occupied when the bank full width is doubled.
4. Burned piles within riparian areas will be left “messy” in order to retain sediment on site.
5. Ignitions will not occur within 15 feet of riparian areas.
6. Any firelines created during burning operations will follow *The Five-D System for Effective Fireline Waterbars* (Hauge et al., 1979).
7. Firelines that need to cross riparian areas will do so perpendicular to the channel and should not have more than 40 feet of hydrologic connectivity.
8. Cupped fire lines should have water gaps every 20 feet to allow captured water to exit.
9. Existing disturbance areas, such as roads and trails, should be used to the extent possible as fire lines.

Policy: Land managers shall optimize forest and rangeland health and vegetative cover as a means of preserving and protecting groundwater resources.

Policy: In order to reach a full range of reasonable alternatives, federal planning processes shall fully analyze at least one alternative that includes groundwater preservation and protection provisions outlined in Garfield County’s Resource Management Plan.

Policy: Pine stands that have more than 160 trees per acre and spruce-fir stands that have more than 320 trees per acre are subject to catastrophic fire and are not being managed for fire resistance and resilience. Tree densities in excess of these limits are subject to catastrophic fire and threaten groundwater resources

References

Technical Guide to Managing Groundwater Resources, United States Department of Agriculture, Forest Service, May 2007

2.5.5 Water Quality

Introduction

The Clean Water Act (CWA, 33 U.S.C. §1251 et seq. (1972)) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Additional amendments have occurred over time including direction for control of nonpoint source pollution and procedures for state implementation of total maximum daily load standards of impaired waters.

Under the CWA and with approval of the EPA, the State of Utah has primacy for water quality and has implemented pollution control programs such as setting wastewater standards for industry and water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. Permits are managed by Utah's Division of Water Quality through the Utah Pollution Discharge and Elimination System (UPDES).

Discharges from nonpoint sources are also controlled. Nonpoint source pollution generally results from stormwater runoff, precipitation, atmospheric deposition, drainage, seepage or hydrologic modification. Nonpoint source (NPS) pollution, unlike point source pollution from industrial and sewage treatment plants, comes from many diffuse sources. NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters and ground waters. Monitoring and regulation of nonpoint source pollution is more complex than point source pollution because it results from numerous and diverse contributors.

Current Setting

Garfield County is the most sparsely populated county in Utah and has very limited industrial and municipal development. More than 93% of the land is under federal ownership, and only 3% is held by private interests. Consequently, population growth and the development of urban/urbanized areas and industries which have major influences on water quality do not exist. Point source discharges are controlled by state and local regulations; and overall water quality is within established standards. Industrial and municipal discharges are almost entirely limited

to municipalities. Containment structures (lagoons) are located in Panguitch, Bryce Canyon City, Tropic, and Escalante. Other communities rely on individual wastewater systems. No point source discharge issues are known to exist in Garfield County.

Nonpoint source discharges are also characteristic of rural, sparsely populated areas. Relatively few perennial streams and water bodies exist in Garfield County. Several water resources in the County have been identified on the state's list of 303(d) impaired waters including: Sevier River and tributaries from Circleville Irrigation Diversion upstream to Horse Valley Diversion (phosphorus & sediments); Sevier River and tributaries from Horse Valley Diversion upstream to Long Canal (phosphorus & sediments); Sevier River and tributaries from Long Canal to Mammoth Creek confluence (phosphorus & sediments); Mammoth Creek (phosphorus); East Fork of the Sevier River from the Piute/Garfield County line to Antimony Creek (phosphorus); Paria River from its headwaters to the Kane/Garfield County line (sediment); and the Escalante River and some of its tributaries from Boulder Creek Confluence to Birch Creek Confluence (temperature). TMDL reports, which include water quality data and implementation plans typically carried out by various federal, state, and local governments and private cooperators, have been prepared for these waters.

In addition to point and nonpoint pollution sources that are commonly recognized as impacting perennial waterbodies, Garfield County is also impacted by pollution from ephemeral streams. Stormwater runoff is generated from rain and snowmelt events that flow over land and do not soak into the ground. The runoff picks up pollutants like organic debris and dirt/sediment that can harm rivers, streams, and lakes. Concentrated flows also cause damage to ephemeral stream banks and dry washes, threatening rangeland health and stability. Although detailed empirical data is not available, runoff intensity has notably increased over the past few decades. Larger and more damaging runoff events have taken place, and sediment and debris flows have increased proportionally. Together, they can cause changes in hydrology and water quality that result in habitat modification and loss, increased flooding, decreased aquatic biological diversity, and increased sedimentation and erosion. The benefits of effective stormwater runoff control and management of ephemeral watercourses include: protection of wetlands, riparian and aquatic ecosystems; improved quality of receiving waterbodies; conservation of soil resources, and improved range/land forest health.

To protect water quality and associated resources from point and nonpoint pollution, stormwater controls, known as best management practices (BMPs), have been implemented by various agencies. These BMPs filter out pollutants and/or prevent pollution by controlling it at its source. The State of Utah and local governments are authorized under the Clean Water Act to implement permitting and management actions, including BMPs to protect water quality and water resources.

Another form of nonpoint source pollution is hydrologic modification. This term refers to activities that affect the natural pathways of surface water, such as stream channel modification and channelization, deposition which inhibits natural flow patterns and streambank erosion. Although these activities don't seem like forms of pollution, they nevertheless are considered to be part of the NPS pollution problem. Many rivers and streams have natural flood control areas, such as oxbows, adjacent wetlands, and riparian ones. When these areas are modified or removed, significant changes in the ecological functions of surrounding lands are likely to occur.

Channel modifications – even when occurring naturally - frequently degrade instream and riparian habitat for fish and wildlife. Other impacts include erosion and the reduction of the system's ability to filter pollutants. Similarly, upland vegetative modifications, especially adjacent to riparian areas and wetlands can change surface hydrology and reduce natural buffers.

Need for Management Change

- 1) The Clean Water Act authorizes states and local governments to control water quality within their jurisdictions. The State of Utah through its Division of Water Quality has obtained primacy for water quality in Garfield County and throughout the state. However, Garfield County has not taken an active role in management of its water quality. Garfield County needs to take a more active role in water quality management and develop plans, regulations, ordinances and best management practices, as appropriate.
- 2) Degrading water quality, especially in ephemeral water courses, resulting from encroaching conifers has not been recognized for its impacts on water quality. Site specific and cumulative impact analysis of Class II and Class III pinyon / juniper woodlands on water quality needs to be included in future NEPA analysis.
- 3) Beneficial uses of water bodies in Garfield County need to be coordinated, re-evaluated and brought in to consistency with Garfield County's Resource Management Plan.
- 4) Land managers need to actively manage for increased forage production to reduce sedimentation in and hydrologic modification of Garfield County's perennial, intermittent and ephemeral water resources.
- 5) Land managers need to develop additional detention areas, lakes, ponds, wetlands, riparian areas, grade structures, and mesic conditions to slow stormwater and reduce erosion.
- 6) Consistent with ecologic site conditions, land managers need to replace biologic soils and pinyon / juniper woodlands with sagebrush, semi-desert grasslands to increase vegetative soil cover and reduce sediment transport and erosion.
- 7) While developing additional detention areas, lakes and ponds, land managers need to recognize stormwater management approaches that rely solely on peak flow storage have not usually targeted pollution reduction and only treat sediments after they have entered the watercourse. Upland vegetative productivity and cover also needs to be enhanced and optimized with appropriate native non-native seed mixes.
- 8) Garfield Count needs to develop policies, goals, objectives and best management practices for forest and rangelands to reduce sediment and debris in the County's watercourses.
- 9) NRCS soils reports indicate Garfield County soils are producing as little as 25% of their potential. Consistent with ecologic site conditions and the County's RMP, land managers need to improve the vegetative productivity of their soils.

Desired Future Conditions

Garfield County Desires:

- a) The quality and quantity of existing water resources be improved and enhanced.
- b) Garfield County has a more active role in water quality management.
- c) Implementation of County water quality plans, regulations, ordinances and best management practices for forest and rangelands to reduce sediment and debris in the County's watercourses.
- d) Without diminishing existing multiple use levels and uses, implement Best Management Practices, including vegetative treatments and restoration of invasive conifer woodlands to sagebrush / semi-desert grasslands, to reduce pollutant loading in impaired streams and to reduce sedimentation in all perennial, intermittent and ephemeral watercourses.
- e) Degrading water quality, especially in ephemeral water courses, resulting from encroaching conifers and inadequate desirable vegetative cover be recognized for their impacts on water quality.
- f) Site specific and cumulative impact analysis of Class II and Class III pinyon / juniper woodlands on water quality be included in future NEPA analysis.
- g) Beneficial uses of water bodies in Garfield County be coordinated, re-evaluated and brought in to consistency with Garfield County's Resource Management Plan.
- h) Land managers actively manage for increased forage production to reduce sedimentation in and hydrologic modification of Garfield County's perennial, intermittent and ephemeral water resources.
- i) Land managers develop additional detention areas, lakes, ponds, wetlands, riparian areas, grade structures, and mesic conditions to slow stormwater and reduce erosion.
- j) Consistent with ecologic site conditions, land managers replace biologic soils and pinyon / juniper woodlands with sagebrush, semi-desert grasslands to increase vegetative soil cover and reduce sediment transport and erosion.
- k) While developing additional detention areas, lakes and ponds, land managers recognize stormwater management approaches that rely solely on peak flow storage do not usually targeted pollution reduction and only treat sediments after they have entered the watercourse.
- l) Upland vegetative productivity and cover also needs to be enhanced and optimized with appropriate native and non-native seed mixes.
- m) Consistent with ecologic site descriptions and the County's RMP, land managers improve the vegetative productivity of their soils.

- n) Consistent with ecologic site descriptions, Garfield County soils produce 50% of their potential by 2025 and 70% of their potential by 2050.
- o) Consistent with ecologic site descriptions and based on a 10 year rolling average, land managers restore 25% of Class II and Class III pinyon / juniper woodlands to sagebrush / semi-desert grassland habitat.

Findings, Policies, Goals & Objectives

Finding: Given Garfield County's existing population distribution, industries and percentage of privately owned lands, the largest threat to water quality is sedimentation from lands lacking optimum vegetative cover.

Finding: Garfield County has not taken a sufficiently active role in managing water quality to the extent allowed by law.

Finding: Water quality, point source pollution, nonpoint source pollution, and hydrologic modification associated with private lands are being appropriately managed by the Utah Division of Water Quality. Future efforts need to focus on the vast majority of lands in the County that are not in private ownership.

Goal: Garfield County will take a more active role in managing water quality and will implement policies, goals, objectives and best management practices for forest and rangelands to reduce sediment and debris in the County's watercourses.

Policy & Goal: Garfield County will cooperate and coordinate with the State of Utah to review and revised Total Daily Maximum Loads (TDMLs) for hydrologic units listed on the 303(d) list of impaired streams and to develop water quality management plans for other watercourses in Garfield County.

Goal: Improve and enhance the quality and quantity of water resources in Garfield County.

Goal: Manage designated municipal watersheds to preserve or enhance the quantity, quality and health of the water resources.

Goal: Without diminishing existing multiple use levels and uses, Garfield County will adopt and implement Best Management Practices, including vegetative treatments and restoration of invasive conifer woodlands to sagebrush / semi-desert grasslands, to reduce pollutant loading in impaired streams and to reduce sedimentation in all perennial, intermittent and ephemeral watercourses.

Finding: Water quality, especially in ephemeral watercourses is degraded as a result of encroaching conifers and inadequate desirable vegetative cover.

Policy: The impact of encroaching conifers and inadequate desirable vegetative cover on water quality shall be identified, analyzed and disclosed in NEPA processes evaluating major federal actions. Site specific and cumulative impact analysis of Class II and Class III pinyon / juniper woodlands on water quality shall be included in future NEPA analysis.

Finding: Beneficial uses of water bodies in Garfield County need to be re-evaluated and brought in to consistency with Garfield County's Resource Management Plan.

Policy: Garfield County will coordinate with the Utah Division of Water Quality to re-evaluate and refine beneficial use designations of Garfield County's water bodies.

Finding: Multiple Use / Sustained Yield principles implement best management practices for oil & gas leasing, mining, timber harvesting, recreation, OHV use, roads, travel designations, livestock grazing and other activities. Implementation of existing best management practices on site specific projects protects water quality in Garfield County and promotes enjoyable and productive harmony between man and his environment.

Policy: Garfield County supports expanded livestock grazing adaptive management including extended on / off dates, intense seasonal grazing to control invasive species and vegetation based use criteria. Unless coordinated with and approved by Garfield County, livestock grazing restrictions shall not be implemented until water quality prioritizations and provisions outlined in this RMP are completed.

Policy: Land managers shall control water runoff from disturbed or developed sites and shall control soil erosion from undeveloped sites through implementation of provisions contained in the County's RMP. With concurrence of the Garfield County Commission, land managers may implement alternate provisions that have been coordinated with the County and are demonstrated to advance the findings, policies, goals, and objectives of the County RMP.

Policy: Land managers shall actively manage for increased forage production to reduce sedimentation in and hydrologic modification of Garfield County's perennial, intermittent and ephemeral water resources.

Policy: While supporting existing levels and uses, land managers shall develop additional detention areas, lakes, ponds, wetlands, riparian areas, grade structures, and mesic conditions to slow stormwater and reduce erosion.

Policy: Consistent with ecologic site conditions, land managers shall replace biologic soils and pinyon / juniper woodlands with sagebrush, semi-desert grasslands to increase vegetative soil cover and reduce sediment transport and erosion.

Finding: Development of detention areas, lakes, ponds, and other areas that rely solely on peak flow storage for stormwater management is desirable but does not prevent the movement of pollutants and sediment across the land and only treats waters after they have been impacted.

Finding: Optimization of vegetative cover with appropriate and desirable native and non-native vegetative communities provides the best opportunity to promote enjoyable and productive harmony between man and his environment.

Policy: Garfield County supports an integrated approach to stormwater management without negatively impacting existing resource levels and uses. Based on existing conditions, current

technology, acreages in need of improvement, effectiveness of potential actions, and other factors, Garfield County adopts the following prioritization to improve water quality:

1. Optimization of upland vegetative cover through restoration, improvement and enhancement of desirable native and non-native vegetative communities, including restoration of Class II and Class III to sagebrush / semi-desert grasslands, especially in areas of accelerated erosion.
2. Development, enhancement and expansion of detention areas, lakes, ponds, wetlands, riparian areas, grade structures, and mesic conditions to slow stormwater and reduce erosion.
3. Maintenance of existing biologic soil communities where it is scientifically and statistically demonstrated their positive impact on water quality exceeds benefits from optimizing vegetative cover by more than 20%.
4. Modification of existing Best Management Practices for oil & gas leasing, mining, timber harvesting, recreation, OHV use, roads, travel designations, livestock grazing and other multiple use / sustained yield activities.

Policy: Consistent to the maximum extent allowed by law, land managers shall a) reduce impacts to water quality by complying with the provisions of Garfield County's Resource Management Plan; or b) as approved by Garfield County, develop and implement a cooperative and coordinated water quality management plan prior to the first day of their 2020 fiscal year.

Policy: Consistent with ecologic site descriptions, land managers shall improve the productivity of their soils to produce 50% of the soil's potential by 2025 and 70% of the soil's potential by 2050, unless otherwise coordinated with Garfield County.

Policy: Consistent with ecologic site descriptions and based on a 10 year rolling average, land managers restore 25% of Class II and Class III pinyon / juniper woodlands to sagebrush / semi-desert grassland habitat.

Policy: Surface disturbing activities within withdrawn Drinking Water Source Protection Zones may be allowed if the disturbance does not degrade water resources and best management practices are implemented.

Policy: Proper disposal, other beneficial use and appropriate surface discharge of produced water from new activities on public land is allowed if mitigation measures and / or best management practices are implemented to address impacts from the produced water.

References:

Paria River Watershed Water Quality Management Plan, Prepared by Millennium Science & Engineering for Utah Department of Environmental Quality - Division of Water Quality

Otter Creek – East Fork Sevier TMDL Study, Utah Department of Environmental Quality - Division of Water Quality, 2006

Clean Water Act, 33 U.S.C. §1251 et seq. (1972)

2.6 VEGETATION

Management direction for this Resource / Resource Use has not been completed. It is intended that management direction for this Resource / Resource Use will be completed, subject to public comment, and adopted at some point in the future.

Significant portions of Garfield County's riparian vegetation have been impacted by the proliferation of Tamarisk and Russian Olive. These invasive, non-native species were introduced in the West during the late 1800s as bank stabilization and ornamentals. By the 1920s, Tamarisk and Russian Olive had choked out native vegetation, reduced biodiversity, and negatively impact of water resources. Large Tamarisk plants can transpire up to 300 gallons of water per day. Currently, large infestations of Tamarisk and Russian Olive have impacted many of the streams, riparian areas, and groundwater resources of the County. Especially large populations exist in and around shorelines to Lake Powell.

Some significant progress, largely due to the efforts of a single individual, has been made with cutting and treating Russian Olive infestations. However, continued significant efforts are needed to completely eradicate the species and protect the area from recurrent infestations.

Although some effort may have been expended in the control of Tamarisk, the efforts have been inadequate when considering the rapid advance of this undesirable species. Tamarisk infestations are capturing millions of gallons of Garfield County's precious water resources and are choking out desirable vegetation like cottonwoods and willows on thousands of acres.

Garfield County recognizes the detrimental effects of Tamarisk and Russian Olive. The advancement of these species may be the most significant vegetation problem existing within the County. Unfortunately, local, State, and Federal control efforts have been inadequate.

Need for Management Change

1. Federal, State, and local land managers need to significantly increased efforts to control and eradicate Tamarisk and Russian Olive.
2. Garfield County needs to consider including Tamarisk and Russian Olive on the County noxious weed list.
3. The State of Utah, in conjunction with local government, needs to consider placing Tamarisk and Russian Olive on the State noxious weed list.
4. Federal agencies need to greatly expand their efforts to eradicate Tamarisk and Russian Olive.

5. In as much as Tamarisk and Russian Olive constitute evidence of man's presence in the area, Federal land managers need to use every method available including fire, chemical, biological, and mechanical methods to eradicate Tamarisk and Russian Olive. Funding needs to be sought and an aggressive effort needs to be implemented to eradicate these species.

Desired Conditions

Garfield County desires:

- a) Tamarisk and Russian Olive be eradicated on Federal, State, and local lands.
- b) Tamarisk and Russian Olive be eradicated on private lands.
- c) Federal agencies significantly increase their efforts to control and eradicate Russian Olive and Tamarisk.
- d) All viable methods of control be utilized to eradicate Tamarisk and Russian Olive.
- e) Aggressive mechanical and chemical means be initiated immediately to eradicate Tamarisk and Russian Olive.
- f) Tamarisk and Russian Olive be considered for the County and State noxious weeds list.

Policies, Goals, Objectives, and Criteria:

Goal: It is the goal of Garfield County to eradicate Tamarisk and Russian Olive, except in specific situations on private lands.

Policy: Tamarisk and Russian Olive are considered the number one threat to water resources, vegetative diversity, and special status species.

Policy: Garfield County will work cooperatively through participation in cooperative weed management associations to eradicate Tamarisk and Russian Olive.

Policy: In as much as the proliferation of Tamarisk and Russian Olive are an evidence of man's presence and trammeling of the land, the presence of Tamarisk and/or Russian Olive disqualifies lands for wilderness consideration and constitutes a failure on the part of the Federal government to protect wilderness values.

Policy: The detrimental impacts of Tamarisk and/or Russian Olive greatly outweigh any beneficial impacts derived by wildlife and special status species

Findings

Garfield County finds:

- a) Tamarisk and Russian Olive were introduced by man and their presence is a substantially noticeable evidence of man's long-term presence on the land, man's trammeling of the land, and failure to control man's impact on the lands.
- b) Where Federal land managers have failed to eradicate Tamarisk, and/or Russian Olive

infestations or have allowed the propagation of new individuals on their lands, they have failed to protect water resources, protect valuable vegetative resources, have allowed the lands to be degraded, and have failed to protect primitive and semi primitive non motorized lands from man's impact.

c) The presence of Tamarisk and Russian Olive constitute a greater threat to the health of the land than unauthorized ATV use, vandalism, surface disturbance resulting from mining impacts, and any other on the ground surface disturbing impacts.

d) Federal land managers have failed to allocate appropriate resources to be eradication of Tamarisk and Russian Olive.

e) The presence of Tamarisk and Russian Olive on non-WSA lands with wilderness character is an evidence of man and disqualifies the lands from having outstanding opportunities for primitive recreation.

f) The presence of Tamarisk and Russian Olive in the Wilderness Study Areas threatens their qualification for wilderness.

g) Federal and State agencies need to eradicate Tamarisk and Russian Olive on their lands.

i) Garfield County needs to be initiated efforts to eradicate Tamarisk and Russian Olive on private lands.

2.6 VEGETATION

Introduction

Vegetation along with water is one of the most important renewable resources in Garfield County, and is perhaps the only single resource that allows land managers the greatest opportunity for impacting land health, improving species habitat, protecting water resources, restoring streams, stabilizing riparian areas and watercourses and counteracting any effects of wildland fire and potential climate change.

Vegetation plays an important role in many key ecological processes and social values. Vegetation impacts water cycling (precipitation capture, storage, and redistribution), energy capture and cycling (conversion of sunlight to plant matter), and nutrient cycling (the cycle of nutrients such as nitrogen and phosphorus through the physical and biotic components of the environment). Vegetation also provides root systems that help maintain soil integrity and reduce erosion (particularly on steep slopes and areas adjacent to waterways) and provides soil-site stability by limiting redistribution and loss of soil resources (including nutrients and organic matter) by wind and water. Vegetation allows a site to capture, store, and release water from rainfall, run-on, and snowmelt.

Vegetation supports clean water, fish and wildlife habitat, livestock and wild horse forage and desirable conditions for recreation, carbon sequestration, and scenery. Vegetation provides such benefits as hiding cover, browse, and nesting habitat for a variety of wildlife species. All healthy vegetative communities, especially healthy forests, forbs and grasses, sequester vast amounts of carbon. Vegetation is a key component in establishing the capacity of a site to support

characteristic functional and structural communities in the context of normal ecological variability and is the dominant indicator of productivity and land health.

Garfield County's plans, policies and programs for maintenance of soil and water resources, special status species conservation, protection of water quality, fish and wildlife health, forest management, livestock grazing, recreation and scenery incorporate a strong vegetative component. Conversely, ecological processes and resources that are not currently in a properly functioning condition are largely attributable to a substandard vegetative component.

The capacity of a site to a) support characteristic benefits, b) resist loss of function and structure due to disturbance, and c) to recover following disturbance is in direct correlation to the vegetation present at a site.

Vegetation can generally be characterized by ecological provinces, and more specifically by plant communities and associations. Plant communities and associations are groups of plant populations that coexist in space and time and directly or indirectly affect each other's population dynamics. Distinct plant communities are influenced by characteristics such as soil depth, texture, and salinity; climate variables, particularly temperature, total and seasonal distribution of precipitation, and wind; and topographic features, most importantly elevation, aspect and slope. The following discussions of plant communities that occur within the County show the diverse and complex nature of vegetation resources in the area. Plant communities can be represented by plant cover types that reflect the dominant species present in an area.

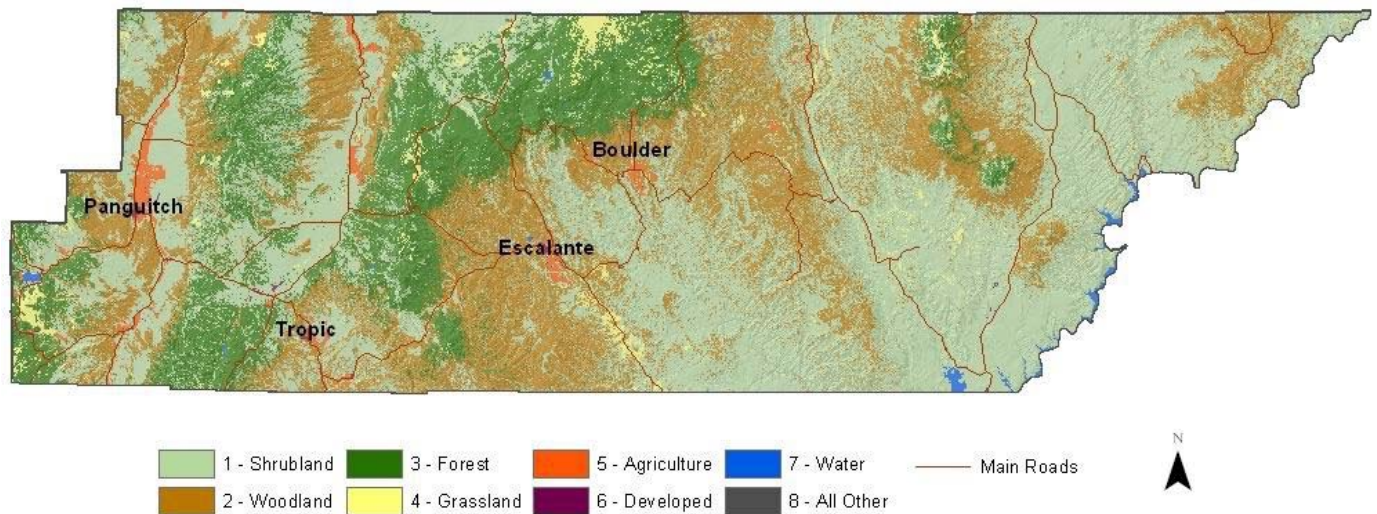
Plant communities and associations are often represented by regional, landscape level, rapid ecoregion, or remotely assessed processes such as the plant cover types documented by the Southwest Regional Gap Analysis Project (SWReGAP) data. The SWReGAP is an update of the Gap Analysis Program's mapping and assessment of biodiversity for the five-state region encompassing Arizona, Colorado, Nevada, New Mexico, and Utah. 43 SWReGAP land cover types were combined into nine vegetation cover types intended to reflect BLM's management of vegetation communities and associations. Due to the dispersed nature, large land area and generalized application of the process, SWReGAP landscape level remote sensing is not an accurate method for detailed inventories or condition assessments necessary for management decisions. However, they may be suitable for very broad planning processes that are followed by site specific refinement.

Vegetation communities can be represented by plant-cover types that reflect the dominant species of an area. However, nature is rarely as definitive as planning descriptions, so plant communities in Garfield County have been combined to facilitate planning level descriptions. The vegetation communities and associations generally discussed in this section comprise the major vegetation communities and associations in Garfield County. Upland vegetation, riparian/wetland vegetation are discussed in this section. Invasive species are discussed in Section 2.6.2 Invasive Species and Noxious Weeds. Special status plant species (T&E and sensitive plant species) are discussed in Section 2.7 Special Status Species.

The vegetation communities and associations generally discussed in this section comprise the major vegetation communities and associations in Garfield County. Upland vegetation,

riparian/wetland vegetation, and invasive species are discussed in this section. Special status plant species (T&E and sensitive species) are discussed in the Special Status Species section.

Figure 2.6.1 Vegetative Cover Types



Need for Management Change

- 1) SWReGAP data needs to be refined before it is used for management actions, planning prescriptions, or site specific projects.
- 2) Management decisions need to be based on reliable, objective, site-specific data analyzed in accordance with the Data Quality Act (sometimes referred to as the Information Quality Act).
- 3) It needs to be recognized that there are no places left in Garfield County that are completely void of man's impact. Historic vegetative conditions need to be recognized as arbitrarily selected snapshots in time and space that may not be desirable or achievable.
- 4) In order to achieve a productive and enjoyable harmony between man and his environment, land managers need to aggressively implement actions that are consistent with desired future conditions, findings, policies, goals and objectives outlined in the Garfield County Resource Management Plan.
- 5) Desirable native and/or non-native vegetation need to be used when allowed by law. Native only vegetation needs to be used only when a) required by law, or b) it provides greater optimization and conservation of targeted resources.

6) Land managers need to implement more aggressive actions to restore, improve and maintain Garfield County's vegetative resources.

Desired Future Conditions

Garfield County Desires:

- a) All management decisions are based on reliable, objective, site-specific data analyzed in accordance with the Data Quality Act.
- b) Eco-region, landscape level or remote sensing such as SWReGAP data is field verified and refined before it is incorporated into management actions, planning prescriptions, or site specific projects.
- c) Land managers aggressively implement actions that are consistent with desired future conditions, findings, policies, goals and objectives outlined in the Garfield County Resource Management Plan to restore, improve and maintain Garfield County's vegetative resources.
- d) Land managers optimize vegetative resources in Garfield County by using native and/or non-native vegetation that best meets the desired objectives.
- e) Native only prescriptions are limited to actions a) required by law, or b) where greater optimization and conservation of targeted resources occurs.

Findings, Policies, Goals and Objectives

Finding: Eco-region, landscape level or remote sensing such as SWReGAP data is insufficient for land use planning in Garfield County unless it is field verified and refined before it is incorporated into management actions, planning prescriptions, or site specific projects.

Policy, Goal & Objective: Land managers shall aggressively implement actions that are consistent with desired future conditions, findings, policies, goals and objectives outlined in the Garfield County Resource Management Plan to restore, improve and maintain Garfield County's vegetative resources.

Policy, Goal & Objective: Land managers shall optimize vegetative resources in Garfield County by using native and/or non-native vegetation that best meets the desired objectives.

Policy, Goal & Objective: Native only prescriptions shall be limited to actions a) required by law, or b) where greater optimization and conservation of targeted resources occurs.

2.6.1 Upland Vegetation

Upland vegetation refers to the dominant vegetation communities that are not directly associated

with wetlands or streams. This vegetation type makes up the vast majority of Garfield County's vegetation with some estimates indicating upland composition in excess of 95% of all lands in the County not covered by water. Although not directly associated with water, upland vegetation, or lack thereof, can have a significant impact on water quality, runoff, erosion, and aquatic habitat. The County's upland vegetation types and dominant plant communities are discussed below.

2.6.1.1 Forests and Woodlands

Forests and woodlands are found throughout the County, especially in higher elevations, and consist of deciduous and coniferous species of trees and shrubs. These areas play a major role in the local ecosystem by providing wildlife habitat, stabilizing soils, reducing erosion, contributing to water quality, producing vegetative biomass, sequestering carbon dioxide from the air, producing oxygen, and serving as indicators of overall ecosystem health. Forests and woodlands have been subject to long-term natural and human manipulation. Historically forests and woodlands have been subject to wildland fire and since the mid-1800s timber harvests that supported local citizenry. More recently these valuable resources have been impacted through fire suppression and management approaches that exclude active and appropriate timber management. The primary components of this vegetation type are discussed below.

Pinyon / Juniper (PJ) Pinyon-juniper woodlands are the most widely distributed and largest forest type community in the County. This community generally occurs on a variety of slopes and aspects, and its soils are usually coarse-texture, calcareous alluvium derived from sandstone and shale. There are significant amounts of bare ground, litter, and desert pavement at the soil surface. Estimates indicate approximately 1.13 million acres or 34% of the total land base in Garfield County are comprised of PJ occupation. PJ woodlands are the dominant forest type and make up approximately 69% of all forested areas in the County

PJ forests, as a result of their chemically competitive nature, inhibit grasses and forbs from germination, thereby creating and maintaining a nearly homogenous, sterile vegetation community. These habitat types provide very little forage opportunities to wildlife, especially big game. PJ woodland communities are increasing in the Western United States as other vegetation communities are invaded by pinyon-juniper woodland species. Utah juniper is expanding into open meadows, grasslands, sagebrush steppe communities, quaking aspen groves, riparian communities, and forestlands. The replacement of shrub steppe communities with juniper woodland has been largely attributed to the reduced role of fire, primarily facilitated by passive vegetative management and active fire suppression. The reduction of fine fuels through livestock grazing prior to the Taylor Grazing Act in 1934 may have played a role in initiating PJ encroachment, but failure to reintroduce a fire component in invasive woodlands has significantly expanded any such impact. This expansion of pinyon-juniper woodlands has been facilitated by a combination of climatic changes/drought and the removal of understory vegetation.

Pinyon-juniper woodlands areas also include lower montane riparian woodlands. These are linear areas or patches occurring primarily in the lowest elevations. The areas are dependent on the natural hydrologic regime and flooding and are often found near wet meadows.

Pinyon-juniper woodland stands can be classified as ephemeral or persistent on a landscape. Persistent stands are those that occupy a given site for a long period and typically have little fire disturbance or very infrequent fire disturbance (fire return intervals in excess of 200 years).

Ephemeral stands are those that periodically share a landscape with other vegetation types, such as sagebrush. The dynamic of area dominance has typically been controlled by the periodicity of fire on the site. Given that fire frequency on many of these sites has been altered (reduced) since pioneer times, more acres are now dominated by pinyon-juniper woodland than were historically reported, and the trees on these sites are often older than would have been expected in a pre-settlement stand.

These changes in fire occurrence and frequency incrementally modify vegetation cover, effecting wildlife habitat and overall landscape condition. Where fires in the sagebrush-steppe were once fueled primarily by herbaceous vegetation, many are now fueled by taller woody vegetation with higher fuel loads. This results in more intense fires that can be damaging to soils, creating habitat for noxious, invasive, and nonnative early successional species in the area.

In the absence of fire or mechanical treatment projects, ephemeral pinyon-juniper woodland will continue to opportunistically expand and increase in density. As tree density increases and tree canopies close, fewer resources are available for understory species. In this situation, understory species (grasses, forbs, and shrubs) will be reduced and wildlife habitat and forage production will be adversely affected. Under juniper-dominated canopies, increases in bare ground and impaired hydrological function, resulting in high levels of erosion, are additional consequences of increasing juniper dominance.

A potential exacerbating force to the spread of pinyon-juniper woodland are the effects of climate change, which could limit resistance and resilience to PJ expansion into adjacent big sagebrush shrublands by expanding drought conditions and fire return intervals. In addition, the expanding range of pinyon-juniper woodlands will result in greater erosion loss of wildlife habitat

Due to increased fuel loadings and increased continuity of tree canopies, wildfires can burn readily and more intensively than historically through ephemeral pinyon-juniper woodland stands, causing both damage to the soil A-horizon and increased erosion from post-fire rains and snow runoff. The threat of canopy-burning fires at high intensities and rapid rates of spread can also impact stands of persistent pinyon-juniper woodland, ponderosa pine, and other tree species, as well as adjacent non-forest vegetation types.

Ponderosa Pine Ponderosa pine (*Pinus ponderosa*) is the most widely distributed pine species in North America, ranging from southern British Columbia to central Mexico and from central Nebraska to the west coast. In climax forests, ponderosa pine stands often contain many small,

even-aged groups rather than a true uneven-aged structure. Interior ponderosa pine or shrub communities in central and southern Utah are usually the lowest coniferous forest type, and border shrublands or pinyon-juniper woodlands.

Ponderosa pine is found scattered through many of the mountain ranges in the region. It is a minor component in many stands of mixed conifer, pinyon-juniper woodland, aspen, and mountain mahogany. In a few areas it forms stands where it is the dominant cover type. Ponderosa pine is an important habitat type, providing high-quality wildlife habitat and visual diversity, often in areas that are otherwise dominated by low-growing woody vegetation.

As with other vegetation types, the fire regime of the ponderosa pine has been altered since pioneer times, and less frequent fires have allowed increases in understory vegetation. This understory vegetation is often pinyon, juniper, or mountain mahogany, all of which provide fuel “ladders” that allow damaging fires to move into the crowns of the taller ponderosa pine. Historically, fires remained largely in the understory of larger trees, causing little damage to the pine.

Wildfires have reduced acreages of mature ponderosa pine for several decades in many parts of southern Utah. Centuries-old trees that once withstood multiple ground-based fires have been lost to canopy fires. These trees are not a replaceable resource within the foreseeable future. Ponderosa pine will continue to be lost in the planning area if the current stand conditions, with substantial understory vegetation, are allowed to persist and spread throughout a stand. Mechanical removal through selective harvest, coupled with the removal of understory growth and judicious use of prescribed fire, can be a long-term solution to promote fire resistance / resilience and to reduce stand-eliminating fires.

Mixed Conifer Mixed conifer stands can be composed of one or more of several species: Douglas-fir, white fir, ponderosa pine, limber pine, Great Basin bristlecone pine, and aspen. Occasionally, and primarily on the western side of the County at higher elevations, subalpine fir, Engelmann spruce, and blue spruce can make up a small percentage of a mixed conifer stand. Where aspen is a stand component, it typically indicates the site was once dominated or mostly dominated by aspen, and it likely indicates that fire has not played the same role in the ecosystem it once did.

Many parts southern Utah have seen an increase in drought-related bark beetle activity that has resulted in mortality of Engelmann spruce, white fir and Douglas-fir. Many of the mixed conifer stands are in areas managed for primitive recreation, making managers reluctant to approve use of mechanical management tools. In addition, many mixed conifer stands are on steep, inaccessible slopes where active management is limited.

Mixed conifer vegetation communities within the planning area are dominated by two primary associations: white fir and Douglas fir. Mixed conifer vegetation communities and associations are found at elevations ranging from 5,000 to 8,500 feet. This mesic vegetation community generally occurs on steep, lower slopes and benches with northern aspects, and in narrow canyons and ravines. Mixed conifer vegetation communities include upper montane/subalpine riparian forests, shrublands and

herbaceous riparian areas. These riparian areas are linear or patches confined to specific environments occurring on floodplains or terraces of rivers and streams. Shrubs are often found in these areas. Understory conditions vary widely from dry, open-canopy forests with grassy undergrowth on open slopes and ridges to moist, closed-canopied stands dominated by numerous herbaceous plants in the canyons and ravines.

Species composition, forest density, structure, and disturbance regimes have been altered in many mixed conifer forests of southern Utah since settlement. Interruption of natural fire regimes has allowed succession to move these forests toward more shade-tolerant species. As a result, ponderosa pine is no longer dominant in mixed conifer forests and aspen populations have declined dramatically. Ponderosa pine has lost acreage to both Douglas-fir and white fir, and in turn, Douglas-fir has lost acreage to white fir.

The most dramatic change in mixed conifer forests is the increase in basal area, tree density, and species composition shift toward white fir at lower elevations and Engelmann spruce and subalpine fir at the higher elevations. For instance, in one area of Bryce Canyon, the largest and oldest trees (200 to 250 years old) are ponderosa pine, Douglas-fir, and white fir, but the regeneration for the past 100 years is mostly white fir and Douglas-fir. In another area of Bryce Canyon National Park, in 2007, white fir over-story density was 80 trees/acre compared to a ponderosa pine over-story density of 23 trees/acre. More striking is the regeneration layer where white fir seedlings density was 1,604 trees/acre, and ponderosa pine seedling density was 37 trees/acre.

Selective harvesting and fire exclusion has caused dense, multistoried Douglas-fir and white fir to largely replace the ponderosa pine component in mixed conifer stands. As a result, mixed conifer forests are now very susceptible to western spruce budworm, root disease, bark beetles, dwarf mistletoe, and stand-replacing fires. The higher densities and contiguity of forests has led to large regional insect outbreaks that are more severe than in the past. Larger outbreaks will result in continued changes in forest structure, composition, and function, including creation of openings, depletion of large diameter trees, and an increase in fire hazard due to greater surface fuel accumulations. With continued fire exclusion in mixed conifer forests, surface and ladder fuels will continue to coalesce with crowns of over-story trees. This change in vertical fuel structure will further increase the probability of severe stand replacement crown fires.

Spruce – Fir Mixed Engelmann spruce and subalpine fir forests comprise the upper extent of forest vegetation in southern Utah, occupying the coldest and wettest sites in the altitudinal continuum of ecologic conditions in the area. Precipitation regimes in these forests are dominated by snow, which can occupy these sites for 6 to 8 months of the year. Spruce-fir forests can exist on-site for extremely long periods, sometimes as long as 500 to 600 years, with reports of even longer periods. Harsh climates and short growing seasons result in infrequent, but large-scale disturbances including fire, insect attacks, wind, and avalanches, which historically interacted to create coarse-scaled mosaics of different aged patches on the landscape.

Spruce-fir forests have expanded into the mixed coniferous forests, as well as into high elevation meadows of southern Utah. Expansion into the lower elevations is a result of succession from

aspen forests to mixed conifer forests due to fire suppression and because aspens provide suitable habitat for the establishment of shade tolerant conifers. Expansion into some higher meadows has also occurred over the past 100 years. If climatic warming is occurring, it would increase the length and warmth of the growing season, possibly improving seedling survival. Furthermore, fire suppression has allowed seedlings to establish on the edges of meadows and reduce the extremely high soil moisture making it easier for additional seedlings to establish in the center of the meadows.

The structure of spruce-fir forests in southern Utah is predominately uneven-aged. Engelmann spruce is the major species, followed by subalpine fir and aspen. Pure Engelmann spruce stands and spruce-fir forests (where spruce and subalpine fir are codominant) consist of all ages, although the majority of these trees are 51 to 150 years old. In addition, there are some Engelmann spruce trees 151 to 250 years old in the Dixie National Forest. Surveys on the Markagunt and Aquarius plateaus in southern Utah in the early 1970s revealed that subalpine fir stocking was uneven-aged, but not all-aged. A 50- to 70-year old prolific regeneration component existed in the understory, which corresponded with a spruce beetle outbreak in the 1930s. Subalpine fir was also present in the 70- to 130-year old age class indicating its ability to maintain itself under the Engelmann spruce canopy for long periods. The predominance of subalpine fir seedlings in the understory of southern Utah forests is indicative of its ability to successfully reproduce on duff-covered seedbeds, but spruce's average longevity over subalpine fir keeps it dominant in the over-story.

Insect activity has also dramatically increased in southern Utah in recent years. Spruce bark beetle populations have been at epidemic levels since 1991 on the Dixie National Forest and since 1989. Large areas of the Dixie, Fishlake, and Manti-LaSal National Forests have experienced severe disturbances caused by spruce bark beetle. Most spruce trees greater than 6 to 8 inches were killed during these outbreaks. It is estimated from 2000 to 2004, spruce bark beetles have killed over 366,000 trees on over 100,000 acres of southern Utah National Forests. Hazard ratings indicate that 45 percent of spruce-fir forest types on the Dixie National Forest are at moderate to high risk of attack by bark beetles.

Aspen Quaking aspen is the most widely distributed tree in North America. Aspen stands provide excellent diversity for wildlife and ecological settings. The largest stands are in mountain environments at higher elevations. Other stands can be found scattered in many of the mountain ranges, typically in riparian areas or on the more mesic sites. Stands tend to be small, and sometimes clones can be composed of just a few individuals. Aspen has become subordinate to conifer in some stands, which are now classified as mixed conifer stands. On these sites, typically white fir, one of the most shade-tolerant conifers, has become the dominant species. On the drier aspen sites, junipers and pinyons have become a prominent understory component of aspen stands. The increase in coniferous species in aspen- and once-aspen-dominated stands is an indicator that fire has not played its former role in the ecosystem. In Garfield County, aspen reproduces primarily by vegetative reproduction. Without active management or fire use, aspen will likely continue to decline within the region. Aspen stands could regenerate following fire events in mixed conifer stands that have an aspen component.

Aspen provides habitat for a wide variety of wildlife needing young forests, including black bear, deer, elk, ruffed grouse, and a number of smaller birds and animals. Compared to conifer forests, aspen forests allow more surface water and/or groundwater recharge and streamflow because of their lower seasonal water losses to interception and transpiration. Aspen stands also produce abundant forage that amounts to as much as 1,000 to 2,500 pounds per acre annually, or three to six times more than typical conifer stands. These amounts are comparable to forage production on some grasslands.

Fire is a natural feature in much of the aspen ecosystem of western North America. It is responsible for the abundance of aspen in the West and for the even-aged structure of most stands. In some areas, many aspen stands are the same age, dating from a single great fire or a year of widespread fires. Fire appears to be necessary for the continued well-being of aspen on most sites. Many aspen stands are replaced by grass, forbs, shrubs, or conifers in the absence of fire. Because of low fuel accumulations, aspen stands have low flammability and make excellent firebreaks.

Aspen is considered a fire-induced successional species that will dominate a site until it is replaced by less fire-enduring and more shade-tolerant species, such as conifers - provided a coniferous seed source is present. Fire reduces the over-story, stimulates shoots to sprout, and kills invading conifers growing in the aspen clone. Since aspen can sprout from existing roots and these suckers grow faster than the new slowing growing conifers, aspen can dominate a grove for many years after a fire. Otherwise, aspen can be replaced relatively quickly by conifers, within 100-200 years, or the replacement may be slower taking more than 1,000 years.

Aspen forests do not readily burn. Aspen trees have moist green leaves and thick twigs that do not burn easily, unlike conifers, which have dry needles and twigs. Crown fires running through coniferous forest drop to the ground when they come to an aspen stand and may even extinguish after burning into the aspen only a few yards. Fires sometimes bypass stands of aspen enclosed within coniferous forest.

Although aspen forests do not burn readily, aspen trees are extremely sensitive to fire. A fire intense enough to kill the aspen over-story will stimulate abundant suckering, though some suckers arise after any fire. As many as 50,000 to 100,000 suckers can sprout and grow on a single acre after a fire.

Although many diseases attack aspen, relatively few kill or seriously injure living trees. Generally, the common leaf diseases are found throughout the range of aspen, while decay fungi and major canker-causing organisms are more locally distributed. Much remains to be learned of the disease organisms that infect aspen.

The aspen ecosystem is rich in number and species of animals, especially in comparison to associated coniferous forest types. Aspen forest types produce an abundance of forage, as much as many grasslands and more than 10 times that produced under associated conifers. Cattle and sheep grazing the aspen understory has been the primary consumptive use of the aspen forest in the West.

Browsing has a direct impact on aspen trees in this forest community. Through the early sapling stage, browsing reduces aspen growth, vigor, and numbers. Heavy browsing by large ungulates such as deer, elk, or sheep can drastically reduce or eliminate aspen sucker regeneration.

Beaver can also affect aspen. Beaver have the ability to cut and remove saplings to mature-sized aspen trees. Cutting, by itself, stimulates abundant aspen suckering. Beaver cut aspen of all diameters, feed on the bark and small branches of the felled trees, and utilize stems of medium diameter in their dams. The flooding resulting from the beaver dams may change the entire plant community, and even the landscape. A series of benches may result

from siltation behind beaver dams. Each bench is relatively flat and wet along the stream course, often too wet for aspen to develop. These benches may become dominated by other vegetation for centuries.

Aspen is especially susceptible to gnawing or stripping of its bark by several species of mammals, such as elk, deer, rabbits, hares, mice, voles, and porcupines. Aspen buds are an important winter food source for wildlife. Aspen seedlings and saplings may also be trampled by large ungulates and may be affected by digging and feeding upon their roots by pocket gophers and other burrowing creatures.

Need for Management Change

- 1) Forest and woodland health needs to be restored to the historical range of variability, including but not limited to composition, age, size, and density in accordance with ecologic site descriptions.
- 2) Land managers need to increase the use of timber harvesting to restore resilience and resistance to fire, insects, and other disturbances.
- 3) Timber harvest appraisals need to be revised to reflect timber values in Garfield County and to encouraged resurgence of timber harvesting infrastructure and the timber harvesting industry.
- 4) Insect and disease epidemics that could degrade forest and woodland health need to be prevented.
- 5) Land managers need to use silvicultural practices to increase the presence of large trees in Ponderosa Pine stands.
- 6) Biomass or other markets need to be developed for smaller diameter materials to reduce competition and surface build up.
- 7) Mixed conifer forests need to be returned to earlier successional stages and have age and spatial diversity increased.
- 8) In mixed conifer forests, prescribed fire needs to be used judiciously after harvests, thinning, mechanical mastication, and other fuel reduction projects to eliminate undesirable seedlings.
- 9) Additional forage resulting from improved forest health needs to be allocated to livestock and wildlife in accordance with the County's plans, programs and policies.
- 10) Spruce fir forests need to be restored to healthy conditions and maintained in a condition that is resilient and resistant to fire and insect damage.
- 11) Aspen regeneration and rejuvenation need to be increased.
- 12) The impact of elk on forests managed for aspen regeneration needs to be controlled.

Desired Future Conditions

Garfield County desires:

- a) Forest and woodland health is restored to the historical range of variability, including but not limited to composition, age, size, and density in accordance with ecologic site descriptions.
- b) The use of timber harvesting is increased to restore resilience and resistance to fire, insects, and other disturbances.
- c) Appraisals for timber sales are revised to reflect timber values in Garfield County and to encouraged resurgence of timber harvesting infrastructure and the timber harvesting industry.
- d) Insect and disease epidemics that could degrade forest and woodland health are prevented.

- e) Silvicultural practices are used to increase the presence of large trees in Ponderosa Pine stands.
- f) Biomass or other markets are developed for smaller diameter and other materials that promote competition and surface build up.
- g) Mixed conifer forests are returned to earlier successional stages and have age and spatial diversity increased.
- h) Prescribed fire is used judiciously after harvests, thinning, mechanical mastication, and other fuel reduction projects in mixed conifer forests to eliminate undesirable seedlings.
- i) Additional forage resulting from improved forest health is allocated first to livestock to restore suspended or unused AUMs, second to wildlife to meet objectives in place on January 1, 2015 and third equally between livestock and wildlife.
- j) Spruce fir forests are restored and maintained in a healthy condition that resilient and resistant to fire and insect damage
- k) Aspen are regenerated and rejuvenated.
- l) The impact of elk on forests managed for aspen regeneration is controlled.
- m) 80 million board feet of timber are harvested annually to reduce high risk stands and increase short term resilience and long term resistance to insect outbreaks and crown fires.

Findings, Policies, Goals and Objectives

Finding: Forests and woodlands impact land health and the health, safety, welfare, custom, culture and heritage of Garfield County. It is imperative that forests and woodlands are restored to and maintained in a properly functioning condition.

Finding: Forests and woodlands that are susceptible to catastrophic fire, insects and disease threaten air quality, water quality, soil stability, wildlife, recreation and the health, safety, welfare, custom, culture and heritage of Garfield County.

Finding: Forests and woodlands that are a) outside a desirable range of variation or b) not in properly functioning condition fail to support an enjoyable and productive harmony between man and his environment.

Goal & Objective: Restore and maintain the County's forests and woodlands to a properly functioning condition consistent with the historical range of variability and ecologic site descriptions, including but not limited to composition, age, size, and density.

Goal & Objective: Restore and maintain the vigor of the County's timber harvest infrastructure and industry.

Goal & Objective: Timber harvesting is increased to restore resilience and resistance to fire, insects, and other disturbances.

Policy: Timber sale appraisals shall be specific to the area of the sale and shall reflect timber values in Garfield County. Wherever proposed harvests are susceptible to catastrophic fire, appraisals shall consider and include potential costs for no action and a fire taking place.

Policy: Timber and woodland resources shall be managed to prevent insect and disease epidemics that could degrade forest and woodland health. Integrated forest management, including harvesting, thinning, mulching, prescribed fire and other appropriate techniques, shall be implemented to restore forests and woodlands to a condition that prevents insect and disease epidemics.

Policy: Silvicultural practices are the preferred method of increasing the presence of large trees in Ponderosa Pine stands.

Goal & Objective: In order to improve forest and woodland health, develop biomass industries and other markets to process small diameter trees and other materials that promote surface fuel build up.

Goal & Objective: Return mixed conifer forests to earlier successional stages and have age and spatial diversity increased.

Policy: Consistent with forest / woodland health and ecologic site conditions and coordinated with Garfield County, ranger districts and field offices shall develop target values for successional stages, age diversity, basal area, tree density, and spatial diversity for forests and woodlands within their jurisdictions. Until site specific target values are developed by ranger districts and field offices the following target values shall apply:

Successional Stages: 30% to 50% early; 20% to 40% middle; less than 25% late

Age, Basal Area, Tree Density and Spatial Diversity: Within 10% of historic, pre-settlement values

Policy: Where stand conditions exceed the target values identified above for late successional stage, age, basal area or density by more than 5%, tree stands will be deemed a) susceptible to catastrophic fire, insect infestation and disease and b) failing to meet resistant and resilient conditions.

Policy, Goal & Objective: Land managers should focus treatment area prioritization on ponderosa pine and mixed conifer forests types where fire regimes and vegetation attributes have been significantly altered from their historical range of variability. These areas require moderate to high levels of mechanical restoration treatments before fire can be reintroduced to restore the historical fire regime.

Policy, Goal & Objective: In ponderosa pine forests, treatments should focus on converting to uneven-aged management, reducing or removing shade tolerant conifers and oak, and re-introducing frequent prescribed surface fires.

Policy, Goal & Objective: Mixed conifer forest treatments should focus on reducing the amount of shade tolerant species and leaving more fire-resistant tree species such as ponderosa pine and Douglas-fir.

Policy, Goal & Objective: Spruce-fir forest treatments should focus on maintaining a landscape of different age structures, successional stages, and fuel breaks to lessen the risk of catastrophic fire.

Policy: Based on a 10 year rolling average and consistent with desired ecological site descriptions, restore at least 25% of the Class II and Class III pinyon/juniper woodlands having a median age of less than 200 years to sagebrush / semi-desert grassland vegetation communities.

Policy: Prescribed fire is an appropriate tool for maintaining forest health and should be used judiciously after harvests, thinning, mechanical mastication, and other fuel reduction projects have been appropriately implemented.

Policy: Additional forage resulting from improved forest health shall be allocated on the following priority:

- First – To restore suspended or un-used livestock AUMs;
- Second - To wildlife to meet January 1, 2015 objectives;
- Third - Equally between livestock and wildlife.

Goal & Objective: Spruce fir forests are restored and maintained in a healthy condition that resilient and resistant to fire and insect damage.

Policy, Goal & Objective: Land managers shall restore forests impacted by insects and disease to properly functioning condition with appropriate seral stages, ages, basal area, tree densities and spatial diversity at a rate of 10% annually.

Goal & Objective: Aspen are regenerated and rejuvenated.

Policy: Wildlife managers shall control the impact of elk on forests managed for aspen regeneration.

Goal & Objective: Harvest 80 million board feet of timber annually to reduce high risk stands and increase short term resilience and long term resistance to insect outbreaks and crown fires.

2.6.1.2 Sagebrush – Steppe/Semi-Desert

The word “steppe” is used to describe a large, dry, level, grassland or scrubland having few or no trees. Steppe areas, also referred to as “semi-desert,” are dry, cold, grasslands found between deserts and forest or woodlands. Under natural conditions, steppes are covered with grasses and shrubs. Sagebrush steppe or sagebrush semi-desert is a dry site vegetation community with a mix of sagebrush, other shrubs, grasses, and forbs. The names come from sagebrush, which is the most abundant plant species that grows in this ecosystem.

Sagebrush steppe vegetation communities and associations are common in Utah, Washington, Oregon, Idaho, and adjacent Wyoming, and Nevada. Sagebrush steppes are mostly found at elevations between 2,000 and 6,000 feet. Sagebrush steppe is a major vegetation community in the County and is usually interspersed with pinyon-juniper woodlands and desert scrub vegetation communities. Precipitation in these areas is between 8–15 inches per year, and soils are dry with a thin organic horizon

Widely distributed in the Colorado River Basins and Great Basin, this vegetation community is often found in the valley portions of Garfield Counties west of Capitol Reef National Park. Sagebrush steppe communities generally occur on the drier portions of pinyon-juniper woodlands and mesic portions of the desert shrub community. Characteristic and dominant shrubs in this habitat may include basin sagebrush, Wyoming sagebrush, mountain sagebrush, antelope bitterbrush, and silver sagebrush. Each of these species can be the only shrub or appear in complex seral conditions with other shrubs. Rabbitbrush and short-spine horsebrush are common associates and often dominate sites after disturbance. Forbs with shallow root systems are favored in wetter years, whereas deeply rooted shrubs have the competitive advantage during droughts and survive by tapping deeply infiltrated moisture. Numerous bird and mammal species are found in sagebrush steppe communities. These species can be grouped into sagebrush obligates (e.g., sage grouse, sage thrasher, sage sparrow, Brewer's sparrow, pygmy rabbit, sagebrush vole, sagebrush lizard and pronghorn); shrubland species (e.g., green-tailed towhee, black-throated sparrow, and lark sparrow); and Shrubland-Grassland species (e.g., Swainson's hawk, ferruginous hawk, prairie falcon, sharp-tailed grouse, and loggerhead shrike).

Shrubs typically provide 10 to 60 percent of the vegetation cover in undisturbed conditions, and in disturbed areas shrub cover varies between 10 and 30 percent. Vegetation structure in this community is characterized by an open shrub layer over a moderately open to closed bunchgrass layer. The more productive sites generally have a denser grass layer and sparser shrub layer than more xeric sites. The bunchgrass layer may also contain a variety of forbs. Sagebrush steppe vegetation communities generally have relatively little exposed bare ground, and mosses and lichens may carpet the area between taller plants. Moist sites may support tall bunchgrasses greater than 3.3 feet or rhizomatous grasses.

Sagebrush ecosystems have been degraded in the past several decades, largely as a result of invading pinyon/juniper, suppression of fire and failure to maintain historic disturbance cycles.

Need for Management Change

- 1) Sagebrush dominant vegetation communities need to be restored to the historical range of variability, including but not limited to composition, age, size, and density in accordance with ecologic site descriptions.
- 2) Land managers need to increase vegetative treatments in sagebrush ecosystems to restore the historic and natural range of variability.

- 3) Invading conifers, especially pinyon/juniper associations, need to be recognized as the greatest threat to a desired and healthy sagebrush ecosystem in Garfield County, and treatments need to be implemented to restore sagebrush ecosystems to their historic range.
- 4) Loss of sagebrush ecosystems to invading conifers needs be recognized for its impact on water quality, wildlife, erosion and other ecological resources.
- 5) Suspended AUMs for livestock need to be restored commensurate with restoration of invading conifers to desirable sagebrush communities.
- 6) Water gain from restoration of invading conifers to sagebrush communities needs to be optimized for rangeland health and multiple uses.
- 7) Additional water needs to be developed in current and restored sagebrush ecosystems to optimize multiple use / sustained yield benefits.
- 8) As sagebrush communities are restored, sage-grouse related prescriptions need to be removed.

Desired Future Conditions

Garfield County desires:

- a) Sagebrush dominant vegetation communities are be restored to the historical range of variability, including but not limited to composition, age, size, and density in accordance with ecologic site descriptions.
- b) Managers increase vegetative treatments in sagebrush ecosystems to restore the historic and natural range of variability.
- c) Invading conifers, especially pinyon/juniper associations, are recognized as the greatest threat to a desired and healthy sagebrush ecosystem in Garfield County; and treatments are implemented to restore sagebrush ecosystems to their historic range.
- d) Loss of sagebrush ecosystems to invading conifers needs be recognized for its impact on water quality, wildlife, erosion and other ecological resources.
- e) Suspended AUMs for livestock need to be restored commensurate with restoration of invading conifers to desirable sagebrush communities.
- f) Water gain from restoration of invading conifers to sagebrush communities needs to be optimized for rangeland health and multiple uses.
- g) Additional water needs to be developed in current and restored sagebrush ecosystems to optimize multiple use / sustained yield benefits.
- h) Prescribed fire is used judiciously after thinning, mechanical mastication, and other treatment projects are completed.
- i) Additional forage resulting from improved rangeland health is allocated first to livestock to restore suspended or un-used AUMs, second to wildlife to meet objectives on January 1, 2015 and third equally between livestock and wildlife.
- j) As sagebrush communities are restored, sage-grouse related prescriptions need to be removed

Findings, Policies, Goals and Objectives

Goal: Manage sagebrush steppe/semi-desert communities for desired future conditions, ensuring ecological diversity, stability and sustainability.

Objective: Maintain or enhance the integrity of current sagebrush and sage-brush semi-desert communities and identify areas in need of restoration due to pinyon-juniper expansion or decadent stands of sagebrush.

Objective: Initiate restoration and/or rehabilitation efforts to ensure sustainable population of greater sage-grouse and other sagebrush-obligate species.

Objective: Maintain vegetation treatment areas to provide suitable habitats and forage for wildlife and livestock.

Objective: Respond to effects of possible climate change by maintaining vegetation communities in good vegetation and soil health. Manage communities to a standard that has decadent, dying, or dead vegetation less than 10 percent compared to live, vigorous vegetation.

Objective: Provide for vegetative restoration in semi-desert ecosystems, including control of noxious weed infestations, and invasive and undesirable nonnative species using optimal mixes of native and non-native species.

Objective: Utilize adaptive management principles for resource uses during times of extended drought and during times of abundant forage.

Goal: Restore sagebrush dominant vegetation communities to historical range of variability, including but not limited to composition, age, size, and density in accordance with ecologic site descriptions.

Policy: Managers shall increase vegetative treatments in sagebrush ecosystems to restore the historic and natural range of variability.

Finding & Policy: Invading conifers, especially pinyon/juniper associations, are recognized as the greatest threat to a desired and healthy sagebrush ecosystem in Garfield County. Treatments to arrest conifer invasion and restore sagebrush communities shall be prioritized.

Finding & Policy: Loss of sagebrush ecosystems to invading conifers is recognized for its impact on water quality, wildlife, erosion, potential climate change and other ecological resources.

Policy: Suspended AUMs for livestock will be restored commensurate with restoration of invading conifers to desirable sagebrush communities.

Policy: Water gain from restoration of invading conifers to sagebrush communities will be optimized for rangeland health and multiple uses.

Policy: Additional water needs to be developed in current and restored sagebrush ecosystems to optimize multiple use / sustained yield benefits.

Policy: Prescribed fire is most judiciously used after thinning, mechanical mastication, and other treatment projects are completed.

Goals & Objectives: Unless otherwise approved by Garfield County and consistent with ecologic site conditions, the following minimum objectives are established when lands are treated with prescribed or wildland fire in sagebrush habitats:

1. Retain 40 percent ground cover after the burn with recruitment to 60 percent ground cover before the first rainy season following the burn.
2. Cupped fire lines should have water gaps every 20 feet to allow captured water to exit.
3. Existing disturbance areas, such as roads and trails, should be used to the extent possible as fire lines.

Policy: Additional forage resulting from improved rangeland health and vegetative treatments in sagebrush communities shall be allocated first to livestock to restore suspended or un-used AUMs, second to wildlife to meet objectives of January 1, 2015 and third equally between livestock and wildlife.

Policy: As sagebrush communities are restored, sage-grouse related prescriptions need to be removed.

Policy: Managers of sage-grouse focal areas and sage-grouse priority habitat management areas shall ensure at least 75% of any focal area or priority habitat area in their jurisdiction maintain an NRCS Wildlife Habitat Evaluation Guide score of 0.7 or higher, consistent with ecologic site descriptions.

Policy: Managers of sage-grouse focal areas and sage-grouse priority habitat management areas shall ensure not more than 20% of any focal area or priority habitat area in their jurisdiction will have an NRCS Wildlife Habitat Evaluation Guide score of lower than 0.4, consistent with ecologic site descriptions.

Policy: Managers shall use of the full range of upland vegetation treatment methods and tools (i.e., prescribed fire, chaining, plowing, bull hog, pipe harrow, hand cutting, herbicide, aerial seeding, drill seeding, and broadcast seeding) to make progress toward achieving desired future conditions in sagebrush ecosystems.

Policy: Managers shall treat all vegetation types to achieve or make progress toward achieving desired future conditions in sagebrush ecosystems. Seed mixes shall be comprised of an optimum combination of native and non-native species and will be based on factors such as soil type, precipitation, and elevation, to provide for effective rehabilitation and the greatest opportunity for success of vegetation treatments. Seed mixes will be comprised of a diverse composition of appropriate species to allow for progress within the range of variability provided by the appropriate Ecological Site Description.

Policy: In PHMA and GHMA, conduct a) land health assessments that include indicators and measurements of structure, condition, composition, etc., of vegetation specific to achieving GRSG habitat objectives and b) NRCS Wildlife Habitat Evaluation Guide analysis to prioritize

treatments in sage-grouse habitat.

Policy: Managers shall treat areas that contain cheatgrass and other invasive or noxious species in sagebrush habitats and shall reduced invasive species and noxious weeds by 10% annually.

Policy: Managers shall treat sage-brush semi-desert communities to a) provide a healthy, diverse mosaic of different height and age structures with components of native and non-native grasses and forbs, and b) limit the pinyon-juniper component for a given ecological site to Class II and Class III PJ woodlands with a median age of at least 200 years.

Policy: Implementation of vegetation treatments in sage-grouse habitat shall be consistent with Garfield County's Resource Management Plan and Sage-Grouse Conservation Plan to the maximum extent allowed by law.

Policy: Based on a 10 year rolling average and consistent with desired ecological site descriptions, restore at least 25% of the Class II and Class III pinyon/juniper woodlands having a median age of less than 200 years to sagebrush / semi-desert grassland vegetation communities.

Policy: Vegetation treatments conducted within 0.6 miles of a lek shall completely remove all conifers less than 200 years old.

Finding & Policy: Class I pinyon juniper trees and Class II and Class III pinyon juniper woodlands with a median age less than 200 years are invasive conifers that are inconsistent with managing for sage-grouse habitat or rangeland health.

Finding & Policy: Pinyon and juniper trees are invasive conifers that degrade rangeland health, water quality, soil stability, vegetative ground cover and other resources. Pinyon / juniper trees and stands shall not be protected as old growth unless they have an age greater than 300 years.

Finding & Policy: Managers have not objectively or scientifically proven native seeds have greater adaptability, probability of success or availability. In sage-grouse management areas and when restoring sagebrush communities, managers shall use an optimum mixture of native and non-native seeds until such time as native only seed mixtures are proven more productive and efficient.

2.6.1.3 Desert Shrub-Scrub

Desert shrub includes the salt shrubs; greasewood, black brush, and desert grassland vegetation cover types. Comprising large portions of Garfield County, mostly east of Capitol Reef National Park, this is the largest vegetation community in the BLM Richfield Field Office. Typically, this vegetation community and associations occupy the driest regions of the County. This vegetation community primarily located on the valley floors and is most common on well-drained, sandy to rocky soils; however, saline and alkaline soils are tolerated. Plants within this community are adapted to a wide temperature range, and many are capable of photosynthesis at temperatures as

low as 11°F. Desert shrub areas are typically at elevations between 2,500 and 8,000 feet. Structural and compositional variations in this habitat are related to changes in salinity and fluctuations in the water table and can be described as occurring in two primary vegetation associations — saltbush and salt desert shrub.

The saltbush vegetation association is perhaps the most arid vegetation type in the intermountain West. These areas are characterized by accumulations of salt in poorly developed deep soils. Soils in these areas usually have a pH of 7.8 to 9, which restricts the uptake of water by all but the most salt-tolerant plants (halophytes). Halophytes function essentially to redistribute salts from the soil depths to the surface, thereby concentrating salts around the perimeter of the plant. This enables the plant to eliminate competition for scarce water and nutrients from other less salt-tolerant plants.

The salt desert shrub association is characterized by drought tolerant shrubs, with few grasses and forbs in the understory. The soils in these areas are shallow saline clays and loams. Typical shrubs in these vegetation types are shadescale, four-wing saltbush, spiny hopsage, greasewood, winterfat, broom snakeweed and bud sagebrush.

Black brush is less tolerant of saline soils than greasewood or salt shrubs and can form nearly monotypic stands with a high percent shrub cover. Fourwing saltbush is tolerant of saline or alkaline soils and has adaptations that enable it to concentrate and secrete salts on the leaf surface.

Wildlife and livestock use of desert shrub vegetation varies depending on the species present. Fourwing saltbush is very palatable and provides high-quality forage for wildlife and livestock even during drought conditions. Black greasewood is a valuable browse for livestock and wildlife, particularly during fall and winter; however, when consumed in large quantities, the soluble oxalates it contains may be poisonous to livestock. The forage value for black brush is principally as browse for bighorn sheep. Domestic sheep and goats, and to a lesser extent cattle, browse black brush. During the winter in southwestern Utah, black brush provides fair forage for domestic sheep and cattle.

Grasslands are comprised of native, non-native naturalized and undesirable annuals. Arid grasslands are dominated by drought resistant plants that have adapted to harsh conditions by developing extensive root systems. Historically, this grassland system was maintained by frequent fires and was sometimes associated with specific soils, often well drained clay soils. A combination of precipitation, temperature, and soils limits this system to the lower elevations within the region. The dominant perennial bunch grasses and shrubs are all very drought resistant plants. Grasses that dominate these communities often develop a dense network of roots concentrated in the upper parts of the soil where rainfall penetrates most frequently. Blue grama, james galleta, indian ricegrass and other common species are generally tolerant to properly managed livestock grazing. Each of the native species has specific characteristics which allow them to adapt to their site specific soil and precipitation conditions.

Naturalized and biologically equivalent non-native species have also been introduced in the County. These species often serve as nurse crops or are used in specific applications such as seedings or post fire restoration. Naturalized and biologically equivalent non-native species are a valuable component of the desired vegetative regime, especially where rangeland health is threatened by the invasion of undesirable species.

Undesirable annual grasslands are generally isolated and are typically located in disturbed areas, especially those burned by wildfire. Areas that are dominated by undesirable annual grasses have typically achieved an ecological threshold and will require significant effort to restore native and biological equivalent non-native species.

Need for Management Change

- 1) Consistent with ecologic site descriptions and desired future conditions, land managers need to implement active treatments to restore and enhance rangeland health and the vigor of arid vegetative communities.
- 2) Undesirable annual grasses / cheatgrass needs to be controlled and reduced until it can be eradicated.
- 3) Where livestock grazing is allowed, additional water needs to be developed to diversify the use of available forage by livestock and wildlife.
- 4) Intense early season grazing, herbicide treatments and biologic agents need to be aggressively employed in areas of undesirable annual grass expansion.
- 5) Encroachment by undesirable native species, invasive non-native vegetation, and noxious weeds needs to be eliminated.
- 6) Areas previously encroached by undesirable native species, invasive non-native vegetation, and noxious weeds need to be restored to properly functioning and desired future conditions.
- 7) Naturalized and biologically equivalent non-native species need to be allowed when their use improves land health unless prohibited by law.
- 8) Managers need to restore an appropriate disturbance regime to maintain a desirable mix of seral stages.

Desired Future Conditions

Garfield County desires:

- a) Land managers implement a full complement of integrated management techniques to restore appropriate disturbance regimes, desirable seral stages and to enhance rangeland health and the vigor of arid vegetative communities.

- b) Undesirable annual grasses / cheatgrass is reduced by 5% annually until it can be eradicated.
- c) Additional water resources are developed to diversify forage utilization by livestock and wildlife.
- d) Intense early season grazing, herbicide treatments and biologic agents are aggressively employed in areas of undesirable annual grass expansion.
- e) Additional encroachment by undesirable native species, invasive non-native vegetation, and noxious weeds is eliminated.
- f) Other than cheatgrass, areas previously encroached by undesirable native species, invasive non-native vegetation, and noxious weeds are restored to properly functioning and desired future conditions at a rate of 25% based on a 10 year average.
- g) Unless prohibited by law, naturalized or biologically equivalent non-native species be allowed/used when they optimizes vegetative cover or improve land health.
- h) Managers enhance vegetative production and forage by livestock and wildlife to combat any effects of climate change.
- i) Where native grasslands or non-native seedings have been lost to pinyon and juniper encroachment, cheatgrass/halogeton invasion or other undesirable vegetation, lands are restored to the native or treated condition. The desired future condition is that vegetative community (native or non-native) that optimizes rangeland health, ground cover and vegetative production.
- j) Salt desert shrub communities consist of native and / or naturalized and biologically equivalent non-native open salt desert scrub vegetation with little to no cheatgrass or halogeton cover, and scattered pockets and patches of herbaceous material and forbs, primarily in the lower areas of the terrain.
- k) Blackbrush and shrubland communities consist of dense-to-scattered shrubs and dense-to-open native and / or naturalized and biologically equivalent non-native grasses. Where surface disturbance occurs, areas are aggressively seeded with a seed mix optimized to reduce invasion of undesirable species and erosion.
- l) Following fire, vegetative communities in this biome are seeded and revegetated, prior to the first rains supporting germination with a native and non-native mix designed to optimize short term and long term rangeland health.

Findings, Policies, Goals & Objectives

Finding: Rangeland health is optimized and the effects of drought and potential climate change

are minimized when managers implement an integrated combination of mechanical, chemical, seeding and biological treatments to reduce cheatgrass and halogeton cover and restore native and desirable non-native communities.

Policy: Land managers shall implement an integrated combination of mechanical, chemical, seeding and biological treatments to optimize rangeland health and minimize the effects of drought and potential climate change.

Policy: Land managers shall implement an integrated combination of mechanical, chemical, seeding and biological treatments to reduce cheatgrass, halogeton and other undesirable vegetation and to restore native and desirable non-native communities

Policy, Goal & Objective: Undesirable annual grasses / cheatgrass shall be reduced by 5% annually until eradicated.

Policy, Goal & Objective: Additional water resources shall developed to diversify forage utilization by livestock and wildlife.

Finding: Intense early season grazing, herbicide treatments and biologic agents are appropriate and valuable techniques in combating undesirable annual grass expansion.

Policy, Goal & Objective: Land managers shall aggressively employ intense early season grazing, herbicide treatments and biologic agents in areas of undesirable annual grass expansion prior to prescribed management of other multiple uses.

Policy: Areas historically occupied by desert shrub / grassland communities that have been encroached upon by undesirable native species, invasive non-native vegetation, and noxious weeds shall be restored to properly functioning and desired future conditions at a rate of 25% based on a rolling 10 year average.

Policy: Unless prohibited by law, naturalized or biologically equivalent non-native species shall be allowed/used when they optimizes vegetative cover or improve land health.

Policy: Managers shall enhance vegetative production and forage by livestock and wildlife to combat any effects of potential climate change.

Policy: Where native grasslands or non-native seedings have been lost to pinyon and juniper encroachment, cheatgrass/halogeton invasion or other undesirable vegetation, lands shall restored to the native or treated condition. The desired future condition is that vegetative community (native or non-native) that optimizes rangeland health, ground cover and vegetative production.

Policy, Goal & Objective: Salt desert shrub communities shall consist of native and / or naturalized and biologically equivalent non-native open salt desert scrub vegetation with little to

no cheatgrass or halogeton cover, and scattered pockets and patches of herbaceous material and forbs.

Policy, Goal & Objective: Blackbrush and shrubland communities shall consist of dense-to-scattered shrubs and dense-to-open native and / or naturalized and biologically equivalent non-native grasses. Where surface disturbance occurs, areas are aggressively seeded with a native/non-native seed mix optimized to reduce invasion of undesirable species and erosion.

Policy, Goal & Objective: Following fire, vegetative communities in this biome are seeded and / or revegetated, prior to the first rains supporting germination with a native and non-native mix designed to optimize short term and long term rangeland health.

2.6.1.4 Riparian & Wetlands

Riparian and wetland systems are found throughout the Rocky Mountain and Colorado Plateau regions within a broad range terrain and elevation conditions. These systems often occur as a mosaic of multiple communities that are often tree-dominated with a diverse shrub and grass component. Riparian areas are typically dependent on a natural hydrologic regime, especially annual to episodic flooding. Wetland areas are typically dependent upon continuous saturation or inundation of soils to support wetland obligate species. Riparian occurrences are found within the flood zone of rivers, on islands, sand or cobble bars, and immediately adjacent to streambanks. They can form large, wide occurrences on mid-channel islands in larger rivers or narrow bands on small, rocky canyon tributaries and well-drained benches. Wetlands are typically found in backwater channels and other perennially wet but less scoured sites, such as floodplains, swales and irrigation ditches. Both riparian and wetland systems may also occur in upland dominant areas of mesic swales and hillslopes below seeps and springs.

Riparian and wetland systems in the County experience typically cold winters and hot summers. Surface water is generally high for variable periods. Soils are typically alluvial deposits of sand, clays, silts and cobbles that are highly stratified with depth due to flood scour and deposition. Highly stratified profiles consist of alternating layers of clay loam and organic material with coarser sand or thin layers of sandy loam over very coarse alluvium. Soils are often fine-textured with organic material over coarser alluvium. Some soils are more developed due to a slightly more stable environment and greater input of organic matter.

Riparian/wetland areas commonly contain specialized vegetation associated with surface or subsurface moisture. Riparian resources include wetland areas which require prolonged saturation of soils and contain certain vegetative species dependent upon saturation. Only a small percentage of lands in Garfield County contain riparian/wetland resources. Riparian and wetland ecological systems comprise less than 1 percent of the approximately 22 million acres of BLM-administered public lands in Utah, but are among the most important, productive, and diverse ecosystems on the landscape. Most of these resources are commonly located along major rivers,

drainages, or spring sites with a higher density located in forests and areas of higher precipitation than in the arid lowlands.

Moisture for wet meadow community types is acquired from groundwater, stream discharge, overland flow, overbank flow, and on-site precipitation. Salinity and alkalinity are generally low due to the frequent flushing of moisture through the meadow. Depending on the slope, topography, hydrology, soils and substrate, intermittent, ephemeral, or permanent pools may be present. These areas may support species more representative of purely aquatic environments. Standing water may be present during some or all of the growing season, with water tables typically remaining at or near the soil surface. However, fluctuations of the water table throughout the growing season are not uncommon. On drier sites supporting the less mesic types, the late-season water table may be several feet or more below the surface. Soils typically possess a high proportion of organic matter, but this may vary considerably depending on the frequency and magnitude of alluvial deposition and flood conditions. Organic composition of the soil may include a thin layer near the soil surface or accumulations of material several feet thick.

Wet meadow ecological systems provide important water filtration, flow attenuation, and wildlife habitat functions. Properly functioning riparian/wetland areas help maintain the quality and quantity of water regularly used for both culinary and agricultural purposes. Riparian and wetland areas also support habitat for migratory birds, raptors, and fish; support forage and browse for wildlife, wild horses, and livestock; and provide numerous recreation opportunities.

Riparian areas occur throughout the County as long strips of vegetation adjacent to streams, rivers, lakes, reservoirs, and other inland aquatic systems that affect or are affected by the presence of water. This vegetation contributes to unique ecosystems that perform a large variety of ecological functions. Riparian areas are classified as lotic riparian resources (flowing water streams and rivers) or lentic riparian resources (non-flowing wetlands, meadows, lakes, and reservoirs).

Wetland areas differ greatly in species composition, hydrologic regime, geophysical orientation, and climactic circumstances than adjacent uplands. Wetland areas can generally be described as areas influenced by subsurface or surface hydrology, creating anaerobic soil conditions and hydrologic conditions suitable for the establishment of plant species growing wholly or partially in water.

For this discussion, riparian areas and wetlands are considered coincidental because a) these community types typically occur in similar ecological components (e.g., soil moisture, terrain, and precipitation) and a) the resources demonstrate similar response patterns from impacts generated by surface disturbing influences.

Riparian/wetland resources are described through reference to the Properly Functioning Condition (PFC), which is a qualitative analysis used to assess the condition of riparian/wetland areas. The term is used to describe the assessment process and define the potential functional capacity a particular riparian/wetland area could reach with appropriate management practices. PFC is a state of resiliency that measures the potential for an area to produce anticipated ecologic values. Riparian/wetland areas

that are not reaching the functional capacity determined to be PFC are at risk of losing these values. Functioning condition is rated by category to reflect ecosystem health as follows:

Proper Functioning Condition – When adequate vegetation, landform, or large woody debris is present to dissipate energy associated with high flow; filter sediment, capture bedload and aid floodplain development; improve floodwater retention and groundwater recharge; develop root masses that stabilize streambanks against cutting action; develop diverse ponding and channel characteristics; and support greater biodiversity.

Functioning at Risk – Riparian/wetland areas that are in functioning condition, but an existing soil, water, or vegetation attribute makes them susceptible to degradation.

Nonfunctional – Riparian/wetland areas that clearly are not providing adequate vegetation, landform, or large woody debris to dissipate stream energy associated with high flows, and therefore are not reducing erosion, improving water quality, etc.

Unknown – Riparian/wetland areas that have not been inventoried or where there is insufficient information to make any form of determination.

Riparian/wetland areas are meeting PFC when a stream channel exhibits morphology and functionality similar to riparian and wetland areas in the planning area that have not been substantially altered by outside influences. These areas would have vegetation capable of attenuating flood flows, reducing erosion, and creating conditions suitable for the long-term and vigorous occupation of native vegetation on streambanks or in wetlands.

Riparian/wetland areas also can be monitored using quantitative short-term and long-term indicators. This monitoring procedure evaluates indicators for long-term trend, including vegetative composition near the water's edge, woody species regeneration, streambank stability, channel and water width and depth, and substrate composition. The procedures also help determine if short-term management practices are meeting allowable-use criteria. Examples of short-term indicators include woody species use, stubble height, and streambank alteration.

Vegetation in riparian areas and wetlands is a dominant characteristic and includes trees, shrubs, sedges, and grasses. Invasive vegetation is common within riparian areas and often consists of exotic trees (Russian Olive and Tamarisk) and other noxious species (Russian Knapweed and Purple Loosestrife). Generally, the upland vegetation surrounding riparian systems is different and definable and ranges from grasslands to forests. In recent decades pinyon and juniper have also invaded riparian areas, putting additional pressure on limited water supplies.

Grass communities and species are a major component in most riparian and wetland areas. A mix of grasses can normally be found, with wide variability in the number of species, extent or location within the riparian/wetland area. Depending on the degree of inundation or saturation, grasses can include obligate wetland species where sufficient saturation occurs yearlong, facultative wetland grasses, or upland grass species.

This ecological system contains early, mid and late-seral riparian plant associations. It also contains non-obligate riparian species. Cottonwood communities are early, mid or late-seral, depending on the age class of the trees and the associated species of the occurrence. Mature cottonwood occurrences do not reach a climax stage and do not regenerate in place, but regenerate by "moving" up and down a river reach. Over time a healthy riparian area with appropriate ecological site conditions supports all stages of cottonwood communities. Riparian ecosystems are extremely susceptible to fire, containing native woody species which are fire intolerant, often resulting in catastrophic loss to fire, especially when invaded by exotic species including tamarisk.

Associations in this ecological system are adapted to soils that may be flooded or saturated throughout the growing season. They may also occur on areas with soils that are only saturated early in the growing season, or intermittently. Typically these associations are tolerant of moderate-intensity ground fires and late-season livestock and wildlife grazing. Most appear to be relatively stable types, although in some areas these may be impacted temporarily by intensive livestock grazing.

Causal factors for riparian/wetland areas not meeting PFC vary across the rangelands in the County. These factors are inside and outside management control; and in most cases, no single factor is responsible for conditions less than PFC. Common causal factors include (in no particular order of importance) dewatering, drought, incised channels, excessive erosion/sedimentation because of poor upland conditions (i.e., pinyon-juniper woodland expansion), OHV use, wildlife & livestock grazing, and invasive species.

Federal land managers emphasize maintenance of riparian areas and wetlands. Management actions and projects have been implemented to improve riparian/wetland conditions include planting willows to reintroduce a native-woody species component, stream bank stabilization, sediment reduction, flood attenuation, and vegetative recovery in riparian areas and wetlands. Agencies have also initiated adaptive livestock and wildlife management actions to balance grazing and resource protection.

Need for Management Change

1) Active management needs to be implemented to improve and enhance riparian and wetland resources to provide for appropriate physical, biological, and chemical function.

- 2) Vegetation, soil, landform, and water need to be managed to meet or make progress toward attainment of the Utah Standards and Guidelines for Healthy Rangelands according to riparian and wetland site capability.
- 3) Vegetative and soil resources need to be managed to increase the land area occupied by riparian and wetland areas.
- 4) Additional water needs to be developed on federal lands to increase the percentage of lands occupied by riparian and wetland areas.
- 5) Managers need to implement structural and non-structural improvements in unstable water courses to restore riparian and wetlands to properly functioning / desired future conditions.
- 6) Riparian areas and wetlands need to be prioritized and managed to attain desired future conditions for riparian-related resources (e.g. fishery habitat, water quality, wildlife and livestock forage, and soil stability).
- 7) Riparian areas and wetlands need to be expanded and enhanced through integrated management of all types of vegetation including upland, pinyon/juniper woodlands, rabbitbrush, tamarisk, and Russian olive.
- 8) Riparian areas and wetlands need to be available for disposal and transfer to state and local entities for uses which meet or move toward desired future conditions.
- 9) Passive riparian and wetland management need to be abandoned and replaced with aggressive, active management aimed at enhancing existing resources and developing new riparian areas and wetlands.

Desired Future Conditions

Garfield County desires:

- a) Riparian and wetland areas are maximized to provide the greatest productive harmony between man and his environment.
- b) Properly functioning condition is achieved on riparian areas and wetlands in Garfield County.
- c) Riparian/wetland areas support the appropriate ecological conditions, composition and age-class of native and desirable non-native communities to maintain a healthy and properly functioning ecosystem.
- d) Managers implement a full suite of structural and non-structural projects (mechanical, chemical, biological and appropriate fire) to improve and expand the health and extent of existing riparian and wetland areas.

- e) Managers aggressively implement a full suite of structural and non-structural projects (mechanical, chemical, biological and appropriate fire) to create new riparian areas and wetlands.
- f) The impacts of uplands (especially rabbitbrush, encroaching conifers and Class II and Class III pinyon/juniper woodlands) on riparian areas and wetlands are recognized and mitigated.
- g) Riparian areas and wetlands are managed for the mutual and maximum benefit of wildlife, livestock and special status species.
- h) Russian olive, tamarisk, noxious weeds and undesirable native and non-native vegetation are eradicated in Garfield County's riparian areas and wetlands.
- i) The optimum mixture of native and desirable non-native species are used to maximize riparian and wetland productivity, function and condition.
- j) Land managers cooperate and coordinate with Garfield County in the development of new riparian and wetland resources, especially at culvert crossings, bridges, drainage ditches and road related infrastructure.
- k) Riparian areas and wetlands are transferred to state or local control when managers are unwilling or unable to aggressively and actively expand the extent and health of riparian/wetland resources.

Findings, Policies, Goals & Objectives

Finding: Riparian and wetland resources have not been managed to maximize a) the productive and enjoyable harmony between man and his environment or b) their appropriate physical, biological and chemical functions.

Finding: Upland resources have not been managed to maximize the extent, health and condition of riparian and wetland resources.

Policy, Goal & Objective: Riparian and wetland areas shall be maximized to provide the greatest productive harmony between man and his environment and their appropriate physical, biological and chemical functions.

Goal & Objective: Properly functioning condition is achieved on riparian areas and wetlands in Garfield County.

Goal & Objective: Riparian/wetland areas support the appropriate ecological conditions, composition and age-class of native and desirable non-native communities to maintain a healthy and properly functioning ecosystem.

Policy: The optimal mix of native and desirable non-native species shall be used to support desired ecologic conditions and a properly functioning ecosystem. Native only communities shall be limited to areas where they optimize productivity and function.

Policy, Goal & Objective: Managers shall implement a full suite of structural and non-structural projects (mechanical, chemical, biological and appropriate fire) to improve and expand the health and extent of existing riparian and wetland areas. Active restoration techniques are preferred over passive methods.

Policy, Goal & Objective: Managers shall aggressively implement a full suite of structural and non-structural projects (mechanical, chemical, biological and appropriate fire) to create new riparian areas and wetlands.

Finding: Passive management of uplands (especially rabbitbrush, encroaching conifers and Class II and Class III pinyon/juniper woodlands) has had a negative impact on riparian areas and wetlands in Garfield County.

Policy, Goal & Objective: Aggressive, active management of uplands (especially rabbitbrush, encroaching conifers and Class II and Class III pinyon/juniper woodlands) shall be implemented to restore, enhance and develop riparian areas and wetlands in Garfield County.

Policy: Based on a 10 year rolling average and consistent with desired ecological site descriptions, restore at least 25% of the Class II and Class III pinyon/juniper woodlands having a median age of less than 200 years to sagebrush / semi-desert grassland vegetation communities.

Policy, Goal & Objective: Remove 5% of encroaching conifers in federal riparian areas and wetlands annually. In priority sage grouse habitat remove 10% of encroaching conifers in wet meadows, riparian areas and wetlands.

Policy, Goal & Objective: Riparian areas and wetlands shall be managed for the mutual and maximum benefit of wildlife, livestock and special status species.

Policy: Managers shall refrain from implementing utilization standards less than 50%, unless a) implementing a utilization standard between 30% and 50% on a temporary basis not to exceed 2 years is necessary to resolve site-specific concerns; and b) the federal agency consults, coordinates, and cooperates fully with local government.

Policy: Prior to implementing actions that reduce livestock grazing in riparian areas where livestock grazing is not the primary cause of substandard conditions, land managers shall implement structural and non-structural improvements designed to restore properly functioning conditions.

Policy, Goal & Objective: Russian olive, tamarisk, noxious weeds, encroaching conifers, and undesirable native and non-native vegetation shall be removed from Garfield County's riparian areas and wetlands at a rate of not less than 5% annually.

Policy: Optimum mixtures of native and desirable non-native species shall be used in Garfield County to maximize riparian and wetland productivity, function and condition.

Policy: Land managers shall cooperate and coordinate with Garfield County in the development of new riparian and wetland resources, especially at culvert crossings, bridges, drainage ditches and road related infrastructure.

Policy: Prescriptions on livestock grazing in riparian areas shall not be more restrictive than prescriptions for other large herbivores such as elk and wild horses.

Policy: Wildlife, wild horse and wild burro populations shall be maintained at or below objectives adopted prior to January 1, 2015 prior to implementing restrictions to livestock grazing in riparian areas and wetlands impacted by multiple species.

Policy: Structural and non-structural projects designed to restore wetlands and riparian areas to properly functioning condition are prioritized over livestock exclosures, especially where resources are being impacted by wildlife, wild horses or wild burros.

Finding & Policy: Garfield County finds that riparian areas and wetlands that are not properly functioning after 2 years of livestock grazing exclusions are not impacted by livestock grazing. Land managers shall implement active structural and non-structural restoration projects and restore appropriate livestock grazing at the earliest possible date.

Policy, Goal & Objective: Riparian areas and wetlands are transferred to state or local control when managers are unwilling or unable to aggressively and actively expand the extent and health of riparian/wetland resources.

Finding: Exotic and native invasive plant species will continue to threaten and degrade riparian/wetland areas and adjacent uplands until land managers implement projects designed to restore properly functioning conditions and provide the desired vegetative communities.

Policy: Land managers shall implement the following priorities in restoring and maintaining riparian and wetland areas to properly functioning condition:

- 1) Structural improvements that support desired cross section, grade, slopes, sinuosity and other physical characteristics of the area.
- 2) Maintenance of wildlife, wild horses and wild burros within population objectives and limited to herd management areas established on January 1, 2015.
- 3) Removal of undesirable native and non-native vegetative species.
- 4) Establishment of robust communities of desirable vegetative species, consistent

with ecologic site descriptions.

- 5) Implementation of adaptive livestock grazing management techniques, consistent with principles of rangeland health.
- 6) Temporary (not to exceed 2 years) reduction of livestock grazing, when items 1 through 5 are proven to be ineffective.

Finding & Policy: Implementation of Garfield County's priorities for restoring and maintaining riparian and wetland areas is the most effective method for preserving resource health and preventing loss of riparian/wetland resources due to potential climate change.

Finding & Policy: Rapid ecoregion assessments and landscape level planning are insufficient to meet the management needs for riparian and wetland resources in Garfield County. Due to the limited area occupied by riparian areas and wetlands and the value of these resources to ecosystem health, site specific analysis shall be incorporated into actions which impact riparian and wetland resources.

Finding & Policy: Properly located and designed roads minimize impacts to riparian areas and wetlands. Where practical, roads located in riparian areas, wetlands and adjacent uplands will a) be located to minimize impacts to riparian/wetland resources, b) cross streams as close to right angles as possible, c) implement drainage systems which minimize vehicular contact with water and vegetation, d) incorporate slopes that can be revegetated, e) minimized soil loss and sedimentation, and f) optimize ecologic harmony between the road and resources.

Policy: Roads in riparian areas and wetlands claimed by federal agencies under 23 CFR 460 shall not be closed, gated or have seasonal restrictions without consultation, cooperation and coordination with Garfield County. Roads in riparian areas and wetlands not claimed by federal agencies under 23 CFR 460 shall be managed in accordance with the Garfield County Resource Management Plan and shall not be closed, gated or subject to seasonal restrictions without Garfield County approval.

Finding & Policy: Qualitative and quantitative monitoring provides limited snapshots in time and space and often mischaracterizes the overall health of riparian areas and wetlands. Monitoring data shall be used as indicators to identify areas where additional information may be needed and shall not serve as hard triggers that implement prescriptive management actions. Prescriptive management actions in riparian areas and wetlands shall be limited to those areas where accurate trends and conditions are known through comprehensive site specific analysis.

Policy: When land managers determine riparian areas and wetlands are not meeting or moving toward PFC, they shall coordinate with Garfield County by informing the County Commission of the location, extent, causes, and proposed remedy of the condition.

Policy: Surface disturbing activities will be avoided within 330 ft. of riparian areas and wetlands, unless it can be demonstrated a) there are no practicable alternatives, b) all long-term impacts can be fully mitigated, c) the activity will benefit and enhance the riparian area, or d) the activity will maintain the area's condition in a desired state.

Policy: Managers will implement changes in livestock grazing or recreation management to improve riparian areas before fencing water sources. Managers shall provide offsite water for resource uses when necessary.

2.6.1.5 Non Vegetated & Bare Ground

Non-vegetated lands consist of areas with less than 30 percent vegetation cover and occur in long term natural conditions, through natural events (wildfire, floods, landslides, etc.) or man- made disturbances.

Natural areas include lava outcrops, canyon cliffs, slickrock, and sparsely vegetated sand dunes. Volcanic areas are mostly exposed rock (usually greater than 90 percent of the groundcover with sparse alpine vegetation). These areas are often small but may be extensive and are mostly located at upper elevations in the mountainous portions of the County.

Lava outcrops occur throughout the intermountain west and are limited to non-vegetated and sparsely vegetated volcanic substrates such as basalt lava, basalt dikes, and basalt cliff faces with associated loose deposits of rock debris

Colorado Plateau cliffs, talus slopes, and canyons are in foothills to subalpine elevations and include non-vegetated and sparsely vegetated landscapes of steep cliff faces, narrow canyons, and smaller rock outcrops of various igneous, sedimentary rocks. The Colorado Plateau cliffs and canyons are largely composed of exposed bedrock (usually sedimentary) and scree; whereas the Rocky Mountain cliffs and canyons are composed of various igneous, sedimentary, and metamorphic rocks.

Active and stabilized sand dune areas are primarily located in the lower/drier portions of the County. These sand areas may have sparse to moderate vegetation adapted to unstable coarse sands. The soil supporting vegetation is unconsolidated windblown sand on active dunes. The surrounding habitat is either vegetated, stabilized sands, sandstone slickrock, or various exposed shales and other fine grained exposed geologic rock types or their finer grained developed soils. Plants associated with sand dunes may include a wide variety of species such as sand mulesears, blowout grass, sand dropseed, giant dropseed, Indian ricegrass, sandhill muhly, silky sophora, Kanab yucca, rubber rabbitbrush, winged wild-buckwheat, and Ponderosa pine, pinyon pine, Utah juniper, and Welsh's milkweed.

Areas impacted by natural events such as wildfires, floods and landslides were generally vegetated before the event and may or may not be restored to a vegetated condition. Where

adequate soil conditions remain, it is likely vegetation will return, but may take a considerable length of time if left to the natural environment. Some natural events alter the ecological site descriptions to the point that restoration to the original ecologic community is not possible. This may leave an areas susceptible to invasion by noxious weeds or undesirable species.

Man-made disturbances in modern times generally result in temporary non-vegetated/bare ground conditions. Best management practices require restoration after disturbance, and man's activities are controllable when compared to the forces of nature.

Need for Management Change

- 1) Managers need to optimize the use of non-vegetated/bare ground to accommodate surface disturbing activities that would be unacceptable in vegetated areas.
- 2) Slickrock areas need to be made available for mountain biking and canyoneering.
- 3) Sand dunes and other appropriate areas need to be made available for off road/atv open areas.
- 4) Areas disturbed by natural events need to be restored as quickly as possible to desired ecological conditions.
- 5) Noxious weeds and invasive species need to be prevented from areas disturbed by natural events, especially wildfire, and man's activities.
- 6) Managers need to identify at least 2% of the lands in the County for open ATV use.

Desired Future Conditions

Garfield County Desires:

- a) Managers optimize the use of non-vegetated/bare ground to accommodate surface disturbing activities that would be unacceptable in vegetated areas.
- b) Slickrock and other suitable areas are made available for mountain biking, canyoneering and activities that are not fitting for vegetated areas.
- c) At least 2% of the lands in Garfield County are designated as open for cross-country ATV use, including sand dunes.
- d) Areas disturbed by natural events are restored to acceptable conditions as soon as possible.
- e) Lands impacted by wildfire are reseeded prior to the first season with acceptable moisture for germination. A minimum of 60% recruitment of vegetative ground cover consistent with ecologic site descriptions is desired within the first year after a wildfire event.

f) Vegetative resources are managed in a manner that prevents establishment or expansion of noxious weeds and invasive species in areas disturbed by wildfire, other natural events and man's activities.

g) Desirable vegetative communities are prioritized over biologic soil crusts in the restoration of bare ground. Where ecologic site conditions permit, biologic soil crusts serve as a nurse crop succeeded by vascular plants as soon as practical.

h) Native and non-native vegetative communities are allowed to optimize the attainment of vegetative cover standards and to assure sites remain productive and stable.

Findings, Policies, Goals & Objectives

Finding: Bare ground or non-vegetated areas are often natural conditions that are suitable for multiple use activities that are not desired in vegetated areas.

Finding & Policy: Not all bare ground or non-vegetated areas are suitable for vegetation.

Policy, Goal & Objective: Managers shall optimize the use of non-vegetated/bare ground to accommodate surface disturbing, multiple use activities that would be unacceptable in vegetated areas.

Policy, Goal & Objective: Suitable areas shall be made available for mountain biking, canyoneering, ATV use and other multiple use activities that are not desired in vegetated areas.

Policy, Goal & Objective: At least 2% of the lands in Garfield County shall be designated as open for cross-country ATV use.

Policy, Goal & Objective: Areas denuded of vegetation by natural events will be reseeded prior to the first moisture capable of germination and will be restored to properly functioning/desired ecological conditions condition as quickly as possible.

Policy: Bared ground and non-vegetated areas shall be managed to prevent establishment or expansion of noxious weeds and invasive species.

Policy, Goal & Objective: Lands impacted by wildfire shall be reseeded prior to the first season with acceptable moisture for germination. A minimum of 60% recruitment of vegetative ground cover consistent with ecologic site descriptions shall be attained within the first year after a wildfire event.

Policy: Desirable vegetative communities are prioritized over biologic soil crusts in the restoration of bare ground. Where ecologic site conditions permit, biologic soil crusts will serve as a nurse crop succeeded by vascular plants as soon as practical.

Policy: Optimum mixtures of native and non-native vegetative communities shall be used to maximize the attainment of vegetative cover standards and to assure sites remain productive and stable.

References:

Ponderosa Pine, Mixed Conifer, and Spruce-fir Forests, USDA Forest Service Gen. Tech. Rep. RMRS-GTR-202, Michael A. Battaglia and Wayne D. Shepperd, 2007

2.6.2 Invasive Plants and Noxious Weeds

Invasive species are plants that have adaptive characteristics such as high seed production; are aggressive and difficult to manage; are capable of invading native habitats; and can often substantially change vegetation communities and affect ecological relationships. Noxious weeds are a subset of invasive plant species. They are legally designated by state or federal law to have these characteristics and require prevention and control measures to help contain or eradicate them.

Invasive plant and noxious weed species are present at various locations in the County and occur along waterways, roads, recreation sites, rangeland, infrastructure ROW, and livestock/wild horse/wildlife use areas (e.g., trails, watering areas, feeding areas, and corrals). Different species of invasive plants and noxious weeds have the capacity to invade any almost any natural vegetative habitat. Invasive plants and noxious weeds are pioneer species, establishing quickly following ground-disturbing activities such wildland or prescribed fire, ground disturbing construction projects, unauthorized OHV use, and livestock grazing. Once invasive plants and noxious weeds populate a disturbed area, they can outcompete desirable, native, or naturalized vegetation.

Establishment of invasive plants and noxious weeds following ground disturbance is of particular concern because invasive species aggressively outcompete native plant and naturalized species, often altering the physical and biotic features of an ecological community and sometimes affecting the large portions of the landscape. The State of Utah defines noxious weeds in U.C.A. 4-17-2 as "... any plant the Commissioner of Agriculture and Food determines to be especially injurious to public health, crops, livestock, land, or other property." Noxious weeds are nonnative plants that are especially undesirable because they have no forage value and are sometimes toxic or are capable of invading plant communities and displacing native species. Some federal agencies recognize noxious weeds as one of the greatest threats to the health of rangelands nationwide.

The introduction of most the County's invasive plants and noxious weeds from Europe and Asia was unintentional. Once established, these plants spread rapidly by natural (e.g., wind, water, and wildlife) and human influenced means. A notable exception is the invasion of pinyon/juniper woodlands into sagebrush/grassland habitats that has occurred significantly in the last several decades. Invasive and noxious weeds typically have reproductive, morphological, and physiological attributes that allow them to effectively establish populations and outcompete native vegetation. Most invasive species have several of the following characteristics: a) perennial growth, reproducing by rhizomes, roots, and/or vegetative parts; b) continuous seed production throughout the growing season; c) high seed production; d) highly effective seed dispersal; e) long periods of seed dormancy; f) ability to grow under adverse conditions; g) adaptable to a wide variety of soil and climatic conditions; h) compete well for soil moisture and nutrients; and i) possess genetic adaptability.

Management of invasive plants and noxious weeds in Garfield County is aimed at reducing the spread of undesirable species and protecting the integrity of native and desirable non-native/naturalized plant communities. Each year, the County allocates a considerable budget to fund weed management activities on private lands and support cooperative and coordinated weed management on federal and state lands. The County practices and supports an integrated management approach to controlling invasive plants and noxious weeds through close coordination and cooperation with other federal, state, and local entities, and private landowners through a cooperative weed management association

The State of Utah, through the Commissioner of Agriculture and Food under the Utah Noxious Weed Act has published a list of designated noxious weed species. Utah's noxious weeds are classified below. Technical names may be obtained from <http://ag.utah.gov/divs-progs/50-plants-and-pests/hay-grain-seed/599-noxious-weed-list.html>.

Class 1A: Early Detection Rapid Response (EDRR) Watch List Declared noxious and invasive weeds not native to the state of Utah and not known to exist in the State that pose a serious threat to the state and should be considered as a very high priority.

Class 1A: Early Detection Rapid Response (EDRR) Weeds	
Common crupina	African rue
Small bugloss	Mediterranean sage
Spring millet Syrian beancaper	Ventenata (North Africa grass)
Plumeless thistle	Malta starthistle

Class 1B: Early Detection Rapid Response (EDRR) Declared noxious and invasive weeds not native to the State of Utah that are known to exist in the state in very limited populations and pose a serious threat to the state and should be considered as a very high priority.

Class 1B: Early Detection Rapid Response (EDRR) Weeds	
Camelthorn	Japanese knotweed
Garlic mustard	Blueweed (Vipers bugloss)
Purple starthistle	Elongated mustard
Goatsrue	Common St. Johnswort
African mustard	Oxeye daisy
Giant reed	Cutleaf vipergrass

Class 2: Control Declared noxious and invasive weeds not native to the state of Utah, that pose a threat to the state and should be considered a high priority for control. Weeds listed in the control list are known to exist in varying populations throughout the state. The concentration of these weeds is at a level where control or eradication may be possible.

Class 2: Control Weeds	
Leafy spurge	Dyers woad
Medusahead	Yellow starthistle
Rush skeletonweed	Yellow toadflax
Spotted knapweed	Diffuse knapweed
Purple loosestrife	Black henbane
Squarrose knapweed	Dalmation toadflax

Class 3: Containment Declared noxious and invasive weeds not native to the State of Utah that are widely spread. Weeds listed in the containment noxious weeds list are known to exist in various populations throughout the state. Weed control efforts may be directed at reducing or eliminating new or expanding weed populations. Known and established weed populations, as determined by the weed control authority, may be managed by any approved weed control methodology, as determined by the weed control authority. These weeds pose a threat to the agricultural industry and agricultural products.

Class 3: Containment Weeds	
Russian knapweed	Quackgrass
Houndstounge	Jointed goatgrass
Perennial pepperweed (Tall whitetop)	Bermudagrass
Phragmites (Common reed)	Perennial Sorghum spp.: Johnson Grass
Tamarisk (Saltcedar)	Sorghum alnum
Hoary cress.	Scotch thistle (Cotton thistle)
Canada thistle	Field bindweed (Wild Morning-glory).
Poison hemlock	Puncturevine (Goathead)
Musk thistle	

Class 4: Prohibited Declared noxious and invasive weeds, not native to the state of Utah, that pose a threat to the state through the retail sale or propagation in the nursery and greenhouse industry. Prohibited noxious weeds are annual, biennial, or perennial plants that the commissioner designates as having the potential or are known to be detrimental to human or animal health, the environment, public roads, crops, or other property.

Class 4: Prohibited Weeds	
Cogongrass (Japanese blood grass)	Scotch broom
Myrtle spurge	Russian olive
Dames Rocket	

Each county in Utah may have different priorities regarding specific State designated Noxious Weeds and is therefore able to reprioritize these weeds for their own needs. Counties may also designate noxious weed for their specific County. As of January 2017, Garfield County has designated rabbitbrush as a county noxious weeds and is considering other additions.

The County Weed Specialist coordinates weed control activities among the county weed organizations and the agricultural field representatives. Surveys of serious weed infestations are conducted and control programs are developed through the county supervisors, county weed boards, and various landowning agencies. The weed specialist and the inspectors work continually with extension and research personnel in encouraging the use of the most effective methods to control the more serious weeds.

Certain weed eradication methods, such as herbicide spraying, must be consistent with federal and state laws governing the use of chemicals. Federal agencies may also be under additional regulations regarding vegetation treatments and the use of herbicides on federal lands. The use of certified weed-free hay is a common guideline implemented to control the spread of noxious weeds and is consistent with the Forest Service's and BLM's rangeland health standards. For vegetative purposes, the use and perpetuation of native species is often cited as a priority. However, naturalized and non-intrusive, nonnative species are often more ecologically or economically feasible and provide greater resource optimization and benefit. In all cases, the use of weed-free seed in reclamation and rehabilitation projects is standard practice.

Invasive plants and noxious weeds on public lands in the planning area are typically managed by integrated weed management practices including hand methods, mechanical removal, or herbicide application.

Invasive plants and noxious weeds in the County are generally a) widespread invasives covering large areas of the County (e.g. pinyon/juniper woodlands, tamarisk, rabbitbrush, etc.) or site specific infestations with localized impact. Agency vegetation projects have focused on larger scale invasives that have crowded out more desirable vegetation. Cooperative weed management efforts have concentrated on eradication of site specific noxious weeds that have the potential to spread rapidly.

Overall, areas that have been actively managed to prevent the spread of noxious weeds and invasive species have demonstrated a decrease in prevalence, indicating that current management techniques are effective at controlling outbreaks of invasive plants and noxious weeds. Early detection, rapid response, integrated management and interagency cooperation have been effective in helping eliminate new infestations and reducing existing ones. Introductions of new infestations associated with ground disturbing activities (recreation areas, fire, rights of way, etc.) are controlled through implementation of best management practices and appear to be reasonably effective.

Need for Management Change

1. Noxious weed infestations are generally known on private lands in the County. Additional inventory needs to be completed to identify all noxious weed infestations on state and federal lands in the County.
2. Due to the vastness and remoteness of federal lands in Garfield County, all noxious weed infestations on federal lands need to be identified and mapped with GPS/GIS technology.
3. Significant efforts to restore desirable vegetation in areas dominated by native invasive species need to be implemented.
4. Land managers need to eradicate all noxious weed within their jurisdiction and prevent additional infestations. Native and non-native invasives need to be replaced with desirable plant communities, consistent with ecologic site descriptions.
5. In Sage-grouse management areas, land managers need to prioritize aggressive eradication of all noxious weeds and replacement of invasive species with desirable vegetation.
6. All herbicides and treatments authorized for use on private lands need to be available for use on federal lands with the same restrictions that apply to the general public.
7. Cheatgrass needs to be controlled with the most efficient techniques possible including adaptive livestock grazing, herbicides, biologic control and any other legal method.
8. Noxious weeds and invasive species, especially cheatgrass, rabbitbrush and conifers that are inconsistent with historic vegetative communities are a visible impact of man; and lands occupied by such species are not a) natural, b) possessing wilderness characteristics, or c)

suitable for management as wilderness, wilderness study areas or non-wsa lands with wilderness characteristics.

9. Garfield County needs to consider designating cheatgrass, rabbitbrush and invasive conifers that are inconsistent with historic vegetative communities as county noxious weeds.

10. Where cheatgrass or other fire susceptible invasive species occupy large land areas, fire breaks need to be created to limit wildfire extent.

11. Conditions which promote infestation by noxious weeds and invasive species, such as bare ground, be minimized through active and adaptive management.

Desired Future Conditions

Garfield County desires:

a) All noxious weed infestations on federal lands be identified and mapped prior to January 2020.

b) Land managers significantly increase efforts to eradicate noxious weeds and replace invasive species with desirable historic plant communities.

c) All noxious weed infestations on state and federal lands be eradicated by January 2025.

d) Native and non-native invasives replaced with desirable plant communities, consistent with ecologic site descriptions. Class II and Class III pinyon/juniper woodlands are reduced by 25% based on a 10 year rolling average.

e) Sage-grouse management areas are aggressively treated to eradicate all noxious weeds and replace invasive species with desirable vegetation.

f) All herbicides and treatments authorized for use on private lands are available for use on federal lands with the same restrictions that apply to the general public.

g) The most efficient techniques possible are used to control cheatgrass, invasive conifers, rabbitbrush and noxious weeds.

h) Fire breaks are created in cheatgrass and other fire susceptible habitats to reduce the impacts of future wildfire.

i) Noxious weeds and invasive species, especially cheatgrass, rabbitbrush and conifers that are inconsistent with historic vegetative communities are recognized as a visible impact of man; and lands occupied by such species are designated as not a) natural, b) possessing wilderness characteristics, or c) suitable for management as wilderness, wilderness study areas or non-wsa lands with wilderness characteristics.

- j) Conditions which promote infestation by noxious weeds and invasive species, such as bare ground, be minimized through active and adaptive management.
- k) Federal agencies spend an amount on noxious weed control on their lands in proportion to the acres under their control as Garfield County does for private lands under County control.
- l) 40% ground cover is retained in areas of prescribed fire and 60% recruitment is achieved by the next rainy season.
- m) Lands impacted by wildfire are reseeded with desirable native and/or non-native plant communities prior to infestation by noxious or invasive weeds.

Finding, Policies, Goals & Objectives

Objective: Reduce the percentage of invasive or noxious weeds in relation to desired plant populations.

Finding & Policy: Federal lands occupy a significantly larger acreage than private lands in the County and are considerably less observable, so undetected propagation of noxious weeds is a significant threat on federal lands. All noxious weed infestations on federal lands shall be identified and mapped prior to January 2020.

Policy & Goal: All noxious weeds on state and federal lands shall be eradicated prior to January 2025.

Policy: To the maximum extent allowed by law, Integrated Weed Management using the full complement of treatment methods shall be used for invasive species and noxious weed control. Treatment methods shall be compatible with maintaining special status plant species where applicable.

Finding, Policy & Objective: Rabbitbrush, although native, is generally an unproductive plant that degrades land health. Land managers shall replace rabbitbrush with desirable vegetation that is more compatible with land health and resource use.

Finding & Policy: Noxious weeds and invasive species, including rabbitbrush, cheatgrass and conifers that are inconsistent with historic vegetative communities are a visible impact of man; and lands occupied by such species are not a) natural, b) possessing wilderness characteristics, or c) suitable for management as wilderness, wilderness study areas or non-wsa lands with wilderness characteristics.

Finding & Policy: Climate change has significantly less impact on noxious weeds than the actions of land managers. NEPA actions including analysis of noxious weeds and invasive species shall clearly identify uncertainties between alternatives that consider climate change and active management. Active, aggressive management of noxious weeds and invasive species shall be prioritized above passive actions, unless proven less effective by objective science.

Policy, Goal & Objective: Class II and Class III pinyon/juniper woodlands shall be reduced by 25% based on a 10 year rolling average.

Policy: Priority and general Sage-grouse management areas shall be aggressively treated to eradicate all noxious weeds prior to January 2025. Land managers shall also prioritize replacement of invasive species with desirable vegetation in priority Sage-grouse management areas.

Policy: In PHMA and GHMA, integrated Vegetation Management using all available methods will be used to control, suppress, and eradicate noxious and invasive species, including conifers and rabbitbrush.

Policy: Land managers shall prioritize eradication of noxious weeds and replacement of invasive species with desirable vegetation communities in Sage-grouse management and special status species areas prior to restricting resource and land uses.

Policy: All herbicides and treatments authorized for use on private lands shall be available for use on federal lands with the same restrictions that apply to the general public.

Finding & Policy: Noxious weeds, cheatgrass, invasive conifers, and rabbitbrush are invasive species that can have severe detrimental impacts on land health and productivity. Land managers shall employ the most efficient techniques legally available to control cheatgrass, invasive conifers, rabbitbrush and noxious weeds.

Policy: Federal agencies shall cooperate with Garfield County to develop preventative fire breaks along roads, powerlines and other human and natural disturbances in areas infested by cheatgrass and other fire susceptible fuels.

Policy: Conditions which promote infestation by noxious weeds and invasive species, such as bare ground and post fire vegetative loss shall be minimized through active restoration and seeding with native and non-native vegetation communities consistent with ecologic site descriptions.

Policy & Goal: Federal spend an amount on noxious weed control on their lands in proportion to the acres under their control as Garfield County does for private lands under County control. Agency Expenditure = (Federal agency acres/private acres) x Garfield noxious weed expenditures.

Goal & Objective: In areas subject to prescribed fire land managers shall retain 40% ground cover and achieve 60% ground cover prior to the next rainy season.

Policy: Lands impacted by wildfire shall reseeded with desirable native and/or non-native plant communities prior to infestation by noxious weeds or invasive species.

References

Utah Noxious Weed Act, U.C.A. 4-17

<http://ag.utah.gov/divs-progs/50-plants-and-pests/hay-grain-seed/599-noxious-weed-list.html>,
February 18, 2017

The Utah Strategic Plan for Managing Noxious and Invasive Weeds, Utah Weed Control Association, 2004

2.7 SPECIAL STATUS SPECIES (THREATENED, ENDANGERED, AND SENSITIVE)

This section is intentionally left blank. Management direction for this Resource / Resource Use has not been completed. It is intended that management direction for this Resource / Resource Use will be completed, subject to public comment, and adopted at some point in the future.

2.7 SPECIAL STATUS SPECIES

2.7.1. Introduction

Special status species is the term that Garfield County uses to distinguish the wildlife and plant species that the County considers to be threatened, endangered or worthy of special actions to recover or maintain population viability. While each of these species has value in its own right, and collectively play an important role in maintaining ecological integrity, the practical reason for protective action is to eliminate the possibility of a species being listed under the federal Endangered Species Act (ESA). When a species is listed under the ESA, the action generally results in restrictions that have an adverse effect on the productivity of private lands, public lands and the health safety and welfare of the public.

Determining Garfield County's Special Status Species is a fundamental first step in addressing special status species management. Sources used to identify the County's Special Status Species List are:

Utah Sensitive Species List The Utah Sensitive Species List was prepared by the Utah Division of Wildlife Resources (DWR) pursuant to State of Utah Administrative Rule R657-48 and includes "all wildlife species for which there is credible scientific evidence to substantiate a threat to continued population viability." Species on this list are identified as "Wildlife Species of Concern." Included are fish, amphibians, reptiles, birds, mammals and mollusks designated as any of the following:

1. Federal candidate species (as determined by the US Fish and Wildlife Service (FWS)),
2. Federal threatened species (as determined by the FWS),
3. Federal endangered species (as determined by the FWS),
4. Conservation agreement species (subject to official conservation agreements between the U. S. Government and the State of Utah), and
5. Utah wildlife species of concern (species where the State of Utah has determined that conservation actions be taken to preclude their listing as candidate, threatened or endangered).

The Utah Sensitive Species List can be viewed at

dwr.cdc.nr.utah.gov/ucdc/ViewReports/sslist.htm. A list, also prepared by the DWR, of sensitive species in Garfield County can also be viewed at that location. All Utah Sensitive Species that occur in Garfield County are considered to be Garfield County Special Status Species.

Utah Wildlife Action Plan The DWR's Utah Wildlife Action Plan's list identifies "Species of Greatest Conservation Needs." The Wildlife Action Plan analysis focused on three fundamental

factors: 1) the likelihood of an ESA listing, 2) the consequences of listing, and 3) the potential for influencing a listing. For a description of how the species of greatest conservation needs were determined see the Wildlife Action Plan (wildlife.utah.gov/Utah.WAP.pdf). All Garfield County species identified in the Wildlife Action Plan are considered to be Garfield County Special Status Species.

Candidate, Threatened and Endangered Species Candidate, threatened and endangered species listed by the U.S. Fish and Wildlife Service under the ESA are included on the Garfield County list of Special Status Species.

Endangered, Threatened and Candidate Plants Plant species that the FWS has listed as endangered or threatened species or has designated as candidate species that are native to and are known to be present in the County are considered to be a Garfield County Special Status Species. Utah's DWR does not manage plants except as a component of habitat for wildlife, and plants are not included in the State of Utah Sensitive Species List. ESA plants are referenced in the Utah Wildlife Action Plan but they are not specifically included on the list of Species of Greatest Conservation Needs.

Federal Land Management Agency Sensitive Species The Bureau of Land Management and the U. S. Forest Service maintain sensitive wildlife species and sensitive plant species lists. Additionally, the Forest Service has a list of management indicator species (MIS) that, while not necessarily sensitive or vulnerable, do represent the types of species present in various vegetation associations, and the Forest Service considers them worthy of special management attention. A comparison of BLM and Forest Service sensitive species for Garfield County indicates that all of these species are also on one of the two State lists described above. Consequently, there is no need to duplicate the State's species by including BLM or Forest Service sensitive species on the County list of special status species.

Conservation Agreement Species Conservation agreement species refers to wildlife and fish species that are the subject of intergovernmental management agreements. In Garfield County all but one conservation agreement species are fish. The other is a bird. All conservation agreement species are included on the Garfield County list of Special Status Species.

Incidental Occurrence It is possible that species identified in one or another sensitive species list, but not identified as occurring in Garfield County, may at times be found in Garfield County as ranges shift and individuals make incidental or temporary visits due to weather events or other causes. These species are not included in the Garfield County List of Special Status Species.

Introduced / nonessential experimental populations (e.g. the California Condor) introduced species are often classified as a "nonessential experimental populations." Regulatory restrictions are not as intrusive for a nonessential experimental populations compared to the regulations for native and non-experimental listed species. Introduced and nonessential experimental species are included in Garfield County's list special status species on a case by case basis.

For example, the California Condor is included on the DWR list of Species of Greatest Conservation Needs (as an experimental population), but is not on DWR's Wildlife Species of Concern list. The California Condor is a listed ESA species introduced into Arizona north of the Grand Canyon and west of the Glen Canyon Reservoir. It is considered to occasionally visit Garfield County. But, given its transitory presence, vague classification and less restrictive regulatory status, the California Condor is not included on the Garfield County special status species list.

Summary. To summarize, Garfield County Special Status Species includes:

1. Native wildlife and plant species known to regularly be present in Garfield County that the

FWS has listed as endangered (FWSE), threatened (FWST) or designated as a candidate species (FWSC), except for experimental populations.

2. Native wildlife species identified on Utah Sensitive Species List as “Wildlife Species of Concern” and that the State recognizes as occurring in Garfield County. (USC)
3. Wildlife species identified in the Utah Wildlife Action plan as “Species of Greatest Conservation Needs” and that the State recognizes as occurring in Garfield County. (USCN)
4. Wildlife species classified as conservation agreement species and known to be present in Garfield County, including in the Colorado River on the eastern boundary of the County. (CAS)
5. Wildlife species identified by federal agencies as special status are included in Garfield County’s management when identified on Utah’s list of Wildlife Species of Concern or Species of Greatest Conservation Needs. They are included in the chart below to facilitate consistency and coordination as BLM Sensitive Species (BLMSS), Forest Service Sensitive Species (FSSS), and Park Service Sensitive Species (NPSSS)

2.7.2. Current Setting

Based on the factors escribed above, the following species are considered Garfield County Special Status Species:

Common Name	Scientific Name	Group	Designation
Allen’s Big-eared Bat	<i>Idionycteris phyllotis</i>	Mammal	USC, USCN, BLMSS
American Pika	<i>Ochotona princeps</i>	Mammal	USCN
American Three-toed Woodpecker	<i>Picoides dorsalis</i>	Bird	USC, USCN, FSSS
American White Pelican	<i>Pelecanus erythrorhynchos</i>	Bird	USC, USCN, BLMSS
Arizona Toad	<i>Bufo microscsphus</i>	Amphibian	USC, USCN, BLMSS
Autumn Buttercup	<i>Ranunculus aestivalis</i> (= <i>acriformis</i>)	Plant	FWSE, USCN
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Bird	USC, FSSS, BLMSS
Black Canyon Pyrg	<i>Pyrgulopsis plicata</i>	Mollusk	USC, USCN
Bluehead Sucker	<i>Catostomus discobolus</i>	Fish	CAS, USCN, BLMSS
Bonneville Cutthroat Trout	<i>Oncorhynchus clarkii</i> Utah	Fish	CAS, USCN
Bonytail Chub	<i>Gila elegans</i>	Fish	FWSC, USC, USCN
Burrowing Owl	<i>Ursus arctos</i>	Bird	USC, USCN, FSSS, BLMSS
Colorado Pikeminnow	<i>Ptychocheilus Lucius</i>	Fish	FWSE, USC, USCN
Colorado River Cutthroat Trout	<i>Oncorhynchus clarkii</i> <i>pheuriticus</i>	Fish	CAS, USCN, FSSS
Common Chukawalla	<i>Sauromalus ater</i>	Reptile	USC, BLMSS
Desert Night Lizard	<i>Xantusia vigilis</i>	Reptile	USC
Dwarf Shrew			USCN
Peregrine Falcon	<i>Falco peregrinus</i>	Bird	USCN
Ferruginous Hawk	<i>Buteo regalis</i>	Bird	USCN, BLMSS
Flannelmouth Sucker	<i>Catostomus latipinnis</i>	Fish	CAS, USCN, BLMSS
Fringed Myotis	<i>Myotis thysanodes</i>	Mammal	USC, USCN, BLMSS

Common Name	Scientific Name	Group	Designation
Golden Eagle	<i>Aquila chrysaetos</i>	Bird	USCN
Greater Sage-grouse	<i>Centrocercus urophasianus</i>	Bird	USC, USCN, FSSS, BLMSS
Humpback Chub	<i>Gila cypha</i>	Fish	FWSE, USC, USCN
Jones Cycladenia	<i>Cycladenia humilis jonesii</i> var.	Plant	FWST, USCN
Kit Fox	<i>Vulpes macrotis</i>	Mammal	USC, USCN, BLMSS,
Lewis's Woodpecker	<i>Melanerpes lewis</i>	Bird	USC, USCN, BLMSS
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	Bird	FWST, USC, USCN
Northern Goshawk	<i>Accipiter gentilis</i>	Bird	CAS, USCN, FSSS, BLMSS
Northern Leopard Frog	<i>Rana pipiens</i>	Amphibian	USCN
Pygmy Rabbit	<i>Brachylagus idahoensis</i>	Mammal	USC, USCN, FSSS, BLMSS
Roundtail Chub	<i>Gila robusta</i>	Fish	CAS, USCN
Short-eared Owl	<i>Asio flammeus</i>	Bird	USC, USCN, BLMSS
Smith's Black-headed Snake		Reptile	USCN
Southern Leatherside Chub	<i>Lepidomeda aliciae</i>	Fish	USC, USCN, FSSS, BLMSS
Spotted Bat	<i>Euderma maculatum</i>	Mammal	USC, USCN, FSSS, BLMSS
Townsend's Big-eared Bat	<i>Corynorhinus townsendi</i>	Mammal	USC, USCN, FSSS, BLMSS
Utah Physa	<i>Physelia utahensis</i>	Mollusk	USC
Utah Prairie-dog	<i>Cynomys parvidens</i>	Mammal	FWST, USC, USCN
Ute Ladies'-tresses	<i>Spiranthes diluvialis</i>	Plant	FWST, USCN
Western Toad	<i>Bufo boreas</i>	Amphibian	USC, USCN
Winkler Cactus	<i>Pediocactus winkleri</i>	Plant	FWST
Wright Fishhook Cactus	<i>Scierocactus wrightiae</i>	Plant	FWSE

As depicted above, the current Garfield County Special Status Species list contains 43 species, including 38 wildlife species and 5 plant species. The wildlife species include 8 mammals, 12 birds, 3 amphibians, 2 mollusks, 9 fish and 3 reptiles. Ten of the species on the County's list are on the federal ESA list, 5 wildlife species and 5 plant species. 26 of the species are on the DWR Sensitive Species List as Wildlife Species of Special Concern. 35 are classified in the Utah Wildlife Action Plan as Species of Greatest Conservation Needs. 6 species are conservation agreement species. Note that many Garfield County Special Status Species are on two or more of the above lists. Accordingly, combining the number of species on the individual lists results in a number larger than 43.

Three of the ESA species, the Bonytail Chub, Colorado Pikeminnow, and Humpback Chub are Colorado River mainstem fish that are classified as endangered. These three fish species are only located in the Colorado River, have been listed for several years and have a specific interagency management program in place. They are managed through a stable and longstanding

agreement and have a relatively small effect on land use; these species receive little conservation attention from the County.

The other two ESA-listed wildlife species, the Mexican Spotted owl and the Utah Prairie-dog, are classified as threatened. The Greater Sage-grouse was a candidate species but the FWS recently decided not to list this species and it was removed from the candidate species list. The Mexican Spotted owl is often used by special interest groups as the rationale for opposing active forest management, though the species is rarely seen in Garfield County. The Utah Prairie-dog and the Greater Sage-grouse are widely distributed in Garfield County's sage steppe habitats, with the Sage-grouse being the most widespread of the two. Both species are considered to be of special concern to the County due to the effect of listing on grazing, development and public use. The Garfield County list includes 2 endangered plants and 3 threatened plants. All 5 ESA listed plant species are located on federally-administered lands and are monitored regularly by federal botanists. Capitol Reef National Park has expressed concern that cattle trailing could affect the two cactus on the ESA list, though these species and grazing have coexisted for over 130 years. On occasion the presence of a rare plant requires change in a specific Forest Service or BLM activity, but not often. The ESA places no regulatory obligations on private property owners whose lands contain listed plant species. In addition to Garfield County's listed species, BLM and Forest Service have identified 3 species that are a concern to them, and the UDWR Natural Heritage Program has identified approximately 55 more plants in Garfield County that may be of concern at some point in the future. None of these additional plant species identified by BLM, Forest Service or UDWR merit protection.

Of the 6 conservation agreement species on the special status species list, 5 are fish and 1 is a bird, the Northern Goshawk. Three of the conservation agreement fish are mainstem Colorado River species managed through an interagency agreement. The other 2 are the Bonneville and Colorado River cutthroat, both coldwater stream sub-species. Both cutthroat sub-species are fairly widely distributed in Garfield County's coldwater streams, the Bonneville in the Sevier watershed and the Colorado River in the Escalante and Fremont watersheds. Due to their dispersed character, and the value of coldwater streams to communities and the environment, the cutthroat sub-species are priorities for attention by the County. The Northern Goshawk, the only bird conservation agreement species, is one of the most widespread species in Garfield County's mature forests, and is considered to be of special concern due to the adverse effect of Forest Service goshawk management prescriptions on timber harvest.

There are additional species that, while not on the Garfield County special status species list, do warrant mention in the context of this list. The California Condor is a federally listed endangered species. An "experimental population" was established in Kane County and birds from that population are known to temporarily visit Garfield County. An experimental population does not bring about the same management concerns and requirements as non-experimental ESA species or populations. The condor population is therefore not on the County list. The Southwestern willow flycatcher, an endangered species, and the Yellow-billed cuckoo, a candidate species, are on the Utah Sensitive Species List but not in Garfield County. These species are rarely seen in Garfield County. Nonetheless, like the Mexican spotted owl, these species are often used by special interest groups as rationale to bring suit opposing forestry, watershed restoration, rangeland health and other projects in Garfield County.

All of the species on Garfield County List of Special Status Species are being managed for recovery or sustainability by federal land management agencies and the State and are subject to

various levels of Recovery and Conservation Plans implemented by Garfield County. All ESA listed species have recovery plans or plans are being prepared. All conservation agreement species have conservation agreements and strategies, which are similar to recovery plans but not as detailed. Other Garfield County Special Status Species generally do not have species – specific management plans. However, they are typically considered in management plans prepared by Park Service, Forest Service and BLM units within Garfield County. ESA recovery plans are typically prepared by the FWS, though plans prepared by a state or other entity may be adopted as “functional equivalents.” Sometimes multiple species plans are prepared, but none for Garfield County species. While conservation agreement and strategy documents are not as detailed as recovery plans, and do not include recovery criteria, they do provide targeted conservation strategies and the interagency nature of these agreements helps to ensure implementation.

Specific conservation plans have not been prepared for several species on the County’s list of Special Status Species. All of these are species from the State’s Sensitive Species List and Wildlife Action Plan that do not have a direct federal connection as an ESA listed species or cooperative agreement species. A few of these species may have local area conservation plans, usually prepared by federal land managers, but most do not. For these species the County considers the Utah Wildlife Action Plan to be the best available surrogate plan until Garfield County completes a county specific plan. As plans are prepared for these species these plans will be evaluated by the County and, if suitable, recognized by the County. Following is the list of Garfield County Special Status Species, along with County’s determination regarding the best available conservation plan for each species.

Common Name	Scientific Name	Recovery or Conservation Plan
Allen’s Big-eared Bat	<i>Idionycteris phyllotis</i>	Utah Wildlife Action Plan
American Pika	<i>Ochotona princeps</i>	Utah Wildlife Action Plan
American Three-toed Woodpecker	<i>Picoides dorsalis</i>	Utah Wildlife Action Plan
American White Pelican	<i>Pelecanus erythrorhynchos</i>	Utah Wildlife Action Plan
Arizona Toad	<i>Bufo microscsphus</i>	Utah Wildlife Action Plan
Autumn Buttercup	<i>Ranunculus aestivalis</i> (= <i>acriformis</i>)	ESA recovery plan
Bald Eagle	<i>Haliaeetus leucocephalus</i>	ESA recovery plan
Black Canyon Pyrg	<i>Pyrgulopsis plicata</i>	Utah Wildlife Action Plan
Bluehead Sucker	<i>Catostomus discobolus</i>	Conservation agreement and strategy
Bonneville Cutthroat Trout	<i>Oncorhynchus clarkii</i> Utah	Conservation agreement and strategy
Bonytail Chub	<i>Gila elegans</i>	ESA recovery plan
Burrowing Owl	<i>Ursus arctos</i>	Utah Wildlife Action Plan
Colorado Pikeminnow	<i>Ptychocheilus Lucius</i>	ESA recovery plan
Colorado River Cutthroat Trout	<i>Oncorhynchus clarkii</i> <i>pheuriticus</i>	Conservation agreement and strategy
Common Chukawalla	<i>Sauromalus ater</i>	None
Desert Night Lizard	<i>Xantusia vigilis</i>	None
Dwarf Shrew		Utah Wildlife Action Plan

Common Name	Scientific Name	Recovery or Conservation Plan
Peregrine Falcon	<i>Falco peregrinus</i>	Utah Wildlife Action Plan
Ferruginous Hawk	<i>Buteo regalis</i>	Utah Wildlife Action Plan
Flannelmouth Sucker	<i>Catostomus latipinnis</i>	Conservation agreement and strategy
Fringed Myotis	<i>Myotis thysanodes</i>	Utah Wildlife Action Plan
Golden Eagle	<i>Aquila chrysaetos</i>	Utah Wildlife Action Plan
Greater Sage-grouse	<i>Centrocercus urophasianus</i>	ESA recovery plan, State recovery plan
Humpback Chub	<i>Gila cypha</i>	ESA recovery plan
Jones Cycladenia	<i>Cycladenia humilis jonesii</i> var.	ESA recovery outline
Kit Fox	<i>Vulpes macrotis</i>	Utah Wildlife Action Plan
Lewis's Woodpecker	<i>Melanerpes lewis</i>	Utah Wildlife Action Plan
Mexican spotted owl	<i>Strix occidentalis lucida</i>	ESA recovery plan
Northern Goshawk	<i>Accipiter gentilis</i>	Conservation agreement and strategy, USFS forest plan amendment
Northern Leopard Frog	<i>Rana pipiens</i>	Utah Wildlife Action Plan
Pygmy Rabbit	<i>Brachylagus idahoensis</i>	Utah Wildlife Action Plan
Roundtail Chub	<i>Gila robusta</i>	Conservation agreement and strategy
Short-eared Owl	<i>Asio flammeus</i>	Utah Wildlife Action Plan
Smith's Black-headed Snake		Utah Wildlife Action Plan
Southern Leatherside Chub	<i>Lepidomeda aliciae</i>	Utah Wildlife Action Plan
Spotted Bat	<i>Euderma maculatum</i>	Utah Wildlife Action Plan
Townsend's Big-eared Bat	<i>Corynorhinus townsendi</i>	Utah Wildlife Action Plan
Utah Physa	<i>Physelia utahensis</i>	None
Utah Prairie-dog	<i>Cynomys parvidens</i>	ESA recovery plan
Ute Ladies'-tresses	<i>Spiranthes diluvialis</i>	Draft ESA recovery plan
Western Toad	<i>Bufo boreas</i>	Utah Wildlife Action Plan
Winkler Cactus	<i>Pediocactus winkleri</i>	Draft ESA recovery plan
Wright Fishhook Cactus	<i>Scierocactus wrightiae</i>	ESA recovery plan

Newer recovery plans for ESA species include range maps and critical habitat for the species. Conservation agreement and strategy documents typically do not include range maps and those that do have maps are quite general. Range maps are very general or non-existent for other Special Status Species. Distribution maps are finer in scale and delineate specific or general habitat locations. Except for fish species and species with limited ranges, these maps are generally lacking, especially for the Greater Sage-grouse. In some cases land management agencies maintain finer scale habitat maps, but these tend to be project-area specific. Where there is concern that the location of a species may place it at risk, researchers may purposely generalize habitat maps. These maps may represent range as large, general polygons or depict

presence/absence at the county-wide level, with the map indicating whether the species occurs in a county but not where in that county. While helpful for general planning, these general distribution maps are not particularly useful for species conservation, management or project-level applications. Except for species and areas where site-level investigation has occurred, existing maps are largely inadequate or non-existent.

The Utah Natural Heritage Program maintains data on Greater-Sage-grouse habitat and distribution and species occurrence data for some ESA listed species. That program also maintains a crucial habitat unit assessment tool. These data can be found at <http://dwrcdc.nr.utah.gov/ucdc/downloadgis/disclaim.htm>.

Species Viability. Viability is the essential measure of whether a species or population is sustainable or under significant threat. There is no single formula for determining species or population viability. Rather, several specific biological determinations are involved, and the final call on species viability represents a consensus of scientific opinion. The Dixie National Forest has compiled a report that describes the viability of species found in that agency's boundaries, 40% of which is located in Garfield County. That report is considered the best available existing information concerning species viability in Garfield County.

Citation:

With 93% of Garfield County's land base in federal management, with sensitive species management plans in place for all federal lands, and with the State and County taking an active role in sensitive species habitat conservation on both public and private lands, the likelihood of further decline or extinction for Garfield County populations of these species is slight and species viability is not subject to significant threats.

Over the past several decades the pressure for listing of species and designation of critical habitat under the Endangered Species Act has been a prominent theme in Garfield County, even at a time when there is very little evidence that some special status species exist in the area or are actually in decline. The increased pressure for ESA-related designations has come at a time when there has been a significant increase in litigation and political pressure aimed at closing roads, stopping grazing, halting timber harvest (and closing mills), and prohibiting energy exploration and extraction, all of which significantly harm the County's economy, community stability, social structure, and lifestyle. This increased attention to sensitive species at a time when multiple use activities on public lands are under attack is not coincidental. Special interest groups – under the guise of conservation - use the ESA as a tool to raise funds and convert multiple use land management to single use management. While this strategy may be used elsewhere, the intensity of its use in Garfield County and surrounding southern Utah area is particularly acute.

Since 1996 timber harvest has decreased by 90%, public lands grazing has decreased by 70%, and energy production has nearly disappeared. Largely as a result of continuing attacks on the traditional activities that support local economies, population growth has slowed or stopped. County-wide the school population is in decline as young families leave to find jobs in larger communities, particularly in communities where the greatest dependence on natural based industries exists.

Endangered species have been a central factor in almost all of the efforts to halt logging, grazing and energy production. Proving that a species is not present and/or would not be affected by a proposed development is extremely difficult, and demonstrating species viability is highly complex and open to criticism. Special interest groups have frequently used species-related

arguments in their extensive appeals and lawsuits. These appeals and lawsuits are the major impediment to properly managing resources that are resistant and resilient to fire and a significant reason that timber production has declined so drastically over the past several years. Only once in the past ten years has the Dixie National Forest been victorious in a species-related harvest law suit.

Pressures for listing of species and designation of critical habitat have been expanding, while site specific inventories, habitat designations and biologic assessments have become increasingly inaccurate. Discretionary funds intended for species conservation and recovery have been diverted to defend lawsuits and appeals, taking money away from critical on-the-ground species recovery actions.

The negative impact of special status species on Garfield County communities is compounded by agency movement toward landscape level and rapid ecoregion management. Federal management actions are increasingly influenced by generalized studies that lack site specific accuracy and are driven by political pressure. State and local governments, although most impacted by the decisions, most familiar with local conditions, possessing much of the expertise, and authorized by federal laws to provide the baseline for management of land, water, and species, are largely ignored.

Need for Management Change

- 1) Active management needs to be implemented to conserve and recover special status species in Garfield County. Secretive and prescriptive approaches need to be replaced with open and aggressive proactive recovery strategies.
- 2) Land managers need to aggressively and actively manage lands to delist species currently on the ESA list of candidate, threatened and endangered species and to prevent other species from being listed.
- 3) Land managers need to aggressively and actively manage lands to improve populations and habitats to remove species from Utah's Wildlife Species of Concern and Species of Greatest Conservation Needs lists and from BLM's and Forest Service's special status species lists.
- 4) In coordination with Garfield County, conservation agreements need to be reviewed and revised to bring them into consistency with Garfield County's plan, program and policy for species managed under such agreements.
- 5) Recovery teams dominated by federal officials focused on research and regulatory strategies need to be replaced with local officials that will implement structural and non-structural improvements that will conserve, recover and increase special status species populations and habitat.
- 6) Accurate maps depicting range, viable habitat, critical habitat, population centers and other mapping needs to be developed. Mapping should focus on watershed or local population scales rather than ecoregions or total range of the targeted species.

- 7) Local conservation strategies and plans need to be developed for each special status species in Garfield County.
- 8) Where habitat/populations cross agency or political boundaries, conservation efforts should be coordinated at the local level.
- 9) Critical, crucial, priority and other habitat designations need to be corrected to conform to target species life cycle requirements.
- 10) Species managers need to make annual counts of special status species under their jurisdiction to evaluate conservation and recovery progress.
- 11) Existing management plans for the northern goshawk threaten forest health and promote conditions that are not resistant and resilient to fire. Northern goshawk populations and habitats need to be inventoried; and conservation plans need to be revised to provide for healthy forests within 5 years or at the next forest planning cycle, whichever occurs first.
- 12) Federal agencies need to share annual counts and recovery information with Garfield County to document progress toward conservation/recovery directives.
- 13) Lands that do not currently contain special species populations or habitat meeting desired life cycle requirements need to be released from critical, crucial or priority habitat designations.
- 14) The existing system of ESA species, species of concern, species of greatest conservation need, and agency special status species is confusing and cumbersome. A single system needs to be developed to simplify recover and house all conservation plans under one agency.

Desired Future Conditions

The County desires that:

- a) The need for future listings under the Endangered Species Act is precluded through the use of proactive habitat enhancements and sound resource management.
- b) Currently listed special status species are recovered to the point they are delisted and their future as viable populations is secured.
- c) The Utah Wildlife Action Plan is used as a principal guide for implementing species conservation strategies until Garfield County develops individual conservation plans for the various species.
- d) When developed, Garfield County's species conservation plans replace the Utah Wildlife Action Plan as a principal guide for implementing species conservation strategies in Garfield County.

- e) Restrictions on land use associated with special status species are removed from lands that do not contain a) permanent populations or b) high value habitat of the targeted species.
- f) Conservation/recovery plans and habitat evaluation guides are developed for each special status species in Garfield County.
- g) Existing conservation recovery plans and critical, crucial and priority habitat designations are reviewed and revised to reflect only those lands suitable for species recovery and long term conservation.
- h) Goshawk management plans for forested lands in Garfield County are amended to prioritize first healthy forests that are resistant and resilient to fire, second restoration of traditional timber harvests, and third management of resources for goshawk conservation.
- i) The goshawk amendment to the Dixie National Forest Plan is discarded and replaced with an effective plan that meets Garfield County's priorities for the beneficial use of land and natural resources.
- j) Special status species conservation and recovery is managed in concert with traditional multiple uses such as livestock grazing, timber harvest and energy development to promote the productive and enjoyable harmony between man and his environment.
- k) Garfield County communities thrive and are sustainable due to a healthy balance between man, development, natural resources, and land health.
- l) Decisions regarding management of special status wildlife and plant species and their habitats are made based on the best available, site specific, biological and social scientific knowledge and information.
- m) Critical habitats and recovery plans are not based on landscape or ecoregion level analysis but are based on local population and habitat conditions.
- n) Scientifically accurate and scale-appropriate counts, data and maps concerning the location of special status species are available to assist with site-level analysis.
- o) Spurious attempts to halt responsible land use through species listings, designation of critical habitats and other ESA and sensitive species-related strategies are precluded through active management emphasizing habitat vitality and vigor.
- p) Garfield County is recognized as a full and vital partner with state and federal agencies in the management of special status species and habitats.

q) The County's jurisdictional authority and expertise concerning land use, planning, zoning, site specific conditions, habitat, socio-economics, cultural impacts and other subjects is recognized, accepted and acknowledged by other levels governments.

r) A single special status species list and a single repository for conservation plans are developed for all governmental entities in Garfield County.

SPECIAL STATUS WILDLIFE

Findings, Policies, Goals & Objectives

Policy: In accordance with its police power authority, it is the policy of Garfield County to use its land use planning and zoning authority to designate plans, programs and policies on private and public lands to ensure conservation and recovery of Garfield County's special status species.

Policy: By mandating Garfield County complete a Resource Management Plan which includes special status species, the Utah Legislature recognized and established the County's role in managing special status species.

Policy, Goal & Objective: Special status species conservation and recovery is managed in concert with traditional multiple uses such as livestock grazing, timber harvest and energy development to promote the productive and enjoyable harmony between man and his environment.

Policy, Goal & Objective: Recovery of special status species and precluding listing of other at risk species through active management, proactive habitat restoration and sound resource use is the central policy, goal and objective of Garfield County's special status species program. It is Garfield County's goal to have all special status species recovered to the point of removing them from federal, state and local lists prior to 2026.

Policy: Garfield County will support and participate in reasonable actions that will keep species from special status listing and will remove existing special status species from special management in the County.

Policy: Garfield County will take necessary actions to conserve and recover special status species consistent with its authorities and while exercising jurisdiction to protect the health, safety and welfare of the residents of the County.

Policy: Garfield County will be a full and active partner in conservation, recovery, planning and implementation actions relating to special status species.

Policy: To the maximum extent allowed by law, species and land managers shall be consistent with Garfield County special status species plans programs and policies. Modifications shall be approved by the Garfield County Commission. Species and land managers shall incorporate modifications in their programs at the earliest possible date, not to exceed two years.

Finding & Policy: Plant and wildlife species not included on Garfield County's special status species list but a) designated by BLM or the Forest Service as sensitive or b) identified by the UDWR Natural Heritage Program as being of concern do not merit special protection. Best management practices which employ avoidance/minimization/mitigation protocols shall apply unless other species-specific conservation plans are developed in coordination with Garfield County and approved by the Garfield County Commission.

Finding & Policy: Garfield County shall be included in all NEPA analysis impacting special status species to the maximum extent allowed by law. Failure to Coordinate with Garfield County and failure to fully include the County in NEPA actions is a violation of federal law.

Policy: Management of special status species and habitats to meet perceived native conditions for some arbitrarily selected time is inconsistent with Garfield County's Resource Management Plan. Management actions shall be based on current recovery requirements and settings

Policy, Goal & Objective: Prior to January 31st each year, land and species managers shall provide Garfield County with a progress report for each Garfield County special status species. The reports shall include but not be limited to: 1) current population counts; 2) population trends; 3) critical habitat acreages meeting species life cycle needs; 4) critical habitat acreages not meeting species life cycle needs; 5) progress toward recovery/delisting; 6) challenges to recovery/delisting; 7) accomplishments and proposed actions; and 8) other maps, data and information needed to describe the condition of the species.

Policy: To the maximum extent allowed by law, species and land managers shall modify existing conservation, recovery or management plans and critical, crucial and priority habitat designations to conform with Garfield County's special status species plans, programs and policies as contained herein prior to January 1, 2020 or their regular planning review process, whichever occurs first.

Goal & Objective: Establish conservation/recovery plans and habitat evaluation guides for each of Garfield County's special status species.

Policy: The Utah Wildlife Action Plan shall be used as a principal guide for implementing species conservation strategies until Garfield County develops individual conservation plans for the various special status species in the County. When developed, Garfield County's species conservation plans shall replace the Utah Wildlife Action Plan as the principal guide for implementing species conservation strategies in Garfield County.

Finding & Policy: Approximately 97% of the land in Garfield County is in federal or state ownership; there are no urban lands in Garfield County; and considerably less than one percent of the land is located in a city, town or municipality. Private lands are primarily occupied by vegetated fields or rangelands. Threats associated with urban development and housing are not applicable in Garfield County unless verified by site specific studies demonstrating Garfield County's development/housing exhibits significant adverse impacts to the targeted species' state-wide population or habitat.

Finding & Policy: Wildlife species, especially elk may impact health of aspen habitats. Where improper grazing is determined to be a threat to special status species in aspen habitat, site-specific studies will be conducted to determine the proportional impacts created by the various wildlife and livestock species. Any reduction in animal unit months for the various wildlife and livestock species shall be allocated on the same proportion as determined in the site specific study for the individual species.

Policy: Garfield County's species specific conservation and recovery plans, policies and programs shall be included, analyzed and disclosed in all NEPA actions. Failure to include, analyze and disclose Garfield County's species specific conservation and recovery plans, policies and programs to the maximum extent allowed by law is arbitrary, capricious and fails to provide a full range of reasonable alternatives.

Policy: Species and land managers shall focus conservation and recovery efforts on species included on Garfield County's Special Status Species List. The initial list consists of a) ESA-listed or candidacy wildlife and plant species; b) wildlife species on the Utah Sensitive Species List; c) wildlife species on the Utah Wildlife Action Plan list; and d) wildlife with State/Federal cooperative conservation plans. Species and land managers shall not consider non-essential, experimental, occasional/temporary, or introduced species as special status.

Policy: Species and land managers shall conduct annual counts of Garfield County's special status species within their jurisdiction. Where annual counts do not exist for the last five years or where annual counts are zero for five consecutive years, permanent populations of the individual species are deemed to no longer exist in Garfield County. Assuming a species exists in the County without verified counts in the previous 5 years is speculative, arbitrary and capricious.

Policy: It is the policy of Garfield County that an area only be considered as critical, crucial, priority or other habitat for a special status species if the species has been documented as using the area on a recurring basis. Periods of sporadic use with unused intervals of more than two years shall be deemed unused. Exceptions may be granted on a case by case basis after presentation of all relevant facts.

Policy: Prior to implementing prescriptions for conservation and/or recovery of special status species, land and wildlife managers shall inventory proposed areas and verify the existence and condition of populations and habitat. Management prescriptions shall not be applied to lands that do not contain special status species populations or required habitat.

Policy: Restrictions on land use associated with special status species are removed from lands that do not contain permanent populations or high value habitat of the targeted species.

Finding: Federal land managers have a) failed to accurately map general, critical, crucial, and priority habitat for special status species, b) incorrectly designated special status species habitat where the species is not present, and c) ignored site specific conditions and special status species life cycle requirements to adopt generalized habitat polygons that are not consistent with

objective science.

Finding: Habitat and crucial habitat mapping by state and federal agencies has no legal or regulatory meaning and generally depicts only the estimated range for the identified species. Mapping often includes developed areas that do not have biologic conditions necessary to support the species. Until state and federal maps are refined to accurately depict species habitat, the maps included in this RMP constitute the highest and best data available for site specific and landscape level planning.

Finding, Policy & Criteria: “Critical” and “Crucial” habitat shall be decisive for the success or failure of the local population of the designated species and shall meet the following criteria:

1. At least 85% of the Critical/Crucial habitat shall have permanent populations or annual seasonal populations of the designated species as confirmed by annual counts.
2. At least 85% of the Critical/Crucial habitat shall contain those physical or biological features essential to the conservation of the designated species. When a habitat evaluation guide exists for a designated species and habitat evaluation scores are less than 50%, the area shall be determined as not demonstrating those physical or biological features essential to conservation of the species, unless the area is subject to treatments which will improve the habitat score to at least 75% within two years.
3. Critical/Crucial habitat shall not be located within 200 feet of a State Highway or Class B County Road nor within 100 feet of a Class D Road or other motorized path, way or trail.
4. Critical/Crucial habitat shall not be located within 330 feet of a municipality, private land, human developments, or structural improvements.
5. Critical/Crucial habitat shall be located in natural environments consistent with ecologic site descriptions and shall not be located in habitats that have been heavily manipulated by man or are not consistent with recovery “in the wild.”

Policy: Species and land managers shall focus species recovery efforts on federal lands that make up majority of the land base in Garfield County. Private and state lands may be used for species recovery when such lands are consistent with native/wild habitat the landowner is supportive.

Policy: Only site specific, scientifically proven and verified data, consistent with the Data Quality Act, shall be used to make determinations regarding special status species and critical/crucial habitat. Landscape level and ecoregion data is too broad to accurately depict topography, vegetation, habitat conditions and other key life cycle elements.

Policy: Special status species or populations that have recovered to the point where they are no longer at risk shall be promptly down-listed or de-listed. Land managers shall remove land use prescriptions as soon as possible after a species is down-listed or de-listed.

Policy: Garfield County supports implementation actions consistent with County approved recovery plans and conservation agreements. Garfield County encourages other governmental entities to take actions consistent with these plans. The County reserves the right to reject a plan or a component in a plan when the County determines that the plan/component fails to make adequate progress toward species conservation/recovery.

Policy: Species and land managers shall not rely on landscape level or ecoregion species inventories and mapping for site-specific analysis unless the data includes sufficient detail to accurately depict population distribution and habitat conditions for individual population centers in Garfield County. The County also reserves the right to develop its own inventories and mapping if other data are deemed inadequate.

Finding: Special status species and associated habitat conditions are dynamic and are best managed under the principles of a) active management, b) multiple use / sustained yield, and c) adaptive management.

Policy: Habitat restoration, including vibrant and vigorous vegetation, is the fundamental component for species conservation and recovery in Garfield County. Restoration projects shall consider the natural variation of habitats in Garfield County, and - where practical – include a mosaic of vegetation types crossing land ownership boundaries and interagency coordination. Projects that provide multiple benefits for a variety of uses, species and objectives are preferable to single benefit/single species strategies.

Policy: Managers shall increase diversity in vegetation through optimization of native and non-native species to the maximum extent available by law. Limiting vegetative communities to “native species only” shall only be implemented when a) required by federal or state law, b) scientifically proven to optimize species recovery and/or desirable habitat conditions, c) consistent with Garfield County’s Resource Management Plan, or d) approved by the County Commission.

Goal: Prior to December 31, 2025, land managers will seek to have habitats supporting special status species meet the following seral stage ranges:

Early Stage	30% to 50%
Mid Stage	30% to 40%
Late Stage	Less than 25%

Policy: Class I pinyon/juniper stands impacting species conservation/recovery, species diversity or desired habitat conditions shall be eradicated in the most feasible manner possible at a rate of 10% annually. Based on a 10 year rolling average and consistent with desired ecological site descriptions, restore at least 25% of the Class II and Class III pinyon/juniper woodlands having a median age of less than 200 years to sagebrush / semi-desert grassland vegetation communities.

Policy: Decadent special status species habitat shall have 10% treated annually.

Policy: Where grazing is the primary causal factor in preventing species recovery, wild horses and burros grazing outside herd management areas and wild horses, burros and wildlife populations in excess of AML/population objectives shall be corrected within one year. Grazing restrictions, if any, shall be a) applied only after wild horses and burros are under AML and limited to herd management areas; b) temporary and not more than 2 grazing seasons; c) demonstrated to move the special status species toward significant recovery; d) limited to the smallest area possible; e) applied first to wild horses, burros and wildlife not meeting objective and second proportionally to wild horses, burros and wildlife meeting objective and permitted livestock.

Policy: Conservation and recovery actions employing prescriptive management strategies shall only be employed on a temporary basis and upon objective evidence that significant progress toward delisting will occur within

Objective: Establish coordinated efforts between Garfield County, the State of Utah, the U.S. Forest Service, the Bureau of Land Management and the National Park Service to implement large-scale, multi-year and multi-species habitat improvement projects to significantly move special status species toward delisting.

Finding and Policy: Garfield County recognizes practical limits to financial and staff resources. Resource expenditure for special status species shall be commensurate with: a) the risks of extinction, b) the potential for action to have a beneficial effect on recovery, and/or c) the potential for socio-economic disruption if action is not taken. At present the species recognized as highest concern by the County are: a) Greater Sage-grouse, b) Utah Prairie-dog, c) Northern Goshawk, and d) Mexican Spotted Owl. Priorities may change as recovery occurs.

Finding & Policy: Garfield County finds Greater Sage-grouse, Utah Prairie-dog and Northern Goshawk are not at significant risk and implementation of reasonable vegetative, rangeland health and forest health strategies assures conservation of the species. Garfield County opposes conservation/recovery plans, policies, and programs for special status species that are based on political or philosophical values and are not consistent with the best available science, multiple use/sustained yield management and existing conditions.

Objective: Remove the Goshawk amendment from the Dixie National Forest Plan prior to January 1, 2020 or during the next regular planning cycle, whichever occurs first.

Objective: Remove the Utah Prairie-dog from ESA protections in Garfield County prior to June 30, 2018.

Policy: Manage Utah Prairie-dogs in conformance with the UDWR Utah Prairie Dog Management Plan and in coordination with Garfield County.

Finding & Policy: Utah Prairie-dogs have adapted to human interaction and are often found in fully developed human environments. Permanent surface disturbance and facilities shall be allowed in Utah Prairie-dog critical, crucial, priority and focal area habitat with appropriate mitigation.

Finding and Policy: Utah Prairie-dog conservation/recovery and livestock grazing are compatible activities. Vegetation treatments, water development, predator control, and other management actions are mutually beneficial and shall be allowed to the maximum extent practical.

Finding & Policy: BLM and Forest Service Greater Sage-grouse management areas and habitat designations fail to comply with Data Quality Act requirements and are discretionary management determinations that are inconsistent with state and local plans, programs and policies. Prior to January 1, 2018 BLM and Forest Service shall bring their Greater Sage-grouse management areas and habitat designations into conformance with Garfield County's plan, policy and program, to the maximum extent allowed by law.

Policy, Goal & Objective: Support vegetative treatments and conversion of Class II and Class III pinyon/juniper woodlands to sagebrush/grassland communities to ensure recovery of Greater Sage-grouse and removal of BLM and Forest Service restrictions in Garfield County prior to January 1, 2025 or the respective agency's next regular planning cycle, whichever occurs first.

Finding: Species and land managers have a) failed to accurately map Greater Sage-Grouse habitat, b) incorrectly designated pinyon/juniper woodlands as Greater Sage-Grouse habitat, and c) ignored the two greatest impacts on Greater Sage-Grouse in Garfield County: invasive conifer encroachment and predation (primarily from corvids and canids).

Finding: Garfield County finds that sage-grouse populations and habitats are compatible with livestock grazing management which conforms to Garfield County's Resource Management Plan. Practices, such as rotational grazing systems can enhance plant community vigor, suppress noxious weeds, and sustain diverse plant communities with forb components that benefit sage-grouse habitat.

Finding & Policy: Large portions of Priority Habitat Management Areas (PHMA) and General Habitat Management Areas (GHMA) do not qualify as suitable for Greater Sage-grouse habitat. Prior to implementing provisions of the BLM/FS Utah Greater Sage-grouse Plan Amendment, land managers shall verify through site specific evaluations the current potential habitat conditions. Habitats where at least 75% of the area does not score higher than 0.75 on NRCS/Garfield County Evaluation Guide are not suitable for Priority management. Habitats where at least 75% of the area does not score higher than 0.4 on NRCS/Garfield County Evaluation Guide are not suitable for General management. Habitats where at least 75% of the area scores lower than 0.4 on NRCS/Garfield County Evaluation Guide are not suitable Greater Sage-grouse habitat and need to be removed from management prescriptions.

Policy: BLM and Forest Service PHMA and GHMA objectives and management actions shall apply to existing sagebrush areas and areas with short term ecological sagebrush potential within the respective PHMA and GHMA polygons. In the mapped PHMA and GHMA there are significant areas that lack the principle habitat components necessary for GRSG, including but not limited to rock outcrops, alkaline flats, and pinyon-juniper ecological sites. These are areas that do not have existing sagebrush or ecological potential to contain sagebrush in less than five

years. These areas of non-habitat shall be identified during site-specific project review by agency biologists and coordinated with the appropriate state and local agency.

Policy: Because of the importance of PHMA to conserve, enhance and restore GRSG and its habitat, objectives and management actions will only apply to those areas within the respective PHMA polygons providing principle habitat components. The GHMA objectives and management actions will not apply to the areas of identified non-habitat within the GHMA polygons one of the following conditions is met: a) the non-habitat provides important connectivity between areas with existing or potential habitat; or b) direct and indirect impacts impair the function of adjacent seasonal habitats, the life-history or behavioral needs of the GRSG population, as demonstrated in the project's NEPA document.

Policy: Preservation of Class II or Class III pinyon/juniper woodlands in PHMA or GHMA is a direct negative impact on sage grouse conservation and recovery and is considered a "Take" in Garfield County.

Policy: PHMA and GHMA boundaries and classifications on federal lands are discretionary planning designations and shall comply with Garfield County's plan, policy and program to the maximum extent allowed by law.

Policy: Prior to implementing livestock grazing restrictions for the purposes of conserving sage-grouse, federal agencies shall:

1. Implement effective vegetative manipulation to achieve sage-grouse habitat objectives and maintain or improve vegetation conditions or trends.
2. Design and implement grazing management systems that maintain or enhance herbaceous understory cover, height, and species diversity that occurs during the spring nesting season, consistent with ecological site characteristics and potential.
3. Maintain residual herbaceous vegetation at the end of the livestock grazing season to contribute to nesting and brood-rearing habitat during the coming nesting season. Amounts of herbaceous vegetation will be determined on a site specific basis in Coordination with Garfield County.
4. In priority sage-grouse management areas, minimize livestock and wildlife grazing within the lesser of 0.6 mile or direct line of sight of occupied leks during the lekking periods.
5. Minimize wildlife grazing effects on the cover and height of primary forage species in occupied habitat during the nesting season.
6. Manage wildlife grazing of riparian areas, meadows, springs, and seeps in a manner that promotes vegetation structure and composition appropriate to the site.
7. Place salt and mineral supplements to optimize benefits to sage-grouse breeding habitat and to improve management of livestock for the benefit of sage-grouse and livestock.

8. Minimize constructing new fences within 0.6 mile of occupied leks, near winter-use areas, movement corridors, and other important seasonal habitats.

9) Install fence markers or remove fences where sage-grouse mortality due to collision with fences is documented or likely to occur due to new fence placement.

10) Design new spring developments in priority sage-grouse habitat to maintain or enhance springs and wet meadows. Retrofit existing water developments during normal maintenance activities. Costs should be borne by the land managing agency unless other agreeable arrangements are made with livestock producers

11) Ensure that new and existing livestock troughs and open water storage tanks are fitted with ramps to facilitate the use of and escape from troughs by sage-grouse and other wildlife.

12) Avoid placing new water developments into higher quality native breeding/early brood habitats that have not had significant prior grazing use.

Policy & Finding: Garfield County supports agency efforts to convert undesirable pinyon/juniper woodlands to vegetative communities which fortify Greater sage-grouse recovery. Garfield County opposes efforts to mischaracterize vegetative treatments as “deforestation” and finds such characterizations disingenuous and inconsistent with Garfield County’s plan, policy and program.

Policy: NEPA proposals found to be disingenuous or inconsistent with Garfield County’s special status species plan, policy or program shall be fully disclosed in accordance with 40 CFR 1500.

Policy: Garfield County encourages and supports changes in procedures for implementing the Federal Endangered Species Act to make it more efficient, effective and supported by the general public, including changes that:

1. Deemphasize the punitive and divisive aspects of the Act and emphasize positive, mutually beneficial elements;
2. More fully embrace federal, state and local cooperation and coordination as the preferred means to implement the various elements of the Act, including but not limited to listing, critical habitat delineation, recovery planning, recovery action implementation, down-listing and delisting;
3. Convert the prevailing emphasis on a single species to multi-species, multiple benefit approach; and
4. Replace political/philosophical values and litigation with active, scientifically based strategies designed to optimize species conservation and recovery.
5. Remove incentives to use the Equal Access to Justice Act and the Department of Justice’s litigant compensation fund to engage in sensitive species litigation.

Objective: Establish an agreement between the U.S. Government and the State of Utah to conduct a ten year ESA management experiment based on the four proposals enumerated above.

Policy: New water development for other multiple use purposes shall be allowed in special species habitat when it may benefit the habitat or designated species.

Policy: Special status species shall not be introduced, translocated, augmented, or reestablished in Garfield County without a) complying with Garfield County's special status species plans, programs and policies, b) government to government coordination with Garfield County, and c) concurrence from the Garfield County Commission.

Policy: Use of pesticides, rodenticides, herbicides and other viable techniques for the benefit of special status species shall be permitted to the maximum extent allowed by law.

Policy: Surface disturbing and disruptive activities are allowed in special species habitat with the application of best management practices and avoidance/minimization/mitigation protocols.

Policy: Site stability, hydrologic function and biologic integrity shall be optimized in special status species habitat by allowing the use of native and non-native plant species for vegetation and reseeding treatments.

Policy: Focus management areas shall not be designated within ½ mile of private property without a) site specific NEPA, b) detailed site specific and cumulative impact analysis for private properties within 1 mile of the focus management area, c) detailed disclosures identified in 40 CFR 1502.22, and d) government to government coordination with Garfield County.

Policy: Surface-disturbing or disruptive activities and permanent facilities in mapped pygmy rabbit habitat shall be allowed on a case by case basis.

Policy: All vegetation treatments shall be allowed in pygmy rabbit habitat as needed with appropriate conservation measures.

Policy: Surface-disturbing or disruptive activities in special status species fish habitat shall be allowed with appropriate mitigation or if the action will benefit the species or habitat.

Policy: Surface-disturbing or disruptive activities, new roads, and permanent above ground facilities within 0.5 miles of California Condor roosts or within 1 mile of occupied nests shall be allowed in Garfield County. Condors are only temporary visitors to the County and no management protection beyond existing law is provided.

Finding & Policy: Land and wildlife managers have not adequately inventoried Mexican Spotted Owl critical habitat and protected activity centers (PACs) for occupancy. Where critical habitat and/or PACs have not been inventoried for three consecutive years or where inventories indicate no occupancy in the last year, critical habitat and/or PACs are unoccupied; and no management prescriptions will be applied until occupancy is verified.

Policy: Where Mexican Spotted Owl critical habitat and/or PACs are occupied as verified by field surveys, the following management prescriptions shall apply:

1. Allow development and maintenance of recreation and administrative facilities in PACs outside of the breeding season if a) the activity is consistent and compatible with protection, maintenance or enhancement of the habitat and populations, or b) the activity is relocated or redesigned to eliminate or reduce detrimental impacts.
2. Issue recreation permits in the PACs from March 1 through August 31 if a) the activity is consistent and compatible with protection, maintenance or enhancement of the habitat and populations, or b) the activity is relocated, designed or managed to eliminate or reduce detrimental impacts.
3. Allow recreation activities, including hiking, camping and equestrian use in PACs and implement best management practices on a case by case basis to reduce impacts.
4. Allow OHV use on roads, paths, ways and trails designated in Garfield County's travel management plan.
5. Allow surface disturbing and disruptive activities within 0.5 miles of nests with appropriate best management practices.

Finding & Policy: Land and wildlife managers shall adequately inventory potential Western Yellow-billed Cuckoo and Southwest Willow Flycatcher habitat for occupancy. Where a) habitat has not been inventoried for two consecutive years, b) inventories indicate no occupancy in the last year, or c) habitat is occupied by Tamarisk, Russian Olive or other undesirable invasive species, potential habitat shall be deemed unoccupied; and no management prescriptions will be applied until occupancy is verified or undesirable vegetation is removed.

Policy: Where Western Yellow-billed Cuckoo and Southwest Willow Flycatcher habitat is occupied as verified by field surveys, the following management prescriptions shall apply:

1. Allow surface disturbing and disruptive activities within 0.25 miles of occupied breeding habitat if a) the activity is consistent and compatible with protection, maintenance or enhancement of the habitat and populations, or b) the activity is relocated or redesigned to eliminate or reduce detrimental impacts.

Policy: For the purposes of special status species and related analysis the following shall apply:

1. Immediate impact is defined as impact which lasts less than one year. Immediate impacts do not need to be mitigated, if desired conditions are achieved within the one year period.
2. Short term impact is defined as impact which lasts longer than one year but less than five years. Short term impacts do not need to be mitigated, if desired conditions are achieved within the five year period.
3. Long term impact is defined as impact which lasts more than five years but less than twenty years. Long term impacts do not need to be mitigated, if desired conditions are phased and achieved within a five year period of phased disturbance.
4. Permanent impact is defined as an activity which lasts longer than twenty years. Permanent impacts need to be mitigated or offset by other enhancements initiated within five years.

SPECIAL STATUS PLANTS

Findings, Policies, Goals & Objectives

Goal: Manage for the biological integrity of terrestrial and aquatic ecosystems to sustain or improve habitat for special status plants to promote ecosystem health and biodiversity.

Objective: Manage special status plant habitats to protect and actively promote the recovery of federally listed threatened, endangered, or candidate plant species, and to prevent the need for federal listing of Garfield County sensitive status species under the Endangered Species Act.

Objective & Policy: Reduce environmental hazards, risks, and impacts to special status plants through conservation measures, avoidance, or implementation of best management practices. Use restrictions shall be avoided and if used shall be a) temporary, b) limited to the smallest time period, and c) limited to the smallest space necessary.

Objective: Increase available data through site specific inventories.

Policy: Garfield County will support and implement current and future special-status species recovery and conservation plans, strategies, and agreements in coordination and consultation with the USFWS, the UDWR, and other state and federal entities.

Policy: The augmentation of special status plants is allowed on appropriate sites where populations are in decline. Prior to reintroduction, land managers shall ensure threats affecting the persistence of a species have been adequately identified, remediated, or eliminated to allow for successful reintroduction.

Policy: The reintroduction of special status plants on sites where populations have been lost or on new sites shall not be allowed unless the action is a) required to prevent listing under the ESA, and b) coordinated with and approved by the County Commission.

Policy: Where authorized disturbances are allowed in special status plant-occupied habitat, lands shall be rehabilitated or restored.

Policy: Fuels treatment projects in special status plant-occupied habitats shall be established at strategic locations to minimize size of wildfires and limit undesirable disturbance.

Policy: The use of motorized vehicles to construct fire lines in occupied habitat for special status plants, shall be optimized to a) protect human life and property, b) improve and protect habitat, and c) improve rangeland and/or forest health.

Policy: Native and non-native seeding for land health, rehabilitation and emergency stabilization shall be allowed in habitat for special status plants with appropriate best management practices.

Policy: Surface disturbing activities shall be allowed in habitat for special status plants with implementation of appropriate best management practices to reduce or eliminate impacts to occupied special status plant habitat.

Policy: Multiple use activities shall be allowed in special status plant-occupied habitat if they would not result in long-term habitat loss or unacceptable fragmentation.

Policy: Maintenance of existing structural and non-structural range improvements in special status plant-occupied habitat shall be allowed.

Policy: Placement of new structural and non-structural range improvements in special status plant-occupied habitats shall be allowed if a) the activity is consistent and compatible with protection, maintenance of intact habitat, or enhancement of the habitat and populations, or b) the project is designed to eliminate or reduce detrimental impacts.

Policy: Wildlife and livestock grazing shall be managed to minimize adverse impacts to special status plants and their habitat. Managers shall implement vegetative treatments and range improvements to protect special status plants. Managers may also use adaptive management strategies and structural range improvements. Wildlife and livestock grazing restrictions shall be a last resort and shall be implemented in the shortest time frame and over the smallest area possible with County Commission concurrence.

Policy: Integrated weed management methods, including the use of herbicides and pesticides, for control of invasive species and noxious weeds is allowed. Methods shall be compatible with maintaining special status plant species and their habitats.

Policy: Fuel-wood cutting in special status plant-occupied habitat is allowed if it will not result in long-term habitat loss or unacceptable fragmentation.

Policy: Collection of non-special status plant seed in occupied habitat is allowed where it will not result in long-term habitat loss or unacceptable fragmentation.

References:

Utah Wildlife Action Plan Joint Team, 2015. Utah Wildlife Action Plan: A Plan For Managing Native Wildlife Species And Their Habitats To Help Prevent Listing Under The Endangered Species Act. Publication number 15-14. Utah Division of Wildlife Resources, Salt Lake City, Utah, USA.

Plant Information Compiled By the Utah Natural Heritage Program: A Progress Report, Publication Number 05-40, Utah Division of Wildlife Resources

Appendix 2.7.1 Garfield County Special Status Species List

Appendix 2.7.2 Garfield County Greater Sage Grouse Conservation Plan

Appendix 2.7.3 Garfield County Greater Sage Grouse Habitat Evaluation Guide

Maps Critical/Crucial/Priority Habitat maps for special status species.

2.8 FISH AND WILDLIFE

Management direction for this Resource / Resource Use has not been completed. It is intended that management direction for this Resource / Resource Use will be completed, subject to public comment, and adopted at some point in the future.

Policy:Wildlife - In the past Garfield County residents have enjoyed many benefits associated with an abundant and diverse wildlife population. The County recognizes Division of Wildlife Resources' efforts to manage wildlife and fisheries resources for the public's benefit and formally supports those efforts, which compliment other County interests. In the past few years there seems to be a downward trend in the number of hunters who frequent the area. Some think this trend is satisfactory; others whose businesses are more directly affected by low numbers are concerned.

It is Garfield County's position that all wildlife decisions affecting the Southwest Region, most especially this County, should have local input. Decisions rendered by the agency should reflect a balance with other local priorities. Of particular interest is that forage allocations be balanced between competing users based on fair and equitable assumptions and considering local goals and desires. Perhaps the greatest concern is that there needs to be a clear understanding of much how forage is available to be allocated between livestock and wildlife, and how much of that forage goes to each.

The County desires that State Wildlife Managers and those Federal Land Management agencies provide adequate notice and supporting documentation to local residents and governments before decisions are made and/or programs implemented. The County will work to improve communications between the regional wildlife advisory councils and County residents. When requested by the Governor, the County will also submit formal comment regarding proposed DWR property acquisitions.

It is Garfield County's Policy that maximum, minimum, and ideal wildlife populations will be jointly developed between Utah Division of Wildlife Resources and Local Government (the County) with input from land management agencies regarding habitat capabilities. Species populations will be managed in accordance with established agreements and will only be modified with County consent after appropriate analysis of impacts over the range of environmental, social, and economic issues.

It is Garfield County's Policy to use crucial/critical habitat information only as a broad description of areas used by wildlife populations. The County will support the use of such data as the basis of land management decisions only after detailed analysis prioritizing wildlife populations on a State, Regional, and Local basis and after analysis indicates the decision is justified when considering County plans, goals, objectives, custom and culture, socioeconomics, and stewardship of natural resources. Plans failing to include such analysis will be deemed inconsistent with Garfield County's General Management Plan.

Objective: Active County participation in wildlife/fisheries management decisions and issues. Garfield County will actively participate in the State and Federal Management of big game, fisheries, habitat management and forage allocations processes.

Actions/

Implementation:

This will be done by:

- Direct participation and communication by the County Board of Commissioners.
- Assigning specific issues to the Public Lands Committee, who will in turn advise the commissioners concerning impacts, strategies and alternatives considered through the process. The commissioners will submit the County's formal response to the appropriate local, Federal and state public land management agencies and organizations. Copies will also be forwarded to the State RDCC, the State Office of DWR, and the Governors Office.
- Commission a study that would show optimal opportunities for wildlife, wildlife forage requirements, projected sustainable wildlife populations, maximum, minimum, and ideal wildlife populations, State, Regional, and Local importance of wildlife populations and habitats, and other information necessary to implement the County's Wildlife Policy.
- Notifying interested County residents and in-County wildlife interest groups of current or proposed activities and solicits their input when formulating County comments.
- Participating in Federal and State wildlife/fisheries/habitat planning processes during the scoping and issues identification and draft plan review/comment periods.
- Attending local, regional and state UDWR public meetings as needed.
- Reviewing Federal and State Resource Management Plans in respect to wildlife management. This would include assessing wildlife types, numbers, locations and habitat needs.

Garfield County is not in favor of and will generally oppose the introduction of exotic or species not native to the area unless it can be demonstrated that the proposed action enhances Garfield County's custom, culture, socioeconomic status, and is approved by the County Commission.

Garfield County also believes that game management plans need to be completed and approved prior to game management decisions being made.

- A schedule of relevant Federal and State wildlife planning processes and projects will be available through the Public Lands Steering Committee and posted at an appropriate place in the Garfield County Courthouse.
- Introduction of non-native or exotic species should only occur after adequate research has been done and with the approval of the County Commission. Species that are used to improve watershed management, vegetation, range land health or grazing, and a listing of best management practices will be developed and approved for general use in Garfield County.

2.9 WILDLAND FIRE ECOLOGY

This section is intentionally left blank. Management direction for this Resource / Resource Use

has not been completed. It is intended that management direction for this Resource / Resource Use will be completed, subject to public comment, and adopted at some point in the future.

2.9 Fire Ecology & Management

Current Setting

Fire is a natural and historical component of ecological processes in Garfield County. Historically, fire has played an important role in the promotion of plant succession and the development of plant communities and wildlife habitat. The environment created prior to European settlement was developed under a regime of natural and man-induced intermittent fire. Artificial suppression of fire during the past century combined with several decades of passive federal land management have changed plant communities and resulted in conditions that are often incapable of resilience from and resistance to fire. These conditions have led to an imbalance in fire adapted plant and animal communities and an increase in extreme wildfire potential. Management on public lands has resulted in vegetation and fuel loadings that support uncharacteristically large, catastrophic fires. Complicating management further, fire susceptibility and behavior vary with many factors, including vegetation type, topography, stand health/density, drought, wind, and site productivity.

Garfield County's fire management program focuses on two general categories of fire: unplanned ignitions (wildfires) and planned ignitions (prescribed fires). In the western portion of the County (west of Capitol Reef National Park), fire and fuels management activities, including planned and unplanned ignitions, are managed in accordance with the Southwest Utah Support Area Fire Management Plan. Capitol Reef National Park and areas to the east are managed by the Central Utah Fire Management Plan. The fire management plans (FMPs) were prepared in response to the Federal Wildland Fire Management Policy, which directs federal agencies to have an FMP for all areas with burnable vegetation.

National fire management policy has evolved in response to increased fatalities, property losses, local economic disruptions, risks to ecosystems associated with increasingly severe wildland fires, and increasing wildland urban interface (WUI) conflicts. National policy requires that federal fire management practices reflect protection of human life and safety and reduce risk to natural resources and private property. This section of Garfield County's Resource Management Plan provides fire management direction that is compliant with national and interagency direction.

Garfield County's fire management program requires coordination among local and regional jurisdictions, including the BLM, Forest Service, National Park Service, and Utah Department of Forestry, Fire and State Lands. The FMPs, in accordance with federal policy, provide for firefighter and public safety and include fire management strategies, tactics, and alternatives based on direction outlined in RMPs. Suppression tactics outlined in the FMPs vary by vegetation type and resource values at risk. Land use management direction influenced portions of the FMP that include lands managed by the various state and federal agencies. A vast majority of the land in Garfield County is under federal ownership, so details regarding methodologies for prescribed fires, non-fire fuels treatment, community assistance/protection procedures, emergency stabilization, and rehabilitation for federal lands are applicable to federal agencies.

National and state fire policy for federal agencies requires current and desired resource conditions related to fire management be described in terms of five fire regimes and three condition classes tabulated below. The Healthy Forest Restoration Act adopted this classification system, known as the Fire Regime Condition Class (FRCC), which describes the amount of departure of an area or landscape from historic vegetation conditions to present vegetation conditions. This departure from the natural state can be a result of changes in one or more ecosystem processes. This information can be used to prioritize areas for treatment.

Fire Regimes
I (0-35 year frequency and low to mixed severity-surface fires most common)
II (0-35 year frequency and high severity-stand replacement fires)
III (35-100+ year frequency and mixed severity)
IV (35-100+ year frequency and high severity-stand replacement fires)
V (200+ year frequency and high severity-stand replacement fires)

Fire Regime Condition Classes defined vegetative communities in terms of the relative risk of losing one or more key components that define an ecological system based on five ecosystem attributes—disturbance regimes (patterns and frequency of insect, disease, fire), disturbance agents, smoke production, hydrologic function (sedimentation, stream flow), and vegetation attributes (composition, structure, and resilience to disturbance agents). Condition Classes are described as follows:

Condition	Condition Class Description
Condition Class 1	Fire regimes are within an historical range and the risk of losing key ecosystem components is low. Vegetation attributes (species composition and structure) are intact and functioning within an historical range. Where appropriate, these areas can be maintained within the historical fire regime by treatments such as fire use.
Condition Class 2	Fire regimes have been moderately altered from their historical range. The risk of losing key ecosystem components is moderate. Fire frequencies have departed from historical frequencies by one or more return intervals (either increased or decreased). This results in moderate changes to one or more of the following: fire size, intensity and severity, and landscape patterns. Vegetation attributes have been moderately altered from their historical range. Where appropriate, these areas may need moderate levels of restoration treatments, such as fire use and hand or mechanical treatments, to be restored to the historical fire regime.
Condition Class 3	Fire regimes have been significantly altered from their historical range. The risk of losing key ecosystem components is high. Fire frequencies have departed from historical frequencies by multiple return intervals. This results in dramatic changes to one or more of the following: fire size, intensity, severity, and landscape patterns. Vegetation attributes have been significantly altered from their historical range. Where appropriate, these areas may need high levels of restoration treatments, such as hand or mechanical treatments, before fire can be used to restore the historical

Lands classified as Condition Class 1 have the smallest amount of acres in Garfield County. Some estimates indicate fire regimes within the historical range make up less than 5% to 10% of all lands in the County, and some agencies may have less than 2% within their specific jurisdiction. Class 2 lands are estimated to be 10% to 20% of the County's land base. Lands identified as Condition Class 3 make up the vast majority of lands in Garfield County. Some estimates indicate lands where fire has been significantly altered from the historic condition comprise as much as 60% to 90% of the County.

Federal agencies have also divided the County into fire management units (FMUs) defined by fire management objectives, management constraints, topographic features, access, values to protect, political boundaries, and fuel types. The FMUs generally have prescribed management objectives and preselected fire suppression strategies assigned to accomplish the specific objectives.

Fuel structure in the County is gradually changing due to management practices and incursion of non-native annual grasses, especially cheatgrass, and the encroachment of pinyon/juniper woodlands. In areas where fuels are continuous, there is the potential for fires to spread readily and rapidly during the height of the average fire season. Much of this area is grouped typically in fire regimes I and II, but many of the pinyon and juniper stands have much older stand characteristics, which often have heavier fuel accumulations and burn with stand replacement fire behavior. Many areas exist where sparse fuels and other natural barriers limit the spread of wildfires. Most are dry sites where the vegetation is of a moderate to old age class distribution. In specific locations, cheatgrass has significantly increased from historically inhabiting scattered pockets to becoming a dominant fine fuel component intermixed with sagebrush and pinyon-juniper stands.

The moderate to long return fire interval, fire exclusion and other management practices, and passive management of forests and rangelands have rendered many of the vegetative communities in peril of large severe wildland fires. These areas have achieved a level of vegetation stocking and dead and down fuel loads to exacerbate large fire spread through the dry seasons of the year. Recent insect and wind episodes have also increased fuel loadings in localized areas to critical levels.

The hazard component varies across the County from very low to very high. Mature stands of pinyon/juniper woodlands inhabit much of the lands formerly occupied by sagebrush vegetative communities. Decadent stands of sagebrush are common. Insect-killed Spruce stands also contribute to high hazard areas.

Historically, the most prolific wildfire events have been wind-driven, especially in the brush plant cover types. Plume- dominated fires have occurred particularly during very dry years in the older stands of pinyon-juniper and the mixed conifer stands. Rates of fire spread through the canopies of sagebrush can exceed three miles per hour, while spread through mixed conifer and pinyon-juniper stands of one-half mile per hour are not uncommon. Periods of better than average moisture tend to keep the light fuels (i.e., grasses) green, which helps curtail fire progression. The incursion of annual grasses, such as cheatgrass, is changing the fire environment. Light fuels available to

burn through the height of the fire season are becoming more abundant by way of the species morphology. Much of the timbered lands in the County experience long return intervals between fire events. Burn severity in these communities tends to be moderate to severe resulting in stand replacement of the dominant species. Examples of these vegetation types are high elevation sub-alpine fir and spruce and some pinyon-juniper stands. Examples of a more moderate to frequent return interval would be sage/grasslands and the lower elevation shrub communities.

Wildfire in many of Utah's vegetation communities was historically a regular occurrence that helped define species composition, structure, and productivity. As such, many plants that make up these communities are adapted to withstand wildland fire. Grasslands, sagebrush, mountain shrub, aspen and mixed conifer forests are examples of fire-adapted communities in Utah. In contrast, frequent wildland fire is not part of the normal ecology of other vegetation communities with long fire return intervals such as salt desert scrub and blackbrush, which typically are not dominated by fire adapted species. Fire in these communities is generally viewed as detrimental because plant succession may take decades to centuries for the vegetation to recover. Some species may never recuperate.

The widespread presence of invasive nonnative species has greatly altered the resource character and values across the landscape and may pose an even greater threat in the future. Historic post-fire recovery processes may no longer dominate the recovery and regeneration process due to introduced species. Cheatgrass and some of the knapweeds are known to alter (shorten) fire return intervals and may dramatically expand their range and coverage after fires. Degraded communities may facilitate expansion of invasive species (e.g., cheatgrass), have lower biological resource values, and pose increased fire hazards. For location of acres and additional descriptions of these vegetation types in the planning area, refer to agency specific fire management documents.

Land management agencies use planned ignitions (prescribed fires) in a controlled manner for specific purposes, such as improving habitat, plant community health, including protection and enhancement of desirable age class stands, and reducing hazardous fuels. Projects in agency fuels programs generally focus on achieving two goals: (1) reducing fire hazard, with an emphasis on Wildland Urban Interface (WUI) areas, and (2) restoring and/or improving FRCC. These goals supported through interdisciplinary partnerships such as the Utah Watershed Restoration Initiative (UWRI). Together, these partnerships identify priority watersheds to address a variety of interdependent resource issues and improve long-term watershed conservation and restoration.

Specific watersheds are targeted and prioritized for treatment and are coordinated through participating federal, state and local entities. Treatment types include prescribed fire and mechanical and chemical treatments. These treatments are completed for a variety of reasons, including fuels reduction, protecting WUI areas, improving wildlife habitat, improving watershed conditions, and improving rangeland resources. Prescribed burns, if conducted properly, will also return less carbon dioxide to the atmosphere than uncontrolled wildfires,

which helps to maintain the carbon dioxide sequestration capacity of vegetation communities.

Most prescribed fire projects on public lands in the planning area are closely tied to habitat, watershed, and other natural-resource objectives, and hazardous fuels reduction. These projects are almost always followed by seeding/planting and additional vegetation enhancement work. Prescribed burns are carried out to reduce fuel loads (existing dead and dormant vegetation) and reduce the threat and severity from wildfires should one occur. Prescribed burns also reduce woody plant encroachment and are beneficial for many native plant species in a way mechanical and chemical management treatments cannot duplicate. Wildlife, both game and nongame species, also benefit from prescribed burning which results in new plant growth and restoration of habitats which they utilize for food and cover. Purposes for conducting prescribed burn activities may include

- Reduce hazardous fuels, protect communities from wildfires
- Reduce the spread of pests and disease
- Provide habitat and forage for game and nongame species
- Recycle nutrients back into the soil
- Promote desirable native and non-native species
- Promote a diverse natural landscape

Drivers for future increases in wildland fires in the County include steady increases in live and dead fuels, continued encroachment of invasive annual grasses and conifer woodlands into sagebrush and native grass areas, and unfavorable climatic conditions. Indicators of stress on vegetation in the planning area include periods of drought, expansion of invasive weeds such as cheatgrass, and reduced areas of sagebrush presence.

Fire frequency and fire severity are expected to be higher than historical levels because most of the County is in FRCC 2 and FRCC 3 condition. It is expected that due to the current fire regime conditions in the County and factors affecting wildfires (e.g., invasive weed control, vegetation management issues, drought, and timber harvest), FRCC categories will be maintained at or in excess of their current conditions. Based on current management, prolonged drought conditions and establishment of invasive species, the potential for uncharacteristic wildfire effects will likely continue. It is also anticipated that under present management, live and dead fuel loadings in forest stands and conifer/juniper encroachment into aspen and higher-elevation sagebrush communities will continue to increase with a proportional increase in the risk for wildfires with potentially uncharacteristic fire effects.

Need for Management Change

- 1) Lands in in FRCC 2 and FRCC 3 condition need to be significantly reduced.
- 2) Prescribed fire needs to be used as part of an integrated approach after mechanical, chemical, grazing, and vegetative harvesting techniques have been appropriately used.
- 3) Managers need to harvest an average of at least 8 million board feet annually for the next 20

years to restore woodlands to desirable Fire Regime Condition Classes.

4) Managers need to implement aggressive vegetative treatments to restore vegetative resources to desirable Fire Regime Condition Classes.

5) When managing for potential climate change, managers need to reduce areas in FRCC 3 by at least 5% annually.

6) Managers need to be consistent with Garfield County's fire ecology and management plans, programs and policies, including air, water quality, vegetation and other impacted resources. Land managers need to coordinate wildfire management and prescribed fire programs with Garfield County.

7) Managers need to reduce fire hazards for WUI areas and around other infrastructure through non-fire fuel treatments prior to implementing prescribed fire.

8) Effective emergency stabilization and rehabilitation programs need to be incorporated in all wildland and prescribed fire events.

Desired Future Conditions

Garfield County desires:

a) Resources are managed to ensure fire resilience and resistance. Desired FRCCs in Garfield County are: 30% to 50% FRCC1; 30% to 40% FRCC2; and less than 25% FRCC3.

b) Prescribed fire is used as part of an integrated approach after mechanical, chemical, grazing, and vegetative harvesting techniques have been appropriately implemented.

c) An average of at least 8 million board feet are harvested annually for the next 20 years to restore woodlands to desirable Fire Regime Condition Classes.

d) Managers implement aggressive vegetative treatments to restore vegetative resources to desirable Fire Regime Condition Classes.

e) Areas identified as FRCC3 and managed for potential climate change are reduced by at least 5% annually.

f) Managers are consistent with the County's plans, policies and programs for fire ecology and management and impacted/related resource values.

g) Managers prevent fire related impacts to WUI areas and other areas occupied by infrastructure.

h) Aggressive and effective emergency stabilization and rehabilitation programs are

incorporated in all wildland and prescribed fire events.

Finding Policy, Goals & Objectives

Policy: Public health, safety and welfare and firefighter safety are compatible, co-equal priorities for wildland and prescribed fire management in Garfield County. All fire management plans and activities shall maximize a) public health, safety and welfare and b) firefighter safety.

Finding: Land managers have failed to actively manage resources in Garfield County to provide resilience and resistance to wildfire.

Finding: Wildfires impact a wide variety of the County's resources and can be reasonably controlled by implementing an integrated approach of mechanical, chemical, grazing, and harvesting techniques to provide resilience and resistance to wildfire.

Policy, Goal & Objective: Managers shall maintain resources in a condition that they are resilient and resistant to fire, including rehabilitation and restoration efforts undertaken to protect and sustain ecosystems, public health and safety, and to protect infrastructure.

Policy, Goal & Objective: Consistent with the County's plans, policies and programs for fire ecology and management and impacted/related resource values, land managers shall implement an aggressive integrated program to ensure all lands in Garfield County are resilient and resistant to fire and to restore woodlands to desirable Fire Regime Condition Classes.

Policy: Lands in Garfield County will be deemed to be making progress toward resilience and resistance when the following ranges for Fire Regime Condition Classes are met:

FRCC 1	30% to 50%
FRCC2	30% to 40%
FRCC3	Less than 25%

Finding & Policy: Positive impacts of wildland fire can be mimicked through integrated mechanical, chemical, grazing, and harvesting techniques that provide resilience and resistance to wildfire.

Policy: Where fire is used to as an ecological process and natural change agent lands will be seeded and restored to desirable vegetative conditions prior to the first rainy season following the burn.

Policy, Goal & Objective: An average of at least 8 million board feet shall be harvested annually in Garfield County for the next 20 years to restore woodlands to desirable Fire Regime Condition Classes.

Finding & Policy: Allowing lands to remain in FRCC3 is inconsistent with managing for

potential climate change. Where land managers are required to manage for potential climate change, FRCC3 lands in their jurisdiction shall be reduced by at least 5% annually.

Policy, Goal & Objective: Based on a 10 year rolling average and consistent with desired ecological site descriptions, at least 25% of the Class II and Class III pinyon/juniper woodlands having a median age of less than 200 years shall be restored to sagebrush / semi-desert grassland vegetation communities.

Finding & Policy: Bull hogging, accompanied by appropriate seeding, is the environmentally preferred method of vegetative treatment in Class II and Class III pinyon juniper woodlands. Bull hogging and seeding shall be prioritized over use of fire in restoring Class II and Class III pinyon juniper woodlands to desirable vegetative communities.

Policy: Prescribed fire is most judiciously used after thinning, harvesting, mechanical mastication, and other treatment techniques are completed.

Policy, Goal & Objective: Aggressive and effective emergency stabilization and rehabilitation programs shall be incorporated in all wildland and prescribed fire events.

Policy, Goal & Objective: Unless otherwise approved by Garfield County and consistent with ecologic site conditions, the following minimum objectives are established when lands are treated with prescribed fire or experience wildland fire in sagebrush habitats:

1. Retain 40 percent ground cover after the burn with recruitment to 60 percent ground cover before the first rainy season following the burn.
2. Cupped fire lines should have water gaps every 20 feet to allow captured water to exit.
3. Existing disturbance areas, such as roads and trails, should be used as fire lines to the greatest extent possible.

Policy: Land managers shall prevent fire related impacts to WUI areas and other areas occupied by infrastructure.

Finding & Policy: All wildland and prescribed fires impact air quality. Prior to wildland or prescribed fire, land managers shall analyze and disclose ambient and proposed air quality conditions, including BACTs that can be implemented to reduce air quality impacts.

Policy: Land managers shall initiate BACTs, including commercial harvesting of excess fuels and other methods for reducing potential fire related air pollutants and for achieving harmony between man and his environment.

Policy: Managers of wildland and prescribed fire shall comply with Garfield County Air quality plans, policies, programs and ordinances.

Policy: Garfield County will cooperate and coordinate with federal, state and local entities to address barriers and challenges associated with fire and fuels management in areas impacting the County's resources.

Finding & Policy: Restoration of a natural fire regime is neither desirable nor attainable. As a result of past management and the extent of vegetative ecosystem alteration, natural conditions no longer exist in the County. While it is known that there have been large vegetation alterations since historical times, the extent or severity of most of these alterations remains uncertain. As a result of ecosystem change, passive restoration techniques, such as restoring naturally occurring fires to the land, would not have the same benefit to ecosystems as in the past. Without active restoration techniques, fires dramatically increase resource damage which could result in the permanent loss of historical ecosystem structure and function.

Finding & Policy: The principles and policies in this plan provide an optimum approach to wildland and prescribed fire management on federal, state and local lands. Managers are encouraged to use fire as a tool for accomplishing resource management objectives after other integrated management techniques have been exhausted. Consistent with public health and ecologic processes, agencies are encouraged to emphasize active, integrated resource management over passive fire suppression.

Policy, Goal & Objective: Land managers shall incorporate emergency stabilization and burned-area rehabilitation as part of a holistic approach to addressing post wildland and prescribed fire impacts and shall include suppression activity damage and long term restoration. Emergency stabilization shall be completed 1 year of wildland fire containment. Short-term actions shall minimize and mitigate threats to life or property, and stabilize/prevent unacceptable degradation to natural and cultural resources resulting from the effects of fire. Burned area rehabilitation to repair or improve damaged lands to acceptable conditions or to repair or replace facilities damaged by fire shall be completed within 3 years the fire event.

Policy: The use of fire in priority, crucial, and general wildlife habitat shall be allowed when compatible with protection, maintenance, enhancement, or development of desirable habitat conditions.

Finding & Policy: Fire is often a destructive force that impacts sensitive species. The use of motorized vehicles to construct fire lines and control fire in habitat for special status plant and animal species is allowed.

Policy: Low intensity ground fires from natural or management ignitions in ponderosa pine or aspen stands are allowed.

Policy: The full range of upland vegetation treatment methods and tools (i.e. chaining, plowing, bull hog, pipe harrow, hand cutting, herbicide, aerial seeding, drill seeding, and broadcast seeding) are encouraged and allowed prior to the use of prescribed fire in vegetative treatment and enhancement projects.

Policy: The use of native and non-native seeds for fuels management treatment shall be based on availability, adaptation (site potential), and probability of success. Desirable non-native seeds

may be used to meet Sage Grouse habitat objectives. When reseeding, use fire resistant native and desirable non-native species for fire breaks is allowed.

Policy: Where land managers implement an integrated approach using the full range of upland treatment methods, prescribed burning shall be allowed on all suitable lands up to 20% of the lands within the manager's jurisdiction.

Policy: In Sage Grouse management areas, post burn stabilization and rehabilitation shall be completed within two growing seasons. Changes in livestock grazing shall be limited to two full growing seasons or less.

Policy: Greater Sage Grouse Landscape Wildland Fire and Invasive Species Habitat Assessments shall be developed in cooperation and coordination with Garfield County and shall be consistent with the County's RMP to the maximum extent allowed by law.

Finding & Policy: Garfield County's plan program and policy for wildland and prescribed fire provides the highest and best management across agency boundaries. Annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments shall be coordinated across jurisdictional boundaries and shall be consistent with Garfield County's RMP.

Finding & Policy: Lands impacted by wildland fire no longer retain desirable qualities of naturalness, solitude, or opportunities for primitive, unconfined recreation and no longer exhibit wilderness characteristics. Lands impacted by natural fire shall not be managed for wilderness values until such time as native vegetative communities consistent with ecologic site descriptions are restored and the visual effects of fire are eliminated.

Finding & Policy: Post fire restoration and rehabilitation of lands managed for wilderness character is prioritized over management for wilderness values that have been impaired due to wildfire. Use of vehicles, motorized tools and other restoration and rehabilitation techniques that optimize recovery of desirable vegetative communities and eliminate the visual effects of fire shall be allowed in areas managed for wilderness characteristics.

Finding & Policy: Lands managed for wilderness values that have been impacted by wildfire are impaired and no longer qualify for wilderness management until such time as the ecologic and visual impacts of the fire event are eliminated.

References:

Southern Utah Support Area Fire Management Plan Environmental Impact Statement, UT-040-04-054, United States Department of the Interior, Bureau of Land Management, November 2005

Central Utah Interagency Fire Management Plan, Fishlake National Forest, Richfield BLM Field Office, Fillmore BLM Field Office, 2010

2.10 CULTURAL RESOURCE MANAGEMENT

2.10.1 INTRODUCTION

Cultural resources are sensitive, irreplaceable resources with potential public and scientific uses, and are an important and integral part of our national and local heritage. Cultural resources constitute “a definite location of human activity, occupation, or use identifiable through field inventories (i.e., surveys), historical documentation, or oral evidence” (BLM-M-8110). The term “cultural resource” also includes “historic or architectural sites, structures, or places with important public and scientific uses, and may include definite locations (i.e., sites or places) of traditional cultural or religious importance to specified social and/or cultural groups. Cultural resources are concrete, material places and things that are located, classified, ranked, and managed through the system of identifying, protecting, and utilizing for public benefit”. Archaeological resources, a subset of cultural resources, are “any material remains of human life or activities that are at least 100 years of age, and that are of archaeological interest” as further defined in 43 CFR 7.3.

2.10.2 CURRENT SETTING

A variety of cultural resource types attributed to distinct chronological periods ranging from over 10,000 years ago to the present have been discovered in Garfield County, and there is potential for finding additional resources. Archaeological investigations began in or near Garfield County in the late 1920s. In response to legislative requirements, more recent inventories have traditionally been conducted to support site specific surface disturbing projects and to comply with the requirements of Section 106 of the National Historic Preservation Act (NHPA) and other cultural resource preservation laws. Additionally, academic institutions have performed some research projects, although such scientific investigations are relatively limited.

Detailed inventories have not been conducted on all of the cultural resources in the County. Intensive cultural resource inventories meeting Utah Class III standards (i.e. 15 meter transect intervals) have only been completed on a small percentage of the lands in Garfield County. Within Garfield County, a total of 3,802 cultural resource sites are listed in the State Historic Preservation Office (SHPO) database. Cultural resource densities range from non-existent in rugged remote terrain to more than 100 sites per square mile in favorable locations. Based on Garfield County’s size, tens of thousands of cultural resources may exist within the County limits.

It is believed that there are numerous unknown cultural resources in the County. Many of these resources are not able to be associated with specific events or time periods. Some resources lack any diagnostic information that would enable interpretation of small and previously impacted sites. Other resources are easily visible and contain characteristics suitable for interpretation, use

and enjoyment. The size/influence of cultural resources can be determined from the field measurements and GPS technology. It is believed that reliable documents have not been developed for most of the cultural resources within the County. Many cultural resources are eligible for listing in the National Register of Historic Places (NRHP) and are managed as directed by local, state, and federal regulation. SHPO records for Garfield County indicates two cultural resources are listed in the NRHP; one cultural resource is nominated for listing and 1,765 resources have been evaluated as being National Register quality.

2.10.3 NEED FOR CHANGE IN MANAGEMENT DIRECTION

Cultural resources have monetary, social, scientific and cultural value. When the resources are destroyed or exported from the County (even for scientific purposes,) there is a net loss of cultural value. The County needs to have a “No Net Loss of Cultural Resource Value” policy.

Cultural resources have not been adequately identified, mapped, or surveyed in the County. To a large extent, the cultural resources are unknown and therefore cannot be adequately managed, developed, used, enjoyed, or protected. Cultural resources need to be identified and inventoried. The lack of reliable data and specific inventories has resulted in cultural resources being used as a club to support special designation and prevent otherwise acceptable uses of the land or has left the resource unprotected.

Agencies lack specific direction regarding Outstandingly Remarkable/Relevant and Important values associated with cultural resources. Criteria need to be provided to federal and state land managers, so a consistent, legal management approach can be implemented.

Artifacts and other cultural resources have cultural, social, scientific and monetary value. Resources are being extracted and exported without the County receiving any value in return. A system needs to be established for the County’s residents and visitors to receive a cultural, social, scientific and/or monetary value for resources that are exported from the County. This is in addition to any intrinsic value that may be available for cultural resources having been here for some time.

Rural natural resource based communities are struggling to survive. Increasing environmental legislation and prescriptive, recreation oriented management have resulted in loss of economic opportunity and business capabilities associated with traditional natural resource extraction industries. In addition to efforts to revive such industries, educational and interpretive opportunities need to be greatly expanded for residents and visitors to rural communities like Garfield County.

Some cultural resources in the area have been described as “world class.” Educational opportunities, interpretive facilities, programs, and understanding of cultural resources need to be world-class for all of the residents and visitors to Garfield County. The school children, residents and visitors of the County need to have the greatest opportunities for field trips, hands-on experience, understanding, use, and enjoyment of these resources.

A facility needs to be constructed for the study, interpretation, use, enjoyment, display, and curation of cultural resources.

2.10.4 DESIRED FUTURE CONDITION

Garfield County desires:

1. Consistent criteria for Outstandingly Remarkable/Relevant-Important values as they relate to cultural resources be developed. There are thousands of cultural resources within the County. Some are of greater value, and some are of lesser value. Those of lesser value need to be treated in accordance with law and in a manner that permits the multiple use/sustained yield of lands located in the County. Those that are determined to be Outstandingly Remarkable/Relevant-Important need to be developed to provide for interpretive opportunities, use and the enjoyment of current and future generations. Special designations should only occur in those situations where the cultural resource is of such quality and value that it meets or exceeds the Outstandingly Remarkable/Relevant-Important minimum criteria.
2. All cultural resources within the County be identified and evaluated as part of a level I, and Level II Inventory. Until cultural resources are adequately identified, mapped, and inventoried, they cannot be adequately protected and are considered speculative. All federal and state agencies need to conduct Level I, and Level II inventories on their lands to identify any cultural resources located in Garfield County.
3. Necessary compliance work for projects be conducted in a timely and expeditious manner and in such a way that science is expanded, interpretive opportunities are developed and projects are allowed to move forward in an economically viable manner.
4. To retain existing cultural resources. In situations where it is impossible to retain a cultural resource, an equal/adequate social, cultural, and/or economic compensation needs to be provided to the County. Such compensation may be in the form of educational opportunities, interpretive development, increased facilities, cultural programs, and/or monetary contributions.
5. A facility be constructed for the study, interpretation, use, enjoyment, display, and curation of cultural materials and resources. Residents and visitors to the County need to have a facility where they can view, interpret, and enjoy many of the artifacts and resources that are located here. Ideally, the facility needs to provide research opportunities, so experts from around the world can share their expertise with others.
6. Any new cultural resource discoveries are made and are used to solve the riddles of the past. New and expanded interpretive opportunities need to be developed for cultural resources, including opportunities for world-class experiences throughout the County.
7. Economic opportunities associated with identification, excavation, research, and interpretation of cultural resources be provided throughout the County. Study of cultural resources is no less an extraction industry than mining or timber harvesting. Those industries provided jobs and supported families within the County. Natural resource extraction industries were eliminated, largely through federal regulation. Extraction of cultural resources and research attached thereto help replace traditional industry and provide equal or greater economic opportunities and support for local families.

8. The use of these cultural resources not be used to prevent multiple use/sustained yield of public lands and to create special area designations to promote single use recreation. Cultural resources need to be used for the understanding, benefit, use, and enjoyment of the public and not be used as a pry bar to force the political will of others on the residents and visitors to Garfield County.

9. The items listed above be given funding and manpower by Federal and State agencies for the accomplishment of the work outlined in this chapter.

2.10.5 POLICIES AND GOALS

Garfield County contains some of the most outstanding scenery in the world. It includes parts or all of three National Parks, one National Recreation Area, one very large National Monument and one designated wilderness area. All of the designations preclude or severely limit extractive uses of on these public lands. In addition vast acreages of land are being considered for potential wilderness as Wilderness Study Areas managed by the Bureau of Land Management.

Coupled with this, are vast expanses of cultural resources in the County. These resources are protected by Federal law and cannot be extracted, bought, sold or in any way excavated or destroyed for economic purposes.

Their basic monetary value would be derived in two ways. First, and perhaps most important would be through fees charged the public for viewing displays and educational opportunities through a world class repository/museum located within the bounds of Garfield County.

The second opportunity for monetary value is through the inventory, mapping, recordation, stabilization, and housing of these resources. It will take decades to accomplish this work.

Policy: It is the policy of Garfield County that there be a “No Net Loss of Resources and Opportunity” as it relates to cultural resources. The belief of the County is that these resources should remain in the area from which they came.

Objective: It will be the objective of the Garfield County to pursue a world class facility for the purpose of housing, researching, interpreting, displaying and generally providing for the residents and visitors of Garfield a place where the cultural, social, scientific, and monetary values derived from cultural resources can be met.

At the present time there are only a few places where these valuable resources are housed, displayed and scientifically studied within the State of Utah. Probably none are of world-class status. Therefore, the County will actively pursue funding from grants, partnerships, and other available Federal, State, and local funding sources to bring this to fruition.

Policy: It will be the policy of Garfield County to issue permits for activities that impact cultural resources.

Objective: The County is desirous of keeping cultural resources extracted from lands within the County in the County. If they are removed from the County then compensation, either monetary

or otherwise must be made to the County.

These permits are above and beyond those issued by other Federal or State agencies as required by law. It will be considered a violation of local law to extract, remove without authorization or in anyway violate the County ordinance protecting cultural resources. Violators will be prosecuted.

Objective: Garfield County will adopt a County Ordinance protecting cultural resources and adopting a permitting process. This ordinance can be found in Appendix A2.10b.

Objective: Develop criteria for identifying and determining relevance, and outstandingly remarkable values for important cultural resource values. Actions that do not comply with this criteria will be considered to be out of compliance with the County General Plan and in violation of local law.

Objective: Pursue opportunities to inventory, map and determine the relevance of cultural resources within Garfield County.

At the present time the County recognizes only known, inventoried resources. Resources that have not been mapped and been the subject of a Level II inventory are considered speculative until adequately documented. Land management decisions that are based on speculative cultural resource information are inconsistent with the local plan and a violation of the County ordinance.

This will be labor intense, somewhat costly, and take perhaps decades to complete. In the end it will provide a base from which stronger management decisions can be made, especially when dealing with other uses of public lands.

2.11 PALEONTOLOGICAL RESOURCES

2.11.1 INTRODUCTION

Paleontological resources constitute a fragile and nonrenewable scientific record of the history of life on earth. It is Garfield County's policy to manage paleontological resources for scientific, educational, interpretive, and recreational values, and to protect or mitigate these resources from adverse impacts while enhancing their use and enjoyment.

2.11.2 CURRENT SETTING

The scientific value of fossils, especially vertebrates, generally drives management decisions. However, these resources are also enjoyed by many of the general public as objects of wonder and beauty. Although a comprehensive paleontological resource inventory has not been completed within the County, review of paleontological research regarding geologic formations contained in the County has identified the types of formations where fossil resources are known to be present, and significant resources have already been discovered. Many formations in the County are known to contain vertebrate or trace vertebrate fossils. Some formations have higher potential than others to contain significant numbers of fossils.

In addition to the general potential for formations to contain paleontological resources, specific paleontological localities have been identified by the Utah Geological Survey. Garfield County

contains 846 localities in the Survey's database. Research of the County's paleontological resources has been minimal, but it is expected that as research increases the number of localities will increase and interest in using and enjoying the resource will increase as well. Fossils in the County represent a diverse array of plants, invertebrates, and vertebrates. Numerous scientifically significant specimens have been found on Forest Service, State, and Interior Department lands. It is anticipated demand for paleontological resources for public and private purposes will increase.

Paleontological resources have monetary, social, scientific, and cultural value. When the resources are destroyed or exported from the County (even for scientific purposes,) there is a net loss of value. Garfield County has a "No Net Loss of Paleontological Resource Value" policy.

A variety of paleontological resource types attributed to distinct geologic periods have been discovered in Garfield County, and there is potential for finding additional resources. Paleontological investigations began in or near Garfield County in the early 1900s. In response to legislative requirements, more recent inventories have traditionally been conducted to support site specific surface disturbing projects, and academic institutions have performed some research projects, although such scientific investigations are relatively limited.

Detailed inventories have not been conducted on all of the paleontological resources in the County. Intensive paleontological resource inventories have only been completed on a small percentage of the lands in Garfield County. Within Garfield County, a total of 846 specific paleontological localities are identified in the Utah Geologic Survey database. The total extent of the County's paleontological resources is unknown. Based on Garfield County's size and land form, thousands of paleontological resources may exist within the County limits.

It is believed that there are numerous unknown paleontological resources in the County. Many of these resources are not able to be associated with specific events or time periods. Some resources lack any diagnostic information that would enable interpretation of small and previously impacted sites. Other resources are easily visible and contain characteristics suitable for interpretation, use and enjoyment. The size/influence of paleontological resources can be determined from field measurements and GPS technology. It is believed that reliable documents have not been developed for most of the paleontological resources within the County.

2.11.3 NEED FOR CHANGE IN MANAGEMENT DIRECTION

Paleontological resources have monetary, social, scientific and cultural value. When the resources are destroyed or exported from the County (even for scientific purposes,) there is a net loss of paleontological value. The County needs to implement its "No Net Loss of Paleontological Resource Value" policy.

Paleontological resources have not been adequately identified, mapped, or surveyed in the County. To a large extent the paleontological resources are unknown and therefore cannot be adequately managed, developed, used, enjoyed, or protected. Paleontological resources need to be identified and inventoried. The lack of reliable data and specific inventories has resulted in paleontological resources being damaged and vandalized or has left the resource unprotected.

Agencies lack specific direction regarding Outstandingly Remarkable/Relevant and Important values associated with paleontological resources. Criteria need to be provided to federal and state land managers, so a consistent, legal management approach can be implemented.

Paleontological resources are being extracted and exported without the County receiving any value in return. A system needs to be established for the County's residents and visitors to receive a cultural, social, scientific and/or monetary value for resources that are exported from the County. This is in addition to any intrinsic value that may be available for paleontological resources being located in the area.

Rural natural resource based communities are struggling to survive. Increasing environmental legislation and prescriptive, recreation oriented management have resulted in loss of economic opportunity and business capabilities associated with traditional natural resource extraction industries. In addition to efforts to revive such industries, educational and interpretive opportunities associated with paleontological resources need to be greatly expanded for residents and visitors of rural communities like Garfield County.

Some paleontological resources in the area have been described as "world class." Educational opportunities, interpretive facilities, programs, and understanding of paleontological resources need to be world-class for the residents and visitors of Garfield County. The school children residents and visitors of the County need to have the greatest opportunities for field trips, hands-on experience, understanding, use, and enjoyment of these resources.

A facility needs to be constructed for the study, interpretation, use, enjoyment, display, and curation of paleontological resources.

2.11.4 DESIRED FUTURE CONDITION

Garfield County desires:

1. Consistent criteria for Outstandingly Remarkable/Relevant-Important values as they relate to paleontological resources be developed. There are thousands of paleontological resources within the County. Some are of greater value, and some are of lesser value. Those of lesser value need to be treated in accordance with law and in a manner that permits the multiple use/sustained yields of lands located in the County. Those that are determined to be Outstandingly Remarkable/Relevant-Important need to be developed to provide for interpretive opportunities, use and the enjoyment of current and future generations. Special designations should only occur in those situations where the paleontological resource is of such quality and value that it meets or exceeds the Outstandingly Remarkable/Relevant-Important minimum criteria.

2. All paleontological resources within the County be identified and evaluated as part of a detailed on the ground survey. Until paleontological resources are adequately identified, mapped, and inventoried, they cannot be adequately protected and are considered speculative. All federal and state agencies need to conduct detailed surveys similar to Archeological Level I, and Level II inventories on their lands to identify any paleontological resources located in Garfield County.

3. Necessary compliance work for projects be conducted in a timely and expeditious manner and in such a way that science is expanded, interpretive opportunities are developed and projects are allowed to move forward in an economically viable manner.

4. To retain existing paleontological resources. In situations where it is impossible to retain a paleontological resource, an equal/adequate social, cultural, and/or economic compensation needs to be provided to the County. Such compensation may be in the form of educational opportunities, interpretive development, increased facilities, paleontological programs, and/or monetary contributions.

5. A facility be constructed for the study, interpretation, use, enjoyment, display, and curation of paleontological materials and resources. Residents and visitors of the County need to have a facility where they can view, interpret, and enjoy many of the artifacts and resources that are located here. Ideally, the facility needs to provide research opportunities, so experts from around the world can share their expertise with others.

6. Paleontological resource discoveries are made and are used to solve the riddles of the past. New and expanded interpretive opportunities need to be developed for paleontological resources, including opportunities for world-class experiences throughout the County.

7. Economic opportunities associated with identification, excavation, research, and interpretation of paleontological resources be provided throughout the County. Study of paleontological resources is no less an extraction industry than mining or timber harvesting. Those industries provided jobs and supported families within the County. Natural resources extraction industries were eliminated largely through federal regulation. Extraction of paleontological resources and research attached thereto should help replace traditional industry and provide equal or greater economic opportunities and support for local families.

8. The use of paleontological resources not be used to prevent multiple use/sustained yield of public lands and to create special area designations to promote single use recreation. Paleontological resources need to be used for the understanding, benefit, use, and enjoyment of the public.

9. The items listed above be given funding and manpower by Federal and State agencies for the accomplishment of the work outlined in this chapter.

2.11.5 POLICIES AND GOALS

Prescriptive management of specially designated public lands precludes or severely limits extractive uses and traditional natural resource based industries.

Coupled with this is there are vast expanses of paleontological resources in the County. These resources are protected by Federal law and cannot be extracted, bought, sold or in any way excavated or destroyed for economic purposes.

Their basic value may be derived in two ways. First, and perhaps most important would be

through fees charged the public for viewing displays and educational opportunities through a world class repository/museum located within the bounds of Garfield County.

The second opportunity for compensating value is through the inventory, mapping, recordation, stabilization, research, and housing of these resources.

Policy: It is the policy of Garfield County that there be a “No Net Loss of Paleontological Resources and Opportunity”. The belief of the County is that these resources should benefit the area from which they came.

Objective: It will be the objective of the Garfield County to obtain a world class facility for the purpose of housing, displaying, researching, and generally providing for the residents and visitors of Garfield a place where the cultural, social, scientific, and monetary values derived from paleontological resources can be met.

At the present time there are only a few places where these valuable resources are housed, displayed and scientifically studied within the State of Utah. Probably none are of world-class status. Therefore, the County will actively pursue funding from grants, partnerships, and other available Federal, State, and local funding sources to bring this to fruition.

Policy: It is the policy of Garfield County to issue permits for activities that impact paleontological resources.

Objective: The County is desirous of keeping paleontological resources extracted from lands within the County in the County. If they are removed from the County, compensation (monetary, social, educational, or otherwise) must be made to the County.

These permits are above and beyond those issued by other Federal or State agencies as required by law. It will be considered a violation of local law to extract, remove without authorization or in anyway violate the County ordinance protecting paleontological resources. Violators will be prosecuted.

Objective: Garfield County will adopt a County Ordinance protecting paleontological resources and adopting a permitting process.

Objective: Develop criteria for identifying and determining relevance, and outstandingly remarkable values for important paleontological resource values. Actions that do not comply with this criteria will be considered to be out of compliance with the County General Plan and in violation of local law.

Objective: Pursue opportunities to inventory, map and determine the relevance of paleontological resources within Garfield County.

At the present time the County recognizes only known, inventoried resources. Resources that have not been mapped and been the subject of a detailed inventory are considered speculative until adequately documented. The County believes that land management decisions that are

based on speculative paleontological resource information are considered inconsistent with the local plan and a violation of the County ordinance.

2.12 VISUAL RESOURCES

Management direction for this Resource / Resource Use has not been completed. It is intended that management direction for this Resource / Resource Use will be completed, subject to public comment, and adopted at some point in the future.

Visual Resource/Scenery Management

Each federal agency has its own system for classifying visual resources and for scenery management. BLM uses a Visual Resource Management system (VRM); Park Services has moved to a Visitor Experience and Resource Protection framework (VERP); and Forest Service has recently adopted a Scenery Classification system (SCS), which categorizes areas from 1 to 7, based on sensitivity. The most restrictive category for each agency - and often the second most restrictive - results in what is equivalent to a Special Designation. Although there may be some common traits, no two agencies are completely consistent with the County's planning efforts or expressed desires. Generally, Visual Classification Areas are more restrictive than needed outside National Parks and Designated Wilderness.

Visual Resource/Scenery Management is discussed in greater detail in Section 4.4.2.

2.13 NON-WSA LANDS WITH WILDERNESS CHARACTERISTICS

Management direction of lands with wilderness character is described in Chapter 4, Special Designations. Please refer to that chapter of the Resource Management Section of the Garfield County General Management Plan for detailed information about non-WSA lands with wilderness character.

CHAPTER 3

Resource Uses

3.1 FORESTRY AND WOODLAND PRODUCTS

This section is intentionally left blank. Management direction for this Resource / Resource Use has not been completed. It is intended that management direction for this Resource / Resource Use will be completed, subject to public comment, and adopted at some point in the future.

Forest Resources of Garfield County

Introduction

This report includes an overview of forest resources in Garfield County of southern Utah. The value of these forests includes much more than just wood. The majority of this region's water comes from high-elevation forests and it can be argued that water, which plays a central role in the economy, politics and culture of the semi-arid West, is the most important forest resource. Recreation, quality wildlife habitat, and forage for domestic livestock are also exceedingly important forest resources.

An overarching theme for any discussion of vegetation, particularly forest vegetation, in the Interior Western United States is disturbance. Forests in this region are fundamentally shaped by disturbances, both natural and those associated with human use. The long history of use, and in some cases abuse, of these forest resources have in many cases resulted in unwanted consequences that are a major challenge to resources managers (Long 2003).

The focus of this analysis is the forests of Garfield County. The objective is characterization of the major forest types including: 1) existing condition; 2) challenges to sustainability; and 3) general strategies for effective management.

Data Sources

USDA Forest Service Forest Inventory and Analysis (FIA)

Data used in this analysis were taken from USDA Forest Service Forest Inventory and Analysis (FIA) surveys (Woudenberg et al. 2010) conducted between 2005 and 2014. FIA plots are established on a systematic grid and the data, therefore, represent an unbiased sample of forest resources. From these surveys we identified 309 FIA plots within Garfield County. FIA plots measured since 2000 follow a mapped-plot design, meaning that a plot footprint can sample forest and non-forest, or stands of differing composition. Characteristics normally attributed to stands in other inventories, such as forest type or stand density, are assigned to FIA conditions.

Among condition-level variables is the proportion of the plot footprint that the condition occupies, and the sum of all condition proportions on a plot equals 1.0.

In this analysis the collective attributes associated with a condition (e.g., *Aspen forest type*) at a given sample location will be treated as reflecting an individual stand. The stand is the basic unit of forest vegetation assessment and management. A stand is relatively homogeneous forest which, for the purposes of management, is treated as a single unit (Reynolds et al. 2013). While silvicultural prescriptions are written and implemented on a stand by stand basis, effective resource management must also be undertaken in a broader context (i.e., multiple stands within a watershed or a landscape). One of the important advantages of the FIA database is that it will support county-level monitoring of forest condition, e.g., trends in the risk of high-severity fire and insect outbreaks.

LANDFIRE Raster Data

Species distribution maps were created using the 30m resolution Existing Vegetation Type (EVT) layer from LANDFIRE.gov (acquired 4/7/2016). EVT is mapped using decision tree models, field data, Landsat imagery, elevation, and biophysical gradient data. Decision tree models are developed separately for each of the three lifeforms, tree, shrub, and herbaceous and are then used to generate lifeform specific EVT layers. (from website: <http://www.landfire.gov/NationalProductDescriptions21.php>).

The EVT SAF_SRM field was filtered in ArcGIS to extract the following species of interest:

- SAF 206: Engelmann Spruce-Subalpine Fir
- SAF 208: Whitebark Pine
- SAF 209: Bristlecone Pine
- SAF 210: Interior Douglas-Fir
- SAF 211: White Fir
- SAF 217: Aspen
- SAF 219: Limber Pine
- SAF 237: Interior Ponderosa Pine
- *SAF 238: Western Juniper
- *SRM 412: Juniper-Pinyon Woodland
- SRM 413: Gambel Oak
- SRM 415: Curlleaf Mountain-Mahogany
- SRM 418: Bigtooth Maple
- SRM 421: Chokecherry-Serviceberry-Rose
- *SRM 504: Juniper-Pinyon Pine Woodland

*combined.

LANDSAT8 Raster Data

The basemap layer for the species distribution maps was mosaicked in ArcGIS using LANDSAT

8 data acquired 4/8/2016 from <http://earthexplorer.usgs.gov/>. More information about Landsat 8 can be found at <http://landsat.usgs.gov/landsat8.php>.

Current Setting

Garfield County has a great diversity of natural vegetation which is reflective of a broad range of environmental conditions. Different types of vegetation are associated with differences in elevation. Increasing elevation is associated with increasing precipitation and decreasing temperatures (both summer and winter). These strong environmental gradients result in zones of vegetation types ranging from hot/dry low elevation desert to cold/wet high elevation alpine communities. Southern Utah, like the rest of the Middle and Southern Rocky Mountain Region, has both lower and upper treelines (Long 1994). Below the lower treeline, conditions are generally too dry for trees to survive; above the upper treeline, conditions are generally too cold. The montane forest and woodland vegetation occurring between the upper limit of the pinyon-juniper woodlands and upper treeline is the subject of this assessment (Figure 1).

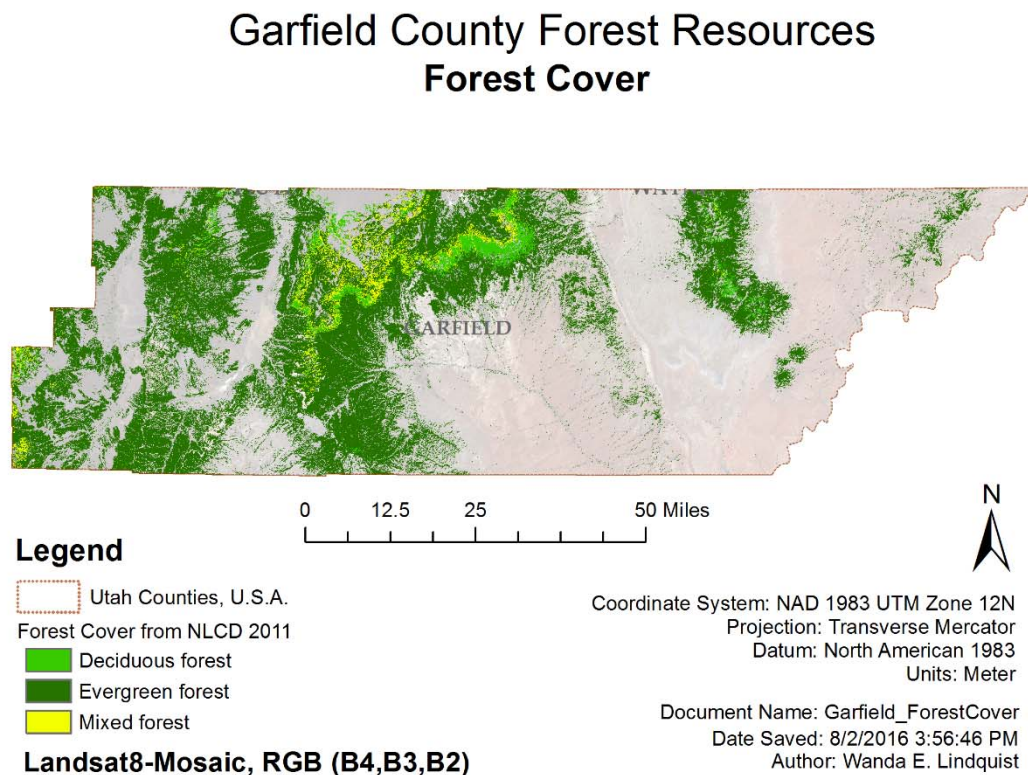


Figure 1. Forest cover in Garfield County from the National Land Cover Database 2011 (NLCD 2011, Homer, C.G., Dewitz, J.A., Yang, L., Jin, S., Danielson, P., Xian, G., Coulston, J., Herold, N.D., Wickham, J.D., and Megown, K., 2015, Completion of the 2011 National Land Cover Database for the conterminous United States-Representing a decade of land cover change information. Photogrammetric Engineering and Remote Sensing, v. 81, no. 5, p. 345-354).

Area Estimates

The total area of Garfield County is about 3.33 million acres. About 49.3% of this area is forested (i.e., vegetation dominated or potentially dominated by trees), with pinyon-juniper woodlands representing the largest proportion (Appendix X) (Figure 2). Montane forests and woodlands (i.e. excluding P-J) occupy about 0.49 million acres in the County. Of this area, 75.4% of forest land is further classified as higher productivity timberland with the potential to produce at least 20 cubic feet per acre per year. Nearly 14.9% of the total forest land within the County is in some form of reserve (e.g., parks).

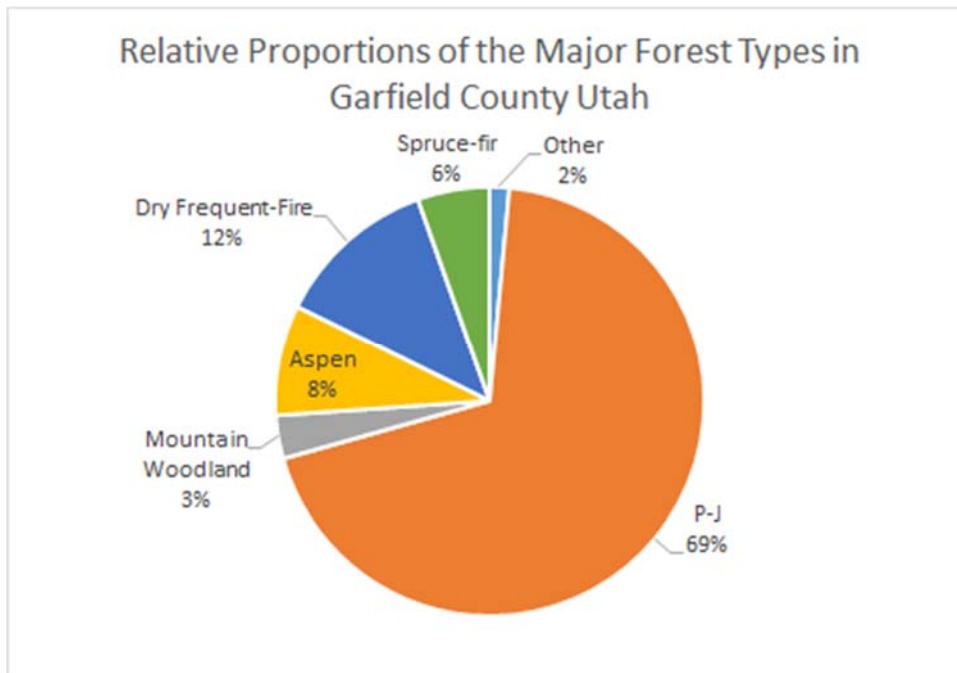


Figure 2. Relative proportions of the major forest types in Garfield County (FIA 2000-2014).

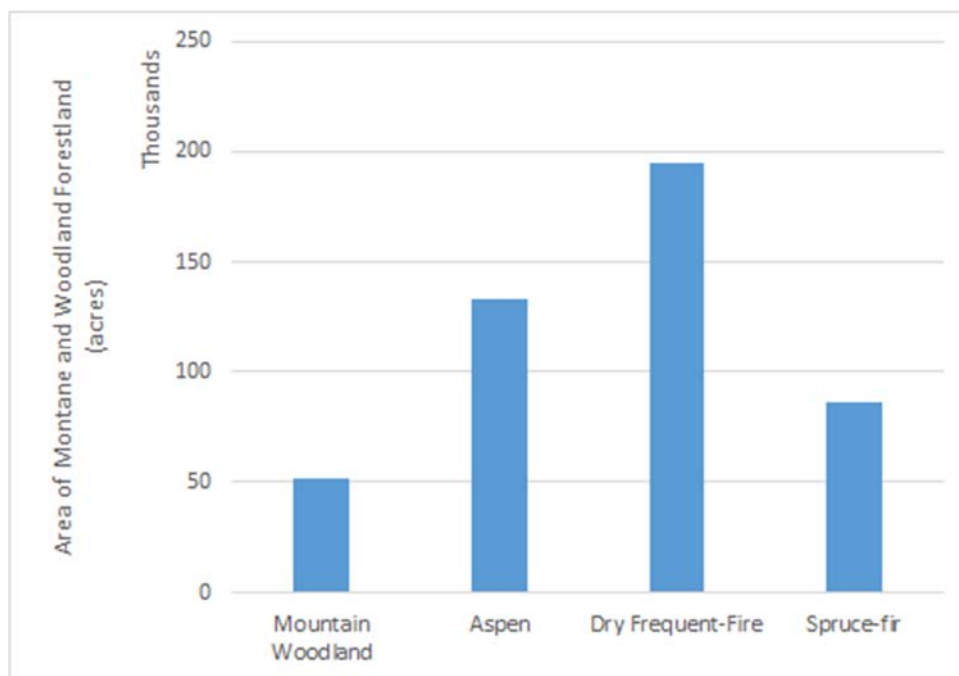
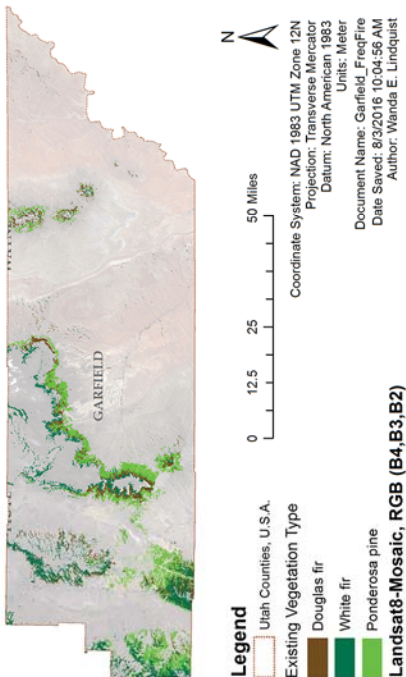


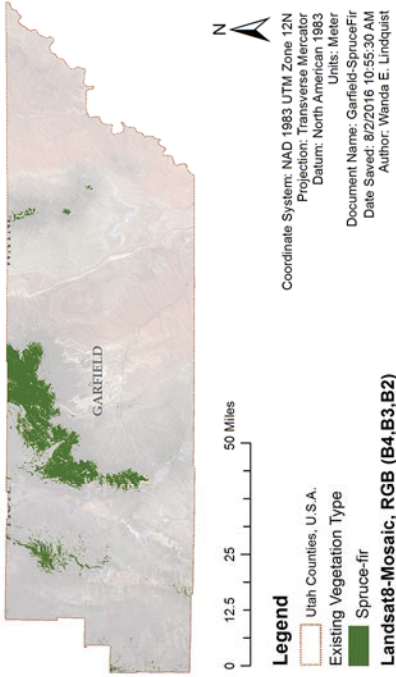
Figure 3. Acres of the major forest types in Garfield County (FIA 2000-2014).

Ownership and management of forests (including Pinyon-Juniper) in the County are dominated by the federal government (95% of total and 65.5% of the unreserved forest). Private ownership accounts for about 1.1% of the total montane forest and woodlands.

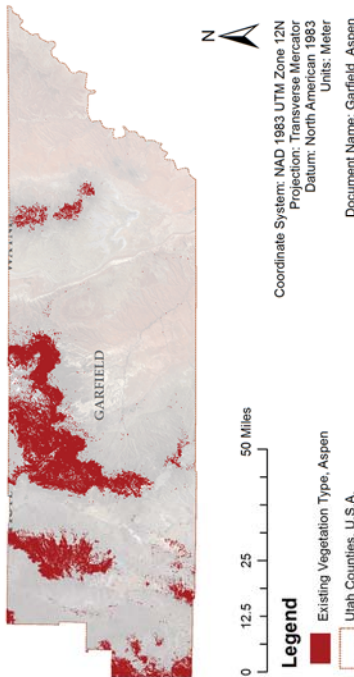
a) Garfield County Montane and Woodland Species
Grouped Distribution of Species
Dry Frequent Fire



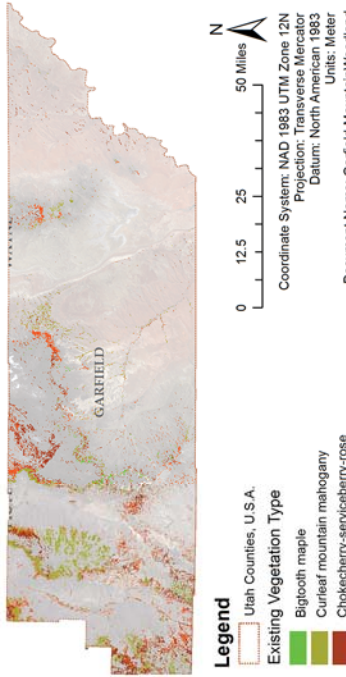
b) Garfield County Montane and Woodland Species
Grouped Distribution of Species
Spruce-fir



c) Garfield County Montane and Woodland Species
Grouped Distribution of Species
Aspen



d) Garfield County Montane and Woodland Species
Grouped Distribution of Species
Mountain Woodland



Forest Types

Within Southwestern Utah there are 12 specifically recognized montane forest and woodland types (Table 1 includes the common and scientific names of the important tree species). Three types are pooled under the characterization *Dry frequent-fire type* (this includes ponderosa pine, Douglas-fir, white fir, and mixtures of these three species) (Figure 4a). Two types representing various combinations of subalpine fir and Engelmann spruce are combined as the *Spruce-fir forest type* (Figure 4b). The remaining types are the *Aspen forest type* (Figure 4c) and the *Mountain woodland type* (Gambel oak, mountain mahogany and intermountain maple) (Figure 4d).

Table 1. Common and scientific names of important tree species occurring in Garfield County (Little 1971; Van Buren et al. 2011)

COMMON_NAME	GENUS_SPECIES
white fir	<i>Abies concolor</i>
subalpine fir	<i>Abies lasiocarpa</i>
curlleaf mountain-mahogany	<i>Cercocarpus ledifolius</i>
Utah juniper	<i>Juniperus osteosperma</i>
Rocky Mountain juniper	<i>Juniperus scopulorum</i>
Engelmann spruce	<i>Picea engelmannii</i>
blue spruce	<i>Picea pungens</i>
common or two-needle pinyon	<i>Pinus edulis</i>
limber pine	<i>Pinus flexilis</i>
Great Basin bristlecone pine	<i>Pinus longaeva</i>
ponderosa pine	<i>Pinus ponderosa</i>
narrowleaf cottonwood	<i>Populus angustifolia</i>
Fremont cottonwood	<i>Populus fremontii</i>
quaking aspen	<i>Populus tremuloides</i>
Douglas-fir	<i>Pseudotsuga menziesii</i>
Gambel oak	<i>Quercus gambelii</i>

Pinyon-juniper woodlands occur at lower treeline between shrub-steppe and montane forests (Brown et al. 2008; Long 1994); this broad and important type is covered elsewhere (Appendix X). Gambel oak can form pure woodland stands at lower elevations; it can also be a component of conifer-dominated (e.g., ponderosa pine) forests up to mid-elevations. Mountain mahogany and intermountain maple are less common than Gambel oak and for the purposes of this analysis, are included in the *Mountain woodland type*. The *Dry frequent-fire type* can include various combinations of ponderosa pine, Douglas-fir and white fir. Ponderosa pine tends to dominate at lower elevations; Douglas-fir and white fir tend to increase in importance on relatively cooler and more mesic sites (e.g., north aspects). Within the broad *Dry frequent-fire type* individual mixed-conifer stands can, depending on specific environmental conditions and disturbance history, include any of the conifer species as well as Gambel oak and aspen. In addition to being

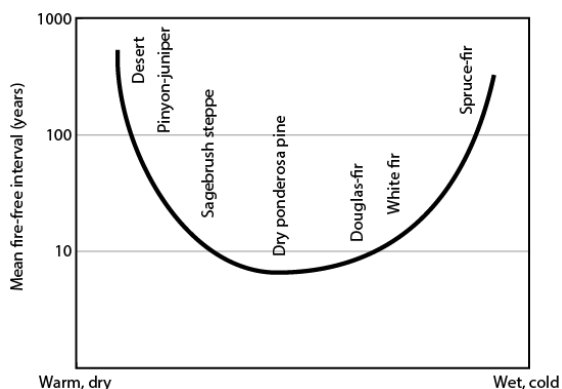
a component of mixed-conifer stands, aspen can form large (>200 ac) stands at middle and upper elevations. The upper elevation *Spruce-fir forest type* includes stands with various proportions of Engelmann spruce and subalpine fir. Limber pine, though never abundant, is often a minor component of mixed-conifer forests across a broad range of elevations. Bristlecone pine is a very long-lived, high-elevation tree typically found on dry or rocky sites (Youngblood and Mauk 1985).

Natural Disturbance Regimes

The species composition and structure of forests and woodlands are to a considerable extent reflections of disturbance history. There is, for example, broad consensus among scientists and forest managers that for many forests in the Southwest, changes in natural fire regimes, coupled with extended drought are responsible for increased size and severity of both wildfires and insect outbreaks (Swetnam and Lynch 1993; Shaw et al. 2005). An understanding of natural disturbance regimes, such as the frequency and severity of wildfire, is fundamental to the creation of effective management strategies. This management approach is not about mimicking the disturbances *per se*. Rather, the focus is on the legacies, e.g., species composition and stand structure, associated with the natural disturbance regimes (Perera and Buse 2004; Long 2009).

Natural disturbances in forests almost invariably involve some combination of biotic (e.g., insects and disease) and abiotic (e.g., fire, wind) agents. Of these, fire and insects are the most important for the forests of Garfield County. A natural disturbance regime for a particular forest type is typically characterized by the dominant type of disturbance (e.g., frequent/low severity fire in the *Dry frequent-fire forest type* in contrast to infrequent/high severity fire in the *Spruce-fir forest type*). Regardless of the dominant disturbance type, there is the potential for important interactions between different types of disturbances (e.g., DeRose and Long 2009; Jenkins et al. 2008; Jenkins et al. 2014). For example, a fire that weakens, but does not actually kill a tree, may make it susceptible to attack by bark beetles.

Natural fire regimes in the Southwest were arrayed from hot dry environments at low elevations to cool wet environments at high elevations (Figure 5). Reference regimes can be categorized



along a gradient from ‘fuel-limited’ to ‘climate-limited’. In deserts and other non-forested vegetation types with very low productivity, the frequency of return fires is limited by the long period of time necessary for fuels to accumulate. The resulting ‘fuel-limited’ fire regime would be characterized by very infrequent but high severity fires. At the opposite environmental extreme are high elevation forests where relatively high productivity results in fairly rapid accumulation of fuels, but weather conditions conducive to wildfire may be rare. The resulting ‘climate-limited’ fire regime would also be characterized by very infrequent but high severity fires. Most of the forests in Garfield County have natural fire regimes intermediate between these two extremes (Brown et al. 2008; Swetnam and Baison 1996).

For this assessment, the emphasis will be on the potential for ‘uncharacteristic’ disturbance. For example, we rely on the fire regime paradigm in a relative sense to help assess how ‘characteristic’ or ‘uncharacteristic’ a fire (or potential fire) might be (Hardy 2005). Fire hazard refers to the state of the fuels (e.g., presence or absence of fuel ladders), independent of the weather on a given day. Fire severity refers to the effect a fire has on wildland systems. Severity is not a characterization of the fire itself, but rather the fire’s effect (Hardy 2005). For example, a ‘high severity’ fire results in the death of most overstory trees. In contrast, a ‘low severity’ fire might burn understory litter, grass, shrubs, and small trees, but leave most or all of the mature trees unburned.

Insects, particularly bark beetles and defoliators, can cause considerable damage in Southwestern forests. Each of the forest types represented in Garfield County can have insect outbreaks but it is the conifer-dominated forests that are most likely to have substantial mortality during insect outbreaks. Currently all of the insect species causing substantial mortality of mature trees in Southwestern forests are native to the region. Under normal conditions these insects exist as endemic populations and the associated damage is limited in extent. Occasionally, during a prolonged drought for example, the population of a particular insect might transition to outbreak levels and mortality of the host tree species increases in both amount and extent. The impacts of these native insects, at both endemic and outbreak population levels, were natural parts of these forest ecosystems.

Figure 5. Infrequent/high severity natural fire regimes were characteristic of vegetation types that were either fuel-limited (e.g., deserts with low productivity) or climate-limited (e.g., high elevation spruce-fir forests with cool/wet summers). Frequent/low severity natural fire regimes were characteristic of forests that were neither fuel- nor climate-limited (e.g., ponderosa pine) (after Martin and Sapsis 1991).

There are, however, region-wide changes in the frequency, extent, and severity of insect outbreaks (Swetnam and Lynch 1993; DeRose and Long 2009). Some of these changes in insect populations are certainly related to at least short-term changes in climate (e.g., the increased survival of high-elevation spruce beetle with increased winter temperatures and the increased success of pinyon Ips in drought-stressed host trees). Changes in insect impacts are also associated with changes in the various host forest types. Important stand and landscape changes include shifts in tree species composition, increases in stand density, and decreases in age-class diversity.

Mountain woodland type

This type represents a combination of Gambel oak, mountain mahogany and intermountain maple, with Gambel oak by far the most common. Based on research done in this type in northern Utah (Wadleigh et al. 1998), the following is a likely characterization of changes in the natural fire regime of Gambel oak woodlands in Garfield County. Prior to the introduction of domestic livestock and effective fire suppression, a frequent/low-severity fire would have limited the extent of, and the continuity of fuels within, Gambel oak woodlands. With fire exclusion have come fundamental changes in the fuel profile and the increased likelihood of high-severity fires (Bradley et al. 1992; Wadleigh et al. 1998). Changes in the natural fire regime (i.e., decreased frequency and increased severity) has not only altered the structure of oak woodlands, but has resulted in an increase in the abundance of Gambel oak in mixed-conifer stands of the *Dry frequent-fire forest type*.

Dry frequent-fire forest type

The natural fire regime in this forest type is best characterized as frequent/low-severity. Across the range of environmental conditions associated with this important type would have been a range in fire frequency and severity (e.g., Korb et al. 2013; Reynolds et al. 2013). Under the warmest and driest conditions (i.e., sites where ponderosa pine is the dominant species), fires would have been very frequent (< 10 years) and low severity. Under cooler and more mesic conditions (i.e., sites where, in addition to ponderosa pine, Douglas-fir and/or white fir are potentially important stand components) fires were somewhat less frequent (e.g., <35 years) and would have included a combination of low- and mixed-severity.

An overarching theme in the Southwest and Intermountain West is the implication of long-term fire exclusion. Reasons for fire exclusion can include historic overgrazing near the turn of the last century, elimination of burning by Native Americans, and especially effective fire-suppression starting in the middle of the last century. Fire exclusion is primarily an issue in the frequent-fire forest types, as exemplified by the *Dry frequent-fire forest type* in Garfield County.

Long-term fire exclusion in the *Dry frequent-fire forest type* has had a substantial impact on stands and landscapes. Changes include shifts in species composition, increases in stand density, increases in the amount and continuity of fuels (both canopy fuels and fuel ladders) resulting in fundamental changes in fire behavior, and the nature of insect outbreaks. Changes in tree species composition have resulted where the elimination of low-severity fires has allowed the establishment of shade-tolerant Douglas-fir and white fir in stands that under the natural fire regime were almost entirely dominated by ponderosa pine.

Whereas the natural fire regime limited stand density, fire exclusion has allowed many stands to achieve relative densities associated with high competitive stress and continuity of canopy fuels. As a consequence, these stands are more susceptible to a range of insects (Fettig et al. 2007) as well as to high-severity fire (Graham et al. 2004). Changes in vertical structure, for example with the establishment of shade-tolerant Douglas-fir and white fir, represent fuel ladders via which a surface fire can transition to the upper canopy. Changes in composition and vertical structure can also make these stands more susceptible to western spruce budworm, an important defoliator of Douglas-fir and white fir (but not, ironically, spruce) (Long 1994).

Aspen forest type

Commonly, aspen is more intolerant of shade than any of the conifer species with which it may be associated. In most cases, this means if aspen-dominated stands are not to be eventually successional displaced by conifers, there must be periodic disturbance (e.g., natural high-severity fire, prescribed fire, or mechanical treatment). Aspen has some ability to regenerate from seed (Long and Mock 2012) and tremendous ability to regenerate from root suckers (Long 1994), but this regeneration capacity decreases as stand vigor declines with age. It is, therefore, important that regeneration-initiating disturbance be timely (Shepperd et al. 2015).

Spruce-fir forest type

The natural fire regime in these high-elevation, cool, moist forests is characterized by very infrequent (200+ years) high severity fires. Fire frequency is not limited by fuels, but rather by the infrequent combination of ignition (i.e., ‘dry’ lightning) and extreme fire weather (i.e., low fuel moisture, high temperature and high wind speed). This is an example of a ‘climate-limited’ fire regime. Because of the very long average fire return interval compared to the length of the fire suppression era, fire exclusion has had limited impact on composition and structure of individual stands in the *Spruce-fir forest type*. It is likely, however, that fire suppression has resulted in a shift in age-class distribution among spruce-fir stands within large landscapes. Even a modest reduction in the number of young stands could negatively affect landscape resilience following a spruce beetle outbreak (DeRose and Long 2014).

Under normal conditions, spruce beetle (*Dendroctonus rufipennis*) numbers occur at endemic levels. To complete their typical two-year life cycle, the beetles must find and successfully overcome the defenses of a green host tree. They do this by mass-attacking a large living, or very recently wind-thrown, tree. Under endemic conditions spruce mortality within a stand is modest and restricted to a few scattered trees or small groups of trees. The transition from endemic to epidemic population levels can result from a combination of factors including: large numbers of suitable host trees; high stand density and/or prolonged drought (both of which stress trees and weaken their defenses); large scale blowdown of mature spruce; and high temperatures (DeRose et al. 2013; Hart et al. 2014). Increases in winter and summer temperatures are particularly conducive to transition of spruce beetle populations from endemic to epidemic levels. Higher winter temperatures increase over-winter survival. Higher summer temperatures can allow larvae to mature faster resulting in a shift to a one-year from a two-year life cycle. Such a shift allows for much more rapid buildup of spruce beetles and the transition to an outbreak.

Existing and desired future conditions.

A characteristic of many stands in Garfield County is that they are dense, and high relative densities are associated with high competitive stress and density-related mortality (Long et al. 2004). In the *Dry frequent-fire forest type* (ponderosa pine, Douglas-fir, and white fir) high

relative densities potentially makes these stands susceptible to insect attack (e.g., Kolb et al. 1998; Fettig et al. 2007). It is not possible to predict with certainty when or even if a given stand will be attacked; however, once beetles enter a stand, denser stands can be expected to have greater beetle attack (Chojnack et al. 2000). About 85.8% of stands in this important forest type have a risk rating for mountain pine beetle of moderate or higher. When considering only stands which are predominately ponderosa pine, more than 93.9% have a risk rating for MPB of moderate or higher.

Table 2. Volume of live and dead greater than 5 inches DBH (diameter at breast height) by Forest Type Group.

Forest Type Group	Volume of all live on forestland (greater than 5" dbh, cubic feet)	Volume of standing dead on forestland (greater than 5" dbh, cubic feet)
Aspen	163,492,811	65,028,739
Dry Frequent-fire	276,839,432	36,726,580
Spruce-fir	198,915,436	39,349,568

Currently many, if not most, stands in the *Spruce-fir forest type* in the county have neither resistance nor resilience to attack by the spruce beetle (*Dendroctonus rufipennis*). Limited resistance is indicated by the fact that more than 88.9% of stands in this important forest type have a risk rating for spruce beetle on Engelmann spruce moderate or higher (calculation of the spruce beetle risk rating is based on the system developed by Schmid and Frye (1976)). Unfortunately, many of these stands also have limited resilience. In the event of what is probably the inevitable spruce beetle outbreak, the result would be the death of virtually all of the mature Engelmann spruce and conversion of the stand to subalpine fir or even non-forest (DeRose and Long 2010; Windmuller-Campione and Long 2015) (Figure 6).



*Figure 6. The spruce beetle (*Dendroctonus rufipennis*) outbreak on the Markagunt Plateau in Iron County resulted in the effective elimination of Engelmann spruce stands across an entire landscape and is indicative of the sort of damage insect outbreaks can cause in forests lacking either resistance or resilience (DeRose and Long 2014).*

An appropriate management strategy would be to drastically reduce relative density. This would, at least to some extent, increase resistance (Fettig et al. 2007). The reduction in stand density would also create understory condition suitable for the regeneration (natural or by planting) of Engelmann spruce seedlings (as well as other tree species). Time is of the essence for this strategy to succeed – timely treatment to enhance age- and species-diversity will result in stands and watersheds that are much more resilient to a spruce beetle outbreak (Figure 7).



Figure 7. This Engelmann spruce stand on the boundary of Piute and Beaver Counties has high relative density and limited tree species diversity. Because of its structure and composition the stand is neither resistant nor resilient to attack by spruce beetle.

In addition, many stands currently have canopy fuel profiles (i.e., canopy bulk density and canopy base height) which make them prone to crown fires. For example, nearly 50. % of stands in the *Dry frequent-fire forest type* currently have low torching and/or crowning indexes indicating that fire entering these stands, even under less than extreme wind speeds, can be a crown fire.

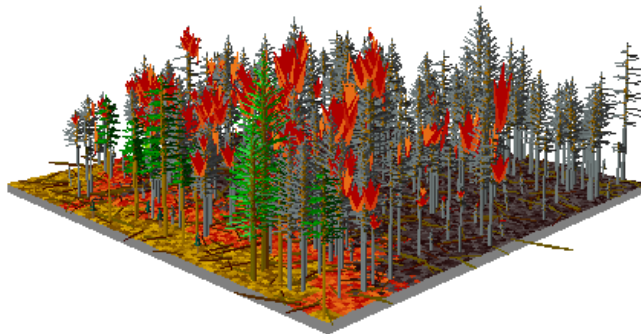
Proactive management can be used to create and maintain species composition and structure in *Dry frequent-fire forest type* stands resistance to, and resilience from, disturbance (DeRose and Long 2014). The following example illustrates the potential for active management to create stand conditions where high severity fire would be unlikely. Figure 8a is a representative mixed-conifer stand from the FIA database. This stand is typical in that fire exclusion has resulted in moderate to high relative density and the development of fuel ladders. With this canopy fuels

profile, fire entering the stand in extreme fire weather would be exceedingly destructive (Figure 8b). The Forest Vegetation Simulator and Fire and Fuels Extension (Dixon 2002; Rebaire 2010) were used to simulate a thinning and fuels treatment in the stand and to model pre- and post-treatment fire behavior under severe weather conditions.

Thinning can be used to fundamentally alter stand structure and species composition (Figure 8c). Thinning can eliminate fuel ladders and favor the retention of large fire-resistant ponderosa pine and Douglas-fir. With this altered canopy fuels profile fire entering the stand even in extreme fire weather would be a low-severity surface fire (Figure 8d). Many of the large trees retained in the post-thinning stand would survive such a fire.

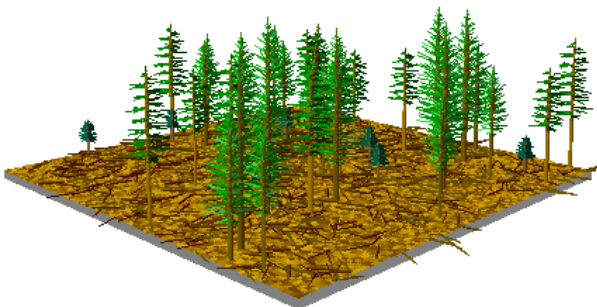


Figure 8. A representative mixed-conifer stand in the dry frequent-fire forest type.



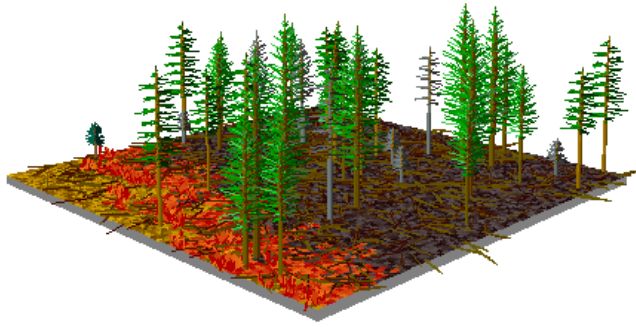
A) With fire exclusion, there has been an increase in shade-tolerant species like white fir and an increase in fuel ladders.

B) Under severe weather conditions, fire behavior is likely to be extreme



C) Simulated thinning and fuels treatment shows the reduction in stand density and fuel ladders and shifts species composition toward large, fire-resistant ponderosa pine and Douglas-fir.

D) Fire behavior in the treated stand is unlikely to be extreme even under severe weather conditions.



Policies and Objectives

Past successes in fire suppression and the limited scale of proactive forest management have resulted in widespread changes in forest structure and composition, particularly in the *Dry frequent-fire forest type*. These forest changes, exacerbated by drought, are associated with fire regime change from frequent/low-severity fire to infrequent/high-severity and mixed-severity fire. In the Southwest and Intermountain West, the increase in the number of ‘mega-fires’ (uncharacteristically large and severe fires) is a region-wide problem. The 8000+ acre Shingle fire in 2012 in Kane County is indicative that the condition of forests in southern Utah is a concern. The cost of the wildfire program in the US is enormous and growing. For the USDA Forest Service, which is but one of the state and federal agencies responsible for wildland fire management, wildfire suppression has gone from 16% of the annual budget in 1995 to more than half in 2015. It is projected to reach 67% of the Forest Service’s total annual budget in 10 years (USDA 2015). The inescapable conclusion is that traditional fire prevention and suppression approaches to wildland fire management are unsustainable; however, there are realistic alternative strategies which are well understood by wildland fire and natural resource managers (e.g., USDA 2015; Stephens et al. 2009).

Building and maintaining forests, particularly in the *Dry frequent-fire forest type*, which are resistant and resilient to both extreme fire and insect outbreaks requires proactive management including combinations of mechanical treatments (e.g., thinning) and prescribed fire. In this type of forest, mechanical treatments followed by prescribed fire or pile burning has been shown to be the most effective treatment for reducing the risk of crown fires (e.g., Stephens et al. 2009). Results of extensive research indicate that “mechanical plus fire, fire-only, and mechanical-only treatments using whole-tree harvest systems were all effective at reducing potential fire severity under severe fire weather conditions” (Stephens et al. 2009).

Management to create and maintain fire resilient forests is a clear alternative to the current unsustainable fire suppression strategy (USDA 2015). Under this alternative, wildland urban interface and back-country lands must be actively managed to maintain structure and tree species composition consistent with low severity fires. To be effective, this management does not have to be done in every stand and on every acre, but it must be extensive enough to achieve the goal of fire resilient forest landscapes (Fule et al. 2001). When “communities, adjacent lands, and back-county areas have been made fire-resilient, sustainable wildland fire management would then involve maintaining...” these structures and compositions over time (USDA 2015).

There is considerable consensus among scientists and forest resource managers in support of a combination of tools (thinning, mechanical treatments, and prescribed fire) to achieve forests which are resistant and resilient to a broad range of environmental challenges (e.g., Covington 2000; Allen et al. 2002; Roccaforte et al. 2008; Stephens et al. 2009; Reynolds et al. 2013; Fettig and McKelvey 2014; DeRose and Long 2014; Shepperd et al. 2015; North et al. 2015; Temperli et al. 2014; Windmuller-Campione and Long 2015). These strategies, however, can only be effective if they are actually implemented and barriers to implementation are more likely to be societal than scientific (e.g., Gill and Stephens 2009; Long 2009). The staffs of the National Forests in southern Utah have either begun or will soon begin development of new Land and Resource Management Plans (i.e., revised Forest Plans). It will be important to explicitly include provisions in the new Forest Plans for the proactive management necessary to build and maintain

forest resilience.

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3.2 LIVESTOCK GRAZING

This section is intentionally left blank. Management direction for this Resource / Resource Use has not been completed. It is intended that management direction for this Resource / Resource Use will be completed, subject to public comment, and adopted at some point in the future.

3.2 LIVESTOCK GRAZING

Introduction

In managing livestock grazing on public and private lands, Garfield County's overall objective is to promote health, safety and welfare by ensuring the long-term health and productivity of a) public and private lands, b) the County's watersheds, c) the livestock industry, d) multiple social and environmental benefits that result from the custom, culture and heritage associated with the livestock industry, and e) cultural resources, ethnographic resources, and traditional uses associated with the livestock industry. Grazing is administered on public lands in accordance with the Taylor Grazing Act of 1934, and in so doing provides livestock-based economic opportunities in rural communities while contributing to the West's and America's social fabric and identity. Together, the County's public lands and private ranches maintain open spaces, provide habitat for wildlife, offer a myriad of recreational opportunities for public land users, and help preserve the custom, culture, heritage and character of the rural West. Livestock Grazing in Garfield County has been designated a resource of cultural and historic significance. Livestock Grazing is protected by Garfield County's Protection of Cultural Resources Ordinance and is on the County Register of Cultural Resources. In some instances Livestock Grazing may also be suitable for protection as an Area of Critical Environmental Concern (ACEC).

A Brief History of Public Lands Grazing

Although the Spanish brought livestock into the American southwest in the 1500's, domestic animals were first introduced into portions of Garfield County in the late 1700's. Herds of cattle were utilized as a source of meat on the long journeys into the Glen Canyon area; and other domestic livestock, like mules and burros, were used to pack additional supplies. Parts of the Old Spanish Trail was first utilized by the Dominguez-Escalante expedition in 1776, as the group crossed the Colorado River at a point subsequently called the "Crossing of the Fathers," which is now below the waters of Lake Powell, at Padre Bay. This historic crossing was the first of many with historical documentation indicating that ensuing drives could have had cattle herds that numbered in the thousands.

There was no serious attempt to utilize the range resources until the early 1860's. Settlers brought small numbers of livestock to the area known today as the "Escalante-Fifty Mile Mountain" area in the early 1870's. During subsequent expansion into southeastern Utah, in 1879-1880, settlers created the famous Hole-in-the-Rock trail as they moved from Escalante into present day San Juan County, accompanied by some 1,800 cattle.

In 1886, large numbers of cattle were driven into the area from central and northern Utah via Hanksville and Halls Crossing. The following years were dry, and livestock numbers decreased due to drought and overuse of the range. Livestock numbers continued to decline during the late 1890's, and the trend continued until the start of World War I. Livestock numbers then increased with the wartime economy. However, the trend peaked at the close of the World War I, and by the 1920's numbers were once again near the average. Statistics from the early 1900's indicate sheep replaced cattle during the hard economic times, but by 1974 the trend had returned to favor

cattle.

During the era of homesteading, federal lands were often grazed because of national policies designed to promote the settlement of the West and the desire to provide food and fiber for the nation. Grazing was largely unregulated and some problems occurred, but a significant understanding was gained regarding livestock grazing in arid ecosystems. In response to requests from Western ranchers, Congress passed the Taylor Grazing Act of 1934, which led to the creation of grazing districts in which grazing use was apportioned and regulated. The Division of Grazing was created within the Interior Department to administer the grazing districts; this division later became the U.S. Grazing Service and was headquartered in Salt Lake City. In 1946 the Grazing Service was merged with the General Land Office to become the Bureau of Land Management.

Unregulated grazing that took place before enactment of the Taylor Grazing Act resulted in unintended damage to soil, plants, streams, and springs. As a result, grazing management was initially designed to increase productivity and reduce soil erosion by controlling grazing through fencing and water projects and by conducting forage surveys to balance forage demands with the land's productivity/carrying capacity. These initial improvements in livestock management arrested the degradation of public rangelands while improving watersheds, and were successful in restoring acceptable conditions.

But by the 1960s and 1970s, regulation of public lands and unrealistic expectations for their management through restrictive federal policies rose to a new level, as made clear by congressional passage of such laws as the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, the National Forest Management Act of 1976, and the Federal Land Policy and Management Act of 1976. Consequently, federal agencies moved away from managing natural resources, vegetation and grazing and toward lengthy studies, litigation and altered fire regimes that have resulted in proliferation of invasive species, loss of wildlife and a morass of bureaucratic delay. In general, regulations were intended to provide better management or protection of specific rangeland resources, such as riparian areas, threatened and endangered species, sensitive plant species, and cultural or historical objects. However, a backlog of litigation, environmental studies and regulation has hampered land management activities aimed at production and healthy ecosystems. Consistent with this enhanced regulatory role, federal agencies developed or modified the terms and conditions of grazing permits and leases and implemented new policies which have delayed range improvement projects which address specific resource issues and which have prevented continued improvement of public rangeland conditions.

Current setting:

Today federal agencies and permittees manage livestock grazing in a manner aimed at achieving and maintaining health of the land and sustaining resources. To achieve desired conditions, the agencies use forest and rangeland health standards and guidelines, which were generally developed in the 1990s with input from citizen-based Resource Advisory Councils across the West. Standards describe specific conditions needed for long term sustainability, such as the presence of stream bank vegetation and adequate canopy and ground cover. Guidelines are the management techniques designed to achieve or maintain healthy public lands, as defined by the

standards. These techniques include such methods as seed dissemination, periodic rest or deferment from grazing in specific allotments during critical growth periods, water development, and land treatments aimed at making the land more productive.

Currently, grazing on public lands is relatively stable. Except for a few isolated locations, problems from the early 1900s have been largely corrected as designed by the Taylor Grazing Act. Forest and rangeland health has improved over the past few decades, and there is continual effort on the part of federal agencies and permittees to maintain healthy conditions.

Livestock grazing on federal lands has been declared an activity of historic and cultural significance in Garfield County and has been placed on the County's register of cultural resources. In addition, the State of Utah has passed legislation recognizing the value of the livestock industry and outlining basic concepts to preserve its vigor. The American cowboy has been recognized by the Congress and the President of the United States for his role in settling the West; and President Clinton recognized the rich human history of the area in the Grand Staircase-Escalante National Monument Proclamation. Livestock grazing is the last human endeavor of the American West that is shaped by nature. Livestock grazing continues to play a vital role in the health, welfare, safety, custom, culture and heritage of Garfield County.

In spite of ongoing improvements in livestock management and federal, state and local recognition of its importance, inflexible federal regulations, altered fire regimes, encroachment of undesirable vegetation (tamarisk, Russian Olive, Pinyon/Juniper, rabbitbrush, etc.), and private citizen efforts to eliminate public land grazing put the industry at significant risk.

Grazing, one of the earliest and longest uses of public lands, continues to be an important activity for those same lands today. Livestock grazing now competes with more uses than it did in the past, as other industries and the general public look to the public lands as sources of both conventional and renewable energy and as places for outdoor recreation, including primitive and motorized use. Among the key issues that face land managers today are drought, severe wildfires, invasive plants, and dramatic increases in recreation.

Modern, well-managed grazing provides numerous environmental benefits. For example, well-managed grazing can be used to control undesirable vegetation. Intensively managed "targeted" grazing can control some invasive plant species or reduce the fuels that contribute to severe wildfires. Besides providing such traditional products as meat and fiber, well-managed rangelands support healthy watersheds, carbon sequestration, recreational opportunities, and wildlife habitat. Livestock grazing on public lands helps maintain the private ranches that, in turn, preserve the open spaces that have helped write Garfield County's history and will continue to shape this region's character in the years to come.

Need for Management Change:

Various conditions exist that create a need for changes in management related to grazing including but not limited to:

1. Designation of grazing as an object of historic and cultural significance to Garfield County and placement of grazing on the Garfield County Register of Cultural Resources;

2. Creation of the Escalante Historic/Cultural Grazing Region by Garfield County and the Escalante Grazing Region Zone by the State of Utah;
3. Recognition of the ongoing threat to the health, safety, welfare, custom, culture, heritage and values of Garfield County resulting from reductions in grazing or harm to the livestock industry;
4. Neglect of natural resources (failure to maintain water developments and desirable vegetation; uncontrolled expansion of tamarisk, Russian Olive, Pinyon/Juniper, rabbitbrush, and noxious weeds, etc.) resulting from failure to aggressively manage the land for optimum forest/rangeland health and potential.
5. Failure to allow for maintenance and enhancement of grazing related infrastructure including but not limited to roads, corrals, seedings, water developments, vegetative resources, desirable ecologic site conditions, etc.
6. Creation of the Grand Staircase-Escalante National Monument and subsequent management actions diminishing land health and forage production. Protections offered by the Monument Proclamation have not been adhered to.
7. Failure of federal agencies to create, update and modify land management plans to optimize multiple use/sustained yield principles and to comply with coordination and consistency requirements mandated by law.
8. Ongoing threats by private groups to eliminate livestock grazing on public lands in Garfield County.
9. Lack of flexibility in managing livestock related resources and permitted activities.
10. Threats to livestock and wildlife resulting from loss of desirable ecologic site conditions and failure to control invasive confers, tamarisk, Russian Olive, rabbitbrush, noxious weeds, and other undesirable vegetation.
11. Increased recreationist created conflicts, especially in areas that are not the focal point of visitation and where water is appropriated for stockwatering.
12. Ongoing threats to forest and rangeland health by limiting vegetation to only native species.

Desired Conditions:

Garfield County Desires:

- a) Land management agencies recognize state and local designation of the significant historic role of livestock grazing and its value as a cultural resource

- b) Land managers recognize Garfield County's Register of Cultural Resources and the County's Resource Management Plan and comply, to the maximum extent allowed by law, with Garfield County's stated goals, plans, desires, and needs.
- c) Federal agencies manage lands to maximize sustained yield, including optimization of available forage for livestock grazing.
- d) Federal agencies restore forests and rangelands to a condition that supports the full number of permitted livestock and increases forage available for livestock grazing over time.
- e) Prior to FY 2050 federal agencies enhance forests and rangelands to a condition that supports an additional 30% of forage over what is necessary to accommodate the full number of livestock and wildlife permitted at present.
- f) Federal agencies restore Pinyon/Juniper stands to desired conditions, eliminate Tamarisk and Russian Olive, eradicate noxious weeds, and replace rabbit brush and other unproductive species with vegetation that will optimize sustained yield and benefit to wildlife, livestock, recreation and other multiple uses.
- g) Water generated from Pinyon/Juniper, Tamarisk and Russian Olive removal be conserved, developed and enhanced to be used: 1) for livestock on lands that are not designated as the focal point for visitors or that have water rights allocated to livestock; 2) for recreation on lands designated as the focal point for visitors and that have water rights allocated to culinary/domestic uses; 3) for livestock on lands designated by Garfield County or the State of Utah where grazing is the highest and best use; and 4) for multiple use/sustained yield purposes in compliance with Utah State Water Law on lands that are undesignated.
- h) New water be developed: 1) for livestock and wildlife on lands that are not designated as the focal point for visitors or that have water rights allocated to livestock and wildlife; 2) for recreation on lands designated as the focal point for visitors and that have water rights allocated to culinary/domestic uses; 3) for livestock on lands designated by Garfield County or the State of Utah where grazing is the highest and best use; and 4) for multiple use/sustained yield purposes in compliance with Utah State Water Law on lands that are undesignated.
- i) The full number of permitted livestock be restored and expanded at the earliest possible time in a phased approach as the conditions of paragraph d) are achieved.
- j) Desired ecological site conditions identified by the Natural Resources Conservation Service be achieved

Findings, Policies, Goals, Objectives, and Criteria

Goal: Preserve the history, culture, custom, and values of the grazing industry within the County. Maximize efficient and responsible preservation, enhancement, and development of grazing resources, practices and affected natural, historical, and cultural activities within Garfield

County.

Goal: On SITLA, Forest Service and BLM lands, manage livestock grazing to provide for multiple uses while maintaining healthy ecosystems and protecting biological and cultural resources consistent with federal law. On NPS lands, manage livestock grazing while maintaining healthy ecosystems and protecting biological and cultural resources and the values and purposes of NPS units consistent with their enabling legislation.

Policy & Objective: On SITLA, Forest Service and BLM lands, manage vegetative resources to become as productive as feasible for livestock grazing, with a goal of restoring suspended and under-utilized AUMs, while maintaining a thriving, ecological balance and multiple-use relationships.

Policy & Objective: On NPS lands, manage vegetative resources to become as productive as feasible to maintain healthy ecosystems and to protect biological and cultural resources and the values and purposes of the specific NPS unit consistent with its enabling legislation. Where authorized, maximize livestock grazing consistent with federal law.

Goal: Garfield County's goals regarding livestock grazing are threefold: 1) Maintain and enhance land health and productivity; 2) Actively manage land to optimize resource use including livestock grazing; and 3) Ensure a healthy, stable and economically viable livestock grazing program to preserve and enhance this important cultural and historic activity. For information purposes, livestock grazing provides year round income of approximately \$100 per AUM. (See **Appendix XXX** for details)

Policy: Grazing on private and State lands in Garfield County is managed under the requirements of the Garfield County, Utah Zoning Ordinance, November 3, 1986 as amended. Grazing on federal lands in Garfield County is managed under the requirements of Garfield County's Resource Management Plan, 2007 and the 2017 revision, as amended.

Finding & Policy: Livestock grazing shall continue to be implemented and managed based on Utah's Standards for Healthy Rangelands and Guidelines for Grazing. Management systems that are based on arbitrary departure standards from selected reference conditions fail to consider natural variability and the complex relationship between ecologic variables. Livestock management systems that are based on departure standards and reference conditions are deemed arbitrary, capricious, scientifically unsubstantiated, statistically unsupported, and inconsistent with Garfield County's Resource Management Plan.

Policy: In strict compliance with 40 CFR 1502.22, land managers considering any grazing management alternative that includes reference areas and/or departure standards shall include in any environmental analysis all information relevant to reasonably foreseeable and/or significant impacts. If the information relevant to reasonably foreseeable and/or significant impacts cannot be obtained, the agency shall include within the environmental document: **a)** A statement that such information is incomplete or unavailable; **b)** a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment; **c)** a summary of existing credible scientific evidence which is relevant

to evaluating the reasonably foreseeable significant adverse impacts on the human environment, and d) the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community. For the purposes of this policy, “reasonably foreseeable” includes impacts which have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.

Goal: Manage livestock grazing in accordance with applicable federal, state and local laws, regulations, standards and guidelines.

Goal: Manage livestock grazing, including use of adaptive management principles, to meet or make progress toward meeting Utah Forest and Rangeland Health Standards where livestock grazing is a causal factor.

Criteria: Garfield County has adopted the BLM Utah Rangeland Health Standards for public lands and has adopted the U.S. Department of Agriculture Natural Resource Conservation Service’s Greater Sage Grouse Habitat Evaluation Method for Greater Sage-Grouse habitats.

Policy: Meet or make progress toward meeting BLM Utah Rangeland Health Standard 2 and Standard 4. Land managers shall comply with water quality standards established by the State of Utah and Garfield County under the federal Clean Water and Safe Drinking Water Acts. Activities on federal and state lands will fully support the designated beneficial uses described in applicable water quality standards.

Finding: Livestock grazing is a cultural resource, an ethnographic resource, part of the County’s heritage, and a traditional activity of significance. It is protected under Garfield County’s Protection of Cultural Resources Ordinance, the Grand Staircase – Escalante National Monument Proclamation, FLPMA, NFMA, and other applicable law.

Finding: Failure to control Tamarisk, Russian Olive and Pinyon/Juniper, and noxious weeds beyond desired levels is a detriment to the health, safety and welfare of Garfield County, is inconsistent with the County’s plan, program and policy, and is a violation of local law. *(Draft ordinance requiring land owners with more than 5000 contiguous acres to control tamarisk, Russian Olive and to restore p/j levels to pre-settlement conditions.)*

Finding: Tamarisk and Russian Olive are not native and constitute evidence/presence of man on the environment. Land bases that contain Tamarisk and/or Russian Olive are trammled by man and contain permanent evidence of man’s impact. Until Tamarisk and Russian Olive are eradicated a land area is not eligible for wilderness designation due to man’s longstanding / permanent impact on the land.

Finding: Grazing commodity zones are necessary for the health, safety, welfare, custom, culture and heritage of Garfield County and following Grazing Commodity Zones have been established:

Panguitch Lake
East Fork
Boulder Mountain
Henry Mountains

Panguitch Valley
Kingston Canyon
Escalante Historic/Cultural Grazing Region
Glen Canyon

Finding: For more than 100 years the areas designated as the Grazing Commodity Zones listed above have provided and continue to provide a significant contribution to the history, custom, culture, heritage, economy, welfare and other values of Garfield County. Properly managed, abundant natural and vegetative resources exist within the commodity zones to support and expand current livestock grazing activities and wildlife habitat.

Policy: Livestock grazing activities in the commodity zones constitute historic resources, ongoing human history, places where nature shapes human endeavors in the American West, a variety of cultural resources, landmarks, structures, and other objects of historic or scientific interest that are worthy of recognition, preservation, protection, and expansion.

Finding: The highest management priority for lands within the above-mentioned commodity zones is a preservation, restoration, and enhancement of watershed, forest and rangeland health conditions to sustain and expand forage production for livestock grazing and wildlife habitat. Other multiple uses (mining, timber harvest, oil & gas extraction, recreation, commodity development, etc.) are compatible with rangeland health when properly managed.

Finding: Managing Garfield County Grazing Commodity Zones for livestock grazing and wildlife habitat does not preclude or restrict other multiple use / sustained yield activities including but not limited to mining, timber harvest, oil & gas extraction, and recreation.

Finding: There are numerous National Parks, State Parks and other sites in and near Garfield County that provide outstanding opportunities for recreation where livestock grazing is not allowed.

Policy: Within Grazing Commodity Zones, minimal, site specific infrastructure may be installed on a case by case basis to enhance resources significantly impacted by livestock and wildlife grazing. However, livestock grazing shall not be diminished to reduce conflicts created by recreationists that choose to visit Grazing Commodity Zones when and where livestock grazing is allowed.

Finding: Vegetative treatments that restore lands to desired ecological site condition and existing seedings are substantially unnoticeable in Recreation Ia and Recreation Ib management zones.

Finding: The existence of Pinyon/Juniper woodlands inconsistent with desired and/or historical sagebrush and grassland ecological site descriptions or the existence of Tamarisk, Russian Olive, noxious weeds, or cheatgrass are evidence of man's presence and constitute a trammeling by man.

Policy: The existence of Pinyon/Juniper woodlands inconsistent with desired and/or historical sagebrush and grassland ecological site descriptions or the existence of Tamarisk, Russian Olive,

noxious weeds, or cheatgrass are not natural conditions, and land occupied by such species are impaired by man until such time as a natural condition where the land retains its primeval character and influence is restored.

Policy: Lands occupied by Pinyon/Juniper woodlands inconsistent with desired and/or historical sagebrush and grassland ecological site descriptions or by Tamarisk, Russian Olive, noxious weeds, or cheatgrass are not suitable for management as wilderness, Recreation Ia or Recreation Ib until a primeval character and influence is restored and such management is approved by the Garfield County Commission.

Finding: The historic levels of livestock grazing activity and other values identified in each commodity zone have greatly diminished, or are under other serious threat, due to: (a) unreasonable, arbitrary, and unlawfully restrictive federal management policies, including: de facto management for primitive recreation in non-wilderness areas and non-WSAs; (b) abandonment of Taylor Grazing Act designations applicable to each of these zones; (c) arbitrary administrative reductions in animal unit months and available forage; (d) inflexible federal grazing practices that disallow grazing at different times each year; (e) encroachment of pinyon, juniper, cheatgrass, invasive species, and woody vegetation that compromise watershed and rangeland health, reduce desirable forage, degrade habitat, limit wildlife populations, reduce water yield, and heighten the risk of catastrophic wildfire; and f) more than 100 years of fire suppression that has promoted invasion of forb/grassland habitats with undesirable species including but not limited to decadent sagebrush, pinyon, juniper, rabbitbrush, cheatgrass, etc.

Policy: Lands designated by Garfield County as Forestry, Forage, Multiple Use Sustained Yield, and Commercial Product Development are targeted areas for Livestock Grazing improvement projects including but not limited to seedings, seeding maintenance, conifer removal, invasive removal, water development, and re-vegetation projects.

Policy: Lands designated by Garfield County as Recreation Ia and Recreation Ib shall be available for Livestock Grazing to the maximum extent allowed by law.

Policy: Lands designated by Garfield County as Recreation II and Recreation III shall be available for Livestock Grazing; and Livestock Grazing related resources shall be improved to the maximum extent allowed by law.

Finding: Restrictive federal regulation has resulted in the loss of a natural/pre-settlement fire regime, the invasive encroachment of conifers in former semi-desert/sagebrush ecosystems, the proliferation of undesirable species including but not limited to Tamarisk, Russian Olive, cheatgrass, and a reduction in available forage for livestock and wildlife grazing.

Policy: Federal land managers shall refrain from implementing policies and programs that reduce livestock grazing on lands in Garfield County's Grazing Commodity Zones. Prior to any reduction in AUMs in Garfield County Grazing Commodity Zones, federal land managers shall coordinate with Garfield County and shall implement all reasonable actions to provide necessary forage to accommodate permitted levels of livestock grazing.

Policy: Federal land managers shall refrain from implementing utilization standards less than 50%, unless: a) implementing a standard of less than 50% utilization on a temporary basis is necessary to resolve site-specific concerns; and b) the federal agency consults, coordinates, and cooperates fully with Garfield County and affected local governments.

Policy: For the purposes of livestock grazing related analysis the following shall apply:

1. Immediate impact is defined as impact which lasts less than one year. Immediate impacts do not need to be mitigated, if desired conditions are achieved within the one year period.
2. Short term impact is defined as impact which lasts longer than one year but less than five years. Short term impacts do not need to be mitigated, if desired conditions are achieved within the five year period.
3. Long term ground impact is defined as impact which lasts more than five years but less than twenty years. Long term impacts do not need to be mitigated, if desired conditions are phased and achieved within a five year period of phased disturbance.
4. Permanent ground disturbance is defined as any ground disturbing activity which lasts longer than twenty years. Permanent disturbances need to be mitigated or offset by other enhancements initiated within five years.

Finding: Federal land managers have a) failed to accurately map general habitat and critical habitat for special status species, b) incorrectly designated special status species habitat where the species is not present, and c) ignored site specific conditions and special status species life cycle requirements to adopt generalized habitat polygons that are not consistent with objective science.

Finding: Federal land managers have a) failed to accurately map Greater Sage-Grouse habitat, b) incorrectly designated pinyon/juniper woodlands as Greater Sage-Grouse habitat, and c) ignored the two greatest impacts on Greater Sage-Grouse in Garfield County: invasive conifer encroachment and predation (primarily from corvids and canids).

Finding: Garfield County finds that sage-grouse populations and habitats are compatible with livestock and grazing management which conforms to Garfield County's Resource Management Plan. Practices, such as rotational grazing systems can enhance plant community vigor, suppress noxious weeds, and sustain diverse plant communities with forb components that benefit sage-grouse habitat.

Policy: Prior to implementing livestock grazing restrictions for the purposes of conserving sage-grouse, federal agencies shall:

1. Implement effective vegetative manipulation to achieve sage-grouse habitat objectives and maintain or improve vegetation conditions or trends.
2. Design and implement grazing management systems that maintain or enhance herbaceous understory cover, height, and species diversity that occurs during the spring nesting season, consistent with ecological site characteristics and potential.
3. Maintain residual herbaceous vegetation at the end of the livestock grazing season to contribute to nesting and brood-rearing habitat during the coming nesting season. Amounts of herbaceous vegetation will be determined on a site specific basis in Coordination with Garfield County.

4. In priority sage-grouse management areas, minimize livestock and wildlife grazing within the lesser of 0.6 mile or direct line of sight of occupied leks during the lekking periods.
5. Minimize wildlife grazing effects on the cover and height of primary forage species in occupied habitat during the nesting season.
6. Manage wildlife grazing of riparian areas, meadows, springs, and seeps in a manner that promotes vegetation structure and composition appropriate to the site.
7. Place salt and mineral supplements to optimize benefits to sage-grouse breeding habitat and to improve management of livestock for the benefit of sage-grouse and livestock.
8. Minimize constructing new fences within 0.6 mile of occupied leks, near winter-use areas, movement corridors, and other important seasonal habitats.
- 9) Install fence markers or remove fences where sage-grouse mortality due to collision with fences is documented or likely to occur due to new fence placement.
- 10) Design new spring developments in priority sage-grouse habitat to maintain or enhance springs and wet meadows. Retrofit existing water developments during normal maintenance activities. Costs should be borne by the land managing agency unless other agreeable arrangements are made with livestock producers
- 11) Ensure that new and existing livestock troughs and open water storage tanks are fitted with ramps to facilitate the use of and escape from troughs by sage-grouse and other wildlife.
- 12) Avoid placing new water developments into higher quality native breeding/early brood habitats that have not had significant prior grazing use.

Finding & Policy: Livestock grazing decisions that are not consistent/compliant with this RMP need to be revisited by the managing agency within 5 years or at the next amendment/revision process whichever occurs first.

Goal: Create sustainable rangelands and forests that are resilient and resistant to fire with diverse vegetation and wildlife and which supports optimal levels of livestock grazing.

Policy: All allotments are open and available for livestock use to the maximum extent allowed by law and consistent with land health. Where allotments are unavailable for livestock grazing or otherwise restricted, management shall be consistent with Garfield County's resource plan or approved by the Garfield County Commission.

Policy: Garfield County requires forage enhancement on all allotments which are suitable for livestock grazing to the maximum extent practical.

Policy: In areas available for livestock grazing, livestock water shall be available at distances of not more than 3 miles. Where livestock water is not available within the 3 mile distance, land managers shall, to the maximum extent practical, take appropriate action to develop additional water resources to meet the 3 mile requirement.

Policy: Land managers shall maintain rangelands in stable or improving conditions by increasing forage and water resources. Active and aggressive management shall be implemented to comply with this policy.

Policy: Class I pinyon/juniper stands impacting land health, species diversity or desired vegetative conditions should be eradicated in the most feasible and cost effective manner possible at a rate of 10% annually. Class II & III P/J stands must be reduced to less than 1,000 acres of contiguous trees in a mosaic pattern and 2% must be treated annually based on a rolling 5 year average. Alternatively, land managers may implement vegetative treatments that convert 25% of Class II & III pinyon/juniper woodlands to desirable vegetative communities based on a rolling 10 year average.

Policy: Decadent sagebrush stands of over 1,000 acres must have 2% treated annually.

Policy: Land managers shall increase diversity in vegetation through optimization of native and non-native species to the maximum extent available by law. Limiting vegetative communities to “native species only” shall only be implemented when a) required by federal or state law, b) scientifically proven to optimize land health and/or desirable forage production, c) consistent with Garfield County’s Resource Management Plan, or d) approved by the County Commission.

Policy: Wildlife populations in excess of population objectives must be corrected within one year. If livestock grazing is being restricted due to lack of forage or drought, restrictions shall occur as follows: First, wildlife that is over objective; Second proportional decreases in wildlife meeting objectives and livestock.

Policy: Adaptive management must be implemented. The conditions of forage may vary each year which may lead to changes in a specific grazing plan. Livestock numbers, on/off dates, days available for grazing should be managed based on conditions rather than a calendar.

Policy: Prior to closure or reductions of livestock AUMs on allotments in Garfield County, NEPA analysis shall be conducted, and Garfield County shall be offered cooperating agency status.

GARFIELD COUNTY GRAZING AGRICULTURAL COMMODITY ZONES

Introduction

The Panguitch Lake Region Grazing Zone is established in U.C.A. 63J-8-105.8(2)(l) to preserve and protect the agricultural livestock industry from ongoing threats; to preserve and protect the history, culture, custom, and economic value of the agricultural livestock industry from ongoing threats; and to maximize efficient and responsible restoration, reclamation, preservation, enhancement, and development of forage and water resources for grazing, wildlife practices and

affected natural, historical, and cultural activities. Located in Garfield and Kane Counties, the livestock grazing zone covers approximately 243,755 total acres as depicted below.

Panguitch Lake Grazing Zone						
Allotments	Total Acres	Acres in PLGZ	# of head	# of Days	AUM's	Permit
Haycock Creek	11,826	10,633	200	121	807	Sheep
Dry Lake-Bunker Hatch Mtn.	25,972	19,755	130	106	459	Cattle
Sage Valley - Horse Valley	13,084	1,127	270	113	1,017	Sheep
Butler Creek	9,577	9,259	100	103	343	Cattle
Haycock Mtn - Brian Head	15,676	11,679	200	121	807	Sheep
Panguitch Lake	11,379	11,379	181	121	730	Cattle
Little Valleys	25,574	16,665	303	136	1,374	Cattle
Warren Bunker-Castle Valley	14,006	3,394	180	76	456	Sheep
Black Mountain Ikes Valley	40,721	25,159	200	115	767	Sheep
Asay Bench	15,613	5,973	266	106	940	Cattle
Red Desert	5,587	972	174	76	441	Cattle
Red Creek	54,741	2,082	696	121	2,807	Cattle
Total	243,756	118,077	2,900	1,315	10,948	

Current Setting

Garfield County's Panguitch Lake Region Grazing Zone (PLGZ) is comprised mainly of Forest Service and private lands and is bounded on the south at the Kane and Garfield County line, west on the Iron/Garfield County line, north along Highway 20, and east along the BLM/Forest Service Boundary. The Panguitch Lake Region Grazing Zone is typically high elevation and higher precipitation range grounds which lends itself to highly productive grazing pastures. The PLGZ also contains of the head waters of the major tributaries of the Sevier River including: Asay Creek, Mammoth Creek, Bunker Creek and Panguitch Creek. Garfield County's portion of the Panguitch Lake Grazing Zone contains all or part of 12 Forest Service allotments that accommodate approximately 11,000 AUM's. The Panguitch Lake Grazing Zone contains approximately 131,122 acres with conditions as described below.

The PLGZ is managed for forage production, wildlife habitat and watershed improvement and is currently meeting rangeland and forest health standards in most areas. However, productivity and land health can be improved, especially on a site specific basis in a few allotments. All of 12 allotments in the Panguitch Lake Zone are available/permitted for livestock use.

Given the current level of livestock and wildlife numbers in the area, there is not a great demand for increases in authorized AUM's. The amount of forage is adequate for current grazing levels; however, additional production is available through improved vegetation management. Future

requests for increased AUMs for livestock or wildlife would be dependent on available forage resources.

Invasive and noxious weed species are present at various locations in the PLGZ and are concentrated in areas near Panguitch Lake. Pinyon-Juniper, musk thistle, rabbit brush, Dalmation Toadflax, Whitetop, and Russian Knapweed are the most common invasive weeds in the grazing zone. Many of these weeds are listed by the State and County as noxious weeds and have been the target of control efforts. In the PLGZ, invasive weeds are being managed varying levels of effectiveness. However, existing control efforts are minimal in comparison to areas of potential treatment, and significant improvement is available.

Livestock grazing in the PLGZ is significantly impacted by big game herd management on the Panguitch Lake wildlife management unit. Deer and elk habitat in the Panguitch Lake Management Unit is stable throughout most of the range. Panguitch Lake deer and elk winter herd size objectives are 10,000 and 1,100 respectively. Historically, the Panguitch Lake has been managed as a limited entry, trophy mule deer herd, and elk populations have been managed by control hunts. The Panguitch Lake wildlife management unit is currently meeting objectives for deer and elk. This is particularly true where management hunts have experienced low success due to limited access, thick vegetation and rugged terrain.

An ongoing issue, specifically during the hunting season, is irresponsible recreation activities occurring on the grazing allotments. Gates are routinely left open, despite signs asking for gates to be closed; and fences are cut for more immediate access to desirable hunting areas. Both of these situations create hardship for the permittee's as livestock become scattered across the allotment and result in permit compliance issues for the permittee and the Forest Service.

Need for Management Change

1. For approximately 100 years, federal agencies have suppressed wildfires which has allowed an unhealthy increase in stand density. This overabundance of woody species has been exacerbated by failure to conduct appropriate timber harvests at reasonable levels. Conifers have replaced aspen. Pinyon/Juniper have expanded into and replaced sagebrush stands and desirable grasslands. Sagebrush sites have become decadent and increased in cover which has crowded out forbs and grasses. Increased woody vegetation, particularly in Class II and Class III Pinyon/Juniper woodlands, has lowered forage production, reduced watershed health, increased erosion, degraded water quality, reduced optimal habitat for wildlife and increased the potential for catastrophic wildfire. Federal agencies need to greatly expand vegetative treatments particularly regarding conifer encroachment into aspen habitat, pinyon / juniper areas beyond historical limits, rabbit brush, noxious weeds, and decadent sagebrush.
2. Land managers need to restore appropriate timber harvest to improve forest and rangeland health.
3. Land managers need to implement adaptive management to provide greater flexibility to optimize rangeland / forest health, forage production and livestock/wildlife productivity.

4. Big game populations need to be maintained within established population objectives and management plans. Structural and non-structural range improvements need to be repaired where they are damaged by wildlife, particularly elk. Forage production needs to be improved for the benefit of land health, wildlife and livestock.

5. Recreation and livestock grazing have been compatible in the PLGZ since European settlement. During the last few decades, special interests opposed to livestock grazing have fabricated conflicts between recreation and livestock activities. Where recreationists have generalized conflicts with livestock, recreationists need to be directed to areas where livestock grazing is not present. Where site specific conflicts between livestock grazing and recreation occur, structural and non-structural solutions need to be implemented to restore the historic compatibility between recreation and livestock grazing.

6. Wildlife objectives need to be viewed as maximum populations and managed at or below objectives that existed in January 2015.

Desired Conditions

Garfield County desires:

- a) Healthy, productive and resilient watersheds which provide multiple goods and services for the health, safety and welfare of Garfield County residents and visitors.
- b) Greater adaptive management and flexibility in managing forage resources, especially in terms of number of livestock, on/off dates and length of season.
- c) Healthy populations of wildlife amenable coexisting with livestock grazing and management.
- d) Increased treatments of woody vegetation, particularly pinyon/juniper, conifer and decadent sagebrush and rehabilitation with a diversity of native and non-native species.
- e) Increased vegetation diversity and forage production.
- f) All allotments be permitted for grazing;
- g) Additional water resources be developed on all allotments. If an area is currently closed to livestock grazing, water developments could be used by wildlife until livestock grazing is reintroduced.

Findings, Policies, Goals & Objectives

Finding: Recreation are compatible activities in the Panguitch Lake Agricultural Commodity Zone.

Policy: Where recreationists have generalized conflicts with livestock, recreationists need to be directed to areas where livestock grazing is not present. Where site specific conflicts between livestock grazing and recreation occur, structural and non-structural solutions shall be implemented to restore the historic compatibility between recreation and livestock grazing.

Policy: The Panguitch Lake Agricultural Commodity Zone will benefit from greater adaptive management and flexibility in managing forage resources, especially in terms of number of livestock, on/off dates and length of season.

h) **Finding:** Active management, aggressive conversion of Pinyon/Juniper woodlands to desirable vegetative communities, restoration of active timber harvests, and water development are key elements in developing a fire resilient and resistant forest and are compatible with livestock grazing in the Panguitch Lake Agricultural Commodity Zone.

Panguitch Valley Grazing Agricultural Commodity Zone

Introduction

The Panguitch Valley Grazing Agricultural Commodity Zone is established in U.C.A. 63J-8-105.8(2)(???) to preserve and protect the agricultural livestock industry from ongoing threats; to preserve and protect the history, culture, custom, and economic value of the agricultural livestock industry from ongoing threats; and to maximize efficient and responsible restoration, reclamation, preservation, enhancement, and development of forage and water resources for grazing, wildlife practices and affected natural, historical, and cultural activities. Located in Garfield County, the livestock grazing zone covers approximately XXX,XXX acres and is depicted on Map XX.

Current Setting

The Panguitch Valley Grazing Zone (PVGZ) is located in the western portion of Garfield County and consists almost entirely of BLM, private and SITLA lands. Parts of the Beaver, Dutton, and Panguitch Lake management areas are within the Panguitch Valley Grazing Zone. Garfield County's portion of the Panguitch Valley Grazing Zone contains all or part of 24 BLM allotments that accommodate approximately X AUM's.

Panguitch Valley Grazing Zone Allotments

Allotment	Total Acres	Acres in PVGZ	# of head	Days	AUM's	Permit
Cove	13970	13970				
Rocky Ford	12599	4121				
Circleville Canyon	4609	4609				
Dog Valley	12560	12560				
Hawkins Wash	9414	9414				
Spry	10790	9838				
Sevier	1640	1640				
Tebbs Hollow	4011	4011				
Marshall Canyon	889	889				

Sanford Bench	10864	10864
Sandy Creek	9813	5473
Three Mile Creek	2656	2656
Shearing Corral	4043	4043
Limeklin Creek	3775	3775
Roller Mill	2541	2541
Graveyard Hollow	1246	1246
South Canyon	20205	20205
Big Flat	6623	6623
Sunset Cliffs	2141	2141
Sagehen Hollow	7040	7040
Hillsdale	2443	2443
Sevier River	2375	2375
Rock Canyon	9151	9151
Limestone Canyon	1511	1511

The PVGZ is primarily rangeland or irrigated agricultural lands. Some forest lands may be present, but woodlands are primarily occupied by invasive, undesirable Pinyon/Juniper. The zone also includes the communities of Hatch and Panguitch, and contains the County's largest population center. Over the course of the last 100 years significant portions of the zone's range have been invaded by encroaching conifers, making much of the land relatively unproductive and currently occupied by Class II and Class III Pinyon/Juniper woodlands. The PVGZ is currently meeting rangeland and forest health standards. However, productivity and land health can be improved in the many allotments. There are a total of 24 allotments in the Panguitch Valley Grazing Zone, X of which are not permitted.

Varying degrees of invasive and noxious weed species are present in the PVGZ. Pinyon-Juniper, musk thistle, rabbit brush, and Russian Knapweed are the most common invasive weeds in the grazing zone, with isolated infestations of Whitetop, Canada Thistle and Scotch Thistle. Some of these weeds are listed by the State and County as noxious weeds and have received control efforts administered by the participants of the Color County Cooperative Weed Management Association.

Livestock grazing in the PVGZ is significantly impacted by big game herd management in the Beaver, Panguitch Lake and Mt. Dutton wildlife management units. Historically, these units have been managed as a limited entry, trophy mule deer herd, and elk populations have been managed by control hunts. The Dutton wildlife management unit is currently meeting objectives for deer (2,700), but has historically failed to manage elk below the authorized maximum objective of 1,500. This is particularly true where management hunts have experienced low success due to limited access, thick vegetation and rugged terrain. Deer utilize almost all private range and agricultural lands at least some time during the year, while elk are more migratory and occupy a much smaller percentage of the private lands

Federal, state, local, and private entities have cooperated to initiate various vegetation treatments to improve vegetation, most recently in response to Greater Sage Grouse conservation concerns. The largest of these initiatives focused on conversion of invasive Pinyon/Juniper woodlands to

desirable sagebrush/semi-desert grassland communities. In some areas vegetative production increased as much as 100 fold. Increases in soil retention, natural springs and presence of wildlife were also observed.

Need for Management Change

1. Land managers need to expand their efforts to convert Pinyon/Juniper woodlands to desirable vegetative communities. There is an associated need to conduct landscape level environmental analysis to prepare for and facilitate future vegetative restoration projects.
2. Cooperative efforts to control invasive and noxious weeds need to be expanded. Cooperating agencies need to continue to expand the use of the latest technology and integrated weed management techniques to optimize weed control.
3. Land managers need to implement adaptive management to provide greater flexibility to optimize rangeland / forest health, forage production and livestock/wildlife productivity.
4. Big game populations need to be maintained within established population objectives and management plans. Structural and non-structural range improvements need to be repaired where they are damaged by wildlife, particularly elk. Forage production needs to be improved for the benefit of land health, wildlife and livestock. On private lands, UDWR needs to continue cooperating with land owners to mitigate wildlife impacts.
5. Additional water needs to be strategically developed to improve distribution of livestock and for the benefit of wildlife.

Desired Conditions

Garfield County desires:

- a) A significant reduction in the lands occupied by Class II and Class III Pinyon/Juniper woodlands and an associated increase in desirable plant communities with a diversity of native and non-native species
- b) Greater adaptive management and flexibility in managing forage resources, especially in terms of number of livestock and length of season.
- c) Healthy populations of wildlife amenably coexisting with livestock grazing and management.
- d) Increased vegetation diversity and forage production.
- e) All allotments be permitted for grazing; The Hillsdale allotment should be combined with adjacent allotments and fenced as needed. The Pole Canyon allotment should be combined with the Hatch allotment and made available for livestock grazing.
- f) Additional water resources be developed on all allotments. If an area is currently closed to livestock grazing, water developments could be used by wildlife until livestock grazing is

reintroduced. Solar water pumps and wells could be an asset to several allotments in this grazing region.

Findings, Policies, Goals & Objectives

Finding: Conversion of Class II and Class III Pinyon/Juniper woodlands to desirable vegetative communities in the Panguitch Valley Grazing Agricultural Commodity Zone has proven to improve rangeland health and benefit a wide variety of species, especially sage grouse.

Finding: Livestock grazing is compatible with conservation of sage grouse and Utah prairie dog populations. Vegetative and water improvements that benefit one species are not detrimental to the other species.

Policy: Garfield County requires forage enhancement on all allotments which are suitable for livestock grazing.

Policy: Additional water shall be developed in the Panguitch Valley Grazing Agricultural Commodity Zone to benefit livestock and wildlife.

East Fork Grazing Agricultural Commodity Zone

Introduction

The East Fork Grazing Agricultural Commodity Zone is established in U.C.A. 63J-8-105.8(2)(m) to preserve and protect the agricultural livestock industry from ongoing threats; to preserve and protect the history, culture, custom, and economic value of the agricultural livestock industry from ongoing threats; and to maximize efficient and responsible restoration, reclamation, preservation, enhancement, and development of forage and water resources for grazing, wildlife practices and affected natural, historical, and cultural activities. Located in Garfield and Kane Counties, the livestock grazing zone covers approximately 419,857 acres and is depicted on Map XX.

Current Setting

The East Fork Grazing Zone (EFGZ) is located in Powell District of the Dixie National Forest and extends from Mount Dutton on the north and into Kane County on the south. It is comprised the Tom Best, Flake Mountain, Dave's Hollow and Paunsaugunt sub regions and includes the East Fork of the Sevier River as it flows from its head waters through Tropic Reservoir to Johns Valley. Garfield County's portion of the East Fork Grazing Zone contains all or part of 19 Forest Service allotments that accommodate approximately 11,000 AUM's. There are a total of 19 allotments in the East Fork Zone, four of which are not permitted. The East Fork Grazing Zone contains approximately 289,000 acres with the following livestock conditions:

Entity	Acres	Allotments	AUMs
Forest Service	136,976		
BLM land	10,507 acres		
Private	14,699 acres	N/A	N/A
SITLA	38,427 acres		

East Fork Grazing Region – Powell District Grazing Allotments and Acres					
Allotment	Acres	# of head	Days	AUM's	Permit
Blue Fly	20486	193	121	778	
Clark Mountain	29424	93	131	406	
Deer Creek	58014	933	116	722	
Don Spring	454	15	60	30	
East Fork/Robinson	45117	443	111	1639	
East Pines	19658	266	131	1162	
Hatch	9828	45	91	137	
Heward	1667			0	Not Permitted
Hillsdale	5991			0	Not Permitted
Hunt Creek/Cottonwood	50810	930	73	453	Sheep Allotment
Jones Corral	15255	208	131	908	
Pines	28252	464	131	2026	
Pole Canyon	5111	464	0	0	Not Permitted
Robinson/Lower Blubber	6792	88	111	326	
Sheep Creek	2795	40	121	161	
Smith Canyon	13655	40	0	0	Not Permitted
Upper Blubber	6917	33	121	133	
Widstoe	13013	339	131	1480	
Willow Springs	20848	162	131	707	
Total	354087	4756	1711	11068	

As with other areas in Garfield County, invasive weed species are present in site specific locations of the EFGZ. Pinyon-Juniper, musk thistle, rabbit brush, and Russian Knapweed are the most common invasive weeds in the grazing zone. Each of the weed species is under various levels of control.

Livestock grazing in the EFGZ is significantly impacted by big game herd management in the Paunsaugunt and Mt. Dutton wildlife management units. Deer and elk habitat in the Paunsaugunt Wild Management Unit is stable throughout most of the range. Paunsaugunt deer and elk winter herd size objectives are 5,200 and 140 respectively. Historically, the Paunsaugunt has been managed as a limited entry, trophy mule deer herd, and elk populations have been managed by control hunts. The Dutton wildlife management unit is currently meeting objectives for deer (2,700), but has historically failed to manage elk below the authorized maximum objective of 1,500. This is particularly true where management hunts have experienced low success due to limited access, thick vegetation and rugged terrain.

State and federal agencies have initiated various vegetation treatments to improve wildlife habitat, most recently in response to greater sage grouse conservation concerns. However, the most significant wildlife habitat improvement during the last several years came as a result of the Sanford fire in 2002. The fire affected a variety of habitats including big game winter and summer range and birthing areas. The Sanford Fire impacted approximately 78,000 acres with half of the area burned and the other half left unaffected. Heavy fuel loadings and decadent vegetation was removed in the burned portions, and there was a corresponding increase in vegetation diversity and forage productivity.

Need for Management Change

1. Land managers need to expand their efforts to convert Pinyon/Juniper woodlands to desirable vegetative communities. There is an associated need to conduct landscape level environmental analysis to prepare for and facilitate future vegetative restoration projects.
2. Land managers need to implement adaptive management techniques for areas impacted by the Sanford fire. Additional forage is available, and managers need to consider experimental projects where AUMs are temporarily increased by 10% or more in specific allotments in order to evaluate carrying capacity.
3. Failure to control elk populations within established wildlife objectives negatively impacts forest and rangeland health and livestock grazing resources. Wildlife managers need to manage elk at or below population objectives established prior to January 2015.
4. Damage to structural and non-structural range improvements by wildlife needs to be repaired and mitigated.
5. Insufficient water is being produced by the pipe system in the Pines Allotment. Improvements to the water system, including a solar powered pump need to be implemented.
6. All allotments need to be made available for livestock grazing. Where appropriate currently unavailable allotments may be fenced and/or combined with adjacent allotments to make them suitable for livestock grazing.

Desired Conditions

Garfield County desires:

- a) Expanded efforts to conduct landscape level NEPA analysis and conduct associated vegetation improvement projects to convert Pinyon/Juniper woodlands to desirable vegetative communities.
- b) Greater adaptive management and flexibility including consideration of experimental projects where AUMs are temporarily (3 to 5 years) increased by 10% or more in specific allotments in order to evaluate carrying capacity.
- c) Control of wildlife populations below population objectives established prior to January 2015.

- d) Repair of structural and non-structural range improvements that have been damaged by wildlife, especially elk that are over population objectives. Repairs should be conducted or paid for by the appropriate wildlife or land management authority.
- e) Additional AUMs where appropriate in allotments impacted by the Sanford Fire.
- f) Repair of the water system in the Pines Allotment, and increased water development in other areas, including solar powered wells, where appropriate.
- g) All allotments are available for livestock grazing. Where appropriate, currently unavailable allotments may be fenced and/or combined with adjacent allotments to make them suitable for livestock grazing.

Findings, Policies, Goals & Objectives

Finding: Grazing and vegetative resources in the East Fork Grazing Agricultural Commodity Zone have not been developed to optimize rangeland/forest health and use by livestock and wildlife.

Goal: Create sustainable, resilient, productive rangeland with diverse vegetation and wildlife which supports optimal levels of livestock grazing through conversion of Class II and Class III Pinyon/Juniper woodlands to desirable vegetative communities in the East Fork Grazing Agricultural Commodity Zone.

Finding: Livestock grazing is compatible with conservation of sage grouse and Utah prairie dog populations. Vegetative and water improvements that benefit one species are not detrimental to the other species.

Policy: Forage enhancements are suitable on all allotments in the East Fork Grazing Agricultural Commodity Zone.

Policy: Additional water shall be developed in the East Fork Grazing Agricultural Commodity Zone to benefit livestock and wildlife. Specifically, water systems shall be improved in the Pines Allotment. Garfield County supports the development of additional water resources, including but not limited to the use of solar powered wells.

Policy: Damage to structural and non-structural range improvements shall be completed. Where damaged is attributable to wildlife, repairs should be conducted or paid for by the appropriate wildlife or land management authority.

Policy: Wildlife shall be managed at or below population objectives in place in January 2015. No additional population increases shall be authorized without coordination and concurrence with Garfield County.

Policy: All allotments shall be made available for livestock grazing. Where appropriate,

currently unavailable allotments may be fenced and/or combined with adjacent allotments to make them suitable for livestock grazing.

Kingston Canyon Grazing Agricultural Commodity Zone

Introduction

The Kingston Canyon Grazing Agricultural Commodity Zone is established in U.C.A. 63J-8-105.8(2)(o) to preserve and protect the agricultural livestock industry from ongoing threats; to preserve and protect the history, culture, custom, and economic value of the agricultural livestock industry from ongoing threats; and to maximize efficient and responsible restoration, reclamation, preservation, enhancement, and development of forage and water resources for grazing, wildlife practices and affected natural, historical, and cultural activities. Located in Garfield and Piute Counties, the livestock grazing zone covers approximately 49,026 acres and is depicted on **Map XX**.

Current Setting

The Kingston Canyon Grazing Zone (KCGZ) is located in the north central area of Garfield County and the southern part of Piute County. Garfield County's portion of the Kingston Canyon Grazing Zone contains all or part of 10 BLM allotments that accommodate approximately **X** AUM's. The Kingston Canyon Grazing Zone contains approximately 49,000 acres with the following livestock conditions:

Kingston Canyon Zone BLM						
Allotment	Total Acres	Acres in KCGZ	# of head	Days	AUM's	Permit
Hunter Spring	3550.37	1948				
Antimony Ranch	841	841				
Dry Wash	5658.64	2604				
Antimony Creek	3992	3992				
Pole Canyon	6988	6988				
Sevier River	50.1	50				
Poison Creek	5222	5222				
Pine Creek						
Antimony	13333	13333				
Johns Valley	5729	5729				
Center Creek	4546	4546				

Need for Management Change

No separate management changes have been identified for the Kingston Canyon Agricultural Grazing Commodity Zone. Needs for Management Change for this zone are described in the general livestock grazing section included above.

Desired Conditions

No separate desired conditions have been identified for the Kingston Canyon Agricultural Grazing Commodity Zone. Desired Conditions for this zone are described in the general livestock grazing section included above.

Findings, Policies, Goals & Objectives

No separate findings, policies, goals or objectives have been identified for the Kingston Canyon Agricultural Grazing Commodity Zone. Findings, policies, goals or objectives for this zone are described in the general livestock grazing section included above.

Boulder Mountain Grazing Agricultural Commodity Zone

Introduction

The Boulder Mountain Grazing Agricultural Commodity Zone is established in U.C.A. 63J-8-105.8(2)(r) to preserve and protect the agricultural livestock industry from ongoing threats; to preserve and protect the history, culture, custom, and economic value of the agricultural livestock industry from ongoing threats; and to maximize efficient and responsible restoration, reclamation, preservation, enhancement, and development of forage and water resources for grazing, wildlife practices and affected natural, historical, and cultural activities. Located in Garfield and Wayne Counties, the livestock grazing zone covers approximately 621,184 acres and is depicted on Map **XX**.

Current Setting

The Boulder Mountain Agricultural Grazing Commodity Zone (BMGZ) consists primarily of Forest Service administered property with a few inholdings of private and BLM property. The BMGZ border follows the GSENM/BLM boundary on the south and south-east to Capitol Reef National Park, Piute and Wayne Counties on the north and BLM/Private/State property in Johns Valley on the west. The BMGZ is unique due to its many natural lakes spread out across its landscape. BMGZ is a high elevation, high precipitation region and lends itself to productive grazing pastures. Garfield County's portion of the Boulder Mountain Grazing Zone contains all or part of 15 Forest Service allotments that accommodate approximately 11,000 AUM's. The Boulder Mountain Grazing Zone contains approximately 621,184 acres with the following livestock conditions:

Entity	Acres	Allotments	AUMs
Forest Service	X	15	X
BLM land	X	X	X
Private	X	X	X
SITLA	X	X	X

Boulder Grazing Region								
Allotments	Total Acres	Acres in BMGZ	# of head	On Date	Off Date	# of Days	AUM's	Permit
Boulder	41052	41052	813	16-Jun	15-Oct	121	3279	
Cameron -	14211	14211	267	11-Jun	10-Oct	121	1077	

Wash								
Canaan Mountain	7137	7137						
Coyote Hollow	74717	74716	1228	16-Jun	15-Oct	121	4953	
Horse Creek	24325	24325	254	16-Jun	30-Sep	106	898	
North Creek	70254	70254	734	16-Jun	30-Sep	106	2594	
Pine Creek	50050	50050	647	16-Jun	30-Sep	106	2286	
Pine Lake	13987	13987	54	11-Jun	10-Oct	121	218	
Sand Creek	48046	48046	754	16-Jun	10-Oct	116	2916	
Sweetwater/ Griffin Top	21172	21172	200	6-Jun	30-Sep	116	773	
Upper Valley East	17132	17132	366	16-Jun	30-Sep	106	1293	
Upper Valley West	16425	16419	215	16-Jun	30-Sep	121	867	
West Deer Creek	30	30	7	1-Jun	10-Oct	131	31	

Livestock grazing in the Boulder Mountain Agricultural Grazing Commodity Zone is significantly impacted by big game herd management in the Boulder Unit. Elk in the area are migratory in nature and are significantly over designated population objectives. Elk utilize important forage resources and damage structural and non-structural range improvements. Elk also impact forage and livestock grazing resources on private property. Management hunts have failed to keep population objectives in check.

Need for Management Change

- 1) Land managers need to expand their efforts to convert Pinyon/Juniper woodlands to desirable vegetative communities. There is an associated need to conduct landscape level environmental analysis to prepare for and facilitate future vegetative restoration projects.
- 2) Failure to control elk populations within established wildlife objectives negatively impacts forest and rangeland health and livestock grazing resources. Wildlife managers need to manage elk at or below population objectives established prior to January 2015.
- 3) Damage to structural and non-structural range improvements by wildlife needs to be repaired and mitigated.

Desired Conditions

Garfield County desires:

- a) Expanded efforts to conduct landscape level NEPA analysis and conduct associated vegetation improvement projects to convert Pinyon/Juniper woodlands to desirable vegetative communities.

- b) Greater adaptive management and flexibility including consideration of experimental projects where AUMs are temporarily (3 to 5 years) increased by 10% or more in specific allotments in order to evaluate carrying capacity.
- c) Control of wildlife populations below population objectives established prior to January 2015.
- d) Repair of structural and non-structural range improvements that have been damaged by wildlife, especially elk that are over population objectives. Repairs should be conducted or paid for by the appropriate wildlife or land management authority.

Findings, Policies, Goals & Objectives

Finding: Grazing and vegetative resources in the Boulder Mountain Grazing Agricultural Commodity Zone have not been developed to optimize rangeland/forest health and use by livestock and wildlife.

Goal: Create sustainable, resilient, productive rangeland with diverse vegetation and wildlife which supports optimal levels of livestock grazing through conversion of Class II and Class III Pinyon/Juniper woodlands to desirable vegetative communities in the Boulder Mountain Grazing Agricultural Commodity Zone.

Policy: Forage enhancements are suitable on all allotments in the Boulder Mountain Grazing Agricultural Commodity Zone.

Policy: Damage to structural and non-structural range improvements shall be completed. Where damaged is attributable to wildlife, repairs should be conducted or paid for by the appropriate wildlife or land management authority.

Policy: Wildlife shall be managed at or below population objectives in place in January 2015. No additional population increases shall be authorized without coordination and concurrence with Garfield County.

Policy: All allotments shall be made available for livestock grazing. Where appropriate, currently unavailable allotments may be fenced and/or combined with adjacent allotments to make them suitable for livestock grazing.

Escalante Grazing Region Zone / Escalante Historic - Cultural Grazing Region Introduction

The Escalante Grazing Region Zone was the first grazing commodity zone designated by the state legislature and is established in U.C.A. 63J-8-105.8(2)(a) to preserve and protect the agricultural livestock industry from ongoing threats; to preserve and protect the history, culture, custom, and economic value of the agricultural livestock industry from ongoing threats; and to maximize efficient and responsible restoration, reclamation, preservation, enhancement, and development of forage and water resources for grazing, wildlife practices and affected natural,

historical, and cultural activities. Located in Garfield and Kane Counties, the livestock grazing zone covers approximately 832,385 acres and is depicted on Map XX.

In addition to the Utah State legislative recognition, the designated area has been recognized by the Garfield County Commission as cultural resource of historic and cultural significance and has been designated the Escalante Historic-Cultural Grazing Region. The County has placed the region on its register of cultural resources and has adopted an ordinance governing its management. Grazing activities conducted in the region are cultural resources and ethnographic resources protected by the County's Protection of Cultural Resources Ordinance and other state and federal law. Federal agencies managing lands in the designated region are required to be consistent with the County's plan, program and policies to the maximum extent allowed by law.

Current setting:

Perhaps more than any other grazing commodity zone in Utah, the Escalante Historic/Cultural Grazing Zone EGZ has been recognized by federal, state and local governments as a historic center for livestock grazing on public land. Livestock grazing is authorized under BLM's normal multiple use mandate. Additionally, livestock grazing in the Grand Staircase-Escalante National Monument is also recognized and protected by the proclamation issued by President William J. Clinton in September 1996. The importance of livestock grazing was recognized by the President when he indicated *"The monument has a long and dignified human history: it is a place where one can see how nature shapes human endeavors in the American West, where distance and aridity have been pitted against our dreams and courage."* Cowboy line camps are specifically identified as objects for which the Monument was designated. In exercising his discretion under the Antiquities Act, President Clinton exempted livestock grazing from laws governing objects in the Monument and protected livestock grazing under existing laws other than the proclamation by the following language, *"Nothing in this proclamation shall be deemed to affect existing permits or leases for, or levels of, livestock grazing on Federal lands within the monument; existing grazing uses shall continue to be governed by applicable laws and regulations other than this proclamation."*

Rangeland is the dominant and most important land base resource in this zone. Perennial grasses, forbs, shrubs, and pinyon and juniper trees are the dominant vegetation. These rangelands have been and continue to be grazed by cattle throughout the year. During the winter months, cattle graze on the lower elevations in the southeastern part of the area. Although on a more limited basis, cattle graze during the summer months on the higher elevations in the northern part; and during the fall and spring they graze the southwestern, eastern and central parts.

Generally, water for livestock is supplied through spring developments, wells, catchponds, and a few streams. Almost all water rights in the grazing zone are allocated for livestock. Although these rangelands are known for recreation, analysis indicates less than 10% of the area is managed for recreation, and visitation is extremely limited to non-existent over the vast majority of the grazing zone. The word "recreation" is completely omitted from the 1996 proclamation and was not a designated purpose for Monument creation.

Many of the soils has very productive capabilities. However, the current vegetative resources show the effects of passive management and the lack of natural fires in the ecosystem; therefore,

some historical grasslands are covered by decadent sagebrush, rabbitbrush, and large areas of invading pinyon and juniper woodlands. Vegetative capability within the Monument is currently far below potential. The Soil Survey of Grand Staircase- Escalante National Monument produced by the Natural Resources Conservation Services indicates *“herbaceous ground cover and grazeable forage may be as little as one-fourth of what it should be, resulting in accelerated erosion. Ground cover and wildlife and livestock forage can be improved using management practices ... Some conditions may require accelerated range practices such as brush management, prescribed burning, and/or reseeding with herbaceous plant species.”*

Dominant Class II (33% to 66% canopy cover) and Class III (greater than 66% canopy cover) pinyon and juniper are widespread throughout much the grazing zone. Historically, P/J woodlands occur on stony or shallow slopes or in shallow topsoil on mesas and benches. However in this grazing zone pinyon and juniper have invaded deep soils in response to a lack of fire in the ecosystem and poor vegetative cover. These invading stands are usually even-aged and less than 150 years old. Pinyon and juniper woodlands are choking out understory vegetation and causing watershed problems in the area. The woodlands produce substantial runoff and sediment, reducing water quality and magnifying natural erosion. Portions of the grazing zone are also impacted by Tamarisk and Russian Olive. These invasive species dominate limited water supplies, outcompete desirable vegetation and degrade valuable riparian area values.

Biological soil crusts composed of lichens, cyanobacteria, mosses, liverworts and microorganisms, are present in many areas of this grazing commodity zone. Although not completely understood, biological soil crusts are widely believed to contribute to ecosystem stability by means of soil stabilization, nitrogen fixation, and improved growth and establishment of vascular plant species. Biological crusts and vascular plants interact on many levels. The nature and consequences of these interactions vary with crust and plant characteristics and environmental conditions and also vary throughout the plants' life cycle. However, the relationship between biologic crusts and vascular plants in the EGZ is generally symbiotic and successional rather than competitive.

Need for Management Change

- 1) Land managers need to provide greater flexibility to optimize rangeland / forest health, forage production and general productivity.
- 2) Forage production needs to be improved for the benefit of land health, wildlife and livestock.
- 3) In management zones designated by Garfield County as Forage, recreation needs to be managed in a manner that preserves or enhances livestock grazing activities.
- 4) Resolution of perceived conflicts between recreation and livestock grazing need to be resolved with deference to livestock grazing in areas that are: a) not designated as a focal point for visitor use, b) acreages that receive an average annual visitation less than 25 visitors per day, or c) designated as Forage in Garfield County's Land Use Management Zones.

- 5) Where perceived conflicts between recreation and livestock grazing are resolved with deference to recreation, they need to be limited to a) the smallest area possible, b) the least impact on the livestock grazing industry as practical; or c) acreages that receive an average annual visitation greater than 25 visitors per day.
- 6) Class II and Class III pinyon/juniper woodlands need to be reduced by 25% based on a rolling 10 year average and maintained as desirable sagebrush semi-desert grasslands communities thereafter.
- 7) Invading Class I conifers in sagebrush semi-desert grassland communities need to be removed and prevented from expanding to Class II status.
- 8) The symbiotic and successional relationship between biologic crusts and vascular plants needs to be recognized.
- 9) Consistent with ecologic site descriptions, lands need to be managed for optimum desirable vascular plant production.
- 10) Biologic soil crusts need to be managed to optimize their contribution to ecosystem stability by means of soil stabilization, nitrogen fixation, and improved growth and establishment of vascular plant species rather than for their potential to exist as a stand-alone, climax resource.
- 11) Prior to 2026 rangeland conditions need to be improved to accommodate permitted livestock grazing levels (including restoration of suspended AUMs, estimated at 106,000 AUMs) that existed at the time President Clinton protected livestock grazing with the Grand Staircase-Escalante National Monument Proclamation.
- 12) Livestock grazing in the Escalante Grazing Region Zone needs to be recognized as an activity of cultural and historic significance in accordance with the Monument Proclamation, Utah State law and Garfield County's Cultural Resource Protection Ordinance.
- 13) Livestock grazing in the Escalante Grazing Region Zone needs to be recognized as the primary activity that qualifies the areas as a) a frontier, b) a place with a long and dignified human history, c) a place where one can see how nature shapes human endeavors in the American West, and d) a place where distance and aridity have been pitted against our dreams and courage.
- 14) Livestock grazing in the Escalante Grazing Region Zone needs to be recognized as a critical element in the County's custom, culture and heritage.
- 15) In order to preserve and enhance rangeland health, and consistent with ecologic site condition, land managers need to comply with Garfield County's plans, policies, programs and ordinances. Specifically, land managers need to take a more active role in optimizing vegetative resources for the benefit of land health, wildlife and livestock.

Desired Conditions

Garfield County desires:

- a) Land managers provide greater flexibility to optimize rangeland / forest health, forage production and general productivity.
- b) Forage production be improved for the benefit of land health, wildlife and livestock to the level that the goals, plans, policies, programs, and ordinances of Garfield County can be obtained.
- c) In management zones designated as Forage by Garfield County, recreation is managed in a manner that preserves or enhances livestock grazing activities.
- d) Resolution of perceived conflicts between recreation and livestock grazing are resolved with deference to livestock grazing in areas that are: 1) not designated as a focal point for visitor use, 2) acreages that receive an average annual visitation less than 25 visitors per day, or 3) designated as Forage in Garfield County's Land Use Management Zones.
- e) Where perceived conflicts between recreation and livestock grazing are resolved with deference to recreation, they need to be limited to 1) the smallest area possible, 2) the least impact on the livestock grazing industry as practical; or 3) acreages that receive an average annual visitation greater than 25 visitors per day.
- f) Class II and Class III pinyon/juniper woodlands are reduced by 25% based on a rolling 10 year average and maintained as desirable sagebrush semi-desert grasslands communities thereafter.
- g) Invading Class I conifers in sagebrush semi-desert grassland communities are removed and prevented from expanding to Class II status.
- h) The symbiotic and successional relationship between biologic crusts and vascular plants is recognized.
- i) Consistent with ecologic site descriptions, lands are managed for optimum desirable vascular plant production.
- j) Biologic soil crusts are managed to optimize their contribution to ecosystem stability by means of soil stabilization, nitrogen fixation, and improved growth and establishment of vascular plant species rather than for their potential to exist as a stand-alone, climax resource.
- k) Prior to 2026 rangeland conditions are improved to accommodate permitted livestock grazing levels (including restoration of suspended AUMs, estimated at 106,000 AUMs) that existed at the time President Clinton protected livestock grazing with the Grand Staircase-Escalante National Monument Proclamation.

- l) Livestock grazing in the Escalante Grazing Region Zone is recognized as an activity of cultural and historic significance in accordance with the Monument Proclamation, Utah State law and Garfield County's Cultural Resource Protection Ordinance.
- m) Livestock grazing in the Escalante Grazing Region Zone is recognized as the primary activity that qualifies the areas as 1) a frontier, 2) a place with a long and dignified human history, 3) a place where one can see how nature shapes human endeavors in the American West, and 4) a place where distance and aridity have been pitted against our dreams and courage.
- n) Livestock grazing in the Escalante Grazing Region Zone is recognized as a critical element in the County's custom, culture and heritage.
- o) In order to preserve and enhance rangeland health, and consistent with ecologic site condition, land managers comply with Garfield County's plans, policies, programs and ordinances. Specifically, Garfield County desires land managers take a more active role in optimizing vegetative resources for the benefit of land health, wildlife and livestock.

Findings, Policies, Goals & Objectives

Policy: Garfield County recognizes that certain NPS lands have restrictions that prohibit full implementation of the policies goals and objectives outlined below. Garfield County encourages park service units to cooperate and coordinate with Garfield County to implement favorable grazing policies to the maximum extent permitted by their enabling legislation.

Policy: Grazing in Grand Staircase-Escalante National Monument is governed by BLM's applicable grazing laws and regulations, independent of protection of objects offered by Proclamation 6920, September 18, 1996.

Finding: Garfield County accepts a plain reading of the Proclamation establishing the Grand Staircase-Escalante National Monument and declares: *Nothing in [the] proclamation shall be deemed to affect existing permits or leases for, or levels of, livestock grazing on Federal lands within the monument; existing grazing uses shall continue to be governed by applicable laws and regulations other than [the] proclamation.*

Finding: In accordance with NRCS soils reports for the Grand Staircase-Escalante National Monument, Garfield County finds soils are producing less than 25% of their capacity.

Finding: Permitted AUMs at the time of Monument designation were approximately 106,000.

Policy: Taking a plain reading of the Monument Proclamation, the minimum annual AUMs in the Grand Staircase-Escalante National Monument are 106,000.

Policy: Failure to improve vegetative resources to provide for 106,000 annual AUMs violates the Monument Proclamation, is inconsistent with state law, is inconsistent with Garfield County's plan program and policy, and violates Garfield County's cultural resource ordinance protecting

grazing resources in the Escalante Region Grazing Zone.

Finding: Vascular plants and biologic soil crusts have a symbiotic relationship that is not completely understood. Managing for optimal desirable vascular plant health, vigor and diversity is the best method for protecting and promoting the health of biologic soil crusts.

Policy: Until all aspects of the relationship between vascular plants and biologic soils are understood and proven by objective science, management actions that promote the health, vigor and diversity of desirable native and non-native vascular plants is deemed to symbiotically protect and enhance the health of biologic soils.

Finding: Ungrazed reference areas have not been scientifically proven to provide optimal forest and rangeland health and have not been shown to ensure and maximize the quality, objectivity, utility, and integrity of scientific data required by the Data Quality Act. Ungrazed reference areas have not been proven to provide the statistical reliability required by federal law.

Policy: Unless mandated by federal or state law, ungrazed reference areas shall not exceed 0.5% of any allotment or 80 acres, whichever is greater. Data obtained from ungrazed reference areas shall be used only as preliminary indicators and shall not be used as a basis for management actions.

Policy: Land managers shall provide greater flexibility to optimize rangeland / forest health, forage production and general productivity, to the greatest extent allowed by law.

Policy & Goal: Forage production shall be improved for the benefit of land health, wildlife and livestock to the level that the goals, plans, policies, programs, and ordinances of Garfield County can be obtained.

Policy: In management zones designated as Forage by Garfield County, recreation shall be managed in a manner that preserves or enhances livestock grazing activities, unless otherwise approved by the Garfield County Commission.

Policy: Resolution of perceived conflicts between recreation and livestock grazing shall be resolved with deference to livestock grazing in areas that are: 1) not designated as a focal point for visitor use, 2) acreages that receive an average annual visitation less than 25 visitors per day, or 3) designated as Forage in Garfield County's Land Use Management Zones.

Policy: Where perceived conflicts between recreation and livestock grazing shall be resolved with deference to recreation, they need to be limited to 1) the smallest area possible, 2) the least impact on the livestock grazing industry as practical; or 3) acreages that receive an average annual visitation greater than 25 visitors per day.

Policy & Goal: Class II and Class III pinyon/juniper woodlands shall be reduced by 25% based on a rolling 10 year average and maintained as desirable sagebrush semi-desert grasslands communities thereafter.

Policy & Goal Invading Class I conifers in sagebrush semi-desert grassland communities are removed and prevented from expanding to Class II status.

Finding, Policy & Goal: The symbiotic and successional relationship between biologic crusts and vascular plants shall be recognized.

Policy & Goal: Consistent with ecologic site descriptions, lands are managed for optimum desirable vascular plant production.

Policy & Goal: Biologic soil crusts shall be managed to optimize their contribution to ecosystem stability by means of soil stabilization, nitrogen fixation, and improved growth and establishment of vascular plant species rather than for their potential to exist as a stand-alone, climax resource.

Policy, Goal & Objective: Prior to 2026 rangeland conditions shall be improved to accommodate permitted livestock grazing levels (including restoration of suspended AUMs, estimated at 106,000) that existed at the time President Clinton protected livestock grazing with the Grand Staircase-Escalante National Monument Proclamation.

Finding & Policy: Livestock grazing in the Escalante Grazing Region Zone is an activity of cultural and historic significance in accordance with the Monument Proclamation, Utah State law and Garfield County's Cultural Resource Protection Ordinance.

Finding & Policy: Livestock grazing in the Escalante Grazing Region Zone is the primary activity that qualifies the areas as 1) a frontier, 2) a place with a long and dignified human history, 3) a place where one can see how nature shapes human endeavors in the American West, and 4) a place where distance and aridity have been pitted against our dreams and courage.

Finding & Policy: Livestock grazing in the Escalante Grazing Region Zone is a critical element in the County's custom, culture and heritage.

Finding & Policy: In order to preserve and enhance rangeland health, and consistent with ecologic site condition, land managers shall comply with Garfield County's plans, policies, programs and ordinances. Specifically, Garfield County requires land managers take a more active role in optimizing vegetative resources for the benefit of land health, wildlife and livestock.

Finding: Livestock grazing decisions that are not consistent/compliant with this RMP needs to be revisited by the managing agency within 5 years or at the next amendment/revision process whichever occurs first.

Goal: Create sustainable, resilient, productive rangeland with diverse vegetation and wildlife which supports optimal levels of livestock grazing.

Henry Mountains Grazing Agricultural Commodity Zone Introduction

The Henry Mountains Grazing Agricultural Commodity Zone is established in U.C.A. 63J-8-

105.8(2)(II) to preserve and protect the agricultural livestock industry from ongoing threats; to preserve and protect the history, culture, custom, and economic value of the agricultural livestock industry from ongoing threats; and to maximize efficient and responsible restoration, reclamation, preservation, enhancement, and development of forage and water resources for grazing, wildlife practices and affected natural, historical, and cultural activities. Located entirely in Garfield County, the livestock grazing zone covers approximately XXX,XXX acres and is depicted on Map XX.

Current Setting

The Henry Mountains Grazing Zone (HMGZ) is located in the eastern part of Garfield County, just north of Lake Powell. Within this area, almost 2 million acres of public land are administered by the Bureau of Land Management. There is a wide variety of multiple uses including mining, recreation, and grazing. This area of Garfield County is one of the driest and least productive from a vegetative standpoint. Some of Capitol Reef National Park is located within the Henry Mountain Grazing Zone.

Henry Mountains Zone						
Allotment	Total Acres	Acres in HMGZ	# of head	Days	AUM's	Permit
Nasty Flat	17776	17776				
Steel Butte	82625.86	73168				
Blue Bench	111701.31	2176				
Crescent Creek	9893.16	9893				
Trachyte	58723.37	58723				
Pennell	63307.23	63307				
Bull Frog	93407.56	93408				
Waterpocket	72870.25	62915				
Rockies	172961					
Cedar Point	59604.12	59350				
Burr Point	72701.09	21308				
Sandy #1	30094.14	6				
Sandy #2	56015.69	55175				
Sandy #3	6177.3	6177				
Hankville	96279.82	1				

As with most areas in the County, vegetation is a basic resource component for grazing in the HMGZ. The area's four major vegetation communities are pinyon/juniper,

saltbush, grassland, and blackbrush. Specific areas of concern include riparian areas, poisonous and noxious plants, and site specific areas defined as being ecologically unique.

Little forage is produced in the pinyon/juniper zone for livestock and large wildlife species. Tree roots deplete the soil of available moisture and nutrients. As a result, understory forage species are often scarce or altogether absent. These areas are also prone to erosion and soil loss as a result of precipitation events.

Generally, the saltbush zone produces a mixture of browse and grass species for livestock grazing. Species that are most common are four-wing saltbrush, shadscale, Mormon tea, galleta, blue gramma, and Indian ricegrass. Although most saltbrush areas are accessible to livestock, use is limited or precluded to some degree by the lack of stock water. Reservoirs are the main source of water but are often dry during the spring and winter months.

Blackbrush communities support stands of forage species, such as Mormon tea, Indian ricegrass, and galleta, which are useful for livestock grazing in fall, spring, and winter. In general, cattle do not use blackbrush if other forage is available.

Riparian areas are generally accessible to livestock and are heavily used because of their relatively lush vegetation, availability of water, and shade. Riparian areas constitute less than 1 percent of vegetation in the grazing zone.

Poisonous and undesirable vegetation, including noxious and invasive plants, are present throughout the grazing zone, but generally do not occur in concentrations sufficient to pose a significant threat to livestock. Additionally, site specific locations and isolated mesa tops are scattered throughout the area and some may contain vegetation types that are ecologically unique. Some of these sites be considered relict areas because inaccessibility limits or prevents livestock and wildlife grazing. These areas are extremely limited in size and only occur sporadically. Their inaccessibility provides some degree of natural protection from resource damage.

Water is scarce over most of the grazing zone and is often a limiting factor for livestock. Snow provides some water to wintering animals, however, if there is insufficient snow, permittees must haul water. Although there are numerous reservoirs, they are generally not very dependable. Most of the water supplied for these reservoirs comes as relatively unpredictable runoff in summer and fall. The soil is permeable, and water that collects in these reservoirs often seeps out or has evaporated by the time livestock enter the area. Wells, pipelines, and springs are more reliable, but they are difficult or infeasible in many areas. Guzzlers are to some degree more successful than reservoirs because they have a smaller area of water surface exposed to evaporation and they can be more easily sealed to prevent leakage.

Need for Management Change

- 1) Land managers need to continue implementing Utah's Standards for Healthy Rangelands and Guidelines for Grazing, but do so in a more aggressive and active approach.
- 2) Increased adaptive management needs to be implemented, including consideration of localized or well-timed precipitation events that may result in adequate forage for specific areas in spite of long term or regional drought conditions.
- 3) Action needs to be taken to significantly improve desirable forage. Particular attention needs to be paid to conversion of pinyon/juniper communities to more desirable and beneficial vegetation and increased ground cover.
- 4) Aggressive action needs to be taken to significantly improve water resources in the area, including development of wells, retention of stormwater and maintenance of ponds and other water related range improvements.
- 5) Flexibility needs to be added to optimize on / off dates, timing, duration, intensity and other aspects of livestock grazing. Operations need to be governed by resource conditions rather than calendar dates.
- 6) Forage allocation needs to be continually updated to optimize use of livestock grazing related resources, including relinquished allotments, changes from realty actions, improved forage, newly developed water resources, changes in season of use or livestock class, or other pertinent factors.
- 7) Land managers need to efficiently address relinquishment of livestock grazing privileges and requests to reallocate available forage. Preference needs to be given to livestock grazing activities wherever possible.
- 8) Forage allocation needs to be addressed on allotments with no forage licensed for livestock use.
- 9) Access for maintaining range improvements needs to be acknowledged and maintained. Where access uses the County's transportation network, County asserted roads, paths, ways, and trails need to be recognized and considered public facilities under County jurisdiction.
- 10) Where increasing recreation results in increased conflicts with livestock grazing, land managers need to mitigate the conflicts limiting livestock grazing restrictions to the smallest acreage and impact possible. Unless mandated by federal or state law, or approved by the Garfield County Commission, preference shall be given to livestock grazing activities.
- 11) Riparian areas need to be managed to optimize use of resources by livestock grazing activities while protecting and enhancing riparian conditions. Riparian resources need to be managed on a site specific basis where mutual benefit to the resource and livestock grazing are achieved.

Desired Conditions

Garfield County desires:

- a) Continued implementation of Utah's Standards for Healthy Rangelands and Guidelines for Grazing.
- b) Increased adaptive management including consideration of localized or well-timed precipitation events that may result in adequate forage for specific areas in spite of long term or regional drought.
- c) Action is taken to significantly improve desirable forage. The County desires particular attention be given to conversion of pinyon/juniper communities to more desirable and beneficial vegetation and increased ground cover.
- d) Vastly improved water resources including but not limited to development of wells, retention of stormwater and maintenance of ponds and other water related range improvements.
- e) Added flexibility to optimize on / off dates, timing, duration, intensity and other aspects of livestock grazing. The County desires livestock operations be governed by resource conditions rather than calendar dates.
- f) Forage allocations are continually updated to optimize use of livestock grazing related resources, including relinquished allotments, changes from realty actions, improved forage, development of new water resources, changes in season of use or livestock class, or other pertinent factors.
- g) Land managers efficiently address relinquishment of livestock grazing privileges and requests to reallocate available forage. Desired conditions include preference is given to livestock grazing activities wherever possible.
- h) Forage allocation are addressed on allotments with no forage licensed for livestock use and consideration be given to making lands available for livestock grazing.
- i) Access for maintaining range improvements is acknowledged and maintained. Where access uses the County's transportation network, County asserted roads, paths, ways, and trails are recognized and considered public facilities under County jurisdiction.
- j) Where increasing recreation results in increased conflicts with livestock grazing, land managers mitigate the conflicts limiting livestock grazing restrictions to the smallest acreage and impact possible. Unless mandated by federal or state law, or approved by the Garfield County Commission, preference is given to livestock grazing activities.
- k) Riparian areas are managed to optimize use of resources by livestock grazing activities while protecting and enhancing riparian conditions. Riparian resources are managed on a site specific basis where mutual benefit to the resource, land health and livestock grazing are achieved.

Findings, Policies, Goals & Objectives

Policy: Garfield County recognizes that certain NPS lands have restrictions that prohibit full implementation of the policies, goals and objectives outlined herein. Garfield County encourages park service units to cooperate and coordinate with Garfield County to implement policies to the maximum extent permitted by their enabling legislation.

Policy & Goal: Increase adaptive management including consideration of localized or well-timed precipitation events that may result in adequate forage for specific areas in spite of long term or regional drought.

Policy & Goal: Significantly improve desirable forage. The County desires particular attention be given to conversion of pinyon/juniper communities to more desirable and beneficial vegetation and increased ground cover.

Policy & Goal: Vastly improve water resources including but not limited to development of wells, retention of stormwater and maintenance of ponds and other water related range improvements.

Policy: Land managers shall increase flexibility to optimize on / off dates, timing, duration, intensity and other aspects of livestock grazing. The County desires livestock operations be governed by resource conditions rather than calendar dates.

Policy: Forage allocations shall be continually updated to optimize use of livestock grazing related resources, including relinquished allotments, changes from realty actions, improved forage, development of new water resources, changes in season of use or livestock class, or other pertinent factors.

Policy & Goal: Land managers shall efficiently address relinquishment of livestock grazing permits and requests to reallocate available forage. Desired conditions include preference is given to livestock grazing activities wherever possible. Relinquished permits shall be reallocated within 1 year whenever possible.

Policy: Forage allocations shall be addressed on allotments with no forage permitted for livestock use and consideration be given to making lands available for livestock grazing prior to .

Policy: Access for maintaining range improvements shall be acknowledged and maintenance authorized prior to 2020. Where access uses the County's transportation network, County asserted roads, paths, ways, and trails shall recognized and considered public facilities under County jurisdiction.

Policy: Where increasing recreation results in increased conflicts with livestock grazing, land managers shall mitigate the conflicts limiting livestock grazing restrictions to the smallest

acreage and impact possible. Unless mandated by federal or state law, or approved by the Garfield County Commission, preference shall be given to livestock grazing activities.

Finding & Policy: Riparian resources are extremely limited in the grazing zone. Riparian areas shall be managed to optimize use of resources by livestock grazing activities while protecting and enhancing riparian conditions. Riparian resources shall be managed on a site specific basis where mutual benefit to the resource, land health and livestock grazing are achieved.

Glen Canyon Grazing Agricultural Commodity Zone

Introduction

The Glen Canyon Grazing Agricultural Commodity Zone is established in U.C.A. 63J-8-105.8(2)(mm) to preserve and protect the agricultural livestock industry from ongoing threats; to preserve and protect the history, culture, custom, and economic value of the agricultural livestock industry from ongoing threats; and to maximize efficient and responsible restoration, reclamation, preservation, enhancement, and development of forage and water resources for grazing, wildlife practices and affected natural, historical, and cultural activities. Located entirely in Garfield County, the livestock grazing zone covers approximately 561,113 acres and is depicted on Map XX.

The Glen Canyon area was the first portion of Garfield County to be used for domestic livestock grazing. The first domestic animals were likely brought into Garfield County as part of the Dominguez-Escalante expedition which traversed the region and led cattle across the Colorado River in 1776. The first serious attempts at using the range were in the 1860s, when the introduction of sheep in the region began. John Atlantic Burr constructed what is now the Burr Trail Road switchbacks to facilitate moving his sheep from summer to winter range east of Capitol Reef National Park. Settlers brought small numbers of livestock to the area in the early 1870s as Escalante and Boulder were settled. During the early part of the 20th century, the Glen Canyon Grazing Zone was historically grazed by sheep, though there are no domestic sheep in the area at this time. When the Glen Canyon National Recreation area was designated in 1972, the enabling legislation authorized grazing, which had occurred in the area for about 100 years.

Glen Canyon BLM						
Allotment	Total Acres	Acres in GCGZ	# of head	Days	AUM's1	Permit
Cedar Point	59604.12	59350				
Burr Point	72701.09	21308				
Sewing Machine	131530.55	131529			1,599	
Rockies	172961.38	172960			5,228	
Waterpocket	72870.25	62915			3,007	
Trachyte	58723.37	58723				
Robbers Roost	204324.95	514				

Current setting:

Under the provisions of its enabling legislation Glen Canyon NRA is managed by the National Park Service (NPS), which mandates the protection of the natural, cultural, and historic resources of the area. Grazing is managed jointly by the NPS and Bureau of Land Management (BLM), which administers grazing permits and implements a grazing program which integrates NPS stewardship responsibilities that protect the values and purposes of Glen Canyon NRA. Glen Canyon NRA values the vegetation, soil, water quality, wildlife, cultural, paleontological, scenic, and recreational resources that make up the scenic, scientific, and historic features which define the outdoor recreational use and enjoyment of Glen Canyon NRA.

A Grazing Management Plan was developed to help managers make informed decisions and manage threats to resources. This plan encourages sound grazing practices to minimize or avoid impacts to area resources. Four BLM resource areas administer 34 grazing allotments that partially or entirely occur within Glen Canyon NRA. Grazing is permitted on 28 of those allotments. The BLM generally issues ten-year grazing permits and monitors the land. When permits are renewed, grazing practices are evaluated and alterations can be made if necessary. The BLM works closely with Glen Canyon staff to ensure that Glen Canyon resource conditions are not impaired. About 882,678 of Glen Canyon NRA's 1.2 million acres are in allotments, 85% of this area was subject to grazing use in 1998.

The rangeland in Glen Canyon NRA is arid to semi-arid with annual rainfall that varies from 4 – 12 inches year to year. Winters are cold, summers are hot. Vegetation includes primarily shrublands and grasslands, and about 8% pinyon-juniper woodlands. Perennial grasslands are relatively rare, but provide much of the available forage for cattle. Animal Unit Months (AUMs) help determine use on allotments of this rangeland. Total acres for AUMs are frequently suspended or altered due to conditions of drought, availability of forage, and other considerations. In the 1990s, AUMs and numbers of livestock fluctuated by allotment as a result of economic changes and drought. In Glen Canyon NRA the total acres per AUM varies from 17 acres in Upper Cattle Allotment to 193 acres in Rock Creek-Mudholes Allotment. Because portions of most allotments have cliffs, slick rock, and other areas which cannot be grazed, the grazable acres per AUM are generally lower than the reported acres. Most grazing in Glen Canyon NRA occurs between November and May during the cool winter months.

Grazing continues a 100+ year history of ranching in the Glen Canyon area, but must be managed to protect the purposes and values of Glen Canyon NRA established by its enabling legislation. Cooperative management by the NPS and BLM that integrates those values and purposes will support continued sound grazing practices in Glen Canyon NRA.

Need for Management Change

- 1) Increased adaptive management needs to be implemented, including consideration of localized or well-timed precipitation events that may result in adequate forage for specific areas in spite of long term or regional drought conditions.
- 2) Action needs to be taken to significantly improve desirable forage for land health and to meet the purposes of Glen Canyon NRA. Particular attention needs to be paid to conversion of

pinyon/juniper communities to more desirable and beneficial vegetation and increased ground cover. As forage is improved, livestock grazing needs to be adjusted accordingly.

- 3) Aggressive action needs to be taken to significantly improve water resources in the area, including development of wells, retention of stormwater and maintenance of ponds and other water related range improvements. Improved water resources benefit a variety of public uses, including recreation and purposes outlined in Glen Canyon National Recreation Area's enabling legislation.
- 4) Flexibility needs to be added to optimize on / off dates, timing, duration, intensity and other aspects of livestock grazing. Operations need to be governed by resource conditions rather than calendar dates.
- 5) Forage allocation needs to be continually updated to optimize use of livestock grazing related resources, including relinquished allotments, changes from realty actions, improved forage, newly developed water resources, changes in season of use or livestock class, or other pertinent factors.
- 6) Land managers need to efficiently address relinquishment of livestock grazing privileges and requests to reallocate available forage. Preference needs to be given to livestock grazing activities wherever possible while considering the special conditions in the National Recreation Area.
- 7) Forage allocation needs to be addressed on allotments with no forage licensed for livestock use.
- 8) Access for maintaining range improvements needs to be acknowledged and maintained. Where access uses the County's transportation network, County asserted roads, paths, ways, and trails need to be recognized and considered public facilities under County jurisdiction.
- 9) Where increasing recreation results in increased conflicts with livestock grazing, land managers need to mitigate the conflicts limiting livestock grazing restrictions to the smallest acreage and impact possible. Unless mandated by federal law, Glen Canyon NRA enabling legislation, state law, or approved by the Garfield County Commission, to livestock grazing activities shall be accommodated to the maximum extent possible.
- 10) Riparian areas need to be managed to optimize resource protection while accommodating livestock grazing activities. Riparian resources need to be managed on a site specific basis where mutual benefit to the resource, recreation and livestock grazing are achieved.

Desired Conditions

Garfield County desires:

- a) Increased adaptive management including consideration of localized or well-timed precipitation events that may result in adequate forage for specific areas in spite of long term or regional drought.

- b) Action is taken to significantly improve desirable vegetative ground cover. The County desires particular attention be given to conversion of pinyon/juniper communities to more desirable and beneficial vegetation and increased ground cover for improved land health.
- c) Vastly improved water resources including but not limited to development of wells, retention of stormwater and maintenance of ponds and other water related range improvements. Water development benefits all land uses.
- d) Added flexibility to optimize on / off dates, timing, duration, intensity and other aspects of livestock grazing. The County desires livestock operations be governed by resource conditions rather than calendar dates.
- e) Forage allocations are continually updated to optimize use of livestock grazing related resources, including relinquished allotments, changes from realty actions, improved forage, development of new water resources, changes in season of use or livestock class, or other pertinent factors.
- f) Land managers efficiently address relinquishment of livestock grazing privileges and requests to reallocate available forage. Desired conditions include preference is given to livestock grazing activities wherever possible.
- g) Forage allocation are addressed on allotments with no forage licensed for livestock use and consideration be given to making lands available for livestock grazing.
- h) Access for maintaining range improvements is acknowledged and maintained. Where access uses the County's transportation network, County asserted roads, paths, ways, and trails are recognized and considered public facilities under County jurisdiction.
- i) Where increasing recreation results in increased conflicts with livestock grazing, land managers mitigate the conflicts limiting livestock grazing restrictions to the smallest acreage and impact possible. Unless mandated by federal or state law, or approved by the Garfield County Commission, it is desired that accommodations are is given to livestock grazing activities.
- j) Riparian areas are managed to optimize use of resources by livestock grazing activities while protecting and enhancing riparian conditions. Riparian resources are managed on a site specific basis where mutual benefit to the resource, land health, recreation, and livestock grazing are achieved.

Findings, Policies, Goals & Objectives

Policy: Garfield County recognizes that certain NPS lands have restrictions that prohibit full implementation of the policies, goals and objectives outlined herein. Garfield County encourages park service units to cooperate and coordinate with Garfield County to implement policies to the maximum extent permitted by their enabling legislation.

Policy & Goal: Increase adaptive management including consideration of localized or well-timed precipitation events that may result in adequate forage for specific areas in spite of long term or regional drought.

Policy & Goal: Significantly improve desirable forage. The County desires particular attention be given to conversion of pinyon/juniper communities to more desirable and beneficial vegetation and increased ground cover.

Policy & Goal: Vastly improve water resources including but not limited to development of wells, retention of stormwater and maintenance of ponds and other water related range improvements.

Policy: Land managers shall increase flexibility to optimize on / off dates, timing, duration, intensity and other aspects of livestock grazing. The County desires livestock operations be governed by resource conditions rather than calendar dates.

Policy: Forage allocations shall be continually updated to optimize use of livestock grazing related resources, including relinquished allotments, changes from realty actions, improved forage, development of new water resources, changes in season of use or livestock class, or other pertinent factors.

Policy & Goal: Land managers shall efficiently address relinquishment of livestock grazing permits and requests to reallocate available forage. Desired conditions include preference is given to livestock grazing activities wherever possible. Relinquished permits shall be reallocated within 1 year whenever possible.

Policy: Forage allocations shall be addressed on allotments with no forage permitted for livestock use and consideration be given to making lands available for livestock grazing prior to .

Policy: Access for maintaining range improvements shall be acknowledged and maintenance authorized prior to 2020. Where access uses the County's transportation network, County asserted roads, paths, ways, and trails shall recognized and considered public facilities under County jurisdiction.

Policy: Where increasing recreation results in increased conflicts with livestock grazing, land managers shall mitigate the conflicts limiting livestock grazing restrictions to the smallest acreage and impact possible. Unless mandated by federal or state law, or approved by the Garfield County Commission, preference shall be given to livestock grazing activities.

Finding & Policy: Riparian resources are extremely limited in the grazing zone. Riparian areas shall be managed to optimize use of resources by livestock grazing activities while protecting and enhancing riparian conditions. Riparian resources shall be managed on a site specific basis where mutual benefit to the resource, land health and livestock grazing are achieved.

References:

Utah BLM Rangeland Health Standards

Chapter 4 Pinyon/Juniper Woodlands, USDA Forest Service Gen. Tech. Rep. RMRS-GTR-202. 2007

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5434337.pdf, January 19, 2017, *Pinyon-Juniper Natural Range of Variation*

Presidential Proclamation 6920, September 18, 1996

3.3 RECREATION

This section is intentionally left blank. Management direction for this Resource / Resource Use has not been completed. It is intended that management direction for this Resource / Resource Use will be completed, subject to public comment, and adopted at some point in the future.

3.4 TRANSPORTATION

The Transportation section of the Plan has not been completed. A Transportation Map identifying County roads, paths, and ways has been included. It is the County's position that the network depicted herein is the minimum necessary to preserve the custom, culture, economic viability, health, and welfare of the County. Reduction of public access without County concurrence is inconsistent with the County's General Management Plan.

Garfield County has also produced an OHV network. The network has been adopted by ordinance and has the weight of local law. The Transportation Plan and OHV Ordinance are adopted by reference.

Current setting:

Most of Garfield County's Transportation Network has grown over time with the development of the West. A vast majority of the County's transportation resources are prescriptive in nature, being developed under easement law in the State of Utah or under Federal Statute permitting the construction of highways across lands not reserved for other public uses. The County does possess some deeded and/or permitted rights-of-way, but these are limited when compared with the total transportation network.

Garfield County's Transportation Network includes roads, paths, ways, trails, airports, landing strips, and ancillary features associated with these facilities.

Until the last decade, State Statute indicated that all roads, paths, and trails that were not Federal, City, State, or special roads, paths, or trails were under the jurisdiction of the County Commission where they were located. In addition, transportation facilities, once established, continued until formally abandoned by local government in accordance with State Statute. In the early 1990s, Garfield County initiated an effort to identify highways, paths, and trails on Federal lands. As part of the Henry Mountains and Kanab - Escalante Resource Management Plans, the County submitted documentation supporting its rights-of-way on transportation facilities that were significant enough to be mapped by the Federal, State or local governments. The maps and

documentation are included herein by reference. Subsequently, in October 1994, at the conclusion of a public hearing, Garfield County adopted the road network shown on BLM's Surface Management Status Maps as the minimum transportation network controlled by Garfield County and forwarded copies of the maps to Federal agencies. The results of the public hearing and subsequent maps are also contained herein by reference.

Documentation and maps submitted as part of the RMP evaluation or as a result of the public hearing should be available from the BLM through the Freedom of Information Act.

With the advancement GPS technology in the late 1990s Garfield County initiated efforts to document previously identified map routes and to identifying impacts on the ground associated with other transportation facilities. Federal and State agencies also initiated efforts to better inventory transportation facilities

Additional efforts by the County included filing FOIA requests to identify transportation facilities claimed to be under Federal jurisdiction, implementing legislation to resolve right-of-way issues across state sections, acquiring rights-of-way or recordable disclaimers of interest for transportation facilities which were located on SITLA lands, obtaining federally permitted rights-of-way where appropriate, participation in court proceedings associated with RS 2477 rights, responding to BLM directives to identify RS 2477 rights as part of RMPs, and other activities.

Beginning in 1992, the Federal Government changed its view regarding transportation facilities across public lands. Federal land managers, particularly the Department of the Interior land managers, initiated efforts to ignore, reduce and/or eliminate Garfield County's transportation rights. The Henry Mountains RMP which identified more than 200 RS 2477 rights and the Kanab - Escalante RMP which identified a significant number of Garfield County's RS 2477 rights were stopped midstream. A moratorium prohibiting expenditure of funds for processing RS 2477 rights-of-way was instituted, the BLM initiated trespass actions against the County regarding routine road maintenance activities, and the Secretary of the Interior began reporting that there were no public roads across BLM lands in the State of Utah.

Changes in the Presidential Administration in 2000 reduced some of the intense attacks on Garfield County's Transportation Network. However, little if any significant progress has been made in identifying all transportation facilities on public lands or formally resolving jurisdictional issues that exist between the County and the Federal Government.

Throughout the last three decades Federal land managers have adopted transportation plans as part of a Resource Management Planning which fail to fully inventory, evaluate, and recognize Federal, State, and County transportation facilities on their lands. Often, the transportation sections of Resource Management Plans are in direct conflict with State and local positions. This has resulted in a transportation network that rises and falls in accordance with political views, is inconsistent with local, State, and Federal law, fails to provide for the needs of the traveling public, and is unenforceable.

As January 2007, State and Federal agencies have transportation management plans that are not being enforced due to obvious conflicts and questions associated with jurisdictional

responsibilities.

Need for Management Change:

1. Garfield County, State, and Federal land managers need to inventory and document every transportation facility that currently exists.
2. Garfield County, State, and Federal land managers need to develop a system where historical transportation facilities can be evaluated and considered in normal planning processes.
3. The Federal government needs to revise existing management plans to bring them into consistency with the local transportation network, and in compliance with State and Federal law.
4. Garfield County, State, and Federal land managers need to develop a system to prevent unauthorized development of transportation facilities.
5. Federal and State land managers need to recognize the existing, on the ground transportation network as the minimum necessary to fulfill Congressional mandates, to complete purposes delineated in enabling legislation, and to preserve the health , welfare, custom, culture, and socioeconomic viability of Garfield County.
6. Garfield County and land managing agencies need to work cooperatively to resolve transportation issues that are affecting sensitive resources.
7. All highways, roads, paths, ways, and trails in Wilderness Areas, Wilderness Study areas, and Non-WSA lands with Wilderness Character need to be carefully and accurately field inventoried using GPS technology to identify the existing on the ground network and to prevent proliferation of future unauthorized routes.
8. A system to preserve the existing network and resolve future problems needs to be developed.

Desired Conditions:

Garfield County desires:

- a) Transportation issues be resolved in a manner which preserves access to public and private lands while protecting resources.
- b) Federal and State land managers recognize Garfield County's Transportation Network and comply, to the maximum extent allowed by law, with Garfield County's stated goals, plans, desires, and needs.
- c) RS 2477 issues be resolved and that the County's needs for access to public lands be recognized and accommodate.
- d) If NEPA authorized rights-of-way are used to resolve transportation issues, the right of ways, at a minimum, include:
 - 1) rights enjoyed under the non NEPA rights-of-way;

2) sufficient width and scope to allow ultimate development of the transportation facilities without additional analysis;
3) provisions to allow a blanket resolution of transportation issues rather than a case-by-case basis.

e) To eliminate the unauthorized use of cross-country travel on public and private lands.

f) To work cooperatively with State and Federal agencies in educating the public and preventing unauthorized travel on public and private lands.

g) The County's Transportation Network be recognized and authorized by State and Federal agencies.

j) That as historical facilities are identified through expanding technology, they are appropriately documented evaluated and authorized.

Policies, Goals, Objectives, and Criteria

Policy: It is the policy of Garfield County to assert and claim jurisdiction over all highways, roads, paths, ways, trails, highways, airports, landing strips, and other transportation facilities, unless they have been determined to be invalid and/or under the jurisdiction of another agency by a court of competent jurisdiction.

Policy: Garfield County declares the existing on the ground and/or mapped network of roads, paths, ways, trails, highways, airports, airstrips, and other transportation facilities is the minimum necessary to provide for the health and welfare, custom, culture, and socioeconomic viability of Garfield County.

Policy: Garfield County asserts, based on FOIA responses and FIMMS databases that the maximum extent of the BLM road, path, way, trail, highway network is that depicted in the aforementioned documents and that all other transportation facilities are under the jurisdiction of Garfield County.

Policy: In as much as roads identified in FOIA responses and on the FIMMS database include roads located on private and SITLA lands, and in as much as Garfield County has rights-of-way over these lands and the BLM does not, Garfield County asserts that it has jurisdictional responsibility over many of these transportation facilities and the BLM does not.

Policy: Garfield County will work cooperatively with federal agencies to resolve valid existing rights, transportation needs, maintenance requirements, improvement projects, and other right-of-way and/or scope issues.

Policy: Well maintained roads increase positive impacts and decrease negative impacts to the adjacent lands

Policy: For roads determined not to be a valid existing right by a court of competent jurisdiction, the County will apply for an appropriate right-of-way or will abandon the road in accordance with State statutes.

Policy: For transportation facilities the County no longer desires to have under its jurisdiction, the County will initiate the abandonment process in accordance with state statute

Policy: For all transportation facilities, Garfield County will, over the course of time, improve the facility to meet AASHTO, national or other applicable standards.

Policy: Prior to closure of any transportation facility on public lands, the following information needs to be identified and evaluated:

- 1.Date of the original construction and use
- 2.Method of original construction and use
- 3.Detailed GPS centerline
- 4.Purpose for which the facility was developed
- 5.Length of time the facility was used
- 6.Users of the facility.
- 7.Map, plan, GLO plats, and study data
- 8.Jurisdictions asserting ownership of the facility
- 9.County position regarding proposed status

Closure of any transportation facility without identification of the information listed above is inconsistent with the Garfield County General Management.

Policy: Garfield County believes federal agencies have complied with statutes requiring appropriate environmental analysis and permitting process prior to implementation of transportation projects. Transportation facilities that are not subject to trespass as of January 1, 2007 or that lack accurate evidence documenting their construction after the passage of controlling legislation, are assumed to be valid and existing rights that were developed prior to the creation of such legislation.

Policy: Closure of transportation facilities as part of federal planning processes without County concurrence, and/or without final determination of jurisdiction by a court of competent jurisdiction is a violation of valid existing rights and is arbitrary and capricious.

Policy: Closure of existing transportation facilities without County concurrence and/or determination of jurisdiction by a court of competent jurisdiction damages the health, welfare, the custom, and culture of the County is inconsistent with the Garfield County General Management Plan

Policy: The Capitol Reef Management Plan, the Grand Staircase-Escalante National Monument Management Plan, and the Glen Canyon National Recreation Area Management Plan fail to recognize valid, existing rights and are inconsistent with Garfield County's General Management Plan. Garfield County encourages these entities to review and revise their management plans and bring them into consistency, to the maximum extent allowed by law, with Garfield County's General Management Plan in accordance with agency review schedules.

Policy: Some transportation facilities that were originally developed for motorized use may, at

present, be more suitable for non-motorized use. Garfield County's concurrence for non-motorized restrictions is required, and such non-motorized use at the present time does not abandon opportunities for future motorized use.

Findings

Garfield County finds that the existing, on the ground and/or transportation network is the minimum necessary to provide for the health and welfare, custom, culture, and socioeconomic viability of the County. Closure of any transportation facility without County concurrence is a negative impact on the County and is inconsistent with Garfield County General Management Plan.

All highways in existence prior to October 21, 1976 are valid, existing rights of way. Closure of any such facility without concurrence of Garfield County violates requirements that management plans be subject to valid existing rights. Absent trespass actions filed prior to January 2007 and/or objective evidence, assuming existing transportation facilities are not valid rights is arbitrary and capricious.

Garfield County has documented and formally asserted many of its rights of way through:

- a. Data submission as part of the Henry Mountains and Kanab-Escalante RMPs
- b. Formal adoption its developed road network in October of 1994
- c. And numerous verbal and written assertions to federal agencies.

All transportation facilities identified as part of the intense study phase associated with the 1964 Wilderness Act or in existence at that time constitute roads and ways that impact wilderness status. Failure to depict inventoried roads and ways in current and future planning documents is inconsistent with agency responsibilities to disclosed environmental consequences and is a misrepresentation of the data.

A certain number of transportation facilities located within the boundaries of WSAs and non-WSA lands with wilderness character have not been or were not adequately inventoried. Unless there is objective evidence to the contrary, Garfield County finds that the transportation facilities that currently exist within WSAs and in non-WSA lands with wilderness character existed at the time of original inventory and were either ignored or overlooked. Garfield County further finds that these transportation facilities are evidence of man or are indications that man was not a visitor and may constitute valid existing rights.

Garfield County finds that it has the authority to maintain its transportation network without contacting the appropriate land management agency. The County also finds that prior to implementing improvement or construction projects, the appropriate land management agency must be consulted. Garfield County finds that the transportation network has not been fully developed and is largely underutilized. Closure of more than 5% or expansion of more than 10% of the existing facilities in any project area or agency without County concurrence constitutes a significant negative impact to the health and welfare, custom, culture, and socioeconomic viability of Garfield County.

Garfield County finds it is in the public's best interest for the County, and land management agencies to cooperate regarding right-of-way issues. Garfield County also finds that its transportation network is the system that best meets the needs of the traveling public and that management actions, which are contrary to the County's transportation network, are not consistent to the maximum extent allowed by law, with agency responsibility and with the County General Management Plan.

3.5 LANDS AND REALTY

This section is intentionally left blank. Management direction for this Resource / Resource Use has not been completed. It is intended that management direction for this Resource / Resource Use will be completed, subject to public comment, and adopted at some point in the future.

3.6 MINERALS AND ENERGY

This section is intentionally left blank. Management direction for this Resource / Resource Use has not been completed. It is intended that management direction for this Resource / Resource Use will be completed, subject to public comment, and adopted at some point in the future.

INTRODUCTION TO THE MINERAL RESOURCES IN GARFIELD COUNTY

The mineral resources of Garfield County are visually presented on a series of maps. Each map displays the location of various mineral commodities found in the county. These commodities are grouped into three categories: metallic deposits, energy mineral occurrences and industrial mineral occurrences. These commodities are each discussed below. Individual mineral occurrences are marked on each map by small circles. The amoeboid shapes on the maps outline formally named mining districts, oil and gas fields (plays), coalfields, or informal groupings of similar minerals. Formations containing energy and industrial minerals that are widely distributed are also outlined on the appropriate maps. Each commodity is discussed in the following text.

The likely-hood for development of each mapped commodity and mineral occurrence is indicated by red, yellow and blue colors within the outlined areas. This likely-hood is termed "potential" on the maps. "High potential" and the red color indicate that the commodity or element will likely be developed in the near future. "Moderate potential" and the yellow color show areas where development of the target commodity might occur in the future. "Low potential" and the blue color shows areas where the subject commodity occurs but is unlikely to be developed in the future. These determinations are based on the following objective and subjective criteria;

- current geologic understanding of the deposit type,
- quality of the resource or concentration of the subject element,
- quantity of the resource thought to be present,
- current and projected market conditions,
- the opinion of the current author.

The maps and written descriptions of the commodities are organized in three divisions. The first is a single map of both base and precious metal mineral deposits, such as gold, silver, copper, and zinc as well as the energy metal, uranium. These are formed by specific mineralizing events and can cross formational boundaries. Federal mineral rights for

these commodities are acquired by staking mining claims. These minerals are marketed as commodities in world markets. Elements listed on the metal mining districts map are those where the Utah Geological Survey data base shows production in excess of 10% of the total reported production from the district. Other un-named elements may also be present in the deposits but due to concentration or market demand, were not recorded in the database.

The second group of maps are of energy minerals which include coal, oil and gas, geothermal energy and tar sands. Federal mineral rights for these resources are acquired by lease. Oil and Gas are marketed as a commodity in international markets. Coal is sold by contract into national and international markets. Geothermal energy is used to generate electricity distributed through the electrical grid or for local space heating. Tar sands require a processing plant where they are converted into liquid oil and then sold through that market.

The third and largest group of resources are termed industrial minerals. These minerals are those used in industrial processes. The rights to industrial minerals on federal lands can be acquired by claim, lease or purchase from the Bureau of Land Management. Manufacturing process that consume these minerals, produce products that are sold to consumers, usually located within a reasonable transportation distance of the mine site.

DATA SOURCES

The mineral occurrences marked on the maps are found in the Utah Geological Survey's Mineral Deposit Data Base that is available on line at <http://geology.utah.gov/resources/data-database/utah-mining-districts/>. Outlines of the mining districts, coalfields, oil and gas fields and geothermal fields are taken from the following publications:

- The Mining District were taken from; Doelling, Hellmut H. and Tooker, Edwin W., August 1983, Utah Mining District Areas and Principal Metal Occurrences: Utah Geological and Mineralogical Survey Map 70.
- Oil and Gas Fields were reproduced from; Wood, R. E., and Chidsey, T. C., Jr., 2015, Oil and Gas Fields Map of Utah: Utah Geological Survey, Circular 119.
- The Coal Fields and Geothermal fields were copied from; Vandenberg, M. D., 2016, Utah's Energy Landscape, 4th edition: Utah Geological Survey, Map C-121.

Outlines of formation outcrop used in the maps to illustrate the location of formation favorable for the occurrence of a commodity are taken from Hintze, Lehi F., Willis, Grant L., Laes, Denis Y. M., Sprinkel, Douglas A. and Brown, Kent D., 2000, Digital Geological Map of Utah: Utah Geological Survey, 1:500,000.

Source for data quoted in the discussion of individual commodities is referenced in those discussions.

METALLIC MINERALS

Base and Precious Metals and Uranium: Metallic mineral deposits include paleo-placer deposit of titanium, zircon and uranium located along the eastern rim of the Kaiparowits Plateau, uranium Deposits in the Circle Cliffs area, about the Henry Mountains, and in the Orange Cliffs as well as, metal mining occurrences of antimony, mercury and silver associated with igneous rocks in western Garfield County. The Map for the county shows these known mining district and the individual mineral occurrences in the resource data base kept by the Utah Geologic Survey.

- The uranium titanium paleo-placers within the Kaiparowitz plateau are significant because of the resources they contain. A resource estimate reported in “Titanium-Zirconium-Bearing Fossil Placers Deposits in the Cretaceous Straight Cliffs Formation, Garfield and Kane Counties, Utah” Glory and others 1997). An estimate of the resources reported in Glory and others, (1997), range between 300,000 and 1,000,000 tons. Grades between 3% and 11 % ZrO₂ and 9.6% to 22% TiO₂ are reported. The Calf Canyon deposit in Garfield County is estimated to contain 300,000 to 600,000 tons. The only uranium mineral reported in these deposits is monazite, which contains rare earth elements (REE) as well. There is significant interest in REE’s as strategically important elements for defense and the computer industry at the time of the writing of this document.
- Uranium districts in the Circle Cliffs and Orange Cliffs areas produced uranium from the Shinerump and Mossback Members of the Chinle Formation respectively. All of the mines in these districts are small and operated briefly in the 1950s, and 1960s with minor production in the 1970s. Uranium deposits in the Henry Mountain Districts are within the Morrison Formation. Most of these deposits were small however exploration in the South Henry Mountains during the 1980’s, delineated the largest uranium deposit known in the Salt Wash Member of the Morrison Formation (20 million pounds of contained U₃O₈ in all categories). A uranium mill constructed near Ticaboo makes it likely that production will occur in the future.
- Base metals deposits near Antimony and Spry are small with limited potential for production. Gold mineralization associate with the igneous rocks of the Henry Mountains have been developed in recent years with limited success.

ENERGY MINERALS

Coal: Three coal fields, the Alton, and Kaiparowitz Plateau, and Henry Mountains fields, occur in Garfield County and are shown on MAP. The Alton Coal field is the most developed with an estimated 5.51 billion tons of original resources. (Bon and others, 2006). Of these resources 672 million tons are considered mineable by surface methods and 4.41 billion tons are minable by underground methods. Production using surface mining methods is ongoing from private lands in Kane County to the south. Only a small unmeasured portion of this coalfield is within Garfield County. The Kaiparowitz Coalfield is estimated to contain a combined resource of 15.2 billion short tons of coal of which between 33 and 50 percent of this resource is considered mineable by underground methods. A summary of the Resource estimates for quadrangles in Garfield done by Doelling and Graham (1972) indicate that about 3.8 billion tons of this resource is in Garfield County. Previous mining was limited to local needs, and did not exceed over 25,000 tons of this resource. All mines are now abandon ore inactive. The Henry Mountains Coalfield is located on the west side of the Henry Mountains in both Garfield and Wayne Counties. The coal occurs in the Ferron and Muley Canyon Members of the Mancos Shale. Tabet (1999) estimates about 2.0 Billion tons of coal to occur in Garfield County’s portion of the Coal field. The field is isolated and has limited previous mining.

Tar Sand: Oil impregnated tar sand occur in the” Tar Sand Triangle” situated between Garfield and Wayne Counties (See Map). Ritzma (1979) did not divide the resources between the two counties but, estimates a total resource between 12,500 and 16,000 million barrels of

oil to be in place within the Permian-Triassic, White Rim Sandstone. Access and processing difficulties limit the development of this resource.

Oil and Gas Potential: Wood and Chidsey (2015) show only two small oil fields in Garfield County, the Escalante field north of the town of Escalante and the Upper Valley Field east of Tropic (see Map). The Escalante Field has had no production to date. The Upper Valley field has produced almost 23 million barrels of oil from 25 wells penetrating the Timpoweap Member of the Moenkopi Formation.

INDUSTRIAL MINERALS

Alunite: One alunite, potassium aluminum sulfate, occurrence is known on the west slope of Mont Dutton in Garfield. See map. Evaluation of alunite occurrences were conducted during the First and Second World Wars to identify replacements for potassium and aluminum ores, which were limited by the conflicts.

Building Stone: Building stone is used for the support and ornamentation of buildings. This includes stone used for facades, counter tops and other decorative uses. With the advent of concrete foundations, the use of stone for foundations has stopped. The market for various stones depends on architectural style and interior decor fashions. The appropriate Map shows the location of past production of building stone production in Garfield County. The formation outlined is the Moenkopi formation which is a source for flagstone.

Clay: The term clay is both a particle size term and a group of crystalline minerals. As a rock type it is a very fine grained sedimentary rock where most of the grains are composed of the crystalline minerals also called clays and other detrital grains less than 4 microns in size. Clay behaves plastically when wet and has an amazing variety of uses. The most common types are two-layer clay minerals called the kaolin group and three-layer type called the montmorillonite group. The montmorillonite group are the types that occur in Garfield County as shown on the map. These clays have swelling characteristics when wet, and are used to line water impoundments, and in oilwell drilling muds. The two formations outlined are the Mancos Shale and the Petrified Forest Member of the Chinle Formation.

Crushed Stone: Crushed stone is used in construction of road beds, and other applications where size and durability are important criteria. In Garfield County the igneous rocks of the Henry Mountains and durable limestone has been found that fit these criteria. The Map of crushed stone shows the location of formations of appropriate rocks in Garfield County.

Diatomite: Diatomite is a siliceous sedimentary rock, which consist mainly of the fossilized remains of diatoms. Diatoms are a microscopic alga that occurs in fresh water environments. Diatomite is a unique form of silica there being nothing else in nature or produced by manufacturing that has its characteristics physical properties. Use for diatomaceous earths include filtration, insulation, absorbent and others. Garfield County has one deposit noted on the map.

Dolomite and Limestone: Dolomite ($\text{CaCO}_3 \text{ MgCO}_3$) and limestone (CaCO_3) are common stones that are chemically reactive, with uses in agriculture, and manufacturing. Agricultural uses include direct application to soil to improve acidity, increase the calcium and/or magnesium content of the soil, as calcium supplements for livestock and in sugar refining. Manufacturing uses of limestone and dolomite include glass and paper

- production, production of lime, as a flux in steel production and in coal fired power generation where it is burned in smoke stacks scrubbers to reduce the emissions of sulfur and nitrogen gasses. Limestones with iron, silica and other impurities are used to make cement. Since transportation of the large volume of limestone and dolomite used in these applications, proximity to a railroad is critical. Two maps show the location of formations containing high quality (+90%) limestone and dolomite in Garfield County.
- Gypsum:** Gypsum is a calcium sulfate mineral use primarily in the manufacturing of wall board and plaster. Gypsum is broadcast onto agricultural fields to increase sulfate. High grade gypsum is used in food additive and pharmacological applications. The map shows the location of the Carmel Formations which is known to contain gypsum in Garfield County. Several quarries produced gypsum for local use in the past.
- Limestone:** Limestone (CaCO_3) is a common stone that is chemically reactive, with uses in agriculture, and manufacturing. Agricultural uses include direct application to soil to improve acidity, and increase the calcium content of the soil which can increase crop yield, calcium supplements for livestock and sugar refining. Manufacturing uses of limestone include glass and paper production, as a flux in steel production and in coal fired power generation where it is burned in smoke stacks scrubbers to reduce the emissions of sulfur and nitrogen gasses. Since transportation of the large volume of limestone used in these applications, proximity to a railroad is critical. The map shows the location of formations containing high quality (+90%) limestone in Garfield County.
- Phosphate:** Phosphate is a principal component of fertilizer. One occurrence of phosphate, probably from the mineral apatite, is known in Garfield County. The map shows the deposit in Garfield County.
- Potash:** Potash, used in fertilizers, is produced from Mississippian aged evaporate beds in San Juan and Grands Counties to the east. Potential for similar deposits lie in the extreme northeast corner of Garfield County (see Map).
- Salt:** Salt is found in the same beds as potash in Grand and San Juan Counties to the East. Potential for similar deposits lie in the extreme northeast corner of Garfield County. (see Map)
- Silica:** Uses for silica include abrasive, glass and chemical,) metallurgical, refractory, and electronic. Abrasive uses include stone cutting, glass grinding and blasting. Glass and chemical uses require extreme high purity and narrow size limits. Metallurgical silica is usually pebble in size but some modern smelters require a small size. Applications of metallurgical silica include the making of silica alloys and as a flux. Refractory uses include mold or cord sand in foundry operations, bottom sand in open hearth and electric steel furnaces and for patching or lining of furnaces and associated vessels. Other uses include as a filter media, hydraulic fracturing in the oil and gas industry and as a component of computer chips. Silica of high purity is found in the Navajo Formations in Garfield County. The outcrop of this formation is shown on the Map.
- Zeolites:** Zeolites are microporous, aluminosilicate minerals commonly used as commercial adsorbents and catalysts. Naturally occurring zeolites are rarely pure and are contaminated to varying degrees by other minerals, metals, quartz, or other zeolites. For this reason, naturally occurring zeolites are excluded from many important commercial applications where uniformity and purity are essential. Natural zeolites can be used as solar thermal collectors, adsorption refrigeration, non-clumping cat litter The largest single use for zeolite is the global laundry detergent market. Zeolites are found in altered volcanic rocks west of Panguitch in Garfield County. (see Map)

3.6 MINERALS AND MINING

Mineral development is an important land use within the federal, state and local multiple-use mandate in Garfield County. In communities across the country, mining provides jobs, economic activity and important commodities that are essential to maintain a high quality of life. Mineral and mining resources are located throughout the County; and resources located on state and private lands have been developed to the extent economically and practically feasible. This section of the Resource Management Plan identifies Garfield County's plans, programs and policies for non-energy mineral and mining resources. Energy related resources are discussed in the Energy section of this plan.

Minerals on Federal lands are divided into three categories, each subject to different laws and regulations.

1. Locatable, which are subject to the Mining Law of 1872, as amended, include gold, silver, copper and other hard rock minerals.
2. Leasable minerals, such as coal and a host of other commodities, are subject to various Mineral Leasing Acts.
3. Saleable minerals, such as sand and gravel that are essential to construction and roadbuilding, are subject to the Materials Act of 1947, as amended.

Current Setting

Locatable Minerals Locatable minerals include both metallic minerals (gold, silver, lead, copper, zinc, nickel, etc.), nonmetallic minerals (fluorspar, mica, certain limestones and gypsum, tantalum, heavy minerals in placer form, and gemstones) and certain uncommon variety minerals. The eastern part of the County in the Colorado Plateau is rated as high potential for metals, including uranium, vanadium and gold as the primary resource.

Metallic mineral deposits in Garfield County include paleo-placer deposit of titanium, zircon and uranium located along the eastern rim of the Kaiparowits Plateau, uranium Deposits in the Circle Cliffs area and near the Henry Mountains, and in the Orange Cliffs as well as, metal mining occurrences of antimony, mercury and silver associated with igneous rocks in western Garfield County.

The uranium titanium paleo-placers within the Kaiparowitz plateau are significant because of the resources they contain. A resource estimate reported in *Titanium-Zirconium-Bearing Fossil Placers Deposits in the Cretaceous Straight Cliffs Formation, Garfield and Kane Counties, Utah*, Glory and others, 1997 indicates deposits range between 300,000 and 1,000,000 tons.

Grades between 3% and 11 % ZrO₂ and 9.6% to 22% TiO₂ are reported. The Calf Canyon deposit in Garfield County is estimated to contain 300,000 to 600,000 tons. The only uranium mineral reported in these deposits is monazite, which contains rare earth elements (REE) as well. There is significant interest in REE's as strategically important elements for defense and the computer industry.

Uranium districts in the Circle Cliffs and Orange Cliffs areas produced uranium from the Shinerump and Mossback Members of the Chinle Formation respectively. All of the mines in these districts are small and operated briefly in the 1950s, and 1960s with minor production in the 1970s. Uranium deposits in the Henry Mountain Districts are within the Morrison Formation. Most of these deposits were small however exploration in the South Henry Mountains during the 1980's, delineated the largest uranium deposit known in the Salt Wash Member of the Morrison Formation (20 million pounds of contained U₃O₈ in all categories). A uranium mill constructed near Ticaboo makes it likely that production will occur in the future.

Base metals deposits near Antimony and Spry are small with limited potential for production. Gold mineralization associated with the igneous rocks of the Henry Mountains have been developed in recent years with limited success.

Leasable Minerals Since 1920, the Federal Government has leased fuels and certain other minerals (43 CFR Parts 3000-3590). Today, minerals that are subject to lease include oil and gas, oil shale, geothermal resources, potash, sodium, potassium, sulfur, native asphalt, solid and semisolid bitumen, bituminous rock, phosphate, and coal. In addition, some hardrock minerals, depending on their location, may be considered leasable. Federal agencies may also lease these minerals on certain private lands, provided the mineral rights are owned by the federal government. Most of the minerals leased under this program are used to make fertilizer or feed stock (mineral supplement for livestock) or have other industrial processes.

Potash, used in fertilizers, is produced from Mississippian aged evaporate beds in San Juan and Grand Counties to the east. Potential for similar deposits lie in the extreme northeast corner of Garfield County. However, this area is managed by the National Park Service as portions of Canyonlands National Park or Glen Canyon National Recreation Area, so exploration and development is highly unlikely. Salt is also found in the same beds as potash in Grand and San Juan Counties to the East. Potential for similar deposits lie in same areas that may contain potash and have similar restrictions on development.

Phosphate is a principal component of fertilizer. One occurrence of phosphate, probably from the mineral apatite, is known in Garfield County.

Uses for silica include abrasive, glass and chemical, metallurgical, refractory, and electronic. Abrasive uses include stone cutting, glass grinding and blasting. Glass and chemical uses require extreme high purity and narrow size limits. Metallurgical silica is usually pebble in size but some modern smelters require a small size. Applications of metallurgical silica include the making of silica alloys and as a flux. Refractory uses include mold or cord sand in foundry operations, bottom sand in open hearth and electric steel furnaces and for patching or lining of furnaces and associated vessels. Other uses include as a filter media, hydraulic fracturing in the

oil and gas industry and as a component of computer chips. Silica of high purity is found in the Navajo Formations in Garfield County.

Salable Minerals Salable minerals or mineral materials are the largest group of mineral resources and are often termed industrial minerals. Salable minerals include sand and gravel, stone, clay, and humate. The rights to industrial minerals on federal lands can be acquired by claim, lease or purchase from the federal agency. Manufacturing processes that consume these minerals, produce items that are sold to consumers, usually located within a reasonable transportation distance of the mine site.

There are several mineral material pits authorized within the County. Many of the pits are available to the public, while others are only available for Federal Highway Administration or governmental use.

Sand and gravel have been some of the most significant mineral commodities mined from the area. The single greatest use has been for construction activities including highways, and most mining has been near existing roads. With the creation of additional layers of federal regulation, future sand and gravel production from the County will be focused even more on limited areas where material deposits do not conflict with other uses.

The development potential for sand and gravel deposits in the planning area is rated as high in areas of past or present sand and gravel extraction, as well as where the proper host formations are found within three miles of a paved road. Sand and gravel development potential is moderate where the host formations are more than three miles from a paved road, and low where the host formations are administratively restricted from future development. Continued exploration and development activities for sand and gravel are expected for the next 15 years at a level that increases slightly from past rates. Most of the activity would be in the areas of high development potential, but some would also occur farther from paved roads to allow maintenance of unpaved county roads.

Building stone is used for the support and ornamentation of buildings. This includes stone used for facades, counter tops and other decorative uses. With the advent of concrete foundations, the use of stone for foundations has stopped. The market for various stones depends on architectural style and interior decor fashions. Early settlers used field stone and quarry stone mostly for home and building construction. A small number of building/dimension stone quarries remain active, and there are several that are inactive or abandoned. In addition, there are a small number of decorative stone quarries, as well as quarries for rip-rap. The development potential for stone is rated as high at past and present quarry sites and moderate outside these areas where the proper host formations occur. Stone exploration or development activity is expected to continue during the next 15 years at rates slightly higher than historic activity levels.

The term clay is both a particle size term and a group of crystalline minerals. As a rock type it is a very fine grained sedimentary rock where most of the grains are composed of the crystalline minerals also called clays and other detrital grains less than 4 microns in size. Clay behaves

plastically when wet and has an amazing variety of uses. The most common types are two-layer clay minerals called the kaolin group and three-layer type called the montmorillonite group. The montmorillonite group are the types that occur in Garfield County. These clays have swelling characteristics when wet, and are used to line water impoundments, and in oil well drilling muds. The two formations outlined above are the Mancos Shale and the Petrified Forest Member of the Chinle Formation. Although clay is one of the more prominent materials, only a few small mines are known to have produced clay in Garfield County. The development potential for clay is rated as high at past and present extraction sites and moderate outside these areas where the host formations are present. No additional significant clay exploration or development activity is expected during the next 15 years.

Although relatively unknown, humate is a pure form of natural organic material and is one of the most complex substances on earth. Humate is highly concentrated into a solid material and is developed in processes similar to coal. As plant matter decomposes materials progress from plant and animal matter to peat, to humate, and in some cases, then continues to lignite or coal. Humate resources in Utah were developed from vast fresh water seas and are of high quality due to arid conditions that prevented nutrient leaching. No known exploration or development activities for humate have occurred in the area. The development potential for humate is rated as low. No humate exploration or development activity is expected during the next 15 years.

Need for Management Change

- 1) Mineral and mining resources need to be recognized as valuable components of multiple use management and as an appropriate use of federal lands.
- 2) Mineral and mining resources need to be responsibly developed for the benefit man.
- 3) Managers need to support community development by facilitating use of mineral and mining resources.
- 4) Mineral and mining resources located outside Park Service lands and designated wilderness need to be available for development.
- 5) Additional sand, gravel and construction material pits need to be developed near communities.
- 6) Additional sand, gravel and construction material need to be made available in remote locations for watershed, facility and road maintenance.
- 7)

Desired Future Conditions

Garfield County Desires:

- a) Mineral and mining development is recognized and advanced as a valuable component of multiple use management and community development.

- b) Mineral and mining resources are developed at an expanded rate.
- c) Mineral and mining resources are optimized to support community sustainability and stability.
- d) Mineral and mining resources located outside Park Service lands and designated wilderness are available for development to the maximum extent allowed by law.
- e) Additional material pits are developed near communities.
- f) Additional material pits are developed for road maintenance, erosion control, stream stabilization and other activities that promote productive and enjoyable harmony between man and his environment.
- g) WSA lands that are not suitable for Wilderness designation as identified in the County land use plan are released from further consideration and made available for mineral and mining extraction.

Findings, Policies, Goals & Objectives

Goal & Objective: Manage mineral and mining resources to a) prevent undue and unnecessary degradation; and b) optimize use of the resources without compromising the long-term health and diversity of lands in the County.

Goal & Objective: Manage mineral and mining resources provide minerals and industries needed for community stability and economic purposes while minimizing impacts to other resources.

Policy: Garfield County adopts the principles expressed in Section 63J-8-104 of the Utah Code regarding mineral and mining on federal land. Federal land managers shall achieve and maintain at the highest reasonably sustainable levels, a continuing yield of mineral and mining resources in those subject lands with economically recoverable amounts of such resources.

Finding & Policy: A vibrant mineral and mining industry is an important component of a healthy, sustainable and stable economy and the communities and families it supports.

Goal & Objective: Manage mineral and mining resources to provide for the responsible use and prosperity of man and local communities.

Finding: Increasing restrictions on the development of mineral and mining resources over the last few decades has had a negative impact on Garfield County's economic welfare, community stability and sustainability.

Policy, Goal & Objective: Managers shall encourage and facilitate development of mineral and mining resources by private and governmental industries in a manner that satisfies national, state and local needs and provides for economically and environmentally sound exploration, extraction and reclamation.

Policy: Garfield County supports implementation of reasonable Best Management Practices for exploration, extraction and reclamation of mineral and mining projects.

Policy: Where surface occupancy would be undesirable (cemeteries, culinary water sources, landfills, NRHP sites, developed recreation sites, etc.), manage for optimal leasing with no surface occupancy stipulations.

Policy: Garfield County will Coordinate and work cooperatively with federal state and local agencies to maximize responsible, environmentally sound development of mineral and mining resources.

Policy: Land managers shall reconsider mineral and mining operations for lands that are designated as No Surface Occupancy or closed when a) the circumstances or relative resource values have changed; b) less restrictive requirements could be developed to protect resources of concern; c) operations could be conducted without causing unacceptable impacts to resources of concern; d) projects are proposed that provide at least 5 full time jobs for a period of not less than 3 years; e) during the next regular planning cycle; or f) prior to the end fiscal year 2025, whichever occurs first.

Policy: Consistent with Garfield County's Visual Resource Management Plan, managers shall not consider surface disturbing mineral and mining operations in VRM Class I areas. VRM Class II, III, and IV areas shall be available for surface disturbing mineral and mining operations with appropriate BMPs. Where questions arise regarding allowable activities in VRM Class II, III, and IV areas, managers shall coordinate with Garfield County to assure consistency to the maximum extent allowed by law.

Policy, Goal & Objective: Opportunities shall be maintained to access mineral and energy resources to sustain viable rural economies and to contribute to the health, welfare and economic growth of the region, state and nation.

Policy: Lands disturbed by mineral and energy activities shall be reclaimed using the best techniques and principles and returned to other productive uses.

Finding & Policy: Mineral and mining activities occur on a very small percentage of the land, generally less than 1%. Mineral and mining exploration, development, extraction and reclamation are compatible with other uses and can occur concurrently or sequentially with such uses.

Policy: Mineral and mining activities will be prioritized outside special status species habitat. When mineral and mining activities are proposed in special status species habitat, priority will be given to development in non/low value habitat

first and then in the least suitable habitat and will implement avoid, minimize, mitigate protocols.

Policy: Surface disturbing mineral and mining activities in special status species habitat shall comply with the Garfield County conservation plan for the species of concern. If no County plan has been adopted for the particular species of concern, land managers shall coordinate species conservation plans and habitat evaluation guides with Garfield County as part of environmental analysis for the proposed mineral/mining activity.

Finding & Policy: Garfield County has sufficient areas managed for primitive recreation in existing parks, monuments, recreation areas, and designated wilderness. Managers shall prioritize exploration, development, extraction and reclamation of mineral and mining resources over wilderness values and primitive recreation unless specifically mandated otherwise by federal law.

Policy: Mineral and mining exploration, development and extraction shall be allowed in Class II and Class III pinyon/juniper woodlands with an median age less than 200 years to the maximum extent allowed by law. Consistent with ecologic site descriptions, reclamation activities in such areas may restore lands to desired future conditions consistent with management objectives.

Finding and Policy: No Surface Occupancy restrictions are not suitable for special status species habitat where the Wildlife Habitat Evaluation Guide score is less than 70% of the maximum, unless approved by the County Commission. Mineral and mining projects that include reclamation anticipated to improve a Wildlife Habitat Evaluation Guide score at least 10% are found to be a net benefit to the species of concern.

Policy: Management of the County's mineral and mining resources in areas designated for sage grouse management shall be consistent with the County's Resource Management Plan to the maximum extent allowed by law.

Policy: Land shall not be managed for wilderness characteristics if they contain mining and mineral resources that have the potential of being developed prior to the subsequent resource management planning event or 25 years, whichever is longer.

Policy: Areas shall not be closed to locatable mineral entry, new mineral material sales, solid mineral leasing, and similar activities without consultation, cooperation and Coordination with the County Commission.

Policy: The least restrictive terms and conditions allowed by law shall apply to exploration, development, extraction, and reclamation of mineral and mining resources in Garfield County.

Policy: All federal land management plans with mineral/mining development provisions applicable to lands in the County, shall include an environmental analysis that clearly discloses: a) the planning agency has considered and evaluated the mineral and mining potential in all areas of the planning area as if the areas were open to mineral development under standard lease agreements; b) the planning agency has evaluated any management plan prescription for its impact on the areas baseline mineral and mining potential; c) development provisions do not unduly restrict access to public lands for mineral exploration and development; d) the planning agency has analyzed all proposed mineral/mining stipulations and considered adopting the least restrictive necessary to prevent or reduce damage to other significant resource values; and e) the planning agency evaluated mineral/mining restrictions to determine whether to waive, modify or make exceptions to the restrictions on the basis that they are no longer necessary or effective.

References

Mineral Potential Report for the Kanab Planning Area, BLM Kanab Field Office Resource Management Plan, 2008

BLM Kanab Field Office Resource Management Plan, 2008

BLM Richfield Field Office Resource Management Plan, 2007

Geology and Mineral Resources of Garfield County, Utah, Utah Geological and Mineral Survey, Bulletin 107, Hellmut H. Doelling, October 1975

3.8 AGRICULTURE

Current Setting: Although rural, Garfield County is not considered by many as an agricultural county when compared to other areas of the nation. Good crop land is limited; water is scarce; and federal or state lands dominate the landscape. However, throughout the last 150 plus years Garfield County has been agriculturally based in its attitudes and lifestyle. Agriculture continues to have a cultural impact out of proportion to any economic, acreage or production standards. The mindset of Garfield County's residents remains in large measure rural with an emphasis on family life. Local influences play an important part in government and social life. Like the early settlers of the County, modern-day residents still see

security in agriculture and their lives take form and context from land-related influences.

Early settlers came to the County in hopes of finding suitable lands, waters and soils for agriculturally based settlements. Irrigation infrastructure and fields were some of the first improvements as each of the communities were populated. And similar to pioneer settlers, current residents prefer an agricultural approach to the land in contrast to development of large population centers or metropolitan areas. Abundant crop land with adequate water is limited, and further restricted by dominant federal ownership in the County. Agricultural interests are generally centered on livestock related activities.

Mountain streams have been diverted, and the farming community has become the dominant characteristic of the cultural landscape. In addition to farms concentrated near communities, livestock interests graze forest lands in the summer and dryer xeric lands in the winter. Concepts of stewardship have deterred overexpansion and exploitation of the land. For many of the County's citizens, agricultural interests extend beyond economics and are a vital part of their custom, culture, heritage and nature. Even as fewer families derive a significant portion of their living from agriculture, the value of land ownership and rural ways continues to reflect strong sentiments and preferences. The County's attitudes regarding use of public and private lands are increasingly disparate from urban areas of the state and country.

The 2012 Census of Agriculture indicated there were 279 farms or ranches in the county with an average size of 328 acres. Total acreage was listed as 91,533 acres. 120 or 43% of the farmers/ranchers derived their primary living from agricultural operations. The county had 19.2% of the land in farms as cropland and 67.5% as pastureland. Cattle and calves were the dominant livestock item and generated \$8,426,000 of products sold. Crops produce \$3,618,000 of sales and total production was \$12,043,000.

Need for Management Change

- 1) Regulations need to be reduced to ensure farmers and ranchers do not face undue or burdensome restrictions from state and national governments.
- 2) The social and cultural value of local farms, ranches and agriculture needs to be identified, analyzed and disclosed in NEPA analysis and land use plans developed by federal agencies.
- 3) A permanent revenue source needs to be established to fund ongoing water resource projects that support and expand agriculture. Additional water resources need to be developed to accommodate municipal growth without jeopardizing agricultural interests.

- 4) Additional water needs to be developed for agriculture and livestock interests on public and private land.
- 5) Federal and state agencies need to transfer suitable lands to private ownership for farming and ranching purposes.
- 6) The agricultural lifestyle of Garfield County needs to be preserved and enhanced.
- 7) The County's strict no net loss of private lands policy needs to be observed, especially related to farms, ranches and agricultural interests.
- 8) Federal and state agencies need to develop land in their ownership for conservation of special status species.
- 9) The use and production of federal lands for livestock grazing needs to be preserved and enhanced.
- 10) Wildlife impacts to private and public land agriculture and ranching need to be reduced. Wildlife managers need to strictly adhere to population objectives established on or before January 1, 2015.
- 11) Federal agencies need to eradicate noxious weeds in their jurisdiction and prevent seeds from moving to private lands.
- 12) Federal agencies need to restore lands occupied by invasive conifers and annual grasses to desired vegetative communities, consistent with ecologic site descriptions.

Desired Future Conditions

Garfield County Desires:

- a) To the maximum extent allowed by law, federal actions are implemented in a way to ensure farmers and ranchers do not face undue or burdensome restrictions.
- b) The social, custom, cultural and heritage value of local farms, ranches and agriculture are identified, analyzed and disclosed in NEPA analysis and land use plans developed by federal agencies.
- c) Additional water is developed for agriculture and livestock interests on public and private land.
- d) A permanent revenue source is established to fund ongoing water resource projects that support and expand agriculture; and additional water is developed to accommodate municipal

growth without jeopardizing agricultural interests.

- e) Federal and state agencies transfer suitable lands to private ownership for farming and ranching purposes.
- f) The agricultural lifestyle of Garfield County needs to be preserved and enhanced.
- g) Federal and state agencies strictly adhere to the County's No Net Loss of Private Lands policy, especially regarding farms ranches and agricultural interests.
- h) Federal and state agencies develop lands under their ownership for conservation of special status species, and, to the maximum extent allowed by law, relieve the burdens on private agricultural lands imposed by the Endangered Species Act.
- i) Utah prairie dogs are removed from private lands and relocated on suitable federal lands.
- j) The use and production of federal lands for livestock grazing is preserved and enhanced.
- k) Wildlife impacts to agriculture and ranching interests are reduced.
- l) Wildlife managers strictly adhere to population objectives established on or before January 1, 2015.
- m) Federal agencies eradicate noxious weeds in their jurisdiction which are suspected of being the seed source for private lands.
- n) Federal agencies restore lands occupied by invasive conifers and annual grasses to desired vegetative communities, consistent with ecologic site descriptions.

Findings, Policies, Goals & Objectives

Finding, Policy, Goal & Objective: The agricultural lifestyle of Garfield County shall be preserved and enhanced.

Finding, Policy, Goal & Objective: Agriculture and ranching interests are vital to the custom, culture, heritage and lifestyle of Garfield County and shall be preserved and enhanced to the maximum extent allowed by law.

Policy: Federal and state agencies shall reduce the burdens on farmers and ranchers to the maximum extent allowed by law.

Policy: The social, custom, cultural and heritage value of local farms, ranches and agriculture shall be identified, analyzed and disclosed in NEPA analysis and land use plans developed by federal agencies. Local farms and ranches constitute small businesses under the Regulatory Flexibility Act and shall be analyzed in accordance with federal law.

Finding, Policy, Goal & Objective: Water is a vital resource that benefits all activities on public and private lands; and additional water needs to be developed for agriculture and livestock interests. Federal and state agencies shall develop additional water resources to the maximum extent allowed by law.

Goal & Objective: A permanent revenue source is established to fund ongoing water resource projects that support and expand agriculture.

Policy, Goal & Objective: As municipal needs increase, additional water will be developed to accommodate municipal growth without jeopardizing agricultural interests.

Policy: Garfield County supports the transfer suitable state and federal lands to private ownership for farming and ranching purposes.

Policy: Federal and state agencies shall strictly adhere to the County's No Net Loss of Private Lands policy, especially regarding farms ranches and agricultural interests.

Finding, Policy, Goal & Objective: Adequate state and federal lands exist to conserve and recover special status species. To the maximum extent allowed by law, federal and state agencies shall develop lands under their ownership for conservation and recovery of special status species, and shall relieve the burdens on private agricultural lands imposed by the Endangered Species Act.

Finding, Policy, Goal & Objective: Utah prairie dogs are not in their natural habitat on agricultural land and are not suitable for private lands. Utah prairie dogs shall be removed from private lands and relocated on suitable federal lands.

Finding, Policy, Goal & Objective: The use and production of federal lands for livestock grazing is a cultural and ethnographic resource and shall be preserved and enhanced.

Finding & Policy: Sufficient state and federal land exist for the management of wildlife. Wildlife impacts to agriculture and ranching interests shall be reduced; and wildlife managers shall strictly adhere to population objectives established on or before January 1, 2015.

Policy: Federal agencies shall eradicate noxious weeds in their jurisdiction which are suspected of being the seed source for private lands.

Policy: Federal agencies shall restore lands occupied by invasive conifers and annual grasses to desired vegetative communities, consistent with ecologic site descriptions.

Policy: Garfield County supports ongoing training resources for agricultural interests to ensure residents are fully aware of available technological advances and funding sources.

Policy: Garfield County supports active vegetative treatments on public lands and expansion of livestock grazing AUM as forage increases.

Policy: Garfield County opposes grazing buyouts, and any other scheme to retire grazing AUMs and prohibit their proper public use by qualified grazers. When grazing AUM's are given up by a public lands livestock grazer, those AUMs shall be made available for other qualified grazers to acquire and utilize.

Policy, Goal & Objective: Consistent with ecologic site descriptions, vegetative resources shall be managed to optimize rangeland health and forage production.

CHAPTER 4

SPECIAL DESIGNATIONS

4.1 INTRODUCTION

Special Designation Areas are established to protect and preserve their unique values and uses. These areas require different management than would normally be applied to the surrounding lands. This section of the plan identifies existing special management areas within the County and addresses, to some degree, those existing conditions, as well as future objectives, suitability criteria, guidelines, qualities, uses, acceptable activities, goals, policies, and minimum requirements for establishment and/or management in the future. Establishment or management of specially designated areas described herein without complying with establish criteria is inconsistent with the Garfield County General Management Plan and considered a violation of local law.

This section describes the current setting, need for management change, desired conditions, policies, goals, objectives, and criteria related to special designations in Garfield County. It is recognized that there is a significant body of Law regarding various land management decisions. It is desired that all of the land management entities comply with the conditions identified below. Management actions must be consistent to the maximum extent allowed by law with Garfield County's General Management Plan. Unless directed by federal or state law, management actions that are contrary to the stated positions are inconsistent with Garfield County's General Management Plan. Where no body of law exists regarding land management decisions or where decisions are left to the Agencies deference or discretion, management actions must be consistent with the positions identified in this plan.

Special designations can be grouped into three broad categories:

Congressional/Legislative Designations - Specially designated areas that are statutorily established by Congress or the Utah State Legislature include National Parks, National Recreation Areas, National Forests, National Monuments, State Parks, Wilderness, and Wild and Scenic River Corridors. Land managers and others may make preliminary recommendations that ultimately could result in congressional/legislative action, but final designation does not take place until the appropriate legislative body takes action. Generally, recommendations require evaluation processes conducted as part of land management plans or NEPA activities and may be administrative recommendations. Bryce Canyon National Park, Glen Canyon National Recreation Area, Box Death Hollow Wilderness Area and Anasazi State Park are examples of Congressional/Legislative designations.

Administrative Recommendations - In some cases, Land managers may make recommendations for special management areas that are evaluated as part of a public land management planning process or that may need action at higher administrative levels to become final. These areas generally include locations designated and managed under special/different management prescriptions. They may include but are not limited to research natural areas, experimental forests, scenic highways, Areas of Critical Environmental Concern (ACECs), wilderness study areas (WSAs), national trails, Wild and Scenic River recommendations,

backcountry/roadless/primitive areas and SRMAs. An extreme example of this type of administrative recommendation is the Grand Staircase Escalante National Monument. It was originally an administrative decision by the President of the United States and subsequently became a Congressional Designation when it was ratified by Congress.

Areas Identified by Land Manager - Authority regarding this category of special area generally rests with the individual Land Manager. The Land Manager may identify, remove, or provide some special management for these areas through approval of the land management plan, land management plan amendments, land management plan revision, or a special management order. These areas may include lands with specific resource management such as lands with wilderness character, visual resource / scenery management lands, No Surface Disturbance lands, or lands under special protective order.

4.2 CONGRESSIONAL/LEGISLATIVE DESIGNATIONS

Approximately 2,200,000 acres or 66 % of Garfield County is congressionally or legislatively designated. Garfield County may be the only County in the country with portions of three national parks within its boundaries. Bryce Canyon National Park, Capitol Reef National Park and Canyonlands National Park comprise 4 % of Garfield County or approximately 132,200 acres. The County also includes more than 300,000 acres of Glen Canyon National Recreation Area, 40% of the Dixie National Forest, more than 700,000 acres of Grand Staircase Escalante National Monument (the second largest National Monument in the continental United States) units of the Fishlake National Forest, two state parks, and the Box Death Hollow Wilderness Area.

Under current management scenarios, lands now designated Parks, Monuments, and Recreation Areas place an unjust burden on residents and tax payer of Garfield County.

4.2.1 PARK SERVICE UNITS

To a greater or lesser extent each National Park Service unit utilizes public services provided by Garfield County including but not limited to roads, emergency medical services, law enforcement, solid waste collection and disposal, and search and rescue. Capitol Reef and Canyonlands National Parks are managed almost exclusively for primitive and unconfined recreation and solitude. Glen Canyon National Recreation Area is managed for recreation, but is similar to Capitol Reef and Canyonlands when considering impacts to Garfield County, but at a much higher level. Land in Bryce Canyon National Park is managed largely for wilderness experiences in spite of only a small percentage of visitors using those values. Garfield County's Recreation Opportunity Spectrum (ROS) identifies National Park Service lands as mostly roaded natural, semi primitive motorized and semi primitive non-motorized. Lands suitable for primitive setting exist in the extreme northeast corner of the County within Canyonlands National Park, and exist in Glen Canyon National Recreation Area. Garfield County recognizes restrictions and management prescriptions identified in the proclamations establishing National Park Service units and regulations governing their administration. The County also recognizes the individual benefits and burdens each unit contributes to the County's residents and visitors.

Garfield County believes National Park Service Units can have beneficial impacts to the County

including opportunities for use and enjoyment of the resources within their boundaries and economic growth from Park Service activities.

Findings

Garfield County finds:

- a) Land owners and users are jointly responsible for impacts to public services.
- b) National Park Service Units are responsible for 2 pounds per visitor day of solid waste.

4.2.1A BRYCE CANYON NATIONAL PARK

Current Setting

Bryce Canyon National Park is a developed park that receives visitation in the range of 1.5 million visitors per year. Visitation in the park is primarily along the main network of roads that are controlled and maintained by the National Park Service. Significant visitation also occurs at the main visitor's center and a concessionaire operated lodge. Visitor patterns and use surveys by the Park demonstrate a significant component of the visitation occurs on developed hiking trails, paths and self guided tours. Less than 0.5 % of the visitors to Bryce Canyon National Park apply for a backcountry permits. Approximately 16,300 acres of the park were recommended for wilderness designation in 1971, but Congress has not acted on the proposal.

Need for Management Change

1. Garfield County needs to solve solid waste management issues associated with the Park. Currently it is believed that Bryce Canyon encourages its visitors to utilize Garfield County's Public Solid Waste Collection and Disposal System instead of participating fully in the program. Estimates indicate park visitors generate approximately 20% of the waste disposed of at the County's Johns Valley Landfill, but fees collected from the park and its concessionaire were less than 5% of the FY 2006 budget.
2. A route to accommodate bike and OHV travel across the park or across adjacent federal agency lands needs to be constructed to access the Bryce Valley area. Current regulations for management direction prohibit such activity on Park lands except in very specific instances. The Park needs to cooperate with the County and other federal agencies in developing a viable route.
3. The park needs to actively support the County's management plans for the Bryce Canyon Airport and development of land adjacent to the park.
4. The park needs to support and participate in the development of an archaeological / paleontological repository and research center in the County.
5. In as much as lands within Bryce Canyon National Park have been withdrawn from natural resource extraction opportunities, Bryce Canyon National Park needs to expand economic, scientific, and cultural opportunities and increase beneficial uses for residents and visitors of Garfield County to the maximum extent possible.
6. Visual Resource management, Recreation Opportunity Spectrum analysis, OHV designations, Outstandingly Remarkable / Relevant-Important evaluation, transportation networks, and other

management tools and criteria need to be consistent, to the maximum extent allowed by law, with comparable components of the Garfield County General Management Plan. Where criteria, protocols, and procedures have been used in development of the County Plan, no new processes should be used without County Commission concurrence.

Desired Condition

Garfield County desires:

- a) Bryce Canyon National Park to expand opportunities for scenic over flights, and work cooperatively with the County to assist Bryce Canyon airport in reaching its full potential. Garfield County desires for Bryce Canyon National Park to work cooperatively at maximizing the beneficial uses of the Bryce Canyon Airport.
- b) Bryce Canyon National Park work cooperatively with County in solving solid waste issues associated with the Park. Current estimates indicate that approximately 2 pounds of solid waste are generated per visitor per day. Although all the waste is not collected in the park, the vast majority eventually reaches the John's Valley Landfill through Garfield County's public collection and disposal system. Garfield County desires that Bryce Canyon National Park compensate the County for this service. Garfield County desires that Bryce Canyon National Park Service pay its fair share for solid waste collection and disposal services, whether the solid waste is collected inside or outside of Park boundaries.
- c) The Park needs to continue to be managed as a visitor destination. The configuration of the Park, the existing transportation system within the Park and the proximity to Tropic Town limit the land of true wilderness character in the Park. Bryce Canyon National Park should be managed for increased visitation with more remote areas managed as semi primitive non-motorized.
- d) Bryce Canyon National Park work cooperatively with the County and other agencies in developing OHV and Bike trail facilities to permit travel from the Paunsaugunt Plateau to the Tropic area.
- e) No Land managed by Bryce Canyon National Park in Garfield County be designated as wilderness.
- f) Mutually beneficial and cooperative relationships be expanded with Bryce Canyon National Park.

Policies, Goals, Objectives, and Criteria

Policy: Garfield County will assess Bryce Canyon National Park a fee commensurate with 2 pounds per day per visitor use day for solid waste collection and disposal activities, and 4.5 pounds per day per resident. Garfield County will use actual visitor counts and will make appropriate deductions for solid waste that is collected, hauled, recycled, and/or disposed of by non County forces.

Goal: Garfield County will develop a bike and OHV route consistent with desired conditions and Park regulations to move visitors from the Paunsaugunt Plateau to the Bryce Valley area.

Garfield County will support enhancement of air service at Bryce Canyon the airport in order to improve and enjoyment and use of resources at Bryce Canyon National Park.

Goal: Garfield County will develop a world-class archaeological and paleontological repository and research center in Garfield County.

Policy: Garfield County will work cooperatively to expand economic, scientific, and cultural opportunities in Bryce Canyon National Park, while increasing beneficial use and enjoyment of Park resources.

Policy: Garfield County will support management of Bryce Canyon National Park in accordance with the Garfield County Recreation Opportunity Spectrum Analysis and other aspects of Resource Management Section of the General Plan.

Findings

Assuming 1.5 million visitors per year to Bryce Canyon National Park, estimates indicate that Park visitors generate approximately 1500 tons of solid waste per year or 20% of waste received at John's Valley Landfill. However, solid waste fees collected from Bryce Canyon National Park equal to only \$8.00 per ton (33% of the cost of disposal or 16% of the cost of collection and disposal). Federal land managers have failed to compensate Garfield County equitably for solid waste collection & disposal services.

4.2.1B CAPITOL REEF NATIONAL PARK

Current Setting

Capitol Reef National Park is a remote, largely undeveloped unit of the National Park system with no significant visitor facilities located in Garfield County. County facilities within park boundaries include a series of roads and trails and 640 acres of County owned land. Visitation in the Garfield County portion of the park is limited, and the park provides little if any economic benefit to the County. Access to Capitol Reef National Park lands in Garfield County is only on County roads. The park issued a final wilderness recommendation in November 1974 identifying 179,185 acres (82 % of the federal land in the park) suitable as wilderness. The Garfield County portion of the park is managed almost exclusively for primitive recreation.

Need for Management Change

1. Garfield County and the Park need to resolve road rights-of-way issues and develop cooperative plans for managing the transportation system while protecting park resources. Garfield County's Valid Existing Rights need to be recognized and managed in a collaborative manner.
2. Garfield County needs Capitol Reef National Park to maximize use and enjoyment of Park lands in Garfield County and to develop opportunities to improve socioeconomic impacts to the County.
3. The County needs Capitol Reef National Park to expand its beneficial impact and reduce negative impacts on County services (law enforcement, search and rescue, emergency medical services, road maintenance, solid waste collection and disposal, etc.)

4. The Notom road and the Burr Trail Road in Capitol Reef National Park need to be improved to an all weather condition meeting AASHTO standards.
5. Trailheads, historic trails, and interpretive facilities need to be expanded in the Park's southern district, particularly regarding the Grand Gulch (Baker Ranch) road the Rainy Day Mine and the Halls Crossing Road.
6. In as much as lands within Capitol Reef National Park have been withdrawn from natural resource extraction opportunities, Capitol Reef National Park needs to expand economic, scientific, and cultural opportunities and increase beneficial uses for residents and visitors of Garfield County to the maximum extent possible.
7. Visual Resource management, Recreation Opportunity Spectrum analysis, OHV designations, Outstandingly Remarkable / Relevant-Important evaluation, Transportation Networks, and other management tools / criteria need to be consistent, to the maximum extent allowed by law, with comparable components of the Garfield County General Management Plan. Where criteria, protocols, and procedures have been used in development of the County Plan, no new processes should be used without County Commission concurrence.

Desired Condition

Garfield County desires:

- a) To see expanded visitation and opportunities for use and enjoyment of the southern section of Capitol Reef National Park, even though the County recognizes that Capitol Reef National Park is and probably always will be a remote type park. It is doubtful those portions of the park located in Garfield County will receive visitation on the scale of magnitude of Bryce Canyon prior to 2030.
- b) Visitation be expanded and economic growth be directed toward the town of Boulder.
- c) The Burr Trail and the Notom road be brought to safe all weather condition meeting AASHTO Standards and paved.
- d) The Rainy Day Mine Road, the Grand Gulch Road and Hall's Crossing Road be recognized as RS 2477 rights, use and enjoyment of these historic facilities be greatly expanded, even if the use is non-motorized in nature.
- e) Capitol Reef National Park and Garfield County work cooperatively at developing interpretive opportunities and programs that can benefit the County.
- f) Visitation in the Park is greatly expanded and that the County be adequately compensated by the Park Service for the use of public services.
- g) Capitol Reef National Park works cooperatively with County in developing and enhancing visitor services.

h) Capitol Reef National Park bring land uses in conformity with the County Plan and ROS while expanding use and enjoyment of Park resources. Due to the presence of roads, ways, mining impacts, and other man made features that predate the Park, much of Capitol Reef, South of the Burr Trail Road, is not ideally suited for wilderness. However, much of the land is remote and is aptly suited for semi-primitive non-motorized recreation.

i) Access, human waste control, solid waste control, law enforcement, search & rescue, and emergency medical services need to be provided through reliable means. The portions of Capitol Reef National Park in Garfield County lying north of the Burr Trail Road are similar to the southern section except that they may be slightly less impacted by man's activities.

j) To continue to work cooperatively with the Park and identifying, evaluating and managing valid existing rights.

k) All roads, paths, and ways that predated the Park be recognized as RS 2477 rights of way and that Park resources including historic roads and trails be managed to maximize use and benefit by the public and socioeconomic value to the County.

l) Capitol Reef National Park works more cooperatively at developing rights-of-way and the transportation network in the park.

Policies, Goals, Objectives, and Criteria

Policy: Garfield County will actively seek to resolve road rights-of-way issues and develop cooperative plans for managing the transportation system while protecting Park resources.

Policy: Garfield County will actively seek to resolve issues associated with its valid existing rights.

Objective: The County will work cooperatively with Capitol Reef National Park to expand beneficial impacts and reduced negative impacts on County services.

Goal: Garfield County will actively pursue improving the Notom Road and the Burr Trail Road to an all weather condition meeting AASHTO Standards.

Policy: Garfield County will support the development of trailheads, historic trails, interpretive facilities, and other projects aimed at maximizing the enjoyment and use of Capitol Reef National Park.

Policy: Garfield County will support expanded economic, scientific, and cultural opportunities, which increased beneficial uses for residents and visitors to Garfield County.

Policy: Garfield County will support Park programs, which are consistent with the Resource Management Section of Garfield County General plan, the Recreation Opportunity Spectrum Analysis, Land Use Management Policy, Transportation System, Visual Resource Management Designations, and other planning tools adopted by Garfield County. The County will appose management actions and scenarios that are inconsistent with those planning tools.

4.2.1C CANYONLANDS NATIONAL PARK

Current Setting

Canyonlands National Park in Garfield County is a remote unit of the National Park system that has no developed facilities and provides little if any economic benefit to the County. Visitation in the park is extremely limited. Only 5 % (17,729 acres) of the Park's 337,570 acres are located in Garfield County - all of which was recommended as suitable for wilderness in 1974. Garfield County's facilities in Canyonlands National Park are limited to a few lightly traveled, sparsely maintained, primitive roads.

Need for Management Change

1. Collaborated, reliable access to Canyonlands National Park needs to be solidified.
2. Public services and appropriate compensation need to be coordinated.
3. Garfield County needs Canyonlands National Park to develop and expand its beneficial uses for County residents and visitors to the maximum extent possible.
4. In as much as lands within Canyonlands National Park have been withdrawn from natural resource extraction opportunities, Canyonlands National Park needs to expand economic, scientific, and cultural opportunities and increase beneficial uses for residents and visitors of Garfield County to the maximum extent possible.
5. Visual Resource management, Recreation Opportunity Spectrum analysis, OHV designations, Outstandingly Remarkable / Relevant-Important evaluation, Transportation Networks, and other management tools / criteria need to be consistent, to the maximum extent allowed by law, with comparable components of the Garfield County General Management Plan. Where criteria, protocols, and procedures have been used in development of the County Plan, no new processes should be used without County Commission concurrence.

Desired Conditions

Garfield County desires:

- a) Even though Canyonlands National Park is more remote than other National Parks, reliable all weather roads and access be provided to Canyonlands National Park for search and rescue, emergency medical services, law enforcement and for use and enjoyment by the public. Although these may be relatively low standard roads, some reliable access needs to be provided.
- b) Portions of the Park, categorized as Rec Ia by Garfield County, be designated as wilderness. Almost all of Canyonlands National Park in Garfield County is suitable for wilderness management.
- c) The Colorado River in Canyonlands National Park be designated a wild river as part of the Wild and Scenic River System.
- d) Improved access to Canyonlands National Park be developed, in cooperation with the National Recreation Area.

e) Canyonlands National Park work cooperatively with the County in expanding opportunities for enjoyment and use of Park resources by residents and visitors of Garfield County.

Policies, Goals, Objectives, and Criteria

Policy: Garfield County will actively pursue improved reliable access to Canyonlands National Park.

Objective: Garfield County will develop cooperative agreements to provide appropriate compensation for public services provided to Canyonlands National Park.

Policy: Garfield County will support development and expansion of use and enjoyment of Canyonlands National Park in Garfield County.

Policy: Garfield County will support expansion of economic, scientific, and cultural opportunities that increase the use and enjoyment of Canyonlands National Park resources policy.

Policy: Garfield County will support Park programs, which are consistent with the Resource Management Section of Garfield County General plan, the Recreation Opportunity Spectrum Analysis, Land Use Management Policy, Transportation System, Visual Resource Management Designations, and other planning tools adopted by Garfield County. The County will appose management actions and scenarios that are inconsistent with those planning tools.

4.2.1D GLEN CANYON NATIONAL RECREATION AREA

Current Setting

Glen Canyon National Recreation Area comprises more than 340,000 acres of Garfield County's land base and includes Bureau of Reclamation lands set aside for Lake Powell. The great bulk of visitation and economic revenue from Glen Canyon NRA occurs on Lake Powell at facilities that are located outside of the County. However, Garfield County expends considerable effort and funds to provide law enforcement, road maintenance, search and rescue, solid waste disposal and other public services without any significant benefit in return. Burdens associated with the public services are exacerbated due to the NRA's distance from County owned facilities.

Need for Management Change

1. Garfield County and the NRA need to resolve road rights-of-way issues and develop cooperative plans for managing the transportation system while protecting resources. Garfield County's Valid Existing Rights need to be recognized and managed in a collaborative manner.
2. Collaborative OHV management activities need to be analyzed and developed including but not limited to use of existing roads and trails, development of an OHV play area in the Bullfrog region, trail head construction, designation of OHV open areas, and necessary law enforcement / educational activities.
3. Management conflicts for the Harris Wash / Silver Falls and Moody Creek roads need to be resolved including but not limited to RS 2477 determinations, permitted uses, route development

and maintenance.

4. All weather access meeting AASHTO standards needs to be provided to the Hole in the Rock site. Interpretive opportunities for the Hole in the Rock Road, Dance Hall Rock, and other associated features need to be expanded.

5. The County needs Glen Canyon National Recreation Area to expand its beneficial impact and reduce negative impacts on County services (law enforcement, search and rescue, emergency medical services, road maintenance, solid waste collection and disposal, etc).

6. Garfield County and Glen Canyon National Recreation Area need expand collaborative efforts to maximize consistency with general management plans. Glen Canyon National Recreation Area must be consistent to the maximum extent allowed by law with the County's land use management plan.

7. Glen Canyon NRA needs to expand efforts to control Tamarisk, Salt Cedar, Russian Olive, and other undesirable invasive plants. The NRA needs to eradicate identified species of noxious weeds. The County needs to consider including undesirable species on its County noxious weed list.

8. Natural resource based industries should be allowed the greatest flexibility allowed by law to locate and develop on NRA lands while fulfilling the purposes of the enabling legislation.

9. In as much as lands within Glen Canyon National Recreation Area have been withdrawn from natural resource extraction opportunities, Glen Canyon National Recreation Area needs to expand recreation, economic, scientific, and cultural opportunities and increase beneficial uses for residents and visitors of Garfield County to the maximum extent possible.

10. Visual Resource management, Recreation Opportunity Spectrum analysis, OHV designations, Outstandingly Remarkable / Relevant-Important evaluation, Transportation Networks, and other management tools / criteria need to be consistent, to the maximum extent allowed by law, with comparable components of the Garfield County General Management Plan. Where criteria, protocols, and procedures have been used in development of the County Plan, no new processes should be used without County Commission concurrence.

Desired Condition

Garfield County desires:

a) Opportunities for the expansion of recreation be greatly enhanced within the NRA. Glen Canyon National Recreation Area is largely underutilized.

b) Several areas within the Recreation Area have been identified and designated as having wilderness character by the County. Those lands should be so designated.

c) Appropriate access to accommodate search and rescue emergency medical services law enforcement, should be developed along with provisions for solid and human waste collection and disposal.

- d) A process to identify, evaluate and resolve issues associated with valid existing rights, RS 2477 rights of way and OHV management within the NRA be initiate.
- e) The NRA and Garfield County work cooperatively to develop a balanced recreation and management plan considering wilderness, semi-primitive uses, OHV play areas, OHV routing system, developed semi-developed primitive campgrounds, and shoreline/Lake management.
- f) The NRA significantly increased efforts to control exotic species and makes significant progress towards eradicating such undesirables as Tamarisk/Salt Cedar and Russian Olive infestations in Garfield County. Garfield County observes significant detriment occurring within the NRA as a result of the proliferation of exotic non-native species.
- g) The Dirty Devil River, North of US 95 be designated a recreational river as part of the Wild and Scenic Rivers System within Glen Canyon National Recreation Area.
- h) Existing access along the Dirty Devil River be improved and that opportunities for recreational use of the resource be greatly expanded.
- i) A world class OHV play area be identified within or near Glen Canyon National Recreation Area in Garfield County.
- j) Suitable lands be identified and designated for OHV play areas. Garfield County believes lands adjacent to the Bullfrog primitive campground are suitable for such an OHV play area.
- k) Glen Canyon NRA and Garfield County jointly develop a methodology for managing OHV use and the criteria for designating and managing routes for OHV travel and OHV open areas.
- l) NRA support and assist in obtaining reliable power to the Bullfrog Basin.
- m) An increase in beneficial impacts resulting from the NRA and a reduction in uncompensated services and negative impacts created by the facility.

Policies, Goals, Objectives, and Criteria

Policy: Garfield County will work as a cooperating agency and in the Glen Canyon National Area OHV Management Plan. In addition, Garfield County will actively pursuing expansion of the plan to include evaluation of OHV play areas in the Recreation Area, recognition of Garfield County's valid and existing rights for roads, and evaluation of suitability for designated OHV use.

Policy: Garfield County will work collaboratively with the National Recreation Area to develop management activities and scenarios to keep OHVs on designated roads and in designated areas. Reasonable accommodations for involvement of County staff and equipment will be made to assist in management activities.

Policy: Garfield County will pursue resolution of conflicts for the Harris Wash/Silver Falls and

Moody Creek roads: including but not limited to recognition of the County's valid existing rights, designation of uses for the roads, and other appropriate management activities.

Policy: Garfield County will actively pursue recognition of rights associated with other roads, paths, and ways within the National Recreation Area. In cooperation with Kane County, Garfield County will pursue interpretive opportunities for Hole in the Rock Road, Dance Hall Rock, and other associated features including improving Hole in the Rock road to an all weather condition meeting AASHTO Standards.

Policy: Garfield County will support programs and activities that expand beneficial impacts, and enjoyment and use of Glen Canyon National Recreation Area and activities and programs, while reducing negative impacts on County services.

Policy: Garfield County will pursue cooperative agreements, which compensate Garfield County for public services provided to Glen Canyon National Recreation Area.

Goal: Garfield County desires Glen Canyon National Recreation Area to expand efforts to control Tamarisk, Salt Cedar, Russian Olive, and other undesirable invasive plants. It is Garfield County's goal to have the presence in these plants reduced by 25% by 2010, 50% by 2015, and 75% by 2020.

Policy: Garfield County will support the development of natural resource based industries within NRA boundaries that are allowable by law and consistent with the enabling legislation.

Policy: Garfield County will support expanded recreation, economic, scientific, and cultural opportunities that increase beneficial use and enjoyment of Glen Canyon National Recreation Area.

Policy: Garfield County will support Park programs, which are consistent with the Resource Management Section of Garfield County General plan, the Recreation Opportunity Spectrum Analysis, Land Use Management Policy, Transportation System, Visual Resource Management Designations, and other planning tools adopted by Garfield County. The County will oppose management actions and scenarios that are inconsistent with those planning tools.

Findings

Garfield County finds:

- a) The burgeoning proliferation of Tamarisk is a significant detrimental impact on the County's water resources.
- b) Tamarisk needs to be eradicated.
- c) At least 3% - 5% of NRA land needs to be designated for cross country/open OHV use.

4.2.2 FOREST SERVICE UNITS

Current Setting

Almost 1,046,000 acres or 31 % of land in Garfield County is under Department of Agriculture

management administered by the Dixie and Fishlake National Forests. Until recently all but 3,824 acres of the forests were part of the Dixie National Forest. In March 2006 the Teasdale Ranger District of the Dixie National Forest and the Loa Ranger District of the Fishlake National Forest were consolidated into the Fremont Ranger District under the Fishlake administration.

The Forest Management Act of 1897 provided management provisions and defined the purpose of the Forest Reserves (the precursor of National Forests) as forest protection, watershed protection and a source of timber supply for the nation. For approximately 20 years, the Forest Service has been moving away from the original mandate and has focused primarily on natural features, wildlife and recreation. This has resulted in negative economic and social impacts to the residents of Garfield County and increased burdens for public services. The Forest Service's inability to provide consistent timber sales has resulted in closures of local sawmills, devastating bug infestations, loss of natural resource based industries, and associated social and economic detrimental effects.

At the present time, Forests in Garfield County are generally classified as roaded natural or semi-primitive non-motorized with most areas having been noticeably impacted by man. Few areas qualify as primitive setting. Visitor use surveys conducted by the Dixie National Forest document more than 80 % of visitors are engaged in motorized activities and a minimal percentage are using the forests primarily for primitive recreation. The Box Death Hollow Wilderness, described below, is located in the Escalante Ranger District of the Dixie National Forest.

Need for Management Change

1. Forest Service units need to revive opportunities for natural resource based industries.
2. The County land use plan has carefully considered Forest Service planning. Forest Service planning efforts need to be consistent to the maximum extent allowed by law with Garfield County's General Management Plan.
3. The existing network of roads and trails needs to be preserved and better utilized or expanded. Visitation is largely motorized. Route elimination or closure should be limited to those routes causing significant resource damage and only after obtaining concurrence with the County Commission. A viable route needs to be developed to connect the Paunsaugunt Plateau and the Bryce Valley Area.
4. The Forest Service should return to its original emphasis of protecting its lands and water while providing reliable sources of timber.
5. Forest lands should be managed for long term sustainability of natural resource development. Multiple use concepts should be re-instated, and primitive or semi-primitive recreation opportunities should be focused in designated wilderness areas. Roadless, backcountry and other recreation oriented activities should give deference to natural resource industries as opportunities develop.
6. The Forest Service needs to compensate Garfield County commensurate with use of public

services, such as landfill use, search and rescue, law enforcement, etc. Visual Resource management, Recreation Opportunity Spectrum analysis, OHV designations, Outstandingly Remarkable / Relevant-Important evaluation, Transportation Networks, and other management tools / criteria need to be consistent, to the maximum extent allowed by law, with comparable components of the Garfield County General Management Plan. Where criteria, protocols, and procedures have been used in development of the County Plan, no new processes should be used without County Commission concurrence.

Desired Condition

Garfield County desires:

- a) To continue the reasonably good working relationship with the United States Forest Service, most especially with the Dixie National Forest while expanding that relationship to the Fishlake National Forest.
- b) Natural resource based industries, particularly the timber industry be revived. The Forest Service should expend efforts comparable to those expended in the special status species program at reviving the timber industry. This can be done by easing industry liability and enhancing opportunity for allowable harvest of timber products in those areas that are outside of designated wilderness areas.
- c) Those areas that are now managed for backcountry experiences, such as roadless areas, or for outback recreation be re-evaluated and brought into compliance with the Garfield County's General Management Plan and ROS analysis.
- d) Forest Service units return to an emphasis on development of water and timber resources, and vegetative management for livestock and wildlife, considering the great recreational opportunities exists elsewhere in the County.
- e) If lands are managed for recreational purposes, recreation be identified as the lowest viable use and that natural resource based protection including timber, grazing, and mining be given a higher priority. Livestock grazing, along with oil and gas exploration be considered one of the more valuable uses of Forest Land and be given deference over non-motorized recreation uses.
- f) The stewardship concept be expanded and considerable effort be expended to develop viable, emerging, resource based industries.
- g) No additional units of the National Forest be managed as wilderness and that areas managed for non-motorized activities comply with the Garfield County General Management Plan or be the approved by the Garfield County Commission.
- h) The Forest Service recognizes all valid and existing rights.
- i) The National Forest Service to be more aggressive in harvesting bug infested timber.
- j) The Forest Service make its lands available for solid waste collection facilities, fire stations, and other vital public services when significant private recreational facilities exist within or

adjacent to the National Forest boundaries.

k) Where small parcels of difficult to manage land exists in Forest Service jurisdiction, efforts should be made to resolve conflicts and establish viable management options for those lands.

l) Solid waste management facilities be made available inside of National Forest Service units and that waste management be handled on a County wide basis with a single billing procedure.

m) The motorized travel management plan be consistent with the Garfield County Off Highway Vehicle (OHV) Ordinance. Before any valid and/or existing rights, such as roads, paths, or ways be designated for closure or for administrative use only they be evaluated for such valid or existing prior to implementation of any restrictive action.

n) No additional wilderness be designated within the National Forest other than the existing Box Death Hollow wilderness area.

o) The Red Canyon Natural Area be managed not to exceed the 12,000 acres and be managed for preservation activities subject to current motorized uses.

p) No additional lands within the Forest be designated for roadless use.

q) Any routes that have heretofore been designated as unclassified or unauthorized roads be considered for wildlife or other management purposes. Unclassified/Unauthorized roads must also be designated or recognized as part of any recreation opportunity spectrum in accordance with Forest Service criteria for primitive routes. Roads used for wildlife need to be managed in coordination with the grazing of livestock and the purposes and benefit should be distributed equally or in favor of livestock.

r) Management priorities in order of importance for the Forest be:

- 1) Commodity production,
- 2) Natural resource enhancement,
- 3) General multiple use management,
- 4) Recreation

Policies, Goals, Objectives, and Criteria

Goal: Revive opportunities and capabilities for a natural resource based industries within the forest.

Policy: Garfield County's policy to support planning and implementation actions that are consistent with the Garfield County General Management Plan. It is also Garfield County's policy to oppose the planning and implementation actions that are inconsistent with the Plan.

Policy: The existing network of roads and trails on Forest Service lands needs to be preserved, better utilized, and/or expanded. Garfield County opposes closure of roads or implementation of management restrictions, unless the benefits of such proposals out weigh the negative impacts to access.

Objective: Detailed information will be required to document the benefits of reduced access.
Goals/

Objective: Assist the Forest Service in its original emphasis on protecting its lands and water while providing reliable sources of timber. Included in this objective are a revival of traditional natural resource based industries and the development of stewardship industries and resource management that will provide for long-term stability and enhancement of local communities.

Policy: Garfield County will support recreation management scenarios that are consistent with Garfield County's Land Use Management Policy and Recreation Opportunity Spectrum. Garfield County opposes any additional designation of wilderness, backcountry, or primitive/unroaded areas without Commission concurrence.

Policy: Garfield County will be compensated for 2 pounds per visitor use day for Forest Service lands in the County; unless it can be demonstrated that solid waste produced by the visitors is collected and disposed of by some other methods. Additionally, the County will develop a procedure for a single billing for each forest associated with solid waste collection and disposal.

Objective: Develop cooperative agreements and systems necessary to compensate Garfield County commensurate with use of public services by the National Forest and their visitors.

Policy: Garfield County will support National Forest Service programs, which are consistent with the Resource Management Section of Garfield County General plan, the Recreation Opportunity Spectrum Analysis, Land Use Management Policy, Transportation System, Visual Resource Management Designations, and other planning tools adopted by Garfield County. The County will oppose management actions and scenarios that are inconsistent with those planning tools.

Findings

The current Transportation System in the Forest is the minimum necessary for attainment of original Forest Service management goals of forest/watershed protection, timber supply for the nation, and current goals of vegetative, hydrologic, and geologic management, wildlife and recreation. Considering the increasing motorized travel needs, particularly regarding OHVs and the large percentage visitors to the forest using motorized recreation, closure of any roads on the forest without County concurrence is a negative impact to the custom, culture, socioeconomics, and viability of the County and needs to be offset with other management actions that enhance motorized recreation opportunities.

4.2.3 GRAND STAIRCASE ESCALANTE NATIONAL MONUMENT

Current Setting

The Grand Staircase Escalante National Monument was established on September 18, 1996 by presidential proclamation. Containing more than 700,000 acres in Garfield County, the lands were previously targeted for mineral production, oil and gas development, and multiple use/sustained yield management. The 1.9 million acre monument withdrew nearly half of Garfield County's non-congressionally designated public lands from multiple use / sustained yield potential. The proclamation also directed the protecting of monument resources and development of opportunities for the study of specific scientific and historic resources.

Largely, the monument has developed into a private playground for the few hardy souls that can take advantage of its natural amenities. Contrary to presidential proclamation, the February 2000 monument management plan ignores valid existing rights, closes roads under County jurisdiction and diminishes opportunities for research and study by setting aside 94% of the monument as outback or primitive areas. Much of the monument land in Garfield County is classified as semi-primitive non-motorized. However, the monument's failure to recognize the County's valid existing rights and efforts to significantly reduce reliable public access has left the County with the burdens of providing search and rescue services, solid waste collection and disposal, emergency medical services, and law enforcement without viable means of compensation. Not only has the monument eliminated the potential for natural resource and economic benefit, it has also failed to develop a compensating scientific/recreation industry.

Need for Management Change

1. GSENM should review and revise its management plan to bring it into consistency with the Garfield County General Management Plan.
2. All roads, paths, ways and trails in existence in September 1996 should be inventoried and evaluated for valid/existing right status.
3. The Monument Management Plan needs to be revised and made consistent with Garfield County's OHV Ordinance.
4. Management conflicts for the Harris Wash/Silver Falls road need to be resolved including but not limited to RS 2477 determinations, permitted uses, route development and maintenance.
5. Hole in the Rock Road, Cottonwood Wash Road, Skutumpah Road, and Alvey Wash Road need to be improved to an all weather condition meeting AASHTO standards.
6. The County needs GSENM to expand its beneficial impact and reduce negative impacts on County services (law enforcement, search and rescue, emergency medical services, road maintenance, solid waste collection and disposal, etc.)
7. GSENM needs to compensate Garfield County commensurate with its use of public services.
8. GSENM needs to support and participate in the development of an archaeological/paleontological repository and research center in the County.
9. GSENM needs to expand efforts to attract recreation visitors and provide opportunities for socioeconomic benefit from lands designated primitive or outback.
10. GSENM needs to be more effective in improving water and vegetative resources for use by livestock and wildlife, including the eradication of Tamarisk/Salt Cedar and Russian Olive.
11. In as much as lands within GSENM have been withdrawn from natural resource extraction opportunities, GSENM needs to expand recreation, economic, scientific, and cultural

opportunities and increase beneficial uses for residents and visitors of Garfield County to the maximum extent possible.

12. Visual Resource management, Recreation Opportunity Spectrum analysis, OHV designations, Outstandingly Remarkable/Relevant-Important evaluation, Transportation Networks, and other management tools/criteria need to be consistent, to the maximum extent allowed by law, with comparable components of the Garfield County General Management Plan. Where criteria, protocols, and procedures have been used in development of the County Plan, no new processes should be used without County Commission concurrence.

Desired Condition

Garfield County desires:

- a) The Monument Management Plan be reviewed and revised in accordance with schedules identified in Department of the Interior planning handbooks.
- b) Garfield County be a cooperating agency in that review and revision process.
- c) Every road and way that exists on the Monument should be identified, evaluated, and documented regarding RS 2477 issues. For roads that existed prior to 1996 that qualify as RS 2477 should be adjudicated and final determinations made. For roads that do not qualify, a Title V right-of-way needs to be offered in accordance with Bureau of Land Management, Grand Staircase Escalante National Monument and Garfield County standards for width and scope for such facilities.
- d) The Monument greatly expand its status as a visitor destination and provide superior visitor services.
- e) The Hole in the Rock Road be brought up to an all weather condition meeting AASHTO Standards.
- f) All roads, paths, ways, OHV routes, and administrative roads be brought into compliance with the appropriate AASHTO or BLM standards.
- g) It absolutely necessary that the Grand Staircase Escalante National Monument upgrade its program to manage solid and human waste and that the Monument compensates Garfield County for collection and disposal of 2 pounds of solid waste per visitor use day in Garfield County.
- h) The BLM to expand interpretive, scientific and educational opportunities within the Monument because it is greatly underutilized.
- i) To work cooperatively with the monument to acquire lands and develop a world-class repository and educational facility for cultural paleontological, historical, and natural resources.
- j) Primitive/wilderness areas be limited to those identified in Garfield County's wilderness proposal and that lands managed for semi-primitive non-motorized recreation be limited to lands identified as semi-primitive non-motorized and approved by Garfield County.

k) The Monument assumes a prominent role as a leader in the scientific community and provides world-class educational opportunities for the school children of Garfield County.

l) The Monument expand hiking opportunities along the Escalante River by eradicating Salt Cedar/Tamarisk, Russian Olive, and by controlling other vegetation that reduces the opportunity for a pleasurable hiking experience.

Policies, Goals, Objectives, and Criteria

Policy: The current Monument Management Plan is inconsistent with the Garfield County Transportation Plan and Garfield County Land Use Management Policy. Garfield County will pursue review and revision of the plan in accordance with BLM planning policies and existing law.

Policy: Garfield County will pursue efforts to inventory all roads, paths, ways, and trails in existence in September 1996 and evaluate the said roads, paths, ways, and trails for valid existing rights status.

Policy: The Monument Management Plan needs to be revised and made consistent with Garfield County's OHV Ordinance. The County will make itself available to work cooperatively with Monument staff to identify, inventory, evaluate, and plan consistent with valid existing rights, existing law, and recreational needs.

Objective: Resolve management conflicts for the Harris Wash/Silver Falls Road, including RS 2477 determinations, permitted use, route development, and maintenance.

Objective: Improve Hole in the Rock Road and Alvey Wash Road; and in cooperation with Kane County, Cottonwood Wash Road and Skutumpah Road to an all weather condition meeting AASHTO Standards.

Policy: Garfield County will support the Grand Staircase Escalante National Monument in expanding its beneficial impacts and reducing negative impacts on County services.

Objective: Garfield County will pursue the development of an archaeological and paleontological repository and research center.

Objective: Revise the Grand Staircase Escalante National Monument Management Plan to be consistent with Garfield County Land Use Plan and expand efforts to attract recreation visitors and provide opportunities for socioeconomic benefit from lands designated primitive or outback.

Policy: Garfield County will work cooperatively with Grand Staircase Escalante National Monument to improve water and vegetative resource for use by livestock, wildlife, and recreationists.

Policy: Garfield County will support expansion of recreation, economic, scientific, and cultural opportunities, which increase beneficial use and enjoyment for residents and visitors to the

Monument.

Policy: Garfield County will support Grand Staircase Escalante National Monument programs, which are consistent with the Resource Management Section of Garfield County General plan, the Recreation Opportunity Spectrum Analysis, Land Use Management Policy, Transportation System, Visual Resource Management Designations, and other planning tools adopted by Garfield County. The County will oppose management actions and scenarios that are inconsistent with those planning tools.

Findings

Garfield County finds:

- a) GSENM is responsible for 2 pounds of solid waste per visitor use day. A situation similar to the National Parks occurs with the Grand Staircase Escalante National Monument where recent visitation figures indicate more than 600,000 visitors, but the Monument's contribution to revenues for solid waste collection & disposal was only \$1200 in 2006. Federal land managers have failed to compensate Garfield County equitably for solid waste collection & disposal services.
- b) The Monument Management Plan is inconsistent with Garfield County's Transportation Network and must be reviewed and revised in accordance with the agency review schedule.
- c) Less than 2% of the visitors to the County are primarily involved in primitive recreation, based on Federal visitor use surveys and backcountry permit data.
- d) The burgeoning proliferation of Tamarisk is a detrimental impact on the County's water resources.
- e) The GSENM is under utilized.

4.2.4 STATE PARKS

Current Setting

Two State Parks, the Escalante Petrified Forest State Park and Anasazi Village State Park, are located in Garfield County. One additional State Park, Kodachrome Basin State Park is located just outside of and is accessed primarily from Garfield County.

The Escalante Petrified Forest State Park is located in unincorporated Garfield County. The Park contains approximately 1,350 acres that include the shoreline along the Wide Hollow Reservoir, and also some developed and backcountry areas. Amenities at the Park include a 22-unit campground with restrooms, showers, and a sanitary station. A small visitor contact station offers visitor information when staffed. Visitation is generally in the range of 40,000 per year. Currently, OHV access to the facilities at this Park is not consistent with the Garfield County OHV Ordinance. This confuses the OHV user and usurps access authority via County roads to an improved campground with showers and information.

Located within the town of Boulder, Anasazi State Park explores one of the largest Ancestral Pueblo communities west of the Colorado River. The park offers a museum, store, auditorium, and outdoor picnic areas. There are no overnight facilities available at the museum, but camping and lodging facilities are located nearby. Visitation is approximately 50,000 per year.

Kodachrome Basin is located adjacent to Garfield County in Kane County approximately 10 road miles south of the town of Cannonville. The Park contains approximately 3,120 acres that

include developed and backcountry areas for camping, hiking, biking, and horse back riding. Amenities at the Park include a 24-unit campground and 2 group areas with restrooms, showers, and a sanitary station. A small visitor contact/fee station offers visitor information when staffed. A concession is operated inside the Park that offers groceries, ice, information, horseback riding tours, and cabins with bathroom rentals. Visitation is generally in the range of 65,000 visitors per year. Although this Park is located in Kane County, primary access and most public services are accessed from Garfield County.

Need for Management Change

1. Opportunities for use - as appropriate - of State Park facilities by visitors and residents including hikers, bikers, OHV users, and others need to be expanded.
2. State Parks need to support and participate in the development of an archaeological / paleontological repository and research center in the County.
3. State Parks need to support Garfield County's recreational trail use educational program.
4. State Parks need to compensate Garfield County commensurate with use of public services.
5. State Parks need to cooperate in Law Enforcement outside of State Park Boundaries working under the direction of the County Sheriff.

Desired Condition

Garfield County desires State Parks:

- a) Be enhanced, and used to augment recreational opportunities that exist in other portions of the County.
- b) Expand recreational opportunities and access to facilities for all modes of travel including OHVs.
- c) Work under the direction of the County Sheriff regarding law enforcement.
- d) Support and participate in the development of an archaeological / paleontological repository and research center in the County.
- e) Support Garfield County's recreational trail use educational program.
- f) Increase in beneficial impacts resulting from State Parks and reduce uncompensated services.

Policies, Goals, Objectives, and Criteria

Goal: Expand the existing State Parks where necessary, and create new State Parks where there is a demonstrated need to do so.

Policy: It is the policy of Garfield County to support the expansion of State Parks and Recreation Areas consistent with land use policies and the Garfield County Resource Management Plan. This will include, but not be limited to the development of structures, access routes, and any

other needful things associated with the expansion and/or development of the State Parks system.

Action/

Implementation:

Work closely with State Parks and Recreation, the Utah State Legislature, and the federal government to procure lands, funding, and other necessities to develop and maintain expansion of existing facilities as well as new opportunities.

Goal: Develop an agreement with State Parks to work under the direction of the County Sheriff regarding Law Enforcement.

Action/

Implementation:

Work closely with State Parks and Recreation along with the Federal Agencies to establish, promote, and implement an OHV Education and Law Enforcement Program.

Policy: Garfield County supports expansion of recreation, economic, scientific, and cultural opportunities, which increase beneficial use and enjoyment for residents and visitors to the State Parks.

Policy: Garfield County supports Utah State Parks in expanding beneficial impacts and reducing negative impacts on County services.

Objective: Develop cooperative agreements and systems necessary to compensate Garfield County commensurate with use of public services by State Parks and their visitors.

Findings

This section is intentionally left blank. Findings for State Parks have not been completed. As findings are developed the Plan will be amended.

4.2.5 WILDERNESS

Current Setting

Wilderness, simply defined, is an undeveloped tract of land retaining its primeval character and influence without permanent improvements or human habitation. Wilderness areas are federally protected and managed to preserve their natural conditions, which generally appear to have been affected primarily by the forces of nature and the imprint of man's activity is substantially unnoticeable; have outstanding opportunities for solitude or primitive, unconfined recreation, be at a minimum 5,000 acres, where man is a visitor and does not remain. They may have supplemental values such as features of scientific interest, educational interest, scenic qualities, or historical value as well as ecological and geological values of interest.

The Wilderness Act of 1964 directed federal agencies to complete a three-step process to preserve lands that met certain specific criteria establishing them as "Wilderness". The steps included: 1) an initial inventory to distinguish lands that clearly and obviously lacked wilderness character from lands that could possibly have wilderness values; 2) an intense study phase to identify lands that were suitable for congressional designation; and 3) a recommendation phase where federal agencies submitted recommendations to be acted upon by Congress. As of April 2007, Congress has acted on only one of the recommendations affecting Garfield County lands.

The Box Death Hollow Wilderness was designated by Congress in 1984 and contains 25,571 acres. All of this wilderness area is located in the Escalante Ranger District of the Dixie National Forest. The Box-Death Hollow Wilderness briefly became the center of controversy during debate over the Utah Wilderness Act of 1984 due to a company that was interested in drilling exploration wells for carbon dioxide. The ridge-top well sites and routes leading to them were cherry-stemmed out of the north side of the legislated boundary, but the project has not developed into production. No visitation figures are readily available for this wilderness. However, economic benefits to the area are considered minimal and would be offset by almost any search and rescue, emergency medical, or law enforcement event.

Need for Management Change

1. In as much as lands within designated wilderness have been withdrawn from natural resource extraction opportunities, land managers with jurisdiction over designated wilderness need to expand recreation, economic, scientific, and cultural opportunities and increase beneficial uses to the maximum extent possible for residents and visitors of Garfield County.
2. Safe all weather access, solid waste collection and disposal, human waste collection and disposal, search and rescue access, emergency medical access, and law enforcement access need to be provided for Wilderness areas.
3. Additional specific needs for land management entities managing designated wilderness may be included in sections describing Wilderness Study Areas.
4. Visual Resource management, Recreation Opportunity Spectrum analysis, OHV designations, Outstandingly Remarkable / Relevant-Important evaluation, Transportation Networks, and other management tools / criteria need to be consistent, to the maximum extent allowed by law, with comparable components of the Garfield County General Management Plan. Where criteria, protocols, and procedures have been used in development of the County Plan, no new processes should be used without County Commission concurrence.

Desired Condition

Garfield County desires:

- a) Lands identified by the Garfield County Commission as eligible and suitable for wilderness be so designated.
- b) All other lands be released from management for wilderness character and be managed in accordance with the County's Land Use Plan.
- c) The use and enjoyment of wilderness areas be expanded to the maximum extent allowed by law.
- d) Federal agencies managing wilderness compensate the County for public services based on visitation and use.
- e) Only those lands identified and approved by the County for wilderness, primitive, semi-primitive non-motorized types of recreation be designated for such use. Non WSA lands with wilderness characteristics need to be managed in accordance with Garfield County's Land Use Plan.
- f) All BLM lands not designated as wilderness be developed to the maximum extent allowed by law for commodity production and socioeconomic growth.

Policies, Goals, Objectives, and Criteria

Policy: It is the policy of Garfield County to support only those areas that have been inventoried, assessed and identified by the Garfield County Commissioners as having true wilderness character.

Goal: Work with State and Federal Legislators to gain support for and draft an acceptable wilderness bill that includes only those areas that have been recommended for inclusion into the National Wilderness System as approved by the Garfield County Commission.

Policy: It is the policy of Garfield County that all lands not recommended by the Garfield County Commissioners for wilderness designation be released from further consideration.

Action: Assist State and Federal legislators in developing legislation that will release lands identified as not recommended for wilderness from further consideration and will return them to Multiple Use/Sustained Yield or Commodity Production Management.

Policy: It is the policy of Garfield County to oppose any efforts by federal agencies to implement wilderness evaluations or inventories conducted after the following dates:

National Park Service	December 31, 1978
National Forest Service	December 31, 1984
Bureau of Land Management	December 31, 1991

Findings

In the 1970s National Park Service units and the BLM completed studies that were part of a thorough and professional inventory process that ensured no valid basis for questioning wilderness inventory results would occur. The intent of the initial inventory was to carry forward, for additional study any lands that may have possibly contained wilderness characteristics. The inventory process was done in an objective, professional manner prior to the time when emotion, politics, and lobbying interests drove the wilderness debate.

National Park Service units in Garfield County submitted recommendations for wilderness lands within their jurisdiction from 1971 to 1975. BLM submitted their final recommendation in 1991. In the mid 1990s Secretary Babbitt initiated efforts to over turn the objective recommendations submitted previously by Department of the Interior agencies and initiated a process aimed at lowering wilderness recommendation standards.

Court action to stop the process was filed. The courts found that the wilderness recommendation process had ended and that no additional recommendations could be forwarded to Congress. However, the courts also found that federal agencies could inventory resources on their lands including wilderness characteristics.

The wilderness re inventory effort directed by Secretary Babbitt was politically driven and was inconsistent with previous criteria. As a result, it lacked the objectivity, professionalism, and integrity of previous studies and original recommendations. Therefore, discussions regarding Wilderness/WSAs consider only recommendations issued by Park Service units from 1971 to 1975 and contained in the Utah BLM Statewide Wilderness Final Environmental Impact Statement completed in 1991. Later inventories are found to be arbitrary, capricious, and lacking factual data supporting wilderness claims. As part of the original study phase, the BLM identified 528,958 acres of land in Garfield County

suitable for additional study as WSAs. The Garfield County Master Plan in 1984 proposed that 111,053 acres of BLM lands in three WSAs and 31,000 acres in one National Forest District be designated wilderness. That recommendation was reevaluated in 1995 and again in 2003. In both of the subsequent evaluations Garfield County identified 100,311 acres as suitable for wilderness designation. Maps depicting Wilderness Recommendations by the National Park

Service and Wilderness Study Areas recommended for Wilderness by the Bureau of Land Management were reviewed in developing Garfield County's Recommendations for Wilderness.

In 2007 the Garfield County Commission undertook a review of wilderness recommendations by Park Service units and identified 117,528 acres as suitable for wilderness designation. In addition Commission compared previous wilderness reviews with ROS analysis and GIS data. The comparison resulted in a refined wilderness recommendation for BLM lands.

Garfield County finds that the majority of WSAs in Garfield County lack outstanding opportunities for solitude and outstanding opportunities for primitive recreation necessary to qualify them for wilderness. Findings are supported by the BLM's 1991 Statewide Wilderness Final EIS and are tabulated below. Garfield County finds the initial inventory, intense study phase and the recommendation phase of the wilderness process competed prior to 1992 as the most accurate evaluation of wilderness values in Garfield County. The County finds that only those areas identified as Rec Ia in the Garfield County General Management Plan are suitable for wilderness designation. All other lands are not suitable for wilderness and should be managed in accordance with the County's Land Use Plan.

Wilderness Table 1 summarizes agency study areas (lands identified in the original inventory as possibly containing wilderness values) and Garfield county's finding of land that qualify for wilderness designation and near wilderness management.

WILDERNESS TABLE 1

<i>Agency Ib/Near Name</i>	<i>Designated Wilderness</i>	<i>Wilderness Recommendation</i>	<i>Rec Ia Wilderness</i>	<i>Rec</i>
<u>Wilderness</u>				
National Forest Service ac.	25,571ac.	0 ac.	25,571 ac.	38,922
BLM ac.	0 ac.	298,411 ac.	100,281 ac.	71,737
Glen Canyon NRA ac.	0 ac.	184,320 ac.	101,458 ac.	62,300
Capitol Reef NP ac.	0 ac.	63,272 ac.	0 ac.	25,080
Canyonlands NP ac.	0 ac.	17,639 ac.	16,070 ac.	0
Bryce Canyon NP ac.	0 ac.	11,660 ac.	0 ac.	11,240
Total acres ac.	25,571 ac.	575,302 ac.	243,380 ac.	209,279

4.3 ADMINISTRATIVE RECOMMENDATIONS

Special administrative areas serve a variety of functions and can be limited to a specific scope and size or can be general and large in nature. Administrative designations can be made at various levels of public land management, but do not require congressional or legislative approval. Garfield County has numerous administrative special designations. Each designation is accompanied by its own set of impacts on Garfield County.

Administrative designations are defined as those areas where designation is the responsibility of local land management administrators. These areas are subject to valid existing rights and are used to protect special land values that could be degraded. They are approved on a case-by-case basis and are subject to review of potential impacts affecting the area through appropriate NEPA analysis.

Desired Condition

Garfield County desires:

- a) Designations, which fail to meet this standard, should be postponed, relocated, mitigated, or denied.
- b) Administrative designations be consistent with Garfield County's Resource Management Plan and, absent federal law to the contrary, be subject to local law, ordinance, or other special concurrence.

Finding

Each special designation brings with it, its own benefits, problems, and impacts on County resources, residents, and visitors.

Garfield County finds:

- a) Administrative designations that occur without Commission concurrence are inconsistent with Garfield County's General Management Plan. In addition, such inconsistent designations have significant negative direct, indirect, and cumulative impacts on the County's custom, culture, and socioeconomic base.

4.3.1 RESEARCH NATURAL / GEOLOGICAL / BOTANICAL AREAS

Current Setting

Several Research Natural, Geological, and Botanical areas exist in Garfield County. Primarily these areas are distinct in nature and have been set aside for specific objectives. Known designations of this type include Red Canyon Research Natural Area, Geological, and Botanical areas, Upper Sand Creek Research Natural Area, and Powell Point Geological Area. These areas total 35,060 acres and are set aside for research and to protect identified natural, geologic, or botanic values and features. Conditions are ordinarily achieved by allowing natural processes to prevail without human intervention. Due to their specific management, these areas provide few significant positive or negative impacts to the County.

Need for Management Change

1. Management for existing Research Natural/Geological/Botanical Areas needs to be discussed with the Garfield County Commission to explain goals, objectives, research potential, benefits,

detriments, and management prescriptions.

2. No additional Research Natural/Geological/Botanical Areas should be developed without Garfield County Commission concurrence.

3. Beneficial, Social, and Economic impacts need to be expanded for existing Research Natural/Geological/Botanical Areas.

Desired Condition

Research Natural Areas are defined as areas where there is an occurrence in a natural condition which exemplifies typical or unique vegetation and associated biotic, soil, geologic, and aquatic features. The idea is to set aside to preserve a representative sample of an ecological community primarily for scientific and educational purposes; commercial and general public use is not allowed. Garfield County believes that examples of most of these types of designations have already been captured within the boundaries of one of the congressional designations within the County or that relict species are captured on mesa tops or other lands where terrain has not allowed impact by man.

Garfield County desires:

a) Before any designations are made, the proposal needs to meet the criteria set forth above and:
1) An assessment of impacts be made that considers cumulative impacts of the actions;
and

2) A thorough inventory be made to consider whether a similar area is already being protected within the boundaries of another Federal or State agency.

b) Research Natural, Geological, Botanical Areas be consistent with Garfield County's Resource Management Plan and, absent federal law to the contrary, be subject to local law, ordinance, or other special consideration.

c) Research Natural, Geological, Botanical Areas be limited to only those areas that can provide significant scientific information and interpretive opportunities while preserving the custom and culture and enhancing the socioeconomics of the County.

d) No Research Natural, Geological, Botanical Areas be designated without the County's support and concurrence.

e) The benefit associated with the existing Research Natural, Geological, and Botanical Areas be enhanced and become a focal point for scientific and interpretive activities.

Policies, Goals, Objectives, and Criteria

Objective: It is the objective of Garfield County to fully participate with federal agencies in developing these special designations, verifying there is a demonstrated need and that no other management scenarios can be utilized to accomplish desired outcome.

Policy: It is the policy of Garfield County to support only Research/ Natural/ Geological/ Botanical areas where there is a clear and demonstrated need, consistent with the terms and

conditions of the Garfield County General Management Plan.

Action/

Implementation:

Garfield County will be a cooperating agency in proposals that consider Research/ Natural/ Geological/ Botanical areas.

Findings

Garfield County finds:

- a) Existing Research Natural/Geological/Botanical areas have not reached their full potential for use and enjoyment by the public and should be more highly promoted.

4.3.2 SCENIC HIGHWAYS

Current Setting

These designations are generally established as a promotional effort to highlight a road in an effort to increase tourism. Although scenic highways (including byways, backways, etc) are generally designated by a state or federal agency, the roads are almost always under the highway authority of the Utah Department of Transportation (UDOT) or Garfield County. In recent years some agencies have incorrectly attempted to use the word “scenic” in these designations as justification for additional management prescriptions or to meet specific criteria required for other designations. A map depicting designated scenic highways in Garfield County will be included in this plan as updates are completed.

The National Scenic Byways Program was established under the Interlocal Surface Transportation Efficiency Act of 1991, and reauthorized in 1998 under the Transportation Equity Act for the 21st Century. Under the program, the U.S. Secretary of Transportation recognizes certain roads as National Scenic Byways or All-American Roads based on their archaeological, cultural, historic, natural, recreational, and scenic qualities. All-American Roads must exhibit multiple intrinsic qualities. For a highway to be considered, it must provide passage for passenger cars year-round, it must be designated a State Scenic Byway, and it must have a current corridor management plan in place. There is one All American Road (State Route 12); Garfield County has also initiated efforts to consider Brian Head/Panguitch Lake Byway as a National Scenic Byway.

Utah Scenic Byways are similar to National Scenic Byways. Utah State Scenic Byways are paved highways that have been designated by official State declaration for their scenic, historic, recreational, cultural, archeological, or natural qualities that are generally suitable for year-round travel by passenger cars. There is one Utah Scenic Byway within the County. The Brian Head/Panguitch Lake Byway (State Route 143) is a 55-mile byway extending from Parowan to Panguitch; the route travels past Brian Head Resort and Cedar Breaks National Monument and enters Garfield County in the Dixie National Forest approximately 30 miles southwest of Panguitch. This byway is being considered for National Scenic Byway designation.

State Scenic Backways are roads that are not generally conducive to year-round travel by passenger cars. They have been designated by official State declaration for their scenic, historic, and recreational qualities. Backways often require four-wheel drive, and road conditions can vary due to such factors as season and weather. There are ten Utah Scenic Backways within

Garfield County. They are the East Fork of the Sevier; Cottonwood Canyon; Griffin Top; Smokey Mountain; Posey Lake; Hole-in-the-Rock; Burr Trail; Hell's Backbone Road; Notom Road, and the Bull Mountain Road.

Need for Management Change

1. The most dominant feature of a scenic highway is generally the highway itself. Scenic Highway designations should not be used to justify establishment of other special designations. Lands adjacent to specially designated highways need to be evaluated on their own merit, and management prescriptions need to be consistent with established criteria.

Desired Condition

Garfield County desires:

- a) Scenic Highway designations be consistent with the Garfield County Resource Management Plan, be consistent with local law, policies and objectives and have approval from the Garfield County Commissioners before designation.
- b) Prior to any designation, the managing agency determines the significance of designation on other resource values and that an assessment of cumulative impacts be made. These assessments must consider both the positive and negative impacts that can be expected from designation.
- c) Existing Scenic Highways be used to attract visitors, as a showcase of multiple use concepts, and to enhance socioeconomic activity while preserving custom and culture.
- d) Scenic Highways be used to attract additional visitors and to provide greater access to public lands.
- e) Use of Scenic Highways as a justification for restrictive land management prescriptions be discontinued.
- f) Scenic Highways within the County be designed, constructed, and maintained to an all weather condition meeting AASHTO Standards.
- g) Right-of-way issues associated with Scenic Highways be resolved and County rights-of-way be recognized.
- h) The rights-of-way have sufficient width, scope, and NEPA analysis to permit the improvement to an all weather condition meeting AASHTO Standards, including paving if the County desires.
- i) No additional Scenic Highways be designated without County concurrence.
- j) Federal and State agencies expand promotion of the Scenic Highways and increase opportunities for multiple use activities along the highways, in as much as, Federal guidelines indicate Scenic Highways be a showcase of multiple use activities.

Policies, Goals, Objectives, and Criteria

Objective: It is the objective of the County to promote these designations as showcases of

multiple use and to oppose management of adjacent lands that is inconsistent with the Garfield County General Management Plan.

Policy: It is the policy of Garfield County to cooperate with other agencies to determine the demonstrated need and the minimum land necessary to accomplish desired outcomes.

Policy: It is the policy of Garfield County to support only Scenic Highways, that are consistent with local bodies of law, ordinances, plans, and are the subject of a cumulative environmental review which determines the impact to local and regional environments, social and economic impacts caused by designation.

Action/

Implementation:

Scenic Highway proposals will be reviewed by the County Public Lands Steering Committee, Board of Commissioners, and may be the subject of public hearings to determine the support of local communities that will be affected.

Findings

Garfield County finds Scenic Highways are showcases of multiple use principles and restrictive land management is inconsistent with Federal policy establishing Scenic Highways and is inconsistent with the County's General Plan.

4.3.3 AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Current Setting

ACECs are specifically designated areas where special management attention is required to protect relevant and important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes from irreparable damage, or to protect life and safety from natural hazards. As of May 2007, there are no ACECs in Garfield County. Until very recently, ACECs were proposed on limited areas of public lands where special management attention was needed to protect / preserve outstanding, sensitive resources that were subject to imminent, irreparable damage from a verifiable threat. Beginning with planning processes conducted after 2002, ACEC proposals incorrectly considered large parcels where purported resources were described in the most general terms and where resources could not be specifically mapped, identified or described. From that time forward efforts have been made to disguise wilderness proposals as ACECs contrary to settlement agreements reached between the State of Utah and the United States government and inconsistent with federal planning regulations and local land use plans.

The Federal Land Policy and Management Act (FLPMA) defines an ACEC as an area within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards.

Other than these broad statements in the law there are very little objective criteria for establishing an ACEC. To date, agency determinations have been speculative at best. To some degree they have been used as an attempt to create wilderness, where it did not exist, or to implement prescriptive management action on large blocks of public land.

Need for Management Change

1. There are limited objectives or consistent Federal criteria for evaluating potential ACECs. Recently large parcels have been evaluated for values loosely defined as “scenic” or “cultural.” Relevant and important values need to be identifiable, articulated, mapped, and distinctly characterized. Values for which an ACEC is considered need to meet standards identified in the Garfield County General Management Plan.
2. There must be a threat to relevant and important values, which is imminent, irreparable, and must not be able to be controlled by other available management tools.
3. ACECs need to be limited to the smallest area necessary to protect relevant and important values from irreparable harm. At least 95% of any land considered for ACEC eligibility needs to meet the relevant and important criteria for which the ACEC is being considered. Areas not meeting relevant and important criteria need to be eliminated from ACEC consideration.
4. Garfield County has evaluated lands recommended for ACEC designation. No lands have been identified that meet ACEC criteria. In cooperation with federal agencies, Garfield County needs to continue to evaluate ACEC proposals as they become available.
5. ACECs need to be identified and designated only to protect those suitable, relevant and important resources that are subject to imminent threat of irreparable harm and that cannot be protected by normal management actions.. In addition there is a strong need to hold ACECs areas to a very high standard and limited in size/number to permit the maximum opportunity for the use and enjoyment of public lands and multiple use - sustained yield management.

Desired Condition

Garfield County desires:

- a) Before any ACEC designation is made, that the proposal meet the criteria set forth in the Garfield County Resource Management Plan, that an assessment of impacts be made that considers cumulative impacts across agency boundaries, and that a thorough inventory be made to consider whether an similar area is already being protected within the boundaries of another Federal or State agency.
- b) ACEC designations be consistent with Garfield County’s Resource Management Plan and, absent federal law to the contrary, be subject to local law, ordinance, or other special consideration.
- c) Cooperative agreements regarding public safety and County services be developed between Garfield County and Federal agencies prior to ACEC designation.
- d) ACECs be designated only on those lands containing Relevant - Important Values that are threatened by irreparable harm and that cannot be managed in some other way.
- e) At least 95% of the land contained in any ACEC proposal meet criteria for Relevant - Important Values contained in Garfield County's General Management Plan.

- f) Areas characterized by broad descriptions such as “scenic”, “cultural”, and “geologic” that fails to have important - relevant values described with specificity be eliminated from ACEC consideration.
- g) No ACEC be designated without County concurrence.
- h) ACEC designation be a temporary measure until threats of irreparable harm can be mitigated or until the area is classified in such a way as to preserve Relevant - Important Values while providing opportunities for public use and enjoyment of the protected resource.
- i) The BLM adopt the County criteria for Relevant - Important Values when considering lands for ACEC designation in Garfield County.
- j) The least restrictive visual resource management classification be used in proposed ACECs, not to be more restrictive than the VRM classification which was present at ACEC nomination.
- k) Multiple use - sustained yield concepts and commodity production continue to the maximum extent allowed by law within ACECs.
- l) Prescriptive management practices be assigned to ACECs only to the extent that it has been objectively and scientifically documented that the management prescription will have a significant positive impact on enhancing the Relevant - Important Values or eliminating the threat to irreparable harm.
- m) Relevant - Important Values associated with ACECs be preserved while expanding the use, enjoyment, and benefit by the public.

Policies, Goals, Objectives, and Criteria

Objective: Garfield County will be proactive in the management of Areas of Critical Environmental Concern (ACEC).

Policy: Approximately 1,041,245 acres of Garfield County’s 3,331,065 acres are included in Bryce Canyon National Park, Capitol Reef National Park, Canyonlands National Park, Glenn Canyon National Recreation Area, and the Grand Staircase/Escalante National Monument. There is also one designated Wilderness Area managed by the U.S. Forest Service. It is the County’s position that relevant/important scenic, cultural, and recreation lands (approximately one third of the County) are already protected.

Policy: Garfield County will support only those ACEC designations that can be demonstrated to have relevant and important values as defined herein that are being threatened with irreparable damage.

Actions/

Implementation:

1. Develop criteria for ACEC nomination, selection and designation.

2. Adopt an ordinance to identify, evaluate, designate, and protect those relevant values discussed above. *(See Appendix A2.10b)*
3. Garfield County will be involved in the designation and management of these areas to the maximum extent allowed by law.
4. Garfield County will only support those management actions that are consistent with the County General Management Plan and the County's other land use decisions and policies.
5. Garfield County will be a Cooperating Agency or Joint Lead Agency in management actions that seek to identify and designate ACECs.
6. Garfield County will periodically review and compare management actions with those described in the General Management Plan and existing Ordinances for consistency.

Criteria: Relevant - Important resources are rare, unique, exemplary, significant, and deserving of special designation, protection, and use. They are outstanding, remarkable, one of kind resources that deserve special management when compared to other similar resources in the region.

Historic/Cultural -

Any activity, business, district, building, structure, object, resource, or site may qualify as a Relevant - Important Historic/Cultural Resource if it is located within the official boundaries of the County, is approved by the County Commission, has been the subject of a Class 3 inventory or equivalent and at least 95% of the designated area meets one or more of the following minimum criteria:

- a) The resource is of sufficient value that it is a site for public or private facilities that enhance interpretive opportunities for the public. Parks, museums, monuments, businesses, and other permanent designations qualify historic/cultural resources for this criterion. Examples within the region of comparison include but are not limited to: Anasazi State Park, Pipe Springs National Monument, Fremont Indian State Park, CEU Museum, American West Heritage Center, This is the Place State Park, Emery County Museum, Edge of the Cedars State Park, etc.
- b) The resource is of sufficient value that it requires paid or volunteer staff to assist with interpretation and/or protection of the resource. The presence of on site guides, hosts, rangers, guards, specialists, or other similar staff for a minimum of 500 hours per year qualifies cultural resources for this criterion. Examples within the region of comparison include but are not limited to: Defiance House, Mormon Handcart Sites, Sand Island, Grand Gulch, Pine Lake Campground, etc.
- c) The resource is of sufficient value that it is the subject of guided or self guided tours promoted by land management agencies or private businesses. Resources that receive a minimum average visitation of 200 visits per month qualify for this criterion. Examples within the region of comparison include but are not limited to: San Juan River Site Tours, Cedar Mesa, Kane Gulch, Cowboy Cave, etc.
- d) The resource is of sufficient renown that its location and nature are well known and recognizable throughout the inter mountain region. Resources that have been the subject of not less than 10 statewide mass media feature articles or programs qualify for this criterion. Examples within the region of comparison include but are not limited to: Mormon Tabernacle, Range Creek, Nine Mile Canyon, Mormon Handcart Sites, Hole in the Rock, etc.
- e) The resource value has been demonstrated to the Garfield County Commission in a public

hearing, and the Relevant - Important nature has been documented by a preponderance of the evidence as determined by the County Commission.

Scenic-

a) Scenic Resources qualify Relevant-Important if they can be graphically described with identifiable limits and meet all of the following criteria:

1. It is located within the official boundaries of the county.
2. It is designated as Class A Scenery or equivalent.
3. It has a Scenic Quality Rating greater than 28 or equivalent.
4. It has a land form rating of 5 or equivalent.
5. It has a vegetation rating of 5 or equivalent.
6. It has a color rating of 5 or equivalent.
7. It has a scarcity rating of 5 or greater.
8. It is renown throughout the state.
9. It is the primary destination for more than 2400 visitors per year as verified by actual visitor counts.
10. All of the land proposed for designation meets all of the criteria

b) If the scenery does not meet the requirements outlined above, it may qualify for designation if it can be graphically described with identifiable limits and at least 95% of the area meets one or more of the following requirements:

1. It is a National Monument and has a Scenic Quality Rating greater than 28 or equivalent.
2. It is part of a congressionally designated area and:
 - A. Has a minimum Scenic Quality Rating 30, and
 - B. Is the destination of more than 6000 visitors per year as verified by actual visitor counts.
3. It is a legislatively designated area by the State of Utah and
 - A. Has a minimum Scenic Quality Rating of 28 or equivalent, and
 - B. The governor of the State of Utah has requested its inclusion on the Garfield County Register of Relevant-Important Cultural Resources.

Fish and Wildlife Values -

Outstandingly remarkable fish and wildlife values are those populations which are rare, special or regionally significant. Although, it may include special status species, special status species designation, in and of itself, does not meet the outstandingly remarkable/ relevant - important threshold. The minimum criteria is as follows:

- a) It is on the threatened or endangered species list and is the only population of the _____ species in the region of comparison.
- b) It is identified by the Garfield County Commission as an outstandingly remarkable/ relevant - important fish and wildlife value.
- c) It is on the threatened/endangered species list and comprises at least 80% of the _____ known individuals for the species within the region of comparison.
- d) It is of significant public interest evidenced by at least 2000 visitors per year to the specified area with the primary purpose of enjoying the value, as confirmed by _____ documented field

surveys.

Natural System or Process - To be developed.

Hazards - To be developed.

Additional Resources that are considered as the basis for ACEC designation do not qualify for Relevant - Important status unless they meet one of the criteria above or are so designated in a public action by the Garfield County Commission.

Findings

The Federal Land Policy and Management Act (FLPMA) defines an ACEC as an area within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards.

Other than broad statements in the law, there are very little objective criteria for establishing ACECs. To date, agency determinations have been speculative at best. To some degree recent ACEC evaluations have been used as an attempt to create wilderness, where it did not exist, or to implement prescriptive management actions on large blocks of public land.

Garfield County finds that ACECs need to be identified and designated to protect suitable, relevant and important resources. In addition there is a strong need to hold these areas to a very high standard and limited in size and number to permit the maximum opportunity for development, multiple use and sustained yield of public lands and for the use and enjoyment of the public at large.

Approximately 1,041,245 acres of Garfield County's 3,331,065 acres are included in Bryce Canyon National Park, Capitol Reef National Park, Canyonlands National Park, Glenn Canyon National Recreation Area, and the Grand Staircase/Escalante National Monument. There is also one designated Wilderness Area. The County finds that the most relevant/important scenic, cultural, and recreation lands are already protected.

Garfield County also finds:

a) large blocks of land described with general values (cultural, geologic, scenic, etc.) do not qualify for ACEC consideration. Only those values that are specific, articulable, and identifiable with specificity shall be considered for ACEC consideration.

b) there is no consistent BLM criteria for evaluating relevant important values associated with ACEC consideration. Garfield County has developed criteria for relevant important evaluation and finds that it is the most accurate, best criteria available when considering the custom, culture, socioeconomic base, and land designations in Garfield County.

c) agencies that have not included Garfield County in all aspects of the ACEC consideration process (public notice, scoping, comment evaluation, criteria development, relevant important

value evaluation, boundary determination, etc.) have failed to include the County as a cooperating agency at the earliest possible date and have not complied with federal law.

d) there are no ACECs within Garfield County as of May 2007 and that designation of ACECs contrary to the criteria established in the Garfield County General Management Plan or without the concurrence of the Garfield County Commission is inconsistent with the County's plan and violates Federal and State law.

4.3.4 WILDERNESS STUDY AREAS

Current Setting

Wilderness Study Areas are those lands identified in the initial phase of the wilderness process as possibly having wilderness values. WSAs were the subject of an intense study phase, which resulted in agency recommendations for areas deemed as suitable segments to be considered by Congress for wilderness. In 1984 the Congress acted on Forest Service recommendations in Utah, but action on National Park Service and BLM lands has not been taken. WSAs are technically limited to BLM lands. However, interim management prescriptions for BLM and Park Service lands are very similar, if not identical, so they will both be discussed under the heading of WSAs.

In the 1970s and 1980s the National Park Service and BLM completed studies that were a subsequent phase of a thorough and professional inventory process that ensured no valid basis for questioning wilderness inventory result. The intent of the initial inventory was to carry forward for additional study any lands that may have possibly contained wilderness characteristics. The inventory process was done in an objective professional manner prior to the time when emotion, politics, and lobbying interests drove the wilderness process. BLM submitted their final recommendation in 1991. In the mid 1990s Secretary Babbitt initiated efforts to re-evaluate the objective recommendations submitted previously by Department of the Interior agencies and initiated a process to expand wilderness recommendations.

Court action to stop the process was initiated. The courts found that the wilderness recommendation process had ended and that no additional recommendations could be forwarded to Congress. However, the courts also found that federal agencies could inventory resources on their lands including wilderness characteristics.

The 1990s effort directed by Secretary Babbitt was politically driven and motivated by special interests. As a result it lacked the objectivity, professionalism, and integrity of previous studies and original recommendations.

As part of the original study phase, the BLM identified 528,958 acres of land in Garfield County suitable for additional study as potential wilderness. BLM concluded the intense study phase by recommending 298,411 acres (56%) for wilderness. The Garfield County Master Plan in 1984 proposed that 111,053 acres of BLM lands in three Wilderness Study Areas and 31,000 acres in one National Forest be designated wilderness. That recommendation was reevaluated in 1995 and again in 2003. In both of the subsequent evaluations Garfield County identified 100,311 acres as suitable for wilderness designation. Table 1 in Section 4.2.5, Wilderness depicts Wilderness Recommendations by the National Park Service, recommended Wilderness identified

by the Bureau of Land Management, and Garfield County's recommendations for Wilderness.

In 2007 the Garfield County Commission undertook a review of wilderness recommendations by Park Service units and identified 117,528 acres as suitable in Park Service units for wilderness designation.

Need for Management Change

1. Wilderness Study Areas were the subject of a lengthy intense effort directed by the Wilderness Act of 1964. The *Utah Statewide Wilderness Final Environmental Impact Statement* identified portions of WSAs that did not have wilderness characteristics. Those portions identified as lacking wilderness characteristics need to be released from prescriptive management and returned to multiple use management.
2. The intense study phase identified numerous man made intrusions, roads, ways, and other features in WSAs that were incompatible with wilderness character. Other features, of a similar nature, were missed all together. All roads, ways, and man made features (including features that were not properly inventoried) which existed in WSAs, at the time of the final EIS, need to be shown on maps, resource inventories and in land use management plans until Congress resolves the wilderness issue.
3. Garfield County holds numerous rights of way over non-federal lands inside WSA boundaries. Access to these rights is assured through the "Cotter Decision". Access to State Trust lands, County rights of way, and other non federal rights in WSAs need to be clearly identified, evaluated and, to the maximum extent allowed by law, resolved as part of any land use planning process which could affect valid and/or existing rights.
4. The *Utah Statewide Wilderness Final Environmental Impact Statement* identified numerous roads and ways in WSAs. Roads and ways that are identified in areas that lack outstanding wilderness characteristics need to be maintained. Issues associated with roads and ways in areas that contain outstanding wilderness characteristics need to be resolved. Garfield County and land managers need to initiate a process to identify, evaluate, and resolve road, way, and related issues in a collaborative manner.
5. Roads and ways in WSAs need to be managed as "limited" until agreement between land management entities and Garfield County regarding their ultimate use is reached. When mutual agreement is reached to close a route, Garfield County needs to complete the abandonment process in accordance with State Law.
6. Garfield County has identified portions of WSAs and park service lands recommended for wilderness that it believes qualify for wilderness designation. The identified lands need to be designated as wilderness, and other lands need to be released from consideration and returned to management as directed by agency regulation and the Garfield County Land Use Plan.
7. Safe all weather access, solid waste collection and disposal, human waste collection and disposal, search and rescue access, emergency medical access, and law enforcement access need to be provided for all Wilderness Study Areas.

Desired Condition

Garfield County desires:

- a) WSAs and Park Service recommended Wilderness Areas identified by Garfield County as being suitable for wilderness designation be so designated.
- b) All WSAs and Park Service recommended Wilderness Areas that have not been found to be suitable for wilderness designation by Garfield County be released from prescriptive management practices associated with wilderness protection.
- c) WSAs that were not identified as part of the Paramount or Recommended Proposals in the 1991 Final Wilderness EIS be released from prescriptive management and returned to use in accordance with Garfield County's Land Use Plan.
- d) Federal Planning documents and revisions include maps, data, classifications, depicting VRM classes, oil and gas management, rights-of-way, intrusions on the land, impacts by man, roads and ways, and other features that existed in the WSA at the time the Final Environmental Impact Statement was published in 1991.
- e) The VRM classifications, oil and gas management, roads and ways analysis, and other inventories that existed at the time of the Final EIS in 1991 be considered the base line/no action condition for the BLM planning process.
- f) All roads, paths, and ways that are known to exist in WSAs and Park Service lands recommended for wilderness be included in planning documents, NEPA analysis, and maps which depict such lands.
- g) The BLM and Park Service include Garfield County assertions for roads and ways in any planning document or NEPA analysis that considers WSAs or Park Service lands recommended wilderness.
- h) Federal agencies and the County work cooperatively to eliminate the creation of unauthorized routes in WSAs and Park Service lands with wilderness character.
- i) Access to County rights-of-way over and across non Federal lands inside WSAs and Park Service lands with wilderness character be addressed in the first/earliest planning document or NEPA analysis considering such lands.
- j) Documented and identified rights-of-way, access to the County's rights-of-way, and access over WSA lands to the County's rights-of-way held within WSAs be resolved. The access needs to be of sufficient scope and width to permit transportation facilities meeting AASHTO Standards.
- k) Range improvements and other man-made intrusion in WSAs be maintained in the condition that existed at the time the improvement was constructed, the WSA was designated, the date of the adoption of the Final EIS, or that currently exists, which ever is highest.

l) Federal agencies adopt Garfield County's Land Use Management Classifications for WSAs and Park Service lands recommended for wilderness, when such lands are released from interim management protection.

m) Federal agencies reduce the burden on County services and resources associated with law enforcement, search and rescue, emergency medical services, solid waste collection and disposal, and human waste collection and disposal associated with WSA and Park Service lands recommended for wilderness.

n) Federal agencies improve access and parking, provide registration boxes, provide dumpsters for solid waste collection and disposal, and provide sanitary facilities for human waste collection and disposal at known access points and trailheads adjacent to WSAs and Park Service lands with wilderness character.

o) Federal agencies work cooperatively with the County in developing best management practices and response procedures to eliminate unauthorized motorized access in WSAs and Park service lands recommended for wilderness designation.

p) No additional lands be managed for wilderness character until the lands Garfield County has identified as suitable for wilderness designation have been so designated and the lands identified by the BLM as not being suitable under the Recommended or Paramount Proposal be released from prescriptive management, inasmuch as the BLM is currently managing for wilderness character lands that it has determined are not suitable/recommended as wilderness.

Policies, Goals, Objectives, and Criteria

Criteria: Vegetative Manipulations - The simple fact that an area has undergone vegetative manipulations sometime in the past does not automatically disqualify a unit or a portion of the unit from a wilderness consideration. Whether the manipulation is substantially noticeable and the imprint of man depends on its age, extent, condition, etc. In order to provide consistency with federal planning regulations, guidance and with Garfield County's General Management Plan the following criteria is established to provide objective, rational evaluation.

Age - Vegetative manipulations where the last manipulation, treatment, or impact by man is older than 100 years may be considered substantially unnoticeable, if no stumps, scares, piles, or any other impacts are present.

Extent - Any vegetative manipulation that has an extent less than 5000 square feet may be considered substantially unnoticeable.

Condition - A vegetative manipulation is considered substantially unnoticeable if after evaluating three random samples not less than 200 square feet inside the manipulated area and three random samples not less than 200 square feet outside the manipulated area on the following criteria are met:

If percentage composition for each species inside the manipulated area is within 3% of the

composition for each type of species outside of the manipulated area;

If estimated age for 97% of the individuals in each species in the manipulated area are within two years of age for the individuals of the same species in the non-manipulated area;

If the species populations within the manipulated area are not less than 95% nor more than 105% of the species populations in the non-manipulated area;

If the species size in the manipulated area is not less than 95% or more than 105% of the height of the species in the non-manipulated area;

If the manipulated area is free from exotic or non-native species that are not present in the non-manipulated area; and

If the boundary between the manipulated area and the non-manipulated area are indistinguishable.

Objective: Complete the wilderness designation process in Garfield County.

Policy: It is Garfield County's policy to support Wilderness designation for lands the County has deemed eligible and suitable for Wilderness under Public Law 88-577.

It is Garfield County's policy to oppose Wilderness designation and/or management for wilderness characteristics on lands the County has deemed are not eligible and suitable for Wilderness designation under Public Law 88-577.

It is Garfield County's policy, to the maximum extent allowed by law, that all lands deemed not eligible and suitable for Wilderness designation and/or management for wilderness characteristics be released from prescriptive management and returned to commodity production or multiple use/sustained yield management.

It is the policy of Garfield County to work cooperatively with land managing agencies, the State of Utah, and Utah's Congressional Delegation to have the lands identified through the County review, study and recommendation process appropriately designated and managed.

Actions/

Implementation:

1. Work with the public lands Steering Committee to gain support for designating those lands approved for wilderness by the County Commissioners.
2. Work with State Legislature to gain State support for those lands approved by the County Commission for wilderness designation.
3. Work with and assist the Utah Congressional Delegation in drafting a wilderness bill that will support the county position for wilderness designation, including release language for lands not recommended for Wilderness designation.

Policy: The County agrees that some public lands need specific restrictions, but it believe those restrictions should be the minimum necessary and should be developed in a spirit of cooperation,

assuring the greatest use and enjoyment by the public and local residents.

Specific concerns include:

1. Additional strain on County emergency services and law enforcement caused by Federal land use decisions.
2. Unreasonable restrictions on existing and potential consumptive uses of public lands.
3. Unreasonable wildlife and wildlife habitat management schemes.
4. Unsubstantiated campsite, human and animal numbers as well as use regulations and restrictions.
5. Access, including but not limited to, road maintenance, maintenance of livestock and wildlife facilities, diversions, monitoring facilities and water resource, and other capital improvements.
6. Undue restriction on lands classified as crucial/critical habitat.

It is the position of the County that these concerns be specifically and adequately identified and addressed.

Criteria: Lands may be deemed eligible and suitable for Wilderness if they meet all of the following criteria, as applicable:

Identified by the Park Service 1971 to 1975 Study;

Identified as Wilderness Study Area by the Bureau of Land Management in 1981;

Identified as semi primitive non motorized or primitive on Garfield County's Recreation Opportunity Spectrum;

Identified in Bureau of Land Management's Wilderness Final EIS as having outstanding wilderness characteristics in the Recommended or Paramount Wilderness Proposal; or

Approved by the Garfield County Commission after appropriate public hearing.

Policy: Areas identified in the Utah BLM Statewide Wilderness Final Environmental Impact Statement as failing to meet outstanding solitude or primitive recreation standards should not be managed for primitive or semi primitive non-motorized recreation.

Findings

As part of the Wilderness Act of 1964, an inventory was required of all federal lands for wilderness values. In compliance with administrative directives, the BLM considered any land greater than 5000 acres in size that was roadless and could possibly contain wilderness values for additional study. These areas became known as Wilderness Study Areas. The standard was held to a minimum, so no potential wilderness was missed.

Garfield County finds:

- a) The BLM determined many WSAs in Garfield County failed to meet standards for outstanding solitude or outstanding opportunities for primitive recreation required for wilderness designation.
- b) The process identified all lands that could possibly contain wilderness values meeting criteria of the Wilderness Act and that all other lands evaluated by the BLM clearly and obviously lacked

wilderness character.

- c) Many of the WSAs failed to meet criteria necessary to be designated as wilderness.
- d) Data presented in the BLM's Statewide Wilderness Final Environmental Impact Statement as the most detailed analysis of wilderness characteristics. Garfield County concurs with the BLM in its finding that the Proposed Action containing 298,411 acres is the maximum amount of BLM land in Garfield County that is suitable for wilderness.
- e) The BLM failed to compare its resources with similar resources in other areas of the County when considering outstanding opportunities for solitude and primitive recreation.
- f) Only those WSAs classified as Recreation Ia - Wilderness in Garfield County's Land Use Management Policy are suitable for wilderness designation.
- g) Those lands classified as Recreation Ib- Near Wilderness are suitable for some level of wilderness value preservation and that all other lands in the County are not suitable for protection of wilderness values.
- h) The BLM failed to identify all motorized roads, paths, ways, and trails within WSAs.
- i) Unless the BLM can specifically document construction occurred after WSA designation, the BLM conducted business in accordance with its responsibility to protect WSAs and existing roads, paths, ways, and trails were missed in its original inventory.
- j) Intrusions in WSAs that were missed in BLM's original study can be verified through historical data, including maps, personal knowledge, affidavits, surveys, deductive reasoning, and other verifiable means.

Wilderness Table 2 summarizes BLM's recommendations for Wilderness Study Areas and Garfield County's finding of lands that qualify for wilderness and near wilderness management.

Wilderness Table 3 summarizes BLM's Analysis of Wilderness Study Areas published in *Utah BLM Statewide Wilderness Final Environmental Impact Statement, 1990*.

Wilderness Table 2

WSA #	Wilderness Study Area Name	WSA Acreage	Paramount Wilderness*	BLM Proposal	County Proposal Rec Ia	County Proposal Rec Ib
22	The Blues	19,030 ac	-0-	-0-		
23	Mud Spring	22,900 ac	-0-	-0-		
28	Death Ridge	18,973 ac	-0-	-0-		
29	Phipps	42,731 ac	39,256 ac	39,256 ac	39,559 ac	
30	Steep Creek	21,896 ac	20,806 ac	20,806 ac		16,627 ac
31	N Escalante Cyn	119,752 ac	91,558 ac	91,558 ac		45,495 ac
32	Carcass	30,450 ac	-0-	-0-		
33	Scorpion	9,631 ac	9,631 ac	8,792 ac	6,402 ac	
35	50 Mile	90 ac	-0-	90 ac		
36	Mount Ellen	17,109 ac	17,109 ac	17,109 ac	-0-	
37	Bull Mountain	8,069 ac	-0-	8,069 ac	-0-	
40	French Sp	165 ac	-0-	165 ac	-0-	
41	Fiddler	73,100 ac	-0-	32,700 ac	18,688 ac	9,616 ac
42	Mount Pennell	74,300 ac	-0-	25,800 ac	14,820 ac	14,820 ac
43	Mount Hillier	20,000 ac	-0-	16,360 ac	-0-	
44	Little Rockies	38,700 ac	38,700 ac	38,700 ac	20,812 ac	
	**Total Ac	528,958 ac	215,251 ac	298,411 ac	100,281 ac	71,738 ac

**The Paramount Wilderness Alternative is defined by BLM as those areas the agency judged to be of the highest wilderness quality.*

***Individual WSA acreages were developed from BLM GIS data. Total values were obtained from Table 6 in Chapter 1 of the Utah BLM Statewide Wilderness Final EIS. Discrepancies will be resolved as part of Wilderness Legislation.*

WILDERNESS TABLE 3

WSA NAME	WSA Acreage	Annual Visitation			Natural %		Outstanding Solitude %				Outstanding Primitive Rec %				VRM %				BLM Alternatives				Interagency Cluster	
		NM ¹	M ¹	T ¹	Y	N	Y	N	Y	N	Y	N	I	II	III	IV	Commodity Production Acres	Proposed Action	Regional Rep Acres	Paramount				
22 The Blues	19,030	10<	90<	100<	99	1	8	92	16	84	0	0	75	25	0	0	0	0	0	0	0			
23 Mud Spring	22,900	3	57	60	100	0	47	53	38	62	0	0	10	90	0	0	0	0	0	0	0			
28 Death Ridge	18,973	24	12	36	100	0	50	50	0	100	100	0	0	100	0	0	0	0	0	0	0			
29 Phipps Death	42,731	22,540	460	23,000	100	0	84	16	86	14	100	0	0	0	0	0	0	39,256	39,256	39,256	39,256			
30 Sleep Creek	21,896	10,050	50	10,100	100	0	71	29	83	17	0	97	0	3	0	0	18,350	20,806	0	20,806	0			
31 N Escalante Cyn	119,752	32,500	0	32,500	100	0	75	25	79	21	11	18	5	66	0	0	91,558	0	91,558	0	91,558			
32 Carcass Canyon	30,450	7	59	66	100	0	57	25	25	25	0	0	0	100	0	0	0	0	0	0	0	0		
33 Scorpion	9,631	41	6	47	100	0	25	75	32	68	0	21	9	70	0	0	0	0	0	0	0	0	0	
35 Fifty Mile	90	0	0	0	100	0	47	53	46	54	0	100	0	0	0	0	0	0	0	0	0	0	90	
36 Mt. Ellen	24,772	58	174	232	98	2	73	27	45	55	0	78	3	19	0	0	17,109	17,109	17,109	24,772	24,772	24,772	0	
37 Bull Mtn.	9,639	133	15	148	96	4	100	0	100	0	0	79	0	21	0	0	8,200	8,200	0	0	0	0	0	0
41 Fiddler Butte (L.)	73,100	45	15	60	88	12	35	65	45	55	0	42	58	0	0	0	27,000	32,700	0	0	0	0	73,100	0
42 Mt. Pennell	74,300	645	1,935	2,580	96	4	24	76	24	76	0	32	28	40	0	0	0	25,800	0	0	0	0	74,300	0
43 Mt. Hillers	20,000	248	542	790	95	5	78	22	78	22	0	96	2	2	0	0	16,300	0	0	0	0	0	0	0
44 Little Rockies	38,700	125	0	125	100	0	72	28	72	28	0	98	2	0	0	0	38,700	38,700	38,700	38,700	0	0	0	0

1 NM = Non Motorized

M = Motorized

T = Total

4.3.5 NATIONAL TRAILS

Current Setting

In 1968, Congress passed the National Trails System Act. The intent of the Act was to provide for outdoor recreation needs and promote the enjoyment, appreciation, and preservation of open-air outdoor areas and historic resources, and to encourage public access and citizen involvement.

A 2006 Memorandum of Understanding (MOU) directs federal agencies to cooperate in the management of National Public Trails by giving direction to enhance visitor satisfaction, coordinate trail wide administration and site specific management, protect the resource, promote cultural values, foster cooperative relationships, share technical expertise, and to fund lands and resources associated with the National Trails. The MOU recognizes the critical role of local government in National Trail administration and management.

National Historic Trails are extended trails which follow as closely as practicable to the original route or routes of travel of national historical significance. Designated for the identification and protection of the historic route and its historic remnants and artifacts for public use and enjoyment, the Old Spanish Trail, is a 2,700-mile long trade route extending from Santa Fe, New Mexico, to Los Angeles, California, passing through the states of Colorado, Utah, Arizona, and Nevada. The trail corridor is defined topographically based on local land features and has no actual trail tread or associated sites in the County. The Northern Route of the Old Spanish Trail enters the County near the town of Circleville; from there the Northern Route continues southwest, running along the Sevier River and U.S. 89, through the Markagunt Plateau along SR-20 in Garfield County and on to the Parowan Valley.

The Regional Forester recommends National Recreation Trails. No National Recreation Trails currently exist in Garfield County. However, the Great Western Trail, which runs through the western United States and through the Dixie and Fishlake National Forests is being considered for designation in the Forest Service June 2006 Proposed Land Management Plan.

Need for Management Change

1.Consideration of any potential National Trails needs to be fully discussed with the Garfield County Commission and needs to be consistent with Garfield County's Transportation Plan and OHV ordinance.

2.National Trails need to be managed to maximize use and enjoyment of designated trails and to develop opportunities to improve socioeconomic impacts to the County.

3.Safe all weather access, solid waste collection and disposal, human waste collection and disposal, search and rescue access, emergency medical access, and law enforcement access need to be provided for all National Trails.

Desired Condition

Garfield County desires:

a) National Trails only be designated in situations that will enhance interpretation, use, and enjoyment of the County's resources.

- b) An all American bikeway be designated and developed connecting National Parks, Recreation Areas, and Monuments within the County and the region.
- c) National Trails only be designated with the concurrence and support of the Garfield County Commission.
- d) National Trails utilize existing routes and corridors or parallel such corridors, to the extent practical.
- e) Prior to designation, National Trails are analyzed for impacts to County services and such impacts are mitigated.
- f) Any National Trail designated in the County enhances socioeconomic vitality, community viability, custom and culture in the County.

Policies, Goals, Objectives, and Criteria

Policy: It is the policy of Garfield County to consider each proposed trail on a case by case basis, considering other values that might be affected by designation; subject to goals and objectives of the Garfield County General Management Plan and demonstrated need including outstanding remarkable values emphasized by designation.

Objective: Work in a cooperatively with State and Federal agencies to consider and designate suitable trails for the National Trails System.

Action/

Implementation:

The County Public Lands Steering Committee will review proposed actions. A consistency review will be done for purposes of compliance with local law, ordinances, planning, etc. Agencies making the proposal may solicit the support of local community leaders. Upon completion of the review process by the Public Lands Steering Committee and community leaders, the County Commissioners will either accept the recommendation(s) of the group, modify them, and/or reject them.

4.3.6 WILD AND SCENIC RIVERS

Current Setting

The Wild and Scenic Rivers Act of 1968 created the National Wild and Scenic Rivers System. The purpose of the Act was to preserve in their free-flowing conditions, certain selected rivers of the nation which with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. The Act directed federal agencies to consider the potential for National Wild, Scenic, and Recreational River areas in all planning for the use and development of water and related land resources.

The Wild and Scenic River (WSR) review process is being incorporated into planning efforts for the Dixie National Forest, the BLM Richfield Field Office, and the Kanab BLM Field Office in their 2007 planning efforts. In 1997, the Escalante Ranger District of the Dixie National Forest began participation in an Interagency Wild and Scenic Rivers Analysis with the Grand Staircase Escalante National Monument and Glen Canyon National Recreation Area. The results of the

eligibility study were published as an appendix to the Draft Environmental Impact Statement prepared for the Monuments Draft Management Plan.

The Monument proceeded to conduct a suitability analysis for eligible segments within the Monument boundary and eligible segments located between the Monument boundary and the Arizona State line. No suitability analysis has been conducted or completed for any other Wild and Scenic Rivers segments in Capitol Reef National Park, Bryce Canyon National Park, or Canyonlands National Parks.

Information regarding Wild and Scenic Rivers in the Parks will be amended to this plan as information becomes available. Review of Draft Management Plans and cooperation with federal agencies in evaluating Wild and Scenic River potential indicates inconsistencies between agency treatments of the Wild and Scenic River Act. Review of the Dixie National Forest Wild and Scenic River Report conducted by a private consultant, indicated that the document was replete with flaws, misconceptions, and inaccuracies. Joint reviews by the Forest and local Counties identified many of the flaws, and the Dixie National Forest undertook revision of the document. Review efforts by the Richfield Field Office and the Kanab Field Office prior to 2007, adopted criteria from other BLM agencies and failed to consider Garfield County's situation regarding Congressionally Designated Areas, presence of National Parks, National Recreation Area, National Monuments, and other natural resources.

A Wild and Scenic River Recommendation is developed as part of this planning process, considering criteria applicable to Garfield County and consistent across the various Federal Agency boundaries.

Need for Management Change

There are no congressionally designated Wild and Scenic River Corridors in Garfield County as of April 2007.

1. Garfield County needs to be involved in all phases of study for Wild and Scenic River designations including eligibility, suitability, and recommendation phases. All federally recommended segments in the County must be consistent with the County Resource Management Plan and have County Commission concurrence prior to final recommendations going forward or final disposal.

2. Little objective or consistent criteria exists for evaluating Outstandingly Remarkable values associated with potential wild and scenic river recommendations. Recently, proposals have been evaluated for values loosely defined as "scenic" or "cultural." Outstandingly remarkable values need to be identifiable, articulated, mapped, and distinctly characterized. Outstandingly remarkable values for which a wild and scenic river proposal is considered must meet criteria identified below.

3. There are no specific requirements concerning minimum flow for an eligible / suitable wild and scenic river segment. However, flows need to be capable of creating or sustaining outstandingly remarkable resources and sufficient to make the river a worthy addition to the National System. Minimum flow requirements need to meet the criteria identified below. In addition, analysis needs to be conducted to determine if proposed outstandingly remarkable

values are dependent on or influenced by existing flows.

4. Wild and scenic river recommendations need to be limited to the smallest area necessary to protect outstandingly remarkable values. At least 95% of any land considered for wild and scenic river eligibility needs to meet outstandingly remarkable criteria for which the wild and scenic river is being considered. Areas not meeting outstandingly remarkable criteria need to be eliminated from wild and scenic river consideration.

5. Criteria for evaluating eligibility and suitability for wild and scenic rivers needs to be consistent to the maximum extent allowed by law with criteria established in the Garfield County General Management Plan.

6. Garfield County needs to recommend candidate segments for inclusion in the Wild and Scenic River System.

Desired Condition

Garfield County desires:

a) River segments listed in the Garfield County Wild and Scenic River Recommendation be included in the Wild, Scenic, and Recreational Rivers System subject to concurrence from affected agencies.

b) A bill be drafted designating rivers listed in the Garfield County Wild and Scenic River Recommendation as Wild, Scenic, or Recreational Rivers subject to concurrence from affected agencies.

c) Designation of the rivers listed in the Garfield County Wild and Scenic River Recommendation complete the process within the County and that no further consideration or attempt by federal agencies be made to designate other stream channels without County participation and concurrence. Any attempts to do so will be considered a violation of local law.

d) The effects of eliminating flow on Outstandingly Remarkable Values be analyzed as part of the eligibility criteria. If it is found that reduction or elimination of flow has no impact on the Outstandingly Remarkable value, then the value be declared not river related and dropped from consideration under the Wild and Scenic Rivers Act.

e) River segments be consistent with the National expectations for criteria for Wild and Scenic Rivers. Segments, which have a minimum volume of 40 cubic foot per second and minimum flow area of 80 square feet or a minimum width of 40 feet for at least 360 days per calendar year, are found to meet National expectations.

f) Wild and Scenic River Recommendations comply with Garfield County's criteria for Outstandingly Remarkable Values.

Policies, Goals, Objectives, and Criteria

Policy: It is Garfield County's policy that, once undertaken, all Wild and Scenic River evaluations be completed through the Suitability stage.

It is Garfield County's policy to support only those river segments which meet the quality standards set forth by the County in a public supported process.

Objective: Develop reasonable criteria for evaluating suitability and eligibility standards from which to base future recommendations for inclusion as a wild, scenic or recreational river.

Actions/

Implementation:

1. Work with the Public Lands Steering Committee to gain support for designating those rivers approved for Wild & Scenic River designation by the County Commissioners.
2. Work with State Representatives to gain State support for those rivers approved by the County Commission for Wild & Scenic River designation.
3. Work with and assist the Utah Congressional Delegation in drafting a Wild & Scenic River bill that will support the County's position for Wild & Scenic River designation, including release language for all other rivers not recommended for Wild & Scenic River designation.

Criteria: The following criteria will be applied to evaluate eligibility and suitability for the proposed Wild & Scenic Rivers in Garfield County.

Outstandingly Remarkable Resources rare, unique, exemplary, significant, and deserving of special designation, protection, and use. They are outstanding, remarkable, one of kind resources that deserve special management when compared to other similar resources in the region.

Historic/Cultural -

Any activity, business, district, building, structure, object, historical/cultural resource, or site may qualify as an Outstandingly Remarkable Cultural Resource if it is located within the official boundaries of the County, has been the subject of a Class 3 inventory, is approved by the County Commission and at least 95% of the designated reach meets one or more of the following minimum criteria:

- a) The resource is of sufficient value that it is a site for public or private facilities that enhance interpretive opportunities for the public. Parks, museums, monuments, businesses, and other permanent designations qualify cultural resources for this criterion. Examples within the region of comparison include but are not limited to: Anasazi State Park, Pipe Springs National Monument, Fremont Indian State Park, CEU Museum, American West Heritage Center, This is the Place State Park, Emery County Museum, Edge of the Cedars State Park, etc.
- b) The resource is of sufficient value that it requires paid or volunteer staff to assist with interpretation and/or protection of the resource. The presence of on site guides, hosts, rangers, guards, specialists, or other similar staff for a minimum of 500 hours per year qualifies cultural resources for this criterion. Examples within the region of comparison include but are not limited to: Defiance House, Mormon Handcart Sites, Sand Island, Grand Gulch, Pine Lake Campground, etc.
- c) The resource is of sufficient value that it is the subject of guided or self guided tours promoted by land management agencies or private businesses. Resources that receive a minimum average

visitation of 200 visits per month qualify for this criterion. Examples within the region of comparison include but are not limited to: San Juan River Site Tours, Cedar Mesa, Kane Gulch, Cowboy Cave, etc.

d) The resource is of sufficient renown that its location and nature are well known and recognizable throughout the inter-mountain region. Resources that have been the subject of not less than 10 statewide mass media feature articles or programs qualify for this criterion. Examples within the region of comparison include but are not limited to: Mormon Tabernacle, Range Creek, Nine Mile Canyon, Mormon Handcart Sites, Hole in the Rock, etc.

e) The resource value has been demonstrated to the Garfield County Commission in at a public hearing and the Outstandingly Remarkable nature has been documented by a preponderance of the evidence as determined by the County Commission.

Scenic-

a) Scenic Resources may qualify as Outstandingly Remarkable if they can be graphically described with identifiable limits and meets all of the following criteria:

1. It is located within the official boundaries of the County.
2. It is designated as Class A Scenery or equivalent.
3. It has a Scenic Quality Rating greater than 28 or equivalent.
4. It has a land form rating of 5 or equivalent.
5. It has a vegetation rating of 5 or equivalent.
6. It has a color rating of 5 or equivalent.
7. It has a scarcity rating of 5 or greater.
8. It is renown throughout the state
9. It is the primary destination for more than 2400 visitors per year as verified by actual visitor counts.
10. All of the land proposed for designation meets all of the criteria

b) If the scenery does not meet the requirements outlined above, it may qualify for designation if it can be graphically described with identifiable limits and at least 95% of the area meets one of the following requirements:

1. It is located in a National Park, National Recreation Area, or National Monument administered by the National Park Service and has a Scenic Quality Rating greater than 28 or equivalent.
2. It is part of a congressionally designated area and:
 - A. Has a minimum Scenic Quality Rating 30, and
 - B. Is the destination of more than 6000 visitors per year as verified by actual visitor counts.
3. It is a legislatively designated area by the state of Utah and
 - A. Has a minimum Scenic Quality Rating of 28 or equivalent, and
 - B. The governor of the State of Utah has requested its inclusion on the Garfield County Register of Outstandingly Remarkable Cultural Resources.

Fish and Wildlife Values -

Outstandingly remarkable fish and wildlife values are those populations which are rare, special or regionally significant. Although, it may include special status species, special status species designation, in and of itself, does not meet the outstandingly remarkable/ relevant - important threshold. The minimum criteria is as follows:

It is on the threatened or endangered species list and is the only population of the species in the region of comparison. It is identified by the Garfield County Commission has an outstandingly remarkable/ relevant - important fish and wildlife value.

It is on the threatened/endangered species list and comprises at least 80% of the known individuals for the species within the region of comparison.

It is of significant public interest evidenced by at least 2000 visitors per year to the specified area with the primary purpose of enjoying the value, as confirmed by documented by field surveys.

Natural System or Process - To be developed.

Hazards - To be developed.

Additional Resources that are considered as the basis of a Wild and Scenic River designation do not qualify for Outstandingly Remarkable status unless they meet one of the criteria above or are designated in a public action by the Garfield County Commission.

Findings

The National Wild and Scenic Rivers System was created by the Wild and Scenic Rivers Act of 1968. The purpose of the Act was to preserve in their free-flowing conditions, certain selected rivers of the nation which with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. The Act directed federal agencies to consider the potential for National Wild, Scenic and Recreational River areas in all planning for the use and development of water and related land resources.

The Wild and Scenic River (WSR) review process is being incorporated into planning efforts for the Dixie National Forest, Richfield Field Office, Kanab Field Office in their 2007 planning efforts applying substandard inconsistent criteria. The 1997 Interagency Wild and Scenic Rivers Analysis conducted by the Grand Staircase Escalante National Monument, Dixie National Forest, and Glen Canyon National Recreation Area also applied substandard criteria.

Garfield County finds, through review of Draft Management Plans and cooperation with federal agencies in evaluating Wild and Scenic River potential, inconsistencies exist between agencies regarding application of the Wild and Scenic River Act.

Review of the Dixie National Forest Wild and Scenic River Report conducted by a private consultant, indicated the document was replete with flaws, misconceptions, and inaccuracies. Joint reviews by the Forest and local Counties identified many errors, and the Dixie National Forest undertook revision of the document. BLM review efforts by the Richfield Field Office and the Kanab Field Office prior to 2007, adopted arbitrary criteria and failed to consider Garfield County's situation regarding Congressionally Designated Areas, presence of National Parks, National Recreation Area, National Monuments, and other natural resources. In addition, the criteria was inconsistent with Garfield County's General Management Plan and/or stated position.

Appropriate Wild and Scenic River Recommendations have been developed as part of the Garfield County planning process, considering criteria applicable to Garfield County and

consistent across the various Federal Agency boundaries.

Data, evaluations, and criteria regarding the Monument WSR process is not readily available. The Monument's eligibility and suitability evaluations are inconsistent with the intent of the WSR Act and the Garfield County General Management Plan. The County finds they must be reevaluated in the next scheduled review and revision process.

Garfield County also finds:

a) the criteria and process used for evaluating Wild and Scenic Rivers is inconsistent between Federal agencies.

b) that application of Outstandingly Remarkable Criteria fails to appropriately consider resources in the County and in a broader region of comparison. Garfield County has determined that not every individual in a population can be outstanding.

c) Federal agencies have failed to hold an appropriate standard for evaluating Outstandingly Remarkable Values.

d) the most consistent, best criteria is that established in the Garfield County General Management Plan.

The Garfield County Commission has found the following as river segments eligible and suitable under the Wild and Scenic Rivers Act for the classification listed below:

River	Beginning	Ending	Classification
Colorado River	Garfield County Boundary	Glen Canyon NRA Boundary	Wild
Colorado River	Glen Canyon NRA Boundary	Lake Powell Backwater	Recreation
Dirty Devil River	Garfield County Boundary	Glen Canyon NRA Boundary	Scenic
Dirty Devil River	Glen Canyon NRA Boundary	Lake Powell Backwater	Recreation

Garfield County finds no other segments eligible and suitable for designation. However, Garfield County will review additional proposals for designation under the Wild and Scenic Rivers Act in accordance with criteria listed above.

4.3.7 BACKCOUNTRY/ROADLESS/PRIMITIVE AREAS

Current Setting

Backcountry/Roadless/Primitive areas are specifically identified land where multiple use and sustained yield management has resulted in semi primitive conditions. Properly designated, these areas are established to temporarily promote semi primitive nonmotorized recreation opportunities, generally in areas where more outstanding opportunities are not present. In Garfield County, land managers have used this designation to incorrectly apply wilderness protections to lands that would otherwise be suited for multiple use. In an effort to lower the qualifying standard for these areas, the Forest Service developed protocols classifying areas containing primitive, unclassified, and or unauthorized roads as roadless. As a result, the Forest Services considering management alternatives that classify semi-primitive motorized lands suitable for multiple use management as roadless or backcountry.

The Grand Staircase-Escalante National Monument management plan also mischaracterizes lands as primitive. Expanding wilderness protection to the lands that did not qualify, the Monument management plan ignores valid existing rights, unilaterally closes roads, ignores recreation opportunity spectrum principles, and reduces use and enjoyment of recreational resources by classifying semi primitive motorized or roaded natural lands as primitive. In Garfield County Backcountry/Roadless/Primitive designations compound problems created by withdrawing federal lands from multiple use management. When compared with congressional designations associated with the national parks, national recreation areas and national monuments, wilderness and with lands currently being managed as wilderness study areas, Backcountry/Roadless/Primitive areas lack the quality and need for protection under the law.

Need for Management Change

- 1.Federal agencies in cooperation with Garfield County need to identify lands set aside for primitive or semi-primitive non-motorized recreation. Lands set aside for those purposes far outweigh the need and are detrimental to other uses of public lands.
- 2.Garfield County needs to establish standards for designating primitive, and semi-primitive non-motorized recreation areas consistent with recreational needs and desired land uses to provide consistency across agency boundaries.
- 3.To the maximum extent allowed by law, federal land managers need to revise the amount of land set aside for Backcountry/Roadless/Primitive Areas to be compatible with visitor use patterns in the County and to be consistent with the Garfield County General Management Plan.
- 4.Prescriptions for lands managed for non-motorized recreation needs to allow for ongoing development of natural resource industries to the maximum extent allowed by law and as opportunities arise.
- 5.Backcountry/Roadless/Primitive Areas need to be compatible with the Garfield County Recreation Opportunity Spectrum.

Desired Condition

Garfield County desires Backcountry/Roadless/Primitive or similar areas:

- a) Be designated in conformance with Garfield County's Land Use Management Plan and only in areas with ROS Classification of Semi Primitive Non Motorized or Primitive or in areas that received specific written concurrence from Garfield County Commission.
- b) Be considered multiple use lands with the backcountry recreation component being given preference only until such time that other multiple use functions (natural resource extraction, development, commodity production, etc.) are proposed or become viable.
- c) Not be designated until detailed objective analysis has been conducted demonstrating the designation will enhance socioeconomic vitality, community viability, custom, and culture of County.
- d) Be accompanied by cooperative agreements identifying management and fees associated with public services including law enforcement, search and rescue, emergency medical, solid waste collection and disposal, and human waste collection and disposal.
- e) Be managed in such a way that socioeconomic vitality, community viability, custom, culture, and benefit use and enjoyment of the facility by local residents are realized.
- f) Give deference to other multiple use proposals, when such proposals are considered.
- g) Unclassified/unauthorized roads, ways, and trails, primitive roads, primitive campsites, vegetation treatments, logging, mining, oil and gas exploration are not eligible or suitable for Backcountry/Roadless/Primitive or similar designations.

In terms of future management it is important that these areas be managed so that the management techniques described above will in fact protect the desired quality of the experience. In conjunction with Garfield County, design roads and trails that will provide well designed consistent high quality access routes for motorized access to and from the areas of concern and trails that will be used to move the public into and out of the areas. At the trailheads high quality restroom facilities need to be developed and primitive restrooms need to be strategically placed in the backcountry so as not to degrade the primitive base.

Policies, Goals, Objectives, and Criteria

Goal: It is the goal of Garfield County to work cooperatively with Federal land management agencies regarding designation of Backcountry/Roadless/Primitive Areas.

Policy: It is the policy of Garfield County to manage only those areas identified in the Garfield County General Management Plan as Rec Ib – Near Wilderness as Backcountry/Roadless/Primitive.

Action/

Implementation:

The County, through use of the definitions of federal agencies, developed an inventory of lands by using a Recreation Opportunity Spectrum Analysis. Areas have been identified on the Garfield County Resource Management Plan Map. The map, upon approval of the plan by the Garfield County Commission, constitutes the implementation of the goals and policies and is the official decision of the County.

Policy: Any deviation from the plan, without approval of the County Commission is inconsistent with the local planning process.

Policy: Backcountry/Roadless/Primitive Areas shall be designated and managed, to the maximum extent allowed by law, in accordance with Desired Conditions state above.

Findings

Backcountry/Roadless/Primitive areas have been initiated by Federal agencies in an effort to provide wilderness protection for lands that are not protected by the Wilderness Act and/or do not meet the criteria for wilderness.

Garfield County finds:

- a) Backcountry/Roadless/Primitive areas are only suitable for lands identified in the Garfield County ROS Analysis as primitive or semi primitive non-motorized.
- b) Federal agencies are currently managing more than 280,000 acres (more than twice the amount of private land in the County) for wilderness values after having determined that the lands are not recommended/suitable for wilderness.
- c) Considering lands currently protected by Congressional Designation (Parks, Recreation Areas, Monuments, Wilderness Areas) lands managed in Garfield County for wilderness purposes greatly exceed the need and lands suitable for such management.
- d) Backcountry/Roadless/Primitive areas create an undue burden on the custom, culture and socioeconomic base of the County and are generally not consistent with the policies, goals, and objectives of the County.
- e) There may be a few limited instances where Backcountry/Roadless/Primitive areas are appropriate and that such areas are acceptable only in conformance with the Garfield County General Management Plan and with the concurrence of the County Commission.
- f) Characteristics described in the below for Backcountry/Roadless/Primitive areas are necessary to protect the custom, culture, socioeconomic vitality, and community viability of the County. Areas, which do not comply with said characteristic, are inconsistent with the Garfield General Management Plan and jeopardize the custom, culture, socioeconomic vitality, and community viability of the County.
- g) Backcountry/Roadless/Primitive area's emphasis on recreation is a temporary measure.
- h) Backcountry/Roadless/Primitive values have been studied, reviewed and considered for inclusion into the Garfield County Resource Management Plan. Appropriate areas were considered and evaluated through the Recreation Opportunity Spectrum process.
- i) The BLM has determined approximately 50% of the WSAs in Garfield County fail to have suitable characteristics to recommend them for wilderness. Yet, the BLM is continuing to

manage the lands for primitive recreation. In addition, National Parks, National Recreation Area, and National Monument lands are being managed for primitive recreation as a result of enabling legislation and/or prescriptive management plans. Visitor use surveys and primitive recreation data indicate a very small number and percentage of Garfield County's visitors participate primarily in primitive recreation. The same visitor use surveys and recreation data indicate that vast majority of visitors to Garfield County are primarily involved in some type of motorized recreation. In addition OHV registration continues to rise rapidly and federal and state agencies readily admit that OHV recreation is burgeoning. As a result, Garfield County finds that there is no need for Backcountry/Roadless/Primitive areas except in concurrence with the Garfield County Land Use Management Plan. Garfield County finds that designation additional Backcountry/ Roadless/Primitive areas without County concurrence is arbitrary and capricious, creates a significant negative impact on the County's custom, culture, socioeconomic base and community viability and is inconsistent with the Garfield County General Management Plan.

The following criteria describe the required setting and prescriptions for Backcountry/Roadless/Primitive areas. Unless approved by the County Commission, other settings and/or prescriptions are inconsistent with the Garfield County General Management Plan:

Backcountry/Roadless/Primitive Areas are specifically identified lands where multiple use and sustained yield management has resulted in semi-primitive conditions. These areas will be managed to promote the perceived natural appearance while continuing to fulfill multiple use and sustained yield mandates for grazing, timber harvesting, mining, drilling, and water development in accordance with the Garfield County General Management Plan.

Backcountry/Roadless/Primitive Areas shall contain and are identified to promote specific or unique recreational, ecological, or natural values. Although these may not be the only areas of the County that provide such opportunities, each Backcountry/Roadless/Primitive Areas shall offer a specific opportunity, characteristic, destination attraction, or have otherwise developed a sense of place. Backcountry/Roadless/Primitive Areas will also be used to help prioritize future investment for a variety of multiple use activities. Motorized access and trail development will generally be limited to those facilities that currently exist and additional facilities that are needed to enhance the area's experience or support multiple use/sustained yield principles. Upon completion of recreational and/or multiple use projects, human development may be removed or mitigated unless it is necessary to support recreational and multiple use activities for that specific area. Generally, Backcountry/Roadless/Primitive Areas are restricted to meet the physical managerial and social settings consistent with Garfield County's Recreation Opportunity Spectrum analysis for primitive or semi-primitive areas. However, specific locations within Backcountry/Roadless/Primitive Areas may be managed for other recreation opportunity spectrum designations or for other resource values. Prior to implementation each Backcountry/Roadless/Primitive Area will have a project plan to include desired conditions, existing conditions, targeted activities, acceptable activities, standards and costs for public services, detailed inventories of all classified, unclassified, authorized, and unauthorized roads, paths, ways, and trails, a delineation of potential valid and existing rights, a detailed analysis covering the entire County of direct, indirect, and cumulative impacts to custom, culture, and socioeconomic base as a result of the proposed area, and Garfield County Concurrence.

4.3.8 SPECIAL RECREATION MANAGEMENT AREAS (SRMAs)

Current Setting

Special Recreation Management Areas (SRMAs) are areas where special management or intensive recreation management is needed. Recreation activity plans are required, and greater managerial investment in facilities or supervision can be anticipated. The Bureau of Land Management must ensure the continued availability of public lands and related waters for diverse, resource dependent, outdoor recreation opportunities, while maintaining its commitment to managing the public lands as a national resource in harmony with the principle of balanced multiple use. In carrying out this policy, efforts must focus on:

- 1) managing the majority of the public lands for traditional dispersed recreation use, and
- 2) intensively managing certain areas of the public lands where outdoor recreation is a higher priority.

This second component of recreation management is classified as Special Recreation Management Areas or SRMAs. In these areas, agencies provide a more intensive visitor management, resource protection, and facility investments.

SRMAs ensure the long-term availability of areas for high-quality outdoor recreation opportunities in specific settings. Major investments in recreation facilities and visitor assistance are carried out to deal with the identified issues and concerns related to SRMAs. Currently there are no SRMAs located in Garfield County. However, several are being considered as part of public land planning processes.

Need for Management Change

1. Special Recreation Management Areas (SRMAs) need to be limited to lands that require more intense recreation management and that are targeted for recreation and socioeconomic development.
2. A financial commitment plan for SRMAs needs to be developed as part of the initial planning process.
3. Land use planning processes regarding SRMAs need to be consistent with Garfield County's General Management Plan. The associated Recreation Opportunity Spectrum and the establishment of SRMAs need to reflect visitor use volumes and patterns.
4. With federal policy changes for OHV use from open to limited areas, opportunities for motorized recreation have been drastically reduced. There needs to be 3% to 5% of the land in Garfield County reserved for cross country/open motorized recreation. SRMAs need to be established, where appropriate, to accommodate cross country/open motorized recreation.

Desired Condition

Garfield County desires:

- a) SRMAs only be established to promote specific recreation oriented resources and in accordance with desired conditions, policy, goals, objectives, and criteria described in this section.

- b) Appropriate SRMAs be established to meet target values of 3% to 5% of County land reserved for cross country/open motorized recreation.
- c) SRMAs be limited in size and at least 95% of the SRMA contains a specific recreational opportunity for which it was established, unless otherwise approved by the Garfield County Commission.
- d) SRMAs are established for motorized recreation. Areas identified as Rec Ia (Wilderness) or Rec Ib (Primitive/Semi Primitive Non Motorized) should not be designated as SRMAs unless specific Garfield County Commission approval has been obtain.
- e) Prior to planning actions designating SRMAs, detailed site-specific studies identifying impacts to socioeconomic vitality, community stability, custom and culture be completed.
- f) Discussions regarding SRMA funding packages and cooperative agreements regarding law enforcement, search and rescue, emergency medical, solid waste collection and disposal, human waste collection and disposal, and other pertinent issues are completed.
- g) SRMAs be promoted, managed, and developed to meet the minimum visitation identified below.
- h) An all weather road meeting AASHTO standards for 35 mph design speed access all SRMAs.
- i) Each SRMA contain a visitor registration box, solid waste collection receptacle, and human waste collection receptacle at the main entrance, unless otherwise approved by the County.
- j) Entrance and use of SRMAs be at no charge to Garfield County residents unless an alternate fee schedule is approved by the Garfield County Commission.
- k) Environmental Analysis regarding SRMAs consider National Parks, National Recreation Areas, and National Monuments located within the County as SRMAs when considering the cumulative impacts.
- l) SRMAs be developed to promote the interpretation, use, and enjoyment of natural resources by residents and visitors Garfield County.

Policies, Goals, Objectives, and Criteria

Goal: It is the goal of Garfield County to establish SRMAs only for resources which significantly enhance the socioeconomic vitality, community viability, custom and culture while expanding agency financial, infrastructure, and management support to fully develop, us and enjoyment of the resource.

Policy: It is the policy of the County to oppose the designation of Special Recreation Management Areas where management scenarios, restrict use and enjoyment of resources or where financial, infrastructure, and management commitments fail to fully develop use and enjoyment of resources.

Action/

Implementation:

When there is an outstanding recreation value suitable for SRMA consideration it will be evaluated through interagency discussion, consideration by the Public Lands Steering Committee, or public hearings prior to approval by the Garfield County Commission.

Policy: Areas are not eligible for SRMA designation unless the area meets the following criteria:

Size 0 to 40 acres

Minimum Visitation No requirement

Comments County concurrence required following 8 per agency.

Size 40 to 320 acres

Minimum Visitation Average 10 visitors per day for at least 90 days per year.

Comments County concurrence required

Size 320 acres to 2000 acres

Minimum Visitation Average 25 visitors per day for at least 120 days per year.

Comments County concurrence required

Size Greater than 2000 acres

Minimum Visitation Average 1 visitor/day/each 80 acres for at least 120 days/yr.

Comments County concurrence required

Policy: SRMAs are inconsistent with primitive recreation because SRMAs require intense management, increased facilities, and investments that impact the land. These requirements conflict with the concepts of primitive recreation (“untrammeled by man”, “without man's influence”, and “infrequent contact with man and his influence”).

Policy: SRMAs are an appropriate management tool to fulfill agency responsibility to ensure traditional, diverse recreation relating to cross country travel and open OHV use.

Policy: Failure to allocate at least 1% of agency land in Garfield County as SRMAs (or other appropriate designations) for cross country travel and/or open OHV use is considered an abrogation of recreation planning responsibility and is inconsistent with the Garfield County General Management Plan.

Policy: Garfield County will consider and support/oppose SRMA management on a case by case basis for lands that contain special features of recreation interest which do not qualify for ACEC, Wild & Scenic River, or other special designation.

Findings

Special Recreation Management Areas are at the discretion of Federal land managers and must be consistent with Garfield County's General management Plan to be consistent with FLPMA. Garfield County also finds that SRMAs:

a) Have a specific benefit only when a specific recreation destination is present.

b) Large blocks of land for designated general purposes (scenic, recreational, cultural) fail to

meet the specific standard necessary for SRMAs management and development.

c) Need to meet specific visitation requirements in order to qualify for designation.

d) Should attract enough visitors to pay for all services that are required from the County.

e) Need to provide human waste collection and disposal, solid waste collection and disposal, access for emergency services, law enforcement etc..

f) Generate solid waste consistent with national averages for nonresident visitors, which is equivalent to 2 pounds per visitor per day.

g) Are not being used to their full potential or in accordance with their purpose. SRMAs should not be used over large blocks of land to manage dispersed recreation in a primitive setting. SRMAs should be used in limited areas where concentration of visitors is anticipated and special or intense recreation management needs exist.

h) Dispersed recreation is a multiple use activity and does not require special management actions.

i) Primitive recreation and semi primitive non motorized recreation are a subset of dispersed recreation and should be emphasized in management areas set aside for those purposes in the Garfield County General Management Plan and only in those areas.

j) Are not suitable where other management classifications (ACECs, Wild and Scenic Rivers, WSAs, etc.) exist.

k) It necessary to establish guidelines regarding size and visitation for SRMAs in order to preserve and enhance the custom, culture, socioeconomic vitality and community viability of the County and to provide consistency across office/agency boundaries. The minimum acreage and visitation figures for SRMAs are as follows:

0 acres	to 40 acres	no requirement maximum of eight per agency.
40 acres	to 320 acres	10 visitors per day for at least 90 days per year.
320 acres	to 2000 acres	25 visitors per day for at least 120 days per year.
Greater than	2000 acres	1 visitor per day per 80 acres for at least 120 days

and County concurrence required.

l) Have a specific development plan identifying expenditures, public services, and cost reimbursement scenarios as part of the NEPA planning process. If these planning items are postponed to the implementation or project phase, inadequate management occurs during the interim.

m) Establishment of SRMAs as part of a programmatic resource management plans and implementation of the specific management actions without secured budgets, cooperative agreements for public services, facilities for the collection and disposal of solid or human waste, reliable all weather access, and other needs is inconsistent with the Garfield County General

Management Plan, is arbitrary and capricious, and is an abrogation of Federal responsibility to the public.

n) Federal agencies need to identify suitable cross country/open motorized recreation areas targeting 3% to 5% and not exceeding 10% of the County's total land area as SRMAs or other similar management areas.

4.4 AREAS IDENTIFIED BY LAND MANAGERS

Inasmuch as lands identified by land managers are generally discretionary, Garfield desires, absent specific federal law to the contrary, lands in this classification be managed in accordance with the Garfield County General Management Plan

Policy: These management actions are primarily at the discretion of the land managers. Unless specifically mandated by law, management plans/actions adopted without the concurrence of the Garfield County Commission are inconsistent with the County's General Management Plan and are a violation of local law.

Findings

Federal Land Managers have a great deal of discretion when it comes to developing planning actions, alternatives, management scenarios and subsequent decisions. Usually plans are developed at the field level, with final approval of plans at State or Regional levels. Appeals to plans are usually resolved at the Headquarters level.

Given the discretionary nature of most federal plans, it is the policy of Garfield County that all discretionary decisions of Federal Land Managers give deference to County government needs, desires and concerns. This is interpreted to mean that where there is no Federal body of law that would prevent an action from occurring, local bodies of law, ordinances, policies, County resource management plans, local environmental needs, economic concerns, and social well being will become the guiding direction for those Federal Planning efforts.

4.4.1 NON WSA LANDS WITH WILDERNESS CHARACTER

Current Setting

In 1996, under the guise of resolving differences regarding the "fundamental issue of how much BLM land has wilderness characteristics," Secretary Babbitt directed an inventory of BLM and non-BLM lands. The effort was to "apply the same legal criteria that were used in the original inventory." However, findings that trails "used by thousands of visitors annually" had outstanding opportunities for solitude; criteria that areas did "not need to have outstanding opportunities on every acre" and that qualifying areas had only to meet the minimal standard of having "opportunities somewhere in the unit"; and practices that considered units adjacent to WSAs as having outstanding opportunities regardless of whether the unit being considered or the WSA qualified for such consideration, resulted in an inventory that created more disagreement

and doubt and was less professional and objective than original inventories that identified lands “that clearly and obviously lacked wilderness character.”

Areas identified in the process are compiled in *UTAH Wilderness Inventory*, 1999. When compared to National Park, National Recreation Area, National Monument, and WSA lands recommended for wilderness designation, Non WSA lands with wilderness character identified in the 1999 inventory fail to meet the same value and /or quality standards as original studies. In addition, higher value lands set aside for preservation and non-motorized recreation are under utilized and occupy an inordinate percentage of Garfield County land when considering current and estimated future visitation.

Need for Management Change

1. Lands with wilderness character need to manage for commodity production, development, multiple uses, and sustained yield with the fewest prescriptions allowed by law. These lands are of lower wilderness value and quality

2. Lands set aside for preservation and non-motorized recreation in Garfield County are under utilized and far exceed current and foreseeable needs for these uses. Lands with wilderness character need to be available for natural resource based industries and multiple use management other than preservation or non-motorized recreation.

3. In as much as federal/state land use plans are to be consistent to the maximum extent allowed by law with local government plans, and in as much as there is no law requiring management of lands with wilderness character for preservation or non-motorized uses, prescriptive management of lands with wilderness character in Garfield County needs to have the approval of the Garfield County Commission.

Desired Condition

Garfield County desires Non-WSA Lands with Wilderness Character:

a) Be managed in accordance with Garfield County's Land Use Plan, as multiple use lands, or as commodity production lands.

b) Be evaluated in light of the original inventory identifying them as lands that clearly and obviously lacked wilderness character.

c) Prior to management for wilderness character have a detailed analysis be conducted identifying:

- 1) The percentage of lands with naturalness,
- 2) Percentage of lands with outstanding opportunities for solitude,
- 3) Percentage of lands with outstanding opportunities for primitive recreation,
- 4) Percentage and acreages of lands classified in each of the Visual Resource Management Classifications,
- 5) Factors that disqualified the lands from possibly containing wilderness values in the initial wilderness inventory,
- 6) Changes to the lands since the initial inventory,
- 7) Comparative analysis between and cumulative impact analysis of wilderness characteristics in

the area being studied versus such characteristics recommended by the National Park Service, Forest Service designated wilderness areas, and lands identified by the Bureau of Land Management in the recommended or Paramount proposals of the BLM 1991 Final EIS.

8) Comparative analysis between and cumulative impact analysis of recreational opportunities offered by these lands versus recreational opportunities currently available in National Parks, National Recreation Areas, National Monuments, Wilderness Areas, and WSAs located in Garfield County and the region.

d) Have a detailed inventory of all roads, paths, ways, trails, campgrounds, fence lines, range improvements, vegetation treatments, erosion control measures, and any other man made impacts on lands as part of the evaluation of Non-WSA Lands with Wilderness Character prior to managing any lands for wilderness values.

e) In as much as the original Wilderness Inventory was conducted over a longer period of time expended greater funds, was in direct response to mandates by Congress, when conflicts occur between the original inventory and the re-inventory conducted by the BLM the late 1990s, that the original inventory controls.

f) The BLM give preference to multiple use, sustained yield, commodity production, natural resource extraction activities unless federal law specifically prohibiting/withdrawing the lands from such activities exists.

g) Have as few restrictions placed on them as possible or allowable by law. They should be managed under the principles of multiple use and sustained yield. Commodity production should be the guiding principle.

Policies, Goals, Objectives, and Criteria

Policy: Garfield County accepts and adopts the BLM determination reached in the original Wilderness Inventory that these lands clearly and obviously lack wilderness character and incorporates the inventory and determinations by reference.

Policy: Garfield County adopts the determination identified on page A1, column 3, paragraph 1 of the UTAH 1996 Wilderness Re inventory that these areas do not have wilderness character on every acre.

Policy: Garfield County adopts the determination identified on A1, column 3, paragraph 1 of the UTAH 1996 Wilderness Re inventory that Non WSA lands with wilderness character located adjacent to WSAs were not evaluated.

Policy: Where inconsistencies exist between the original wilderness inventory conducted as directed by Congress in response to the Wilderness Act of 1964 and UTAH 1996 Wilderness Re inventory, Garfield County adopts the original inventory and determinations as correct, accurate, and the best/most current data. In addition, the County rejects inconsistent findings of UTAH 1996 Wilderness Re inventory as inaccurate and based on subjective, unauthorized criteria.

Policy: No Non WSA lands be managed for wilderness character.

Policy: It is the policy of Garfield County that Non WSA lands with wilderness character be managed for commodity production or multiple use and sustained yield. Management actions must be consistent to the maximum extent allowed by law with the Garfield County General Management Plan, and failure to comply will be considered arbitrary and capricious.

Criteria: Non WSA lands that have been subject to vegetative treatments or manipulations are not suitable for management preserving wilderness characteristics unless they meet all of the following criteria:

Age - Vegetative manipulations where the last manipulation, treatment, or impacted by a man is older than 100 years may be considered substantially unnoticeable, if no stumps, scares, piles, or any other impacts are present.

Extent - Vegetative manipulation that has an extent less than 5000 square feet is considered substantially unnoticeable.

Condition - A vegetative manipulation is considered substantially unnoticeable if, after comparing three random samples not less than 200 square feet inside the manipulated area and three random samples not less than 200 square feet outside the manipulated area, the following criteria is met:

- a) If percentage composition for each species inside the manipulated area is within 3% of the composition for the same species outside of the manipulated area;
- b) If estimated age for 97% of the individuals in each species in the manipulated area is within two years of age for the individuals of the same species in the non-manipulated area;
- c) If the species populations within the manipulated area are not less than 95% nor more than 105% of the species populations in the non-manipulated area;
- d) If the species height in the manipulated area is not less than 95% nor more than 105% of the height of the species in the non-manipulated area;
- e) If the manipulated area is free from exotic or non-native species that are not present in the non-manipulated area; and
- f) If the boundary between the manipulated area and the non-manipulated area is indistinguishable.

Criteria: Roads, paths, ways, and trails that are man made and are substantial enough to be identified on maps, plans, inventories, original wilderness studies, subsequent wilderness studies, public comments associated with wilderness studies, mining claims, gps inventories conducted by Federal, State, or local governments, or that can be visually distinguished on the ground are substantially noticeable and disqualify the land for wilderness management.

Criteria: Tamarisk and Russian Olive were introduced in Garfield County by modern man.

They are a clear and obvious evidence of man's presence and an indication of his trammeling of the land. Non-WSA lands with wilderness character that contain Tamarisk or Russian Olive exhibit evidence of man's presence, the long term presence of man and man's trammeling of the land. Non-WSA lands with wilderness character that contain Tamarisk or Russian Olive do not qualify for wilderness or management for wilderness characteristics.

Findings

Garfield County finds these lands clearly and obviously lack wilderness character as determined in the federal detailed inventory phase directed by the Wilderness Act of 1964. The County also finds these lands have a lower percentage of natural appearance, outstanding opportunities for solitude and outstanding opportunities for primitive recreation than lands carried forward in the intense study phase of the process.

Garfield County has evaluated lands identified by federal agencies as possibly containing wilderness values, lands recommended for wilderness designation, lands currently withdrawn from multiple use / sustained yield management, visitation on lands managed for primitive recreation, demand for primitive recreation, and higher value experiences on other lands available for primitive recreation. Garfield County finds that lands designated as “Non-WSA lands with wilderness character” are to be managed for commodity production or multiple use / sustained yield activities.

Tamarisk and Russian Olive were introduced by modern man as he developed the West. They are non-native, invasive and an evidence of man's lack of understanding regarding his impact on the land. They were introduced by man and constitute a substantial evidence of his presence. The presence of Tamarisk and/or Russian Olive constitute a substantially noticeable evidence of man's presence / impact and disqualifies lands from wilderness management unless otherwise approved by the Garfield County Commission.

Garfield County has evaluated non WSA lands that were originally identified as “clearly and obviously lacking wilderness character” and that were reevaluated by the BLM as part of the process directed by Secretary Babbitt. Management actions containing prescriptions that reduce opportunities to achieve the goals and objectives or that implement prescriptions giving preference to primitive recreation and / or wilderness values over the goals and objectives listed below are found to be inconsistent with Garfield County’s General Management Plan and constitute significant negative direct, indirect and cumulative impacts on the County’s custom, culture and socioeconomic base. Prescriptive management actions on these lands are also found to be in deliberate conflict with the County and are not consistent to the maximum extent allowed by law unless accompanied with objective, scientific data justifying the prescription and approval by the County Commission. Managing part or all of the non WSA lands in Garfield County with wilderness character for wilderness characteristics violates FLPMA, contradicts the State’s Public Land Policy and contradicts the plans of Garfield County. Specifically Garfield County finds the following:

a) As Utah Code ' 63-38d-401(6)(b) indicates, managing the Non-WSA Lands with wilderness character under a wilderness characteristics management standard is not the State of Utah’s policy for multiple use-sustained yield management on public lands that are not wilderness or

wilderness study areas. Nor is it Garfield County's. A so-called wilderness characteristics management standard for the Non-WSA Lands with wilderness character is de facto wilderness management by another name. It is incompatible with and would therefore frustrate and defeat the foregoing plans of Garfield County for managing the Non-WSA Lands with wilderness character. Garfield County has formally taken a position that only lands classified as Rec Ia should be designated as wilderness.

b) A so-called "wilderness characteristics management standard" for the Non-WSA Lands with wilderness character also violates FLPMA and the 2003 Settlement Agreement between Utah and Department of Interior.

- Managing Post-603 Lands¹ pursuant to the Interim Management Policy of 1979 (IMP) is inconsistent with BLM authority. Agreement p. 6 & 13.a;
- Managing Post-603 Lands to preserve alleged wilderness character strays from the multiple use mandate in a manner inconsistent with FLPMA ' Section 603 limited delegation of authority. Agreement p. 9 & 17;
- The 1999 Utah Wilderness Reinventory shall not be used to manage public lands as if they are or may become WSAs. Agreement p. 13 & 4;
- DOI/BLM will not establish, manage *or otherwise treat* Post-603 Lands as WSAs or as wilderness pursuant to the Section 202 process absent congressional authorization. Agreement p. 14 & 7;
- DOI/BLM will remove from the proposed revised resource management plans in the Richfield, Price, Richfield, Monticello and Moab District any and all references or plans to classify or manage Post-603 BLM lands *as if* they are or may become WSAs. (Agreement p.14 & 7).

Garfield County finds the following goals and objectives vital to the County's custom, culture, socioeconomic vitality, and community viability:

1. Achieve and Maintain A Continuing Yield of Mineral Resources At The Highest Reasonably Sustainable Levels.

- Development of the solid, fluid and gaseous mineral resources in the Non-WSA Lands with wilderness character is an important part of the economy of Garfield County.
- Garfield County recognizes that it is technically feasible to access mineral and energy resources while preserving non mineral and non energy resources and uses.
- All solid, fluid and gaseous mineral resources in the Non-WSA Lands with wilderness character that exist in economic quantities and are recoverable with existing or foreseeable

¹ As that term is defined in the *Utah v. Norton* settlement agreement of April 11, 2003.

technology should be available for development.

- Physical and administrative access to mineral resources in the Non-WSA Lands with wilderness character must be maintained. These lands should be open to oil and gas leasing with economically and technically viable stipulations and conditions that will protect the lands against unreasonable and irreparable harm to significant resource values. This should include reasonable and effective mitigation and reclamation measures and bonding for such where necessary.
- Fluid and gaseous minerals within developed areas should be protected from waste and drainage.
- Any previous lease restrictions in the Non-WSA Lands with wilderness character that are no longer necessary or effective should be modified, waived or removed.
- Restrictions against surface occupancy should be modified, waived or if necessary removed where it is shown that directional drilling is not ecologically necessary, where directional drilling is not feasible from an economic or engineering standpoint, or where it is shown that directional drilling will in effect sterilize the mineral and energy resources beneath the area.
- Applications for permission to drill that meet standard qualifications, including where appropriate reasonable and effective mitigation and reclamation requirements, should be expeditiously processed and granted.
- Any moratorium or withdrawals that may exist against the issuance of additional mining patents and oil and gas leases in the Non-WSA Lands with wilderness character should be carefully evaluated for removal.

2. Achieve and Maintain Livestock Grazing At The Highest Reasonably Sustainable Levels Including Range Improvements, Access, Vegetation Treatments, Prescribed Fire, etc.

- Domestic livestock forage in the Non-WSA Lands with wilderness character as expressed in animal unit months and allocated for permitted active use in the current RMP, should be no less than the maximum number of animal unit months sustainable by range conditions in grazing districts and allotments in the Non-WSA Lands with wilderness character, based on an on-the-ground and scientific analysis.
- Where once-available grazing forage in the Non-WSA Lands with wilderness character has succeeded to pinion, juniper and other woody vegetation and associated biomass, or where rangeland health in the Non-WSA Lands with wilderness character has suffered for any other reason, a vigorous program of chemical or mechanical treatments such as chaining, logging, seeding, lopping, thinning, burning, range improvements and /or other treatments should be applied to remove this woody vegetation and biomass and stimulate the return of the grazing forage to its historic levels for the mutual benefit of livestock, wildlife and other agricultural industries in the Non-WSA Lands with wilderness character.
- Garfield County regards the land which comprises the grazing districts and allotments in the

Non-WSA Lands with wilderness character as more valuable for grazing than for the following uses which may exclude livestock grazing:

- a) conversion of AUMs to wildlife, wild horses, or other special species;
- b) recreation;
- c) primitive recreation/wilderness values.

Accordingly, it is Garfield County's finding that animal unit months in the Non-WSA Lands with wilderness character not be relinquished or retired in favor of conservation, wildlife and/or other uses.

- Garfield County recognizes that from time to time a bonifide livestock permittee in the Non-WSA Lands with wilderness character, acting in good faith and not to circumvent the intent of the BLM's grazing regulations, may temporarily cease grazing operations without losing his or her permitted AUMs. However, BLM imposed suspensions of use or other reductions in domestic livestock animal unit months in the Non-WSA Lands with wilderness character should be temporary and scientifically based on rangeland conditions.

- The transfer of grazing animal unit months (AUMs) to wildlife, wild horses or watersheds for supposed reasons of rangeland health or any other purpose is opposed by Garfield County as illogical. There is already imputed in each AUM a reasonable amount of forage for the wildlife component.

- Any grazing animal unit months that may have been reduced in the Non-WSA Lands with wilderness character due to rangeland health concerns should be restored to livestock when rangeland conditions improve, and not converted to wildlife use. New AUMs resulting from increased range production should be divided appropriately between grazing and other uses with at least 50% of any AUM increase allocated to grazing unless otherwise approved by Garfield County.

3. Manage the Watershed To Achieve and Maintain Water Resources At The Highest Reasonably Sustainable Levels

- All water resources derived in the Non-WSA Lands with wilderness character are the property of the State of Utah. They are owned exclusively by the State in trust for its citizens.

- As a political subdivision of the State, Garfield County has a legitimate interest in seeing that all reasonable steps are taken to preserve, maintain, enhance and where reasonable develop those water resources.

- With increased demands on water resources brought on by population increases in the Colorado River drainage area, and with recent drier precipitation trends which call into question in the minds of some whether the climate of the Colorado River drainage area is changing, it is important now more than ever that management practices be employed in the Non-WSA Lands with wilderness character to restore, maintain and maximize water resources there.

- This includes ground disturbing restoration, maintenance and enhancement of the

watershed in the Non-WSA Lands with wilderness character.

- Where water resources in the Non-WSA Lands with wilderness character have diminished because desirable vegetation have succeeded to pinion, juniper, Tamarisk, Russian olive, and other woody vegetation and associated biomass, a vigorous program of chemical or mechanical treatments should be applied to promptly remove this woody vegetation and biomass, stimulate the return of the grasses to historic levels, and thereby provide a watershed that maximizes water yield and water quality for livestock, wildlife, and human uses.

- Part of Garfield County's strategy for enhancing watersheds includes deterring unauthorized cross-country travel. One of the best ways to deter unauthorized travel is to provide an adequate system of routes in designated open areas for OHV use, including non-WSA lands with wilderness character. Garfield County finds the existing County transportation network (including some un-inventoried routes that are known to currently exist) is the minimum necessary to provide for OHV travel and that 3% to 5% of the land in Garfield County needs to be designated for open OHV use to deter unauthorized travel. Failure to provide appropriate open areas comprising 3% to 5% of the County constitutes failure to protect watersheds from unauthorized use, disregard for non-WSA lands with wilderness character and encourages unauthorized cross-country travel.

4. Achieve and Maintain Traditional Motorized and Non Motorized Access To Outdoor Recreational Opportunities

- Historically, citizens of Garfield County and visitors have enjoyed many forms of outdoor recreation in the Non-WSA Lands with wilderness character, such as hunting, fishing, hiking, family and group parties, family and group campouts and campfires, rock hounding, OHV travel, geological exploring, pioneering, parking their RV, or just plain touring in their personal vehicles. Such activities make up an important component of the custom, culture, and socioeconomic base of the County.

- All roads, paths, ways, and trails in the Non-WSA Lands with wilderness character, which historically have been open to OHV use, should remain open.

- Historically, outdoor recreational opportunities in the Non-WSA Lands with wilderness character have been open and accessible to working class families, to families with small children, to the ill and persons with disabilities, to the middle aged and elderly, to persons of different cultures for whom a primitive or back country experience may not be the preferred form of recreating. Current use, demographics and area growth support a need for more dispersed and varied recreation opportunities in the Non-WSA Lands with wilderness character, as opposed to primitive or back country experiences. All of society should not be forced to participate in a solitude experience or a primitive experience as the one and only mode of outdoor recreation in the Non-WSA Lands with wilderness character.

- Any segment of society who wants to recreate in the Non-WSA Lands with wilderness character are entitled to existing, authorized motorized access to traditional recreation uses and additional access where needed. Garfield County finds continued public motorized access to all

traditional outdoor recreational destinations in all areas of the Non-WSA Lands with wilderness character for all such segments of the public is vital to the custom, culture, and economic viability of the County. Garfield County specifically opposes restricting outdoor recreation in the Non-WSA Lands with wilderness character to non-motorized uses.

- Accordingly, all roads, paths, ways, and trails in the Non-WSA Lands with wilderness character that currently exist are part of Garfield County's duly adopted transportation plan should remain open to motorized travel. None of them should be closed, and Garfield County should have the continued ability to maintain and repair those routes, and where reasonably necessary make improvements thereon. All trails in the Non-WSA Lands with wilderness character that have been open to OHV use should continue to remain open. Traditional levels of wildlife hunting and fishing should continue. In addition, all roads administered by the BLM should remain open to public use, and any attempt to close those roads should be subject to the NEPA process.

5. Maintain and Keep Open All Roads, Paths, or Ways on Public Lands That Appear on Garfield County's Most Recent Transportation Map, Federal, State or Local Maps, Original Wilderness Inventory Data Sheets, GLO Plats, the Land as of January 1, 2007 and Provide For Such Additional Roads, Paths, Ways, Trails and other Highways, Rights of Way and Easements As May Be Necessary From Time to Time.

- Garfield County's Transportation Plan includes an Official County-Wide Transportation Map, available to the public for viewing and copying, showing public roads and trails maintained by the County.

- That portion of Garfield County's official transportation map which shows public roads and trails in the Non-WSA Lands with wilderness character is considered to be part of Garfield County's plan specifically applicable to the Non-WSA Lands with wilderness character. In addition, all roads administered by the BLM should remain open to public use, and any attempt to close those roads should be subject to the NEPA process and should provide an opportunity for the County to assume administration of the route if the County desires.

- Garfield County plans to keep all such roads in the Non-WSA Lands with wilderness character open and reasonably maintained and in good repair. Garfield County will consult with the BLM about any required improvements to such roads, reserving the right to request court intervention and relief in the event Garfield County and BLM cannot reach an agreement on such proposed improvements after reasonable efforts at consultation.

- Additional roads, paths, ways, trails and other transportation corridors exist and/or may be needed in the Non-WSA Lands with wilderness character from time to time to facilitate reasonable access to a broad range of resources and opportunities, including livestock operations and improvements, solid, fluid and gaseous mineral operations, energy transportation, recreational opportunities and operations, search and rescue needs, other public safety needs, access to public lands for people with disabilities and the elderly, and access to Utah school and Institutional Trust Lands. Additional access should be provided where a need is demonstrated and can be accomplished while providing required protection to other resources and uses.

6. Manage Cultural Resources in Conformance With Garfield County's Cultural Resource Protection Ordinance, Federal Law and State Law.

- Reasonable mineral development in the Non-WSA Lands with wilderness character can occur while protecting prehistoric rock art, three dimensional structures and other artifacts and sites recognized as culturally important and significant by the state historic preservation officer and Garfield County. Federal, State, and Local laws and regulations adequately protect these resources.

- Reasonable and effective stipulations and conditions to protect against damage to the above-described cultural resources should accompany decisions to issue mineral leases, permit drilling or permit seismic activities in the Non-WSA Lands with wilderness character. Such drilling and seismic activities should not be disallowed merely because they are in the immediate vicinity of the above-described cultural resources if it is shown that such activities will not damage those resources. The primary method of protecting these important resources should be avoidance of the specific sites of their location, not avoidance of blanketed areas spread far and wide around those specific sites.

7. Manage Lands So As to Not Directly or Indirectly Interfere With The Property Rights of Private Landowners Located in Non WSA Lands with Wilderness Character.

- There may be parcels of private fee land located in the Non-WSA Lands with wilderness character.

- Land management policies and standards on Non-WSA Lands with wilderness character should not interfere with the property rights of private landowners in the region to enjoy and engage in traditional uses and activities on their private property, consistent with controlling County zoning and land use laws.

- Nor should those landowners and their guests be denied the right of motorized access to their private property consistent with necessary uses of those private land parcels.

8. Manage lands So As to Not Directly or Indirectly Interfere With The Fiduciary Responsibility of the State School and Institutional Trust Lands Administration (SITLA) With Respect to Trust Lands Located Near Those Lands.

- Scattered throughout the Non-WSA Lands with wilderness character are sections of school and institutional trust land owned by the State of Utah and administered by SITLA in trust for the benefit of public schools and other institutions (school trust lands), as mandated in Utah's Enabling Act and State Constitution.

- As trustee, SITLA has a fiduciary responsibility to manage those school trust lands to generate maximum revenue there from, by making them available for sale and private development, and for other multiple use consumptive activities such as mineral development, grazing, recreation, timber, agriculture and the like, all for the financial benefit of Utah's public

schools and other institutional beneficiaries.

- Land management policies and standards on Non-WSA Lands with wilderness character should not interfere with SITLA's ability to carry out its fiduciary responsibilities.

- Nor should SITLA be denied the right of motorized access to those school trust sections to enable SITLA to put those sections to use in order to carry out SITLA's fiduciary responsibilities.

- Garfield County holds numerous rights-of-way and easements across SITLA lands. Reasonable access needs to be provided across non-WSA lands with wilderness character to allow Garfield County to maintain, improve and enjoy of those rights-of-way and easements.

9. Support implementation of Areas Of Critical Environmental Concern (ACEC) designation only in conformance with criteria established in Garfield County's General Management Plan and consistent with the County's goals for managing non WSA lands with wilderness character.

- It is Garfield County's policy that no part of the Non-WSA Lands with wilderness character should be designated an ACEC unless the following is clearly demonstrated:

a) The proposed ACEC satisfies all the definitional requirements of the Federal Land Policy and Management Act of 1976, 43 U.S.C. ' 1702(a) and Garfield County's criteria for Relevant – Important resources.

b) The proposed ACEC is limited in geographic size and that the proposed management prescriptions are limited in scope to the minimum necessary to specifically protect and prevent irreparable damage to values that are objectively shown to be relevant and important or to protect human life or safety from natural hazards.

c) The proposed ACEC is limited only to areas that are already developed or used or to areas where no development is required.

d) The proposed ACEC designation and protection is necessary to protect not just a change in ground conditions or visual resources that can be reclaimed or reversed eventually (like reclaiming a natural gas well site after pumping operations are complete). Rather, the damage must be shown in all respects to be truly irreparable and justified on short term and long term horizons.

e) The proposed ACEC designation and protection will not be applied redundantly over existing protections available under FLPMA multiple use sustained yield management, the Wilderness Act, threatened or endangered species designations or any other special designation or law.

f) The proposed ACEC designation is not a substitute for a wilderness suitability determination, nor is it offered as a means to manage a non WSA lands for wilderness characteristics.

- The foregoing summarizes the ACEC criteria of the State of Utah and Garfield County. See

Utah Code ' 63-38d-401(8)(c). The foregoing summarizes the criteria of FLPMA.

- As of September 1, 2007, none of the ACEC alternatives being considered in the Richfield Resource Management Plans (RMP) revision process meets the Garfield County's above-stated ACEC planning criteria.

- Garfield County Finds the alternatives being considered for the above-listed ACECs constitute de facto wilderness management in the Non-WSA Lands with wilderness character or fail to be consistent with Garfield County's ACEC criteria. Adopting any of the ACECs without County Concurrence is incompatible with, frustrates and defeats the Management Plan of Garfield County for Non-WSA Lands with wilderness character.

10. Support Inclusion of River Segments as Part of the National Wild and Scenic Rivers System Only in Conformance with Criteria Established in Garfield County's General Management Plan and Consistent With the County's Goals for Managing Non WSA Lands With Wilderness Character.

- It is Garfield County's policy that no river segment should be included in the National Wild and Scenic River System unless

a) Water is present and flowing at all times.

b) The water-related value is considered outstandingly remarkable within a region of comparison consisting of the State of Utah, the Colorado Plateau and Anasazi Dwelling units, and that the rationale and justification for the conclusion are disclosed.

c) BLM fully disclaims in writing any interest in water rights with respect to the subject segment.

d) It is clearly demonstrated that including segment in the NWSR system will not prevent, reduce, impair, or otherwise interfere with the state and its citizen's enjoyment and development of complete and exclusive water rights in and to rivers of the state as determined by the laws of the state, nor interfere with or impair local, state, regional, or interstate water compacts to which the State or Garfield County is a party.

e) The rationale and justification for the proposed addition, including a comparison with protections offered by other management tools, is clearly analyzed within the multiple-use mandate, and the results disclosed.

f) It is clearly demonstrated that BLM does not intend to use such a designation to impose Class I or II Visual Resource Management prescriptions.

g) It is clearly demonstrated that the proposed addition will not adversely impact the local economy agricultural and industrial operations, outdoor recreation, water rights, water quality, water resource planning, and access to and across river corridors in both upstream and downstream directions from the proposed river segment.

- The foregoing also summarizes the wild and scenic river criteria of the State of Utah, Utah Code

' 63-38d-401(8) (a), as well as the criteria of Garfield County.

- As of September 1, 2007, the terms prescribed in alternatives being considered in the proposed revised Richfield RMP for managing proposed wild and scenic river segments in Non-WSA Lands with wilderness character constitute de facto wilderness management. Without County concurrence, they are incompatible with and would therefore frustrate and defeat the foregoing plans of Garfield County for managing the Non-WSA Lands with wilderness character.

11. Maintain the least restrictive Visual Resource Management Classification allowed by law, consistent with Garfield County's VRM Acceptability Table. Oppose a Visual Resource Management Class I or II rating for lands not approved by the County Commission.

- The objectives of BLM Class I Visual Resource Management are not compatible with, and would therefore frustrate and interfere with, Garfield County's General Management Plan regarding Non-WSA Lands with wilderness character.

- The objectives of BLM Class II Visual Resource Management are generally not compatible with, and would therefore frustrate and interfere with, Garfield County's General Management Plan regarding Non-WSA Lands with wilderness character. There are certain limited exceptions where a Class II objective may be compatible with Garfield County's General Management Plan.

- VRM Class II adversely affects existing rights such as mineral leases, livestock grazing and the ability to develop private lands. VRM inventories must be modified to permit full enjoyment and development of underlying land use authorizations and use potential. IBLA has held that VRM classes cannot be enforced if it conflicts with underlying land use or existing oil and gas leases.

- Garfield County's General Management Plan regarding Non-WSA Lands with wilderness character is consistent with either Class III or Class IV, depending on the precise area.

4.4.2 VISUAL RESOURCE / SCENERY MANAGEMENT

Current Setting

Each federal agency has its own system for classifying visual resources and for scenery management. BLM uses a Visual Resource Management system (VRM); Park Services has moved to a Visitor Experience and Resource Protection framework (VERP); and Forest Service has recently adopted a Scenery Classification System (SCS) that categorizes areas from 1 to 7 based on sensitivity. The most restrictive category for each agency - and often the second most restrictive - results in what is equivalent to a Special Designation. Although there may be some common traits, no two agencies are completely consistent with the County's planning efforts or expressed desires. Often, Visual Classification Areas are more restrictive than needed outside National Parks and Designated Wilderness.

Visual resources management is simply a tool to aid the federal land management agencies in quantifying lands in terms of basic terrain, geologic features, water features, vegetative patterns, and land use effects that typify a land unit that influence the visual appeal of the areas and its visitors. It is not, in and of itself, a management decision and is used as a discretionary tool by land managers to aid in the decision making process. The County has considered visual resources within the scope of the County Resource Management Plan.

Need for Management Change

1. There has been increasing effort to use visual resource and scenery management prescriptions as a tool to remove lands from multiple use and sustained yield management. Visual resource and scenery classifications, which restrict use of the land, need to be limited to only those actions required by law and those actions mutually agreed upon by federal, state, and local entities.
2. The least restrictive visual resource and scenery management classification allowed by law needs to be applied to lands in Garfield County.
3. Garfield County needs to develop a scenery management component of the General Management Plan to provide consistency across agency boundaries.
4. Garfield County needs to be provided an opportunity to participate as a cooperating agency in planning actions considering visual resource and scenery management.

Desired Condition

Garfield County desires:

- a) Visual resources and scenery management be conducted in a manner that preserves the natural scenic beauty of Garfield County without prohibiting resource use, development or extraction, and in accordance with Garfield County's Resource Management Plan.
- b) The strictest visual resource management practices be conducted in National Parks.
- c) National Recreation Areas and National Monuments have the minimum restrictions allowed by law regarding visual interpretive opportunities, use and enjoyment on designated lands.
- d) Forest Service and BLM lands be classified with the least restrictive Visual Resource Management Classifications and in accordance with the Garfield County Resource Management Plan.
- e) VRM Class 1 or equivalent and Class 2 or equivalent only be applied specifically to enhance, interpretive opportunities where consistent with the custom and culture of the area and in designated Rec Ia or Rec Ib areas.
- f) Federal agencies adopt Garfield County's Visual Resource Management Classification System for all federal lands in order to provide consistency across agency boundaries and to preserve the County's socioeconomic vitality, custom, and culture.
- g) Federal planning documents include a full range of scenery management alternatives and analysis evaluating direct, indirect, and cumulative impacts on socioeconomic vitality, community viability, custom, and culture.

Policies, Goals, Objectives, and Criteria

Policy: Visual Resource Management is subjective and discretionary management that is not consistent with the County's General Management Plan fails to meet the standards required by FLPMA 202(c).

Policy: It is the policy of Garfield County that any specific action to manage or change visual management or scenery classifications comply with the Garfield County General Management Plan or be approved by the Garfield County Commission.

Action/Implementation:

Before any proposed action is approved, the Garfield County Commission will have a review by its Public Lands Steering Committee, public hearings and/or interagency discussion to identify issues and concerns. The Garfield County Commission will accept, reject or modify the proposal, or modify the General Management Plan as appropriate. Deviations from this process will be considered a violation of local law.

Policy: The County General Management Plan will serve as the governing body of local law concerning the management of visual resources. Before any discretionary action can be taken or approved by federal land managers, it must be shown that the action has been subjected to direct, indirect, and total cumulative impact analysis, have the support of the local Board of County Commissioners, and be consistent with the County Resource Management Plan.

Policy: Establishment of visual resource/scenery management classifications which place restrictions on public lands without considering cumulative impacts associated with Congressional designations and preservation areas (National Parks, National Monuments, National Recreation Areas, and Designated Wilderness) is inconsistent with Garfield County General Management Plan.

Policy: Garfield County supports the least restrictive Visual Resource Classification allowed by law unless otherwise approved by the County General Management Plan or the County Commission.

Policy: Garfield County deems Visual Resource Management scenarios that are more restrictive than the least restrictive allowed by law in conflict and inconsistent with the County General Management Plan unless authorized by the Plan or the County Commission.

Findings

Visual Resource Management is a discretionary tool that is used by the Federal Agencies to inventory and/or classify their lands to aid in making management decisions. The VRM classification is not in and of itself a decision, but an aide or body of information that decision makers can use to guide their decision.

Given the discretionary nature of this management tool, it is the finding of Garfield County that County issues, needs, and concerns be given deference when it comes to future decisions made through federal planning and accompanying environmental documentation. All decisions relating to future actions regarding visual resources in the County will needfully be subject to local bodies of law, ordinances, policies, resource management plans and any other pertinent information. Failure to do will be considered inconsistent with the County's General Plan and a violation of local law.

Garfield County includes parts of the Colorado Plateau and Colorado Plateau/Basin and Range. A broad range of visual settings are the result of the transition of physiographic provinces. Various visual features are scattered throughout the planning area including sand dunes, vast

desert plateaus, and mountain overlooks. Several State Scenic Byways and Backways cross the County, providing views of the vistas, cliffs, and rural settings. Paria Canyon, along the Arizona border, is a designated wilderness area. The proximity of undeveloped landscapes, three national parks, a national monument, a national recreational area (NRA), and two state parks also contributes to the importance of visual resource management (VRM).

The VRM inventory identifies the existing scenic values in the area. The inventory includes an evaluation of scenic quality, analysis of sensitivity, and delineation of distance areas. Based on these three factors lands are placed into one of four VRM inventory classes. The inventory classes represent the relative value of the visual resources. Class I resources are the most sensitive, and Class II resources are somewhat sensitive, Class III resources are moderately sensitive, and Class IV resources are the least sensitive. Garfield County's visual resource management classified lands as follows:

Class I	246,600 Acres
Class II	213,400 Acres
Class III	1,144,800 Acres
Class IV	1,709,300 Acres

Garfield County's visual resource management classifications were developed considering technical, scenic, social, economic, and historic considerations. All lands within the County were considered, and the classification is consistent across agency boundaries. Agencies, which adopt more restrictive classifications, are inconsistent with the General Management Plan and often are inconsistent with their own previous planning documents. Garfield County will consider revised visual resource management scenarios if: a) the alternative is based on objective data, b) all lands in the County are considered, c) detailed cumulative analysis across the entire county is developed, and d) the alternative is consistent with the agency's historic visual resource classifications and with the goals and objectives of the Garfield County General Management Plan.

Any deviation will be subject to prior approval of the Garfield County Board of Commissioners.

4.4.3 NO SURFACE DISTURBANCE

Current Setting

"No Surface Disturbance" is a management action reserved for situations where any surface disturbing activities would be detrimental to higher valued resources. Generally, these situations result from legislative action or withdrawing/removing lands from multiple use - sustained yield activities. The extent of no surface disturbance lands outside wilderness areas is unknown at this time.

Need for Management Change

1. There has been increasing effort to identify lands for no surface disturbance. The technology exists to reclaim and enhance specific resources after surface disturbing activities have taken place. No surface disturbance classifications need to be limited to only those actions required by law and those actions mutually agreed upon by federal, state, and local entities.

2. The least restrictive surface disturbing management classification allowed by law needs to be applied to lands in Garfield County.

3. Garfield County needs to develop a component for surface disturbing activities as part of the General Management Plan to provide consistency across agency boundaries.

4. Garfield County needs to be provided an opportunity to participate as a cooperating agency in planning actions considering surface disturbing activities.

Desired Condition

Garfield County desires that Non-surface Disturbance:

a) Be limited to only those lands where special protection is necessary that have been approved by the Garfield County Commission.

b) Be replaced with opportunities for interpretation, use, and enjoyment consistent with the designation.

c) Be designated only after detailed, direct, indirect, and cumulative analysis considering all other special designations within the County and region.

d) Be used as a last resort when other management options are not available.
Policies, Goals, Objectives, and Criteria

Policies, Goals, Objectives, and Criteria

There has been increasing effort to identify lands for no surface disturbance. The technology exists to reclaim and enhance specific resources after surface disturbing activities have taken place. No surface disturbance classifications need to be limited to only those actions required by law and those actions mutually agreed upon by federal, state, and local entities.

The least restrictive surface disturbing management classification allowed by law needs to be applied to lands in Garfield County.

Goal: Garfield County needs to be provided an opportunity to participate as a cooperating agency in planning actions considering surface disturbing activities.

Policy: Garfield County has developed a component for surface disturbing activities as part of the General Management Plan to provide consistency across agency boundaries. Before any action is taken that will place an area into this no surface occupancy the following criteria shall be followed:

1. A demonstrated need, threat to human health, safety, or welfare of the human environment, or a critical environmental issue that can be managed by no other designation must exist.
2. A demonstrated need must be brought before the Garfield County Board of Commissioners for discussion.
3. Prior to a final agency action the proposal must be brought to the attention of the Public Lands Steering Committee, local community governments, and public hearings must be held so that all aspects, issues and concerns of local citizenry can be discussed.
4. Best management practices must be developed and an environmental document be completed

addressing the total cumulative impacts to the biological environment, social and emotional impacts as well as the economic impacts will be to the local area.

5. When the process is complete, the Board of Commissioners will accept, reject, or suggest modifications of proposal and make a final decision on which action will be in the best interest of the County.

6. That decision will be considered as final local law in Garfield County.

Criteria: Non Surface Disturbance Lands shall:

a) Be limited to only those lands where special protection is necessary that have been approved by the Garfield County Commission.

b) Be replaced with opportunities for interpretation, use, and enjoyment consistent with the designation.

c) Be designated only after detailed, direct, in direct, and cumulative analysis considering all other special designations within the County and region.

d) Be used as a last resort when other management options are not available.

Findings

Absent body of law directing implementation of no surface disturbance management, this tool is discretionary. Given the discretionary nature of this management tool, it is Garfield County's finding that issues, needs, and policies identified by the General Management Plan must be given deference. Management actions that do not comply with Garfield County's General Management Plan are deemed to not be consistent to the maximum extent allowed by law and are a violation of FLPMA.

Any deviation from the general management plan must be approved by the Garfield County Commission

4.4.4 SPECIAL PROTECTIVE ORDERS

Current Setting

Special protective areas are designated when land managers are required to take management action to protect resources / values under unusual or emergency conditions. No lands under special protective orders are identified in Garfield County as of April 2007.

Need for Management Change

1. Special protective orders need to be based on current science, accurate inventories, and multiple use principles.

2. Special protective orders need to be consistent, to the maximum extent allowed by law, with goals, desires and actions identified in the Garfield County General Management Plan.

3. Garfield County needs to be provided the opportunity to participate as a cooperating agency development and implementation of special protective orders to the maximum extent allowed by law.

4. Special protective orders need to be removed as soon as the activity requiring the order is resolved.

Desired Condition

Garfield County desires Special Protection Orders:

- a) Be instituted only in emergency situations with the concurrence Garfield County Commission.
- b) Be based on objective scientific data indicating the protective order will solve the emergency situation.
- c) Be temporary in nature.
- d) Be removed as soon as a emergency situation is resolved or when other management options are developed to resolve problems

Policies, Goals, Objectives, and Criteria Policy: Special Protective Orders will be considered only as a management tool utilized as a last resort.

Policy: It is the policy of Garfield County that Special Protective Orders be utilized, only in areas where there are remarkable values, a demonstrated need for the protection, safety, health, or other human needs, emergency conditions and with the concurrence of the Garfield County Commission.

Criteria: Special Protective Orders shall:

- a) Be instituted only in emergency situations with the concurrence Garfield County Commission.
- b) Be based on objective scientific data indicating the protective order will solve the emergency situation.
- c) Be temporary in nature.
- d) Be removed as soon as a emergency situation is resolved or when other management options are developed to resolve problems

Findings

Garfield County finds that due to their emergency nature, special protective orders are often subjective and speculative. Garfield County and Federal agencies have a common and equal interest in the protection of the land and its resources. Garfield County finds that special protective orders must be developed and implemented based on the most objective, scientific and accurate data, in close cooperation between Federal, State and local officials and consistent to the maximum extent allowed by law with the Garfield County General Management Plan.

4.5 MULTI AGENCY CONCERNS

This section concerns issues that affect multiple agencies and/or are general in nature. Failure to comply with any policy/action identified herein is inconsistent with Garfield County's General Management Plan and, to the extent authorized, a violation of local law.

Desired Condition

Garfield County desires:

- a) Federal and State agencies assume responsibility for impacts to County services created by their agencies, lands, and visitors.
- b) There be consistency across agency boundaries and that interagency jurisdictional disputes be eliminated. Garfield County desires cumulative impacts consider, at a minimum, lands within Garfield County regardless of Agency jurisdiction.
- c) Improved and recognized access to public lands including roads, hiking trails, footpaths, self guided tours, campgrounds, lodges, etc.
- d) Disputes over access routes be resolved.
- e) To maintain the traditional multiple use concept for public lands within the County and to enhance community viability and socioeconomic vitality while preserving the custom, culture, and resources of the area.
- f) All road issues be resolved in terms of ownership, widths, standards and those roads deemed not to be RS2477 rights, should be given Title V right-of-way or other appropriate status.
- g) All lands not classified for some specific purpose within Garfield County should be managed under the principles of commodity production and multiple-use/sustained yield. Priority should be given to commodity production such as, grazing, oil and gas development, habitat manipulation, timber harvesting developed or semi-developed recreation, mining, and all other opportunities needed to sustain a healthy economy in Garfield County.
- h) Solid waste and human waste issues resulting from recreation and other uses on public land be adequately addressed and resolved to the satisfaction of Garfield County. This includes development of facilities to handle such waste as well as reimbursing the County for expenses associated with disposal activities.

Policies, Goals, Objectives, and Criteria Policy: The Garfield County Commission is a duly elected body and represents a legal sub-division of State Government. The County must be a full partner in all laws, ordinances, policies, planning, and needful decisions relating to management of public lands in Garfield County.

Policy: With the increasing influx of visitors to public lands, providing public services has become increasingly burdensome. Federal and State agencies must accept their share of the responsibility in providing critical services. Managers and visitors are jointly responsible for impacts to public services.

Goal: Maintain and enhance the existing custom and culture. Residents of Garfield County enjoy a rural lifestyle characterized by pastoral landscapes, open space, and small town qualities. The total population of the County is approximately 4800 in 2007. Use and development of the

public lands have been intertwined with the County's custom, culture, and socioeconomic base. Access to public lands, freedom to experience natural resources in the least restrictive manner practical and stewardship of the land are vital to the use and enjoyment of current and future generations in Garfield County.

Goal: Maintain and enhance the environment, cultural diversity, clean air, and clean water. Garfield County supports reasonable growth, natural resource enjoyment, use, and development. A healthy environment is a critical component of the custom, culture, and local values

Goal: Maintain and enhance the quantity and quality of public services and facilities. As prescriptive management of public lands has increased negative impacts to County Services have increased and benefits have decreased. Assuming 1.5 million visitors per year to Bryce Canyon National Park, estimates indicate that Park visitors generate approximately 1,500 tons of solid waste per year or about 23 percent of waste received at John's Valley Landfill. However, solid waste fees collected from Bryce Canyon National Park and their concessionaires total only \$12,000.00 for Fiscal year 2006. This represents only about 3% of the operating costs to the County. A similar situation occurs with the Grand Staircase Escalante National Monument. Recent visitation figures have indicated as many as 600,000 visitors annually, but the BLM's (including the Monument's) contribution to revenues for solid waste collection & disposal were only \$1200 in 2006. Public land managers must take responsibility for public services required by their visitors.

Goal: Maintain a usable public land base essential to the health and welfare of Garfield County. Private lands within the County are sparse and disconnected. Maintaining the County's health, welfare, custom, and culture requires the wise use of public land resources.

Policy: Garfield County will classify public lands in the County consistent with federal procedures for Visual Resource/Scenery management, Recreation Opportunity Spectrum analysis, wise stewardship and responsible protection of the health and welfare of the land.

Policy: Garfield County will support management of public lands in accordance with Garfield County's General Management Plan and Land Use Policy.

Objective: Garfield County will actively participate in State and Federal planning processes and will be a Joint Lead or Cooperating Agency in appropriate NEPA processes.

Policy: Garfield County will have an active Public Lands Committee.

Policy: Multiple Use - Lands administered by the Federal Government, unless specifically withdrawn through Congressional mandate for specific purposes, must be managed under the principles of "multiple use and sustained yield." Federal land managers are inconsistent with the definition of "multiple use". Multiple use means, but is not necessarily limited to those items historically and traditionally practiced, both consumptive and non-consumptive, which include grazing, mining, recreation, oil and gas exploration, timber production (to include wood products like fence posts and firewood), wildlife, vegetative management, and water use and development. Garfield County asserts these uses are generally compatible and true "multiple

use” management allows the land and its resources to be used for multiples uses simultaneously or in concert with each other. More than one use can occur at the same time, and many activities are mutually beneficial.

Policy: Wilderness values should not be applied as suitability criteria in determining grazing capacities in designated wilderness or wilderness study areas. Rangeland health standards should be used for grazing allocations.

Policy: County custom, culture, and economic stability depend on agriculture, livestock production, mining, tourism, recreation, the timber industry, the continued use and availability of public lands, and accompanying resources. Federal and State management plans must identify and address the impacts of their proposed management decisions and practices have on traditional resource uses, custom, and culture.

Policy: Sufficient land within County has been designated for primitive recreation and preservation purposes (Parks, Monuments, Recreation Areas, and Wilderness). The County opposes additional lands administered under single use management schemes unless specifically approved by the County Commission.

Policy: Garfield County actively supports public land practices that provide for traditional multiple uses, support the custom and culture of the County, and enhance commodity production consistent with man’s role as steward of the land.

Policy: Public Access - Garfield County supports motorized and non motorized access to public lands. Access to public land has a direct impact on the County’s economic stability, custom, and culture. Open access maintains stability in the County. Garfield County will participate in all relevant Federal and State access decisions, including RS 2477 determinations, Title V issues, closure discussions, and transportation decisions.

Policy: Garfield County has developed a Transportation System that identifies the minimum infrastructure necessary to maintain the custom, culture, and socioeconomic needs of the County. County concurrence must be sought prior to access reduction to prevent negative impacts to the sustainability of local communities.

Policy: Given the importance of public land access, Garfield County asserts roads, paths, ways, and trails constitute valid existing rights if created prior to the passage of FLPMA and/or enabling authority.

Policy: Garfield County declares Federal actions regarding RS 2477 are unjust, illegal, and have placed an unfair burden on Garfield County to protect its rights-of-ways. Garfield County will aggressively protect its right to public access. Agencies who adopt management alternatives that impact the transportation network prior to final determination of jurisdiction, fail to recognize valid existing rights. Restrictions on existing roads, paths, ways, and trails prior to final determinations of jurisdiction is speculative, arbitrary, capricious, and is inconsistent with the Garfield County General Management Plan.

Objective: Garfield County will actively maintain and preserve public land access throughout the County.

Policy: Public Land Recreation and Tourism - Garfield County contains some of the most scenic landscapes in the world. A great diversity of geological and vegetal landscapes exists in Garfield County ranging from desert environments to Alpine and Sub-alpine landscapes. The close proximity of both desert and Forest landscapes provides contrast not found in many areas. Visitors to public lands have a direct bearing on the economic well being of Garfield County and its communities. Visitors also impact County services including search & rescue, emergency medical, solid waste collection and disposal, law enforcement, and fire response.

The County supports increased recreational activity on public lands. However, federal and state agencies must acknowledge, and more aggressively address the impacts associated with their visitors.

Policy: Federal and State land managers are jointly responsible with their visitors to compensate the County for public services. Garfield County concurs with visitor use surveys indicating a vast majority of visitors (80+ %) are involved in some type of motorized recreation and only about 2% of the visitors are primarily interested in primitive recreation. The County adopts the BLM's Final Wilderness EIS finding that primitive recreationists spend approximately \$4.10 per day.

Policy: Environmental Review and Public Land Use and Development - Garfield County enjoys an abundance of natural resources, and beautiful landscapes. Sensible stewardship and responsible development will enhance and preserve the quality of life, which County residents and visitors have come to enjoy while strengthening the custom, culture, and socioeconomic structure.

Responsible environmental review and planning for public lands can be a productive management tool. Responsible stewardship requires that the social and economic environment of local communities most impacted by public land use decisions be included in environmental reviews. Impacts and mitigation measures shall be considered a vital part of responsible land use decisions.

The County supports a responsible environmental review and decision-making process that incorporates cumulative impacts of similar actions across all agency boundaries in the County/region including evaluation of impacts to custom and culture, consistency comparisons between proposed actions and the County Plan, and a detailed socio-economic review.

If such reviews areas not part of the process, the proposal is inconsistent with local law, fails to comply with NEPA and will not be supported by the County.

Policy: Private and Public Land Ratios - Public land acreage currently owned and managed by Federal and State agencies is more than sufficient for the public interest. Approximately 94% of the County is owned, controlled or in some way managed by Federal and State entities. Sufficient acreage exists in the National Parks System, National Monument System, and other

areas of special designation. The County has a “no net loss of private land” and “no expansion of National Parks/Monuments” position relative to Federal-State property exchanges and transfers without the approval of the County Commission. The determination of “no net loss” should consider both acreage and values. The County supports a “net gain of private lands” regarding acreage and value.

The County directs Federal and State agencies involved in private-to-public ownership transactions to identify and make available for private ownership, an equivalent or greater amount and value of public land as a condition of the transaction. These lands, and the accompanying surface and subsurface resources, should be transferred to private ownership without use restrictions or clouded title.

The County also encourages State and Federal agencies to privatize lands suitable for agriculture, roads, material pits, and other required activities. The County will expand efforts to acquire public lands through the Recreation and Public Purposes Act (R&PP) and other programs.

Policy: Recent surveys conducted by the Dixie National Forest regarding visitor activities, indicate that a majority of visitors are involved in motorized recreation and viewing activities. It is recognized by the County that without roads, paths, and ways the public is greatly limited to the land they can see, appreciate, use, and enjoy. It is therefore the policy of Garfield County to place maintenance and improvement of transportation facilities as a higher priority than protecting visual resources adjacent to those facilities. Where existing transportation facilities are present (roads, paths, ways, trails, airstrips, trailheads, parking areas, airports etc.), the area is considered to have enhanced visual characteristics, because the public has an opportunity to view it. Best management practices, which support appropriate visual resource objectives, will be applied on transportation maintenance and improvement projects.

APPENDIX A1.1a

Glossary/Definitions

Affecting - means will or may have an effect on.

Cooperating Agency - means any Federal agency other than a lead agency, which has jurisdiction by law or special expertise with respect to any environmental impact, involved in a proposal (or reasonable alternative) for legislation or other major Federal action significantly affecting the quality of human environment. The selection and responsibilities of a cooperating agency are described in Sec 1501.6. A State or local agency of similar qualifications, or when the effects are on a reservation, an Indian Tribe, may by agreement with the lead agency become a cooperating agency.

Cumulative Impact - is the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Direct effects - are caused by the action and occur at the same time and place.

Documented Field Surveys mean scientifically based field studies, inventories, and/or analysis that is conducted in an objective and accurate manner which has a statistical accuracy of 90% or greater.

Effects - impacts and effects are synonymous.

Highway – Utah State Definition.

Human - Prehistoric, historic, or modern man.

Human environment - is interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effect are interrelated, then the environmental impact statement will discuss all of these effects on the human environment.

Indirect effects - which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Man - Prehistoric, historic, or modern human beings.

Mitigation - means avoiding impacts altogether, minimizing impacts, rectifying impacts, reducing or eliminating impacts, and compensating for impacts.

Outstandingly Remarkable/ Relevant - Important Values - Resources that are rare, unique, exemplary, and merit special protection or concern. Many of these values may be considered under authority of the Wild and Scenic Rivers Act or as part of management actions which consider areas of Critical Environmental Concern (ACECs). In order to provide consistency across agency boundaries and in order to avoid inconsistent, arbitrary, or capricious evaluation criteria, Garfield County has established following outstandingly remarkable/ relevant - important criteria to be applied on all land planning within County boundaries.

Species populations that have been introduced, reintroduced, or transplanted do not qualify for outstandingly remarkable/ relevant - important status unless approved by the Garfield County Commission and such status is made part of the public record introduction, reintroduction, or transplant analysis. Outstandingly remarkable/ relevant - important values are values that merit special protection in addition to those that may be offered under the Endangered Species Act, the Antiquities Act, paleontological protection, organic acts, enabling legislation, or any others statute.

Primeval - of or pertaining to the first or earliest ages.

Primitive - of or pertaining to an early or original state of development.

Region of Comparison is that area comprised of the State of Utah, Colorado Plateau, and the Anasazi dwelling units depicted.

Roads - any roads, paths, ways, or trails shown on maps published by the federal government, working maps created by federal agencies, general land office plats, maps included in official administrative histories report documents, environmental impact statements, plans, and files, inventories, and WSA evaluations.

Roadless - the absence of roads that have been improved and maintained by mechanical means to ensure relative, regular, and continuous use. A way maintained solely by the passage of vehicle does not constitute a road. However, roads constructed as part of timber sale, land treatment, and historical routes whether classified or unclassified/authorized or unauthorized constitute roads and disqualify an area as roadless.

Scope - consists of a range of actions, alternatives and impacts to be considered in an environmental impact statement. One of the criteria is to look at cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in discussed in the same impact statement.

Substantially Unnoticeable - for an item to be substantially unnoticeable an expert passing by the feature would not notice it. It would have to be unnoticeable to an expert passing by or upon examination, the expert would seriously question whether or not the feature actually exists.

Unique - being the only one of its kind; being without equal or equivalent.

Untrammelled by man - free from any prehistoric or historic or modern influence of man including fences,

dwelling, waste/midden piles, excavations, mines, roads, paths, ways, or trails, rock work, artwork, graffiti, petroglyphs, tree carvings, pictographs, vegetative treatments, chainings, seedings, management ignited fire.

APPENDIX A1.1b

Acronyms and Abbreviations

ACEC - Area of Critical Environmental Concern AML - Appropriate Management Level AMP - Allotment Management Plan ANPR - Advance Notice of Proposed Rulemaking APA - Administrative Procedure Act ARPA - Archaeological Resources Protection Act ATV - All Terrain Vehicle AUM - Animal Unit Month BA - Biological Assessment BE - Biological Evaluation BLM - Bureau of Land Management BMP - Best Management Practice BO - Biological Opinion BOR - Bureau of Reclamation CEQ - Council of Environmental Quality CFR - Code of Federal Regulations CWA - Clean Water Act DEIS - Draft Environmental Impact Statement DQA - Data Quality Act EA - Environmental Assessment EIS - Environmental Impact Statement EPA - Environmental Protection Agency ESA - Endangered Species Act FACA - Federal Advisory Committee Act FEIS - Final Environmental Impact Statement FLPMA - Federal Land Policy and Management Act FR - Federal Register FS – Forest Service FWS - U.S. Fish and Wildlife Service FY - Fiscal Year GSENM – Grand Staircase Escalante National Monument IBLA - Interior Board of Land Appeals IM - Instruction Memorandum IMPLAN - Impact Analysis for Planning LUP - Land Use Plan MUAC - Multiple Use Advisory Councils NAAQS - National Ambient Air Quality Standard NASS - National Agricultural Statistics Service NEPA - National Environmental Policy Act NFMA – National Forest Management ACT NFS – National Forest Service	NHPA - National Historic Preservation Act NOI - Notice Of Intent NRA – National Recreation Area NRC - National Research Council NRCS - Natural Resources Conservation Service OHV - Off Highway Vehicle ORV – Off Road Vehicle PLC - Public Lands Council PLF - Public Lands Foundation PLS - Public Land Statistics PRIA - Public Rangelands Improvement Act RAC - Resource Advisory Council REIS - Regional Economic Information System RFA - Regulatory Flexibility Act of 1980 RIP - Range Improvement Permit RMP - Resource Management Plan RNA - Research Natural Area ROD - Record of Decision ROS - Recreation Opportunity Spectrum S&G - Standards and Guidelines SCS - Soil Conservation Service (now the NRCS) SHPO – State Historic Preservation Officer SIP - State Implementation Plan SITLA – State Institutional Trust Lands Adm. SRM - Society of Range Management SRMA - Special Recreation Management Area SWL - Sustaining Working Landscapes T&E - Threatened or Endangered TNC - The Nature Conservancy TR - Technical Reference U.C.A. - Utah Code Annotated U.S.C. - United States Code USDA - United States Department of Agriculture USDI - United States Department of the Interior USFS - U.S. Forest Service USFWS - U.S. Fish and Wildlife Service VRM - Visual Resource Management WSA - Wilderness Study Area WSR - Wild & Scenic River WSRA - Wild & Scenic River Act

APPENDIX A1.1c

PLAN MODIFICATION TRACKING SHEET

Proposed Change _____

Plan Maintenance: Yes No Plan Amendment: Yes No

Public Comment Required: Yes No Completed: Yes No Date _____

Commission Approval Mechanism: _____ Date _____

Document Modification by: _____ Date _____

Attached Documents:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

RESOURCE MANAGEMENT

APPENDIX A2.1 Authorities

Existing Federal, State and Local statutes, laws, ordinances and regulations are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A2.2 Air Quality

Intentionally left blank. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A2.3 Geology, Topography, Climate

Intentionally left blank. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A2.4 Soil Resources

Intentionally left blank. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A2.5 Water Resources

Intentionally left blank. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A2.6 Vegetation

Intentionally left blank. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A2.7 Special Status Species

Intentionally left blank. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A2.8 Fish and Wildlife

Intentionally left blank. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A2.9 Wildland Fire Ecology

Intentionally left blank. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A2.10a

CULTURAL RESOURCE INFORMATION

On October 21, 1976, the Congress of the United States passed Public Law 94-579, known as the Federal Land Policy and Management (FLPMA).

The Act says under Section 102 (a)(8)...”the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, and atmospheric, water resources, and archaeological; that where appropriate, will preserve and protect certain public lands in their natural condition;”. Section 202 (c)(9) concerning planning for these public lands say, “to the extent consistent with the laws governing the administration of the public lands, coordinate the land use inventory, planning and management activities of or for such lands with the land use planning and management programs of other Federal departments and agencies and of the States and local governments.....”.

In 1979, the Archaeological Resources Protection Act was passed as stated, “To protect archaeological resources on public lands and Indian Lands, and for other purposes.”

Section 2 (a) Congress Finds that-

- (1) Archaeological resources on public lands and Indian lands are an assessable and irreplaceable part of the Nation’s heritage.
- (2) These resources are increasingly endangered because of their commercial attractiveness.
- (3) Existing Federal laws do not provide adequate protection to prevent the loss and destruction of the archaeological resources and sites resulting from uncontrolled excavations and pillage; and
- (4) There is a wealth of archaeological information which has been legally obtained by private individual for noncommercial purposes and which could voluntarily be made available to professional archaeologist and institutions.

Section 2(b) The purpose of this Act is to secure, for the present and future benefit of the American people, the

protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals, having collection of archaeological resources and data which were obtained before the date of the enactment of this Act.

DEFINITIONS:

Archaeological Resource - any material remains of past human life or activities that are of archaeological interest. Such determination shall include, but not be limited to pottery, basketry, bottles, weapons, projectiles, tools, structures or portions of structures, pit houses, rock paintings, rock carvings, intaglios, graves, human skeletal materials, or any portions or pieces of any of the foregoing items.

Person - an individual, corporation, partnership, trust, institution, association, or any other private entity or any officer, employee, agent department of instrumentality of the United States, of any Indian tribe, or of any State of political subdivision thereof.

State - any of the fifty States, the District of Columbia, Puerto Rico, Guam and the Virgin Islands.

Public Lands - the lands that are owned and administered by the United States as part of the National Park system, the National Wildlife Refuge system, or the National Forest system, and all other lands the fee title to which is held by the United States, other than lands on the outer continental shelf and the lands which are under the jurisdiction of the Smithsonian Institution.

Excavation and Removal - Any person may apply to the Federal land manager for a permit to excavate or remove any archaeological resource located on public lands or Indian lands and to carry out activities associated with such excavation or removal. The application shall be required under uniform regulations under this, to contain such information as the Federal land manager deems necessary, including information concerning the time, scope, and location and specific purpose of the proposed work.

Custody of Resources - The Secretary of the Interior may promulgate regulations providing for: the exchange, where appropriate, between suitable universities, museums, or other scientific or educational institutions, or archaeological resources removed from public lands and Indian lands pursuant to this Act, and

(2) the ultimate disposition of such resources and other resources removed pursuant to the Act of June 27, 1960 (16U.S.C. 469-469c) or the Act of June 8, 1906 (16 U.S.C. 431-433).

Prohibited Acts - No person may excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless such activity is pursuant to a permit.

No person may sell, purchase, exchange, transport, receive, or offer to sell purchase, or exchange any archaeological resource if such resource was excavated or removed from public lands.

No person may sell, purchase, exchange, transport, receive, or offer to sell, purchase, or exchange, in interstate or foreign commerce, any archaeological resource excavated, removed, sold, purchased, exchanged, transported, or received in violation of any provision, rule, regulation, ordinance, or permit in effect under State or local law.

ADDITIONAL INFORMATION

Additional information and definitions consistent with Federal, State, and local law may be added to this Appendix as Plan maintenance without public comment.

**APPENDIX A2.10b
GARFIELD COUNTY
PROTECTION OF CULTURAL RESOURCE
ORDINANCE 2007-5**

WHEREAS, Garfield County recognizes the value and importance of heritage and culture, including but not limited to, natural history, historical activities, architecture, agricultural industries, archeology, economic enterprises, engineering, cultural resources, sites, and artifacts; and

WHEREAS, Garfield County supports efforts to preserve, develop, interpret, use, and enjoy the history, heritage, culture, and traditional activities in the County; and

WHEREAS, Cultural Resources have monetary, cultural, and intrinsic value; and

WHEREAS, Cultural Resources that are removed from the County result in a loss of monetary, cultural, and intrinsic values; and

WHEREAS, Garfield County desires to have increased interpretive opportunities associated with cultural resources and desires to have a facility within the County where residents and visitors may view, handle, appreciate, use, and enjoy such artifacts; and

WHEREAS, There is not currently such a facility in the County; and

WHEREAS, Garfield County desires to increase educational opportunities associated with cultural resources; and

WHEREAS, There is no set criteria for determining outstandingly remarkable, and important-relevant values associated with cultural resources; and

WHEREAS, Various groups and individuals are increasingly using cultural resources to incorrectly justify restrictions of multiple use activities on the lands in Garfield County; and

WHEREAS, Garfield County is opposed to speculative consideration of cultural resources,

**NOW THEREFORE, IT IS ORDAINED BY THE GARFIELD COUNTY COMMISSION TO
HEREBY ADOPT THE PROTECTION OF CULTURAL RESOURCES AS FOLLOWS:**

PROTECTION OF CULTURAL RESOURCES

An ordinance establishing the uniform definitions, standards, and procedures to be followed by all land managers/persons in providing protection for cultural resources located on lands in Garfield County.

Establishing a Cultural Preservation Commission

To survey and inventory County cultural resources,

To review proposed nominations to the National Register of Historic Places,

To review and designate “Outstandingly Remarkable” and “Relevant - Important” cultural resources,

To review applications for certificates of appropriateness,

To provide advice and information to County officials and other governmental officials and

To support enforcement of federal, state and local cultural preservation laws.

Adopting this Ordinance as part of the County’s General Plan

PROTECTION OF CULTURAL RESOURCES

SECTION 1 - PROTECTION OF CULTURAL RESOURCES

- 1.1 Purpose.
- 1.2 Authority.
- 1.3 Definitions.
- 1.4 Prohibited acts and criminal penalties.
- 1.5 Permit requirements and exceptions.
- 1.6 Application for permits and information collection.
- 1.7 Issuance of permits.
- 1.8 Terms and conditions of permits.
- 1.9 Suspension and revocation of permits.
- 1.10 Appeals relating to permits.
- 1.11 Relationship to section 106 of the National Historic Preservation Act.
- 1.12 Custody of cultural resources.
- 1.13 Determination of resource value and cost of restoration and repair.
- 1.14 Confidentiality of cultural resource information.
- 1.15 Public awareness programs.
- 1.16 Surveys and schedules.
- 1.17 Determination of loss or absence of cultural interest.
- 1.18 Procedural information for securing permits.
- 1.19 Permit reviews and disputes.

SECTION 2 - CULTURAL PRESERVATION COMMISSION, REGISTER OF CULTURAL RESOURCES, REGISTER OF CULTURAL LANDMARKS, REGISTER OF OUTSTANDINGLY REMARKABLE / RELEVANT - IMPORTANT CULTURAL RESOURCES, REGISTER OF OUTSTANDINGLY REMARKABLE / RELEVANT - IMPORTANT SCENIC CULTURAL RESOURCES

- 2.1 Purpose.
- 2.2 Authority.
- 2.3 Cultural Preservation Commission.
- 2.4 Cultural Preservation Commission Duties.
- 2.5 Cultural Preservation Officer.
- 2.6 Cultural Preservation Officer Duties.
- 2.7 Garfield County Register of Cultural Resources.
- 2.8 Designation Procedures.
- 2.9 Garfield County Cultural Landmark Register.
- 2.10 Designation Procedures.
- 2.11 Standards for Rehabilitation and Design Guidelines.
- 2.13 Designation Procedures.
- 2.14 Scenery
- 2.15 Severability.
- 2.16 Repealer.
- 2.17 Effective Date.

SECTION 1 PROTECTION OF CULTURAL RESOURCES

1.1 PURPOSE

(a) This ordinance implements provisions of the Archaeological Resources Protection Act of 1979, as amended (16 U.S.C. 470aa-mm) by establishing the uniform definitions, standards, and procedures to be followed by all land managers/persons in providing protection for cultural resources located on lands in Garfield County. These regulations enable land managers and local officials to protect cultural resources, taking into consideration State and Federal statutes, through permits authorizing excavation and/or removal of cultural resources, through penalties for unauthorized excavation and/or removal, through provisions for the preservation of cultural resource collections and data, and through provisions for sharing of information about specific resources when disclosure would create a benefit to the resource.

(b) The ordinance does not impose any new restrictions on activities permitted under other laws, authorities, and regulations relating to mining, mineral leasing, reclamation, and other multiple uses of the public lands.

(c) The ordinance establishes a Garfield County register of cultural resources and establishes procedures for their use.

(d) The ordinance establishes criteria for designating cultural resources as *Outstandingly Remarkable or Important - Relevant* in connection with federal land management processes and special designation evaluations.

1.2 AUTHORITY

(a) This ordinance is compatible with existing law which requires that the Federal land managers jointly develop uniform rules and regulations for carrying out the purposes of Federal protection acts.

(b) Federal law provides that each Federal land manager shall promulgate such rules and regulations, consistent with the uniform rules and regulations as may be necessary for carrying out the purposes of Federal preservation acts.

(c) In addition to federal regulations, the Utah State Legislature has recognized the value and interest of cultural resources to the public. Utah Code Annotated 17A-3-13 authorizes Counties to:

- (1) Preserve, protect and enhance cultural sites and areas;
- (2) Insure proper development and utilization of lands adjacent to cultural sites and areas.

(d) U.C.A. 17-50-316 authorizes County Commissions to implement necessary laws and ordinances for the protection of the public health and welfare within their jurisdiction including the development of historic, cultural and other resources.

1.3 DEFINITIONS

As used for purposes of this ordinance:

(a) Archaeological Resource means any material remains of human life or activities, which are at least 100 years of age, and which are of archaeological interest.

(1) Of archaeological interest means capable of providing scientific or humanistic understandings of past human behavior, cultural adaptation, and related topics through the application of scientific or scholarly techniques such as controlled observation, contextual measurement, controlled collection, analysis,

interpretation and explanation.

(2) Material remains means physical evidence of human habitation, occupation, use, or activity, including the site, location, or context in which such evidence is situated.

(3) The following classes of material remains (and illustrative examples), if they are at least 100 years of age, are of archaeological interest and shall be considered archaeological resources unless determined otherwise pursuant to paragraph (a)(4) or (a)(5) of this section:

- (i) Surface or subsurface structures, shelters, facilities, or features (including, but not limited to, domestic structures, storage structures, cooking structures, ceremonial structures, artificial mounds, earthworks, fortifications, canals, reservoirs, horticultural/ agricultural gardens or fields, bedrock mortars or grinding surfaces, rock alignments, cairns, trails, borrow pits, cooking pits, refuse pits, burial pits or graves, hearths, kilns, post molds, wall trenches, middens);
- (ii) Surface or subsurface artifact concentrations or scatters;
- (iii) Whole or fragmentary tools, implements, containers, weapons and weapon projectiles, clothing, and ornaments (including, but not limited to, pottery and other ceramics, cordage, basketry and other weaving, bottles and other glassware, bone, ivory, shell, metal, wood, hide, feathers, pigments, and flaked, ground, or pecked stone);
- (iv) By-products, waste products, or debris resulting from manufacture or use of human-made or natural materials;
- (v) Organic waste (including, but not limited to, vegetable and animal remains, coprolites);
- (vi) Human remains (including, but not limited to, bone, teeth, mummified flesh, burials, cremations);
- (vii) Rock carvings, rock paintings, intaglios and other works of artistic or symbolic representation;
- (viii) Rock shelters and caves or portions thereof containing any of the above material remains;
- (ix) Any portion or piece of any of the foregoing.

(4) The following material remains shall not be considered of archaeological interest, and shall not be considered to be archaeological resources for purposes of the Act and this part, unless found in a direct physical relationship with archaeological resources as defined in this section:

- (i) Paleontological remains;
- (ii) Coins, bullets, and unworked minerals and rocks.

(5) The Commission may determine that certain material remains, in specified areas of Garfield County, and under specified circumstances, are not or are no longer of cultural interest and are not to be considered cultural resources under this ordinance. Any determination made pursuant to this subparagraph shall be documented. Such determination shall in no way affect the land manager's/person's obligations under other applicable laws or regulations.

(b) Arrowhead means any projectile point, which appears to have been designed for use with an arrow.

(c) Cultural Resource includes, but is not limited to, any object, building, structure, site, area, place, activity, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural development of Garfield County.

(d) Land Manager means:

- (1) With respect to any public lands, the secretary of the department, or the head of any other

agency or instrumentality of the United States, having primary management authority over such lands, including persons to whom such management authority has been officially delegated;

(2) In the case of Indian lands, or any public lands with respect to which no department, agency or instrumentality has primary management authority, such term means the Secretary of the Interior;

(3) The Secretary of the Interior, when the head of any other agency or instrumentality has, pursuant to section 3(2) of the Act and with the consent of the Secretary of the Interior, delegated to the Secretary of the Interior the responsibilities (in whole or in part) in this ordinance.

(e) Outstandingly Remarkable / Relevant-Important means: rare, unique or regionally exemplary. Federal regulation is largely silent on definitions for outstandingly remarkable/relevant- important values. Minimum standards apply for cultural resources in Garfield County as described in specific sections of this ordinance.

(f) Public Land means:

(1) Lands that are owned and administered by the United States as part of the National Park system, the National Wildlife Refuge system, or the National Forest system; and

(2) All other lands the fee title to which is held by the United States, except Indian lands.

(g) Indian Land means lands of Indian tribes, or Indian individuals, which are either held in trust by the United States or subject to a restriction against alienation imposed by the United States, except for subsurface interests not owned or controlled by an Indian tribe or Indian individual.

(h) Indian Tribe as defined in the Act means:

(1) Any Indian tribe, band, nation, other organized group, or community which is included in the annual list of recognized tribes published in the Federal Register by the Secretary of the Interior pursuant to 25 CFR part 54;

(2) Any other tribal entity acknowledged by the Secretary of the Interior pursuant to 25 CFR part 54 since the most recent publication of the annual list;

(i) Person means an individual, corporation, partnership, trust, institution, association, or any other private entity, or any officer, employee, agent, department, or instrumentality of the United States, or of any Indian tribe, or of any State or political subdivision thereof.

(j) Region of Comparison means geographical areas comprised of the State of Utah, the Colorado Plateau, the Four Corners Area, and the traditional lands of the Anasazi, Paiute, and Navajo tribes.

(k) Site Of Religious Or Cultural Importance means a location that has traditionally been considered important because of a religious event which happened there; because it contains specific natural products which are of religious or cultural importance; because it is believed to be the dwelling place of, the embodiment of, or a place conducive to communication with spiritual beings; because it contains elements of life-cycle rituals, such as burials and associated materials; or because it has other specific

and continuing significance in Garfield County religion or culture.

1.4 PROHIBITED ACTS AND CRIMINAL PENALTIES

(a) No person may excavate, remove, damage, or otherwise alter or deface, or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless such activity is pursuant to a permit issued by Garfield County or exempted by Sec. 1.5(b) of this Ordinance.

(b) No person may sell, purchase, exchange, transport, or receive any archaeological resource, if such resource was excavated or removed in violation of:

(1) The prohibitions contained in paragraph (a) of this section; or

(2) Any provision, rule, regulation, ordinance, or permit in effect under any other provision of Federal, State or Local law.

(c) No person may destroy, eliminate, diminish, or remove any cultural resource listed on the Garfield County register of Cultural Resources:

(1) In violation of any rule, regulation, ordinance, or permit in effect under any other provision of Federal, State or Local law; or

(2) Without Approval of Garfield County.

(d) A person is guilty of a class B misdemeanor if that person:

(1) Violates this part of the ordinance: or

(2) Counsels, solicit, or employ any other person to violate this part.

1.5 PERMIT REQUIREMENTS AND EXCEPTIONS

(a) Any person proposing to excavate and/or remove archaeological resources from lands in Garfield County, and to carry out activities associated with such excavation and/or removal, or proposing to destroy, eliminate, diminish, or remove any cultural resource listed on the Garfield County register of Cultural Resources shall apply to the Garfield County for a permit for the proposed work, and shall not begin the proposed work until a permit has been issued. Garfield County may issue a permit to any qualified person, subject to appropriate terms and conditions, provided that the person applying for a permit meets conditions in Sec. 1.8 (a) of this part.

(b) Exceptions:

(1) No permit shall be required under this part for any person conducting activities on Garfield County lands under other permits, leases, licenses, or entitlements for use, when those activities are exclusively for purposes other than the excavation and/or removal of archaeological resources, even though those activities might incidentally result in the disturbance of archaeological resources. General earth-moving, excavation, road work, mining, drilling conducted under a permit or other authorization shall not be construed to mean excavation and/or removal as used in this part. This exception does not, however, affect the person's responsibility to comply with other authorities which protect archaeological resources.

(2) No permit shall be required under this part for any person collecting for private purposes any rock, coin, bullet, or mineral which is not an archaeological resource, provided that such collecting does not result in disturbance of any archaeological resource.

(c) Persons carrying out official agency duties under a Federal/State land manager's direction, associated with the management of archaeological resources, need not follow the permit application procedures if the Federal/State Land Manager has obtained a permit for such activities for resources within his/her jurisdiction. However, the Federal/State land manager shall insure that permit provisions are met if activities affect any cultural resource listed on the Garfield County Register of Cultural Resources.

1.6 APPLICATION FOR PERMITS AND INFORMATION COLLECTION

(a) Any person may apply to Garfield County for a permit to excavate and/or remove archaeological resources from or to impact cultural resources in Garfield County and to carry out activities associated with actions.

(b) Each application for a permit shall include:

(1) The nature and extent of the work proposed, including how and why it is being conducted, proposed time of performance, location maps, and proposed outlet for public written dissemination of the results.

(2) The name and address of the individual(s) proposed to be responsible for conducting the work and carrying out the terms and conditions of the permit, institutional affiliation, if any, and evidence of education, training, and experience in accord with the minimal qualifications listed in Sec. 1.8(a).

(3) Evidence of the applicant's ability to initiate, conduct, and complete the proposed work, including other permits issued for the work, evidence of logistical support and laboratory facilities.

(4) Where the application is for the excavation and/or removal of archaeological resources from Garfield County:

(A) The name of the institution in which the applicant proposes to store all items derived from the proposed work.

(B) Reasons, if any, why the items cannot remain in Garfield County for the use, benefit and enjoyment of the County's residents and visitors.

(C) Proposed plans for returning the items for the use, benefit and enjoyment of the County's residents and visitors.

(5) Where the application is for the destruction, elimination, diminishment, or removal of any cultural resource listed on the Garfield County register of Cultural Resources:

(A) The scientific information justifying the action.

(B) Resources allocated for in kind replacement and/or equal compensation for loss of the resource.

(C) Alternatives available for completing the action without impacting the resource.

(D) How the action complies with Garfield County's no net loss of cultural resources policy.

(6) Where the proposed activity (including management actions) positively or negatively impacts an Outstandingly Remarkable or Relevant-Important feature:

(A) Evidence the feature is listed as Outstandingly Remarkable or Relevant-Important on the Garfield County register of Cultural Resources;

(B) Proposed impacts to the feature, including improved opportunities for public benefit, use and enjoyment;

(C) Alternatives to the proposed action and comparative benefits and detriments to the resource, including opportunities for public benefit, use and enjoyment;

(c) Garfield County may require additional information, pertinent to cultural resource protection responsibilities, to be included in the application for permit and shall so inform the applicant.

1.7 ISSUANCE OF PERMITS

(a) Garfield County may issue a permit, for a specified period of time appropriate to the work to be conducted, upon determining that:

(1) The applicant is appropriately qualified, as evidenced by training, education, and/or experience, and possesses demonstrable competence in relative to the type and scope of the work;

(2) The proposed work furthers Garfield County's policies regarding cultural resources and is in the public interest;

(3) The proposed work, including time, scope, location, and purpose, is not inconsistent with the County's General Management Plan or if inconsistent no other reasonable alternative exists and adequate replacement/compensation for lost cultural resources is being provided;

(4) The proponent understands and is willing to comply with all Federal, State, and Local laws pertaining to cultural resources;

(5) Every reasonable effort has been made to improve the opportunity for benefit, use and enjoyment of cultural resources for Garfield County's residents and visitors.

(b) When the area of the proposed work would cross jurisdictional boundaries, so that permit applications must be submitted to more than one Federal land manager, the Federal land managers shall coordinate permitting requirements with the County.

1.8 TERMS AND CONDITIONS OF PERMITS

(a) In all permits issued, Garfield County may specify:

(1) The nature and extent of work;

(2) The name of responsible individual(s);

(3) The location in which any collected materials and data shall be deposited; and

(4) Public education, interpretive and/or reporting requirements.

(b) The County may specify such terms and conditions as deemed necessary to protect public safety and other values and/or resources, to secure work areas, to safeguard other legitimate land uses, and to limit activities incidental to work authorized under a permit.

(c) Initiation of work or other activities under the authority of a permit signifies the permittee's acceptance of the terms and conditions of the permit.

1.9 SUSPENSIONS AND REVOCATION OF PERMITS

(a) Suspension or revocation for cause.

(1) Garfield County may suspend a permit issued pursuant ordinance upon determining that the permittee has failed to meet any of the terms and conditions of the permit or has violated Federal, State, or Local law. The County shall provide written notice to the permittee of the suspension, the cause thereof, and the requirements which must be met before the suspension will be removed.

(2) The County may revoke a permit upon the permittee's conviction under laws protecting cultural resources, or upon determining that the permittee has failed after notice under this section to correct the situation which led to suspension of the permit.

(b) Suspension or revocation for management purposes. Garfield County may suspend or revoke a permit, without liability to the County, its agents, or employees, when continuation of work under the permit would be in conflict with County Management Plan requirements not in effect when the permit was issued. The County shall provide written notice to the permittee stating the nature of and basis for the suspension or revocation.

1.10 APPEALS RELATING TO PERMITS

Any affected person may appeal permit issuance, denial of permit issuance, suspension, revocation, and terms and conditions of a permit before the County Commission, or through procedures which may be established pursuant to this ordinance.

1.11 RELATIONSHIP TO SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

Issuance of a permit in accordance with this ordinance does not constitute an undertaking requiring compliance with section 106 of the Act of October 15, 1966 (16 U.S.C. 470f). However, the mere issuance of such a permit does not excuse the permittee from compliance with section 106 where otherwise required.

1.12 CUSTODY OF ARCHAEOLOGICAL RESOURCES

(a) Archaeological resources excavated or removed from the public lands remain the property of legal authority.

(b) Until such time as Garfield County promulgates requirements for ultimate disposition of its cultural resources, permittees are encouraged to utilize viable facilities located in the County.

(c) The County may provide for the exchange of resources with other entities.

1.13 DETERMINATION OF RESOURCE VALUE AND COST OF RESTORATION AND REPAIR

(a) Resource value. The resource value of any cultural resource shall be determined in accordance with 43 CFR Part 7.14(a).

(b) Commercial value. The commercial value of any cultural resource shall be determined in accordance with 43 CFR Part 7.14(b).

(c) Cost of restoration and repair. The cost of restoration and repair of any cultural resource damaged as a result of a violation of this ordinance shall be determined in accordance with 43 CFR Part 7.14(c).

1.14 CONFIDENTIALITY OF ARCHAEOLOGICAL RESOURCE INFORMATION

(a) Federal law prohibits land managers from making certain information available to the public for specific cultural resources. Land managers and permittees may mask nature and location information only to the extent that it complies with law for protected resources. Garfield County shall not make available to the public any information protected by law. The following information shall be provided by land managers and permittees:

- (1) General descriptions of the resource and its significance;
- (2) Resource/ site dimensions and graphical representations of the area on which resources are located;
- (3) Information justifying Outstandingly Remarkable / Relevant Important values;
- (4) Any other information necessary for the County to administer this ordinance.

(b) Land managers considering portions of Garfield County for special designation status (Areas of Critical Environmental Concern, Wild and Scenic Rivers, Conservation Areas, Monuments, Parks, etc.) based on cultural resource values shall document compliance with criteria for Outstandingly Remarkable/Relevant-Important values as defined by County plans and ordinances.

1.15 PUBLIC AWARENESS PROGRAMS

(a) Each permittee or land manager impacting cultural resources will establish programs to:

- (1) Increase public awareness of the need to protect important cultural resources; and
- (2) Advance the benefit, use and enjoyment of cultural resources in Garfield County.

(b) Each permittee or land manager impacting cultural resources should incorporate into current actions public education and interpretation programs where appropriate.

1.16 SURVEYS AND SCHEDULES

(a) Federal land managers are required to develop plans and schedules for surveying specific cultural resources that are likely to contain the most scientifically valuable resources. Garfield County has established survey priorities as follows:

- (1) Level II or Level III surveys, as appropriate, for resources impacted by current, proposed or imminent projects;
- (2) Level III surveys for resources considered Outstandingly Remarkable / Relevant-Important;
- (3) Level I, Level II, or Level III surveys for other resources.

(b) Failure to plan, schedule and conduct surveys in accordance with the priorities in Section 1.16(a) without written County approval is:

- (1) A violation of the ordinance; and

(2) Inconsistent with the County Management Plan.

1.17 DETERMINATION OF LOSS OR ABSENCE OF CULTURAL INTEREST

(a) Under certain circumstances, Garfield County may determine, pursuant to Sec. 1.3(a)(5) of this part, that certain material remains are not or are no longer of cultural interest, and therefore are not to be considered cultural resources under this part.

(b) Garfield County may make such a determination if the County finds that the material remains are not capable of providing scientific or humanistic understandings of past human behavior, cultural adaptation, and related topics.

(c) Prior to making a determination that material remains are not or are no longer archaeological resources, Garfield County may complete some or all of the following procedures:

(1) A professional evaluation of material remains and similar materials within the area under consideration will be completed.

(2) The State Historic Preservation Officer will be requested to recommend whether the material remains under consideration contribute to scientific or humanistic understandings of past human behavior, cultural adaptation and related topics.

(d) The County will make the determination based upon established facts and recommendations of knowledgeable individuals and will document the basis.

(e) The County will make public record of the determination and any permitting requirements for activities associated with the materials determined not to be cultural resources.

(f) Any determination made pursuant to this section shall in no way affect any person's obligations under other applicable laws or regulations.

1.18 PROCEDURAL INFORMATION FOR SECURING PERMITS

Information about procedures to secure a permit to impact cultural resources can be obtained from Garfield County

1.19 PERMIT REVIEWS AND DISPUTES

(a) Any affected person disputing Garfield County's decision with respect to the issuance or denial of a permit, the inclusion of specific terms and conditions in a permit, or the modification, suspension, or revocation of a permit may request the County Commission review the disputed decision and may request a meeting to discuss the decision and its basis.

(b) Any affected person may request a review by the State Historic Preservation Officer of any professional issues involved in a County permitting decision. The State Historic Preservation Officer may make a recommendation to Garfield County. Garfield County will consider the recommendation, but may reject it, in whole or in part, for good cause. This request should be in writing, and should state the reasons for the request.

SECTION 2 CULTURAL PRESERVATION COMMISSION, REGISTER OF CULTURAL RESOURCES, REGISTER OF CULTURAL LANDMARKS, REGISTER OF OUTSTANDINGLY REMARKABLE / RELEVANT - IMPORTANT CULTURAL RESOURCES, REGISTER OF OUTSTANDINGLY REMARKABLE / RELEVANT - IMPORTANT SCENIC CULTURAL RESOURCES

2.1 PURPOSE

Garfield County recognizes that the cultural heritage of the County is among its most valued and important assets. It is therefore the intent of Garfield County to identify, preserve, protect, develop, and enhance cultural resources located within the limits of Garfield County.

2.2 AUTHORITY

Utah Code Annotated 17A-3-13 authorizes Counties to:

- (1) Preserve, protect and enhance cultural sites and areas;
- (2) Insure proper development and utilization of lands adjacent to cultural sites and areas.

2.3 CULTURAL PRESERVATION COMMISSION

A Cultural Preservation Commission is hereby established by Garfield County with the following provisions:

- (1) The Commission shall consist of a minimum of five members with a demonstrated interest, competence, or knowledge in cultural preservation, appointed by the County for terms of not less than two years.
- (2) To the extent available in the County, two Commission members may be professionals, as defined by National Park Service regulations, from the disciplines of history, archeology, planning, architecture, engineering or architectural history.
- (3) The Commission shall meet at least twice each year and conduct business in accordance with the Open Public Meeting laws of Utah. This includes public notification of meeting place, time and agenda items.
- (4) Written minutes of each Commission meeting shall be prepared and made available for public inspection.
- (5) Until such time as the County Commission identifies qualified individuals for the Cultural Preservation Commission, the Garfield County Planning Commission shall be authorized to fill the duties.

2.4 CULTURAL PRESERVATION COMMISSION DUTIES

The Cultural Preservation Commission shall have the following duties:

- (1) The Cultural Preservation Commission shall conduct or cause to be conducted a survey of the cultural resources within the County. The survey shall be, at a minimum, compatible with the Utah Inventory of Historic and Archaeological Sites. Survey and inventory documents shall be maintained and shall be open to the public. The survey shall be updated at least every ten years.

(2) The Cultural Preservation Commission shall review and make recommendations to the County Commission for comment to the State Historic Preservation Officer on all proposed National Register nominations for resources within the boundaries of Garfield County. When the Cultural Preservation Commission considers a National Register nomination, which is normally evaluated by professionals in a specific discipline and that discipline is not represented on the Commission, the Commission shall seek expertise in that area before forwarding its recommendation to the County Commission.

(3) The Cultural Preservation Commission shall review and make recommendations to the County Commission for designation of "Outstandingly Remarkable" and "Relevant - Important" cultural resources within the boundaries of Garfield County. Review and recommendation of "Outstandingly Remarkable" and "Relevant - Important" cultural resources shall comply with the standards for "Outstandingly Remarkable" and "Relevant – Important" cultural resources contained in this ordinance.

(4) The Cultural Preservation Commission shall review and make recommendations to the County Commission on all proposed Garfield County Register of Cultural Resources nominations for resources within the boundaries of Garfield County.

(5) The Cultural Preservation Commission shall provide advice and information by:

(A) Acting in an advisory role to other officials and departments of government regarding the identification and designation of local cultural resources.

(B) Working toward expanding the benefit, use and enjoyment of local cultural resources by the residents and visitors of Garfield County.

(6) The Cultural Preservation Commission shall support the enforcement of federal, state and local laws relating to cultural preservation, including but not limited to:

(A) U.C.A. 17A-3-13, "The Historic District Act;"

(B) U.C.A. 9-8-3, regarding the protection of Utah antiquities;

(C) U.C.A. 9-8-4, regarding notification of the State Historic Preservation Office of any known proposed action which will destroy or affect a site, building or object owned by the State of Utah and included on or eligible for the State or National Registers; and

(D) This ordinance.

2.5 CULTURAL PRESERVATION OFFICER

The County Planner assisted by the County Engineer is hereby designated as the Garfield County Cultural Preservation Officer.

2.6 CULTURAL PRESERVATION OFFICER DUTIES

The Cultural Preservation Officer shall have the following duties:

(1) Serve as the point of contact for governmental entities, citizens and individuals interested in cultural resources of the County.

(2) Serve in an advisory capacity to the Cultural Preservation Commission.

(3) Maintain the Garfield County Register of Cultural Resources, Cultural Landmark Register, and the Register of Outstandingly Remarkable / Relevant - Important Cultural Resources including such classifications and designations as may be approved by the County Commission.

2.7 GARFIELD COUNTY REGISTER OF CULTURAL RESOURCES

(a) The Cultural Preservation Commission may recommend to the County Commission cultural resources for designation on the Garfield County Register of Cultural Resources. Upon review, the County Commission may designate cultural resources for inclusion on the Garfield County Register of Cultural Resources as a means of classifying, recognizing, preserving, protecting, enhancing, or increasing benefit, use and enjoyment of cultural resources in the County.

(b) Any activity, business, district, building, structure, object, resource, scenery, or site may be designated to the Register of Cultural Resources if it meets all of the following criteria:

(1) It is located within the official boundaries of the County.

(2) It is at least 50 years old.

(3) It retains its historic integrity, in that there are no major alterations or additions that have obscured or destroyed the significant cultural features.

(c) Major alterations that would destroy cultural integrity include, but are not limited to:

(1) Changes in the main appearance;

(2) Enlargement or reduction of principal features;

(3) Additions to or removal of original features;

(4) Covering the resource with non-historic materials;

(5) Moving the resource from its original location to one that is dissimilar to the original;

(6) Additions that significantly detract from or obscure the original form or appearance.

(d) If the resource does not meet the integrity requirements outlined above, it may qualify for designation if it meets one of the following requirements:

(1) It is directly associated with events of historic importance in the County.

(2) It is closely associated with the lives of persons who were of historic importance to the County.

(3) It exhibits significant methods of construction or materials that were used within the historic period.

(4) It has been documented according to the Utah State Historic Preservation Office standards for intensive level surveys and copies of that documentation have been placed in the public record.

2.8 DESIGNATION PROCEDURES

(a) Any person, group, or government agency may nominate a resource under its ownership or jurisdiction for listing in the Garfield County Register of Cultural Resources. The nomination and listing procedures are as follows:

(1) Completed intensive level survey documentation for each nominated property must be submitted to

the Cultural Preservation Commission.

(2) The Cultural Preservation Commission will review and consider properly submitted nominations at its next scheduled meeting. The Cultural Preservation Commission will notify the nominating party prior to the meeting that the nomination will be considered and will place that item on the agenda posted for the meeting.

(3) The Cultural Preservation Commission will review the documentation for completeness, accuracy and compliance with the criteria listed in section 2.9 and will make recommendation to the County Commission accordingly.

(4) The County Commission will review the recommendation of the Cultural Preservation Commission and any other pertinent information at a regularly scheduled Commission meeting and will make a decision accordingly.

(5) No resource shall be included on the Garfield County Register of Cultural Resources if the property owner or manager with jurisdiction over the resource is not in favor of the designation.

(b) Designation of a resource to the Garfield County Register of Cultural Resources results in the following:

(1) Owners of designated cultural resources may display information recognizing the resource and containing the historic name of the property, the date of designation, and the appropriate designation.

(2) If a designated cultural resource is to be impacted or extensively altered, efforts will be made to document its physical appearance before that action takes place.

(A) Any demolition / impact permit may be delayed for a maximum of thirty (30) days to allow for the documentation.

(B) Documentation may include photographs, exterior / interior measurements, drawings, histories, video documentation, and any other information that may be valuable or required.

(C) The demolition/impact permit will be issued after thirty (30) days of the initial application whether or not the documentation has been completed. Permits may be issued earlier if the documentation is complete or part of the permitted work.

(D) Documentation will be kept in the public record or forwarded to the State Historic Preservation Office.

(c) Properties that, in the opinion of the Garfield County Commission, no longer meet the criteria for eligibility may be removed from the Garfield County Register of Cultural Resources after review and consideration.

2.9 GARFIELD COUNTY CULTURAL LANDMARK REGISTER

(a) Notable cultural resources may be designated to the Cultural Landmark Register for the purposes of recognizing their value and providing incentives and guidelines for their preservation.

(b) Any activity, business, district, building, structure, object, resource, scenery, or site may be designated to the Cultural Landmark Register if it meets the following criteria:

(1) It is located within the official boundaries of the County.

(2) It is currently listed in the National Register of Historic Places, and a copy of the approved National Register form has been placed in the public record.

(3) A property not yet listed in the National Register must:

(A) Retain its historic integrity; and

(B) Meet at least one of the following National Register criteria:

(i) Be associated with events that have made a notable contribution to the broad patterns of our history; or

(ii) Be associated with the lives of persons notable in our past; or

(iii) Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a notable and distinguishable entity whose components may lack individual distinction; or

(iv) Have yielded, or be likely to yield, information important in prehistory or history.

(4) It has been documented according to the Utah State Historic Preservation Office standards for intensive level surveys or National Register standards, and a copy of that documentation has been placed in the public record.

(5) No resource shall be included on the Garfield County Cultural Landmark Register unless owner / manager approval is obtained as follows:

(A) The owner of a private resource must approve the action to designate the resource on the Garfield County Cultural Landmark Register.

(B) 70 percent of the resource owners in a proposed district must be in favor of the designation. Written objections from at least 30 percent of the resource owners will constitute lack of approval.

(C) Public land managers must concur for public resources within their jurisdiction to be included on the Garfield County Cultural Landmark Register. Failure to concur with such designation constitutes a determination of lack of significance on behalf of the agency.

2.10 DESIGNATION PROCEDURES

(a) Any person, group, or government agency may nominate a resource under its ownership or jurisdiction for listing in the Garfield County Cultural Landmark Register. The nomination and listing procedures are as follows:

(1) Completed intensive level survey documentation for each nominated property must be submitted to the Cultural Preservation Commission.

(2) The Cultural Preservation Commission will review and consider properly submitted nominations at its next scheduled meeting. The Cultural Preservation Commission will notify the nominating party prior to the meeting that the nomination will be considered and will place that item on the agenda posted for the meeting.

(3) The Cultural Preservation Commission will review the documentation for completeness, accuracy and compliance with the criteria listed in section 2.12 and will make recommendation to the County Commission accordingly.

(4) The County Commission will review the recommendation of the Cultural Preservation Commission and any other pertinent information at a regularly scheduled Commission meeting and will make a

decision accordingly.

(5) No resource shall be included on the Garfield County Cultural Landmark Register if the property owner or manager with jurisdiction over the resource is not in favor of the designation.

(b) Following designation by the County Commission, a notice of such shall be mailed to the owners of record together with a copy of this ordinance. In the case of landmark district designation, notice of such may be placed in the local newspaper or in a public building rather than mailed to each owner of a resource in the district. The County Commission shall record the Cultural Landmark Register designation for each resource with the County Recorder's Office.

(c) Designation of a resource to the Garfield County Register of Cultural Resources results in the following:

(1) Resources designated on the Cultural Landmark Register may receive special consideration in the granting of variances or conditional use permits in order to encourage development for the benefit, use and enjoyment by the public.

(2) In the event of rehabilitation of the property, local building officials may consider waiving certain code requirements in accordance with Chapter 34 of the Uniform Building Code and with the Uniform Code for Building Conservation.

(3) Owners of Cultural Landmarks may seek assistance from the Cultural Preservation Commission in applying for grants or tax credits for rehabilitating or developing their resources for the benefit, use and enjoyment by the public.

(4) Proposed work or management changes on resources designated as Cultural Landmarks is subject to the review and approval of the County. The purpose of this review is to ensure the preservation, development and enhancement of cultural properties to the greatest degree possible. This review applies to individually designated landmark resources, resources located in designated landmark districts, and public resources. This review applies only to exterior work which requires a building, sign, or demolition permit and to management actions that affect public resources and lands adjacent thereto.

(A) Applications for building, demolition, or sign permits shall be recommended by the Building Inspection Department to the Cultural Preservation Commission prior to their issuance/denial.

(B) At its next scheduled meeting, the Cultural Preservation Commission shall review the application and proposed work for compliance with design guidelines adopted by the County Commission.

(i) Applicants whose proposed projects comply with the provisions of this ordinance shall be issued the appropriate permit.

(ii) Applicants whose proposed projects are found to be in non-compliance with this ordinance shall be offered a negotiating period of sixty (60) days, during which time the Commission and applicant shall explore all options for an acceptable solution. These may include the feasibility of modifying the plans, using the cultural landmark for alternative purposes, or reselling the property to another party. The Cultural Preservation Commission may extend the negotiating period for additional sixty (60) day periods for the purposes described above if deemed necessary to accommodate a potential solution.

(iii) If no solution has been agreed upon at the conclusion of either the initial sixty-day (60) period or an extended period the Building Official will not issue any permits.

(C) Applicants for work or changes in management actions that affect public resources listed on the

Cultural Landmark Register shall apply directly to the County Commission for consideration.

(5) The Cultural Preservation Commission may approve a permit for Rehabilitation or Demolition of a landmark property if the owner has presented substantial evidence demonstrating that unreasonable economic hardship will result from denial of the request.

(A) In order to sustain a claim of unreasonable economic hardship, the Cultural Preservation Commission may require the owner/manager to provide information as to whether the property is capable of producing a reasonable return for the owner.

(B) Demonstration of economic hardship by the owner shall not be based on conditions resulting from willful or negligent acts by the owner, purchasing the property for substantially more than market value at the time of purchase, failure to perform normal maintenance and repairs, failure to diligently solicit and retain tenants, or failure to provide normal improvements.

(6) An applicant who has been denied any permit by the Building Official, based on the Cultural Preservation Commission's refusal to issue a permit, may appeal that decision to the County Commission. The appeal must be made within 120 days of the Cultural Preservation Commission's decision.

(d) Properties which, in the opinion of the County Commission, no longer meet the criteria for eligibility may be removed from the Cultural Resource Landmark Register after review and consideration.

(e) The provisions of this section are subject to the enforcement provisions established in the Uniform Building Code, Uniform Code for Building Conservation, Uniform Housing Code as adopted by Garfield County and to other provisions as allowed by federal, state and local law.

2.11 STANDARDS FOR REHABILITATION AND DESIGN GUIDELINES

(a) The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings as modified to conform to the exigencies of Garfield County shall be used by the Cultural Preservation Commission in determining the appropriateness of any application pertaining to Cultural Landmark properties.

(b) The following general design guidelines shall be considered and apply where appropriate:

(1) For landmark buildings and contributing buildings in landmark designated historic districts:

(A) Avoid demolition of landmark and contributing buildings.

(B) Vacant buildings should be weather and vandal proofed in order to minimize further deterioration and the threat to public safety.

(C) Rehabilitation work on the exterior and the principal facade should preserve existing historic features or replace them with features and materials known to have existed on the building.

(D) Avoid moving buildings when possible. If buildings must be moved, the new site should be similar to the original site and the original setback and orientation of the building on the lot should be replicated as much as practical.

(2) For additions to landmark and contributing buildings and construction of new buildings within a historic district.

(A) New additions to landmark and contributing buildings should be subordinate to the original building, that is, lower in height, attached to the rear or set back along the side, and subordinate in scale

and architectural detailing.

(B) Height, width, setback, roof shape, and the overall scale and massing of new buildings should be compatible with surrounding historic buildings and the overall streetscape.

(C) Materials on at least the primary facade(s) should be similar to original materials on facades of surrounding historic buildings.

(D) Architectural details should not replicate historic features on surrounding historic buildings.

(E) Window and door openings should be similar in size and orientation to openings on historic buildings and should take up about the same percentage of the overall facade as those on surrounding historic buildings.

(F) The relationship of the width to the height of the principal elevations should be in scale with surrounding structures and streetscape. Wider new buildings can be divided into segments that more closely resemble the facade widths of historic buildings.

(G) The roof shape of a building should be visually compatible with the surrounding structures and streetscape. Unusual roof shapes, pitches, and colors are discouraged.

2.12 GARFIELD COUNTY REGISTER OF OUTSTANDINGLY REMARKABLE / RELEVANT - IMPORTANT CULTURAL RESOURCES

Rare, unique, exemplary Cultural Resources may be designated on the Garfield County Register of Outstandingly Remarkable / Relevant - Important Cultural Resources for the purposes of recognizing their greater than local significance and providing incentives and guidelines for their preservation and the enjoyment of present and future generations.

(a) The Cultural Preservation Commission may recommend to the County Commission cultural resources for designation on the Garfield County Register of Outstandingly Remarkable / Relevant - Important Cultural Resources. Upon review, the County Commission may designate cultural resources for inclusion on the Garfield County Register of Outstandingly Remarkable / Relevant - Important Cultural Resources as a means of identifying and recognizing cultural resources that are rare, unique, exemplary, significant, and deserving of special designation, protection, and use.

(b) Outstandingly Remarkable / Relevant - Important cultural resources are resources that are rare, unique, exemplary, significant, and deserving of special designation, protection, and use. They are outstanding, remarkable, one of a kind resource that deserve special management when compared to other similar resources in the region.

(c) Any activity, business, district, building, structure, object, resource, scenery, or site may be designated on the Register of Outstandingly Remarkable / Relevant - Important Cultural Resources if it is located within the official boundaries of the county, has been the subject of a Class III inventory is approved by the County Commission and at least 95% of the proposed area meets any of the following minimum criteria:

(1) The resource is of sufficient value that it is the site of public or private facilities that enhance interpretive opportunities for the public. Parks, museums, monuments, businesses, and other permanent designations qualify cultural resources for this criterion. Examples within the region of comparison include but are not limited to: Anasazi State Park, Pipe Springs National Monument, Fremont Indian State Park, CEU Museum, American West Heritage Center, This is the Place State Park, Emery County Museum, Edge of the Cedars State Park, etc.

(2) The resource is of sufficient value that it requires paid or volunteer staff to assist with interpretation and/or protection the resource. The presence of on site guides, hosts, rangers, guards, specialists, or other similar staff for a minimum of 500 hours per year qualifies cultural resources for this criterion. Examples within the region of comparison include but are not limited to: Defiance House, Mormon Handcart Sites, Sand Island, Grand Gulch, Pine Lake Campground, etc.

(3) The resource is of sufficient value that it is the subject of guided or self guided tours promoted by land management agencies or private businesses. Resources that receive a minimum average visitation of 200 visits per month qualify for this criterion. Examples within the region of comparison include but are not limited to: San Juan River Site Tours, Cedar Mesa, Kane Gulch, Cowboy Cave, etc.

(4) The resource is of sufficient renown that its location and nature are well known and recognizable throughout the intermountain region. Resources that have been the subject of not less than 10 statewide mass media feature articles or programs qualify for this criterion. Examples within the region of comparison include but are not limited to: Mormon Tabernacle, Range Creek, Nine Mile Canyon, Mormon Handcart Sites, Hole in the Rock, etc.

(5) The resource value has been demonstrated to the Garfield County Commission in at a public hearing and the Outstandingly Remarkable / Relevant - Important nature has been documented by a preponderance of the evidence.

(6) Resources that are the basis of an ACEC / Wild and Scenic River designation do not qualify for Outstandingly Remarkable / Relevant - Important status unless they meet one of the criteria above.

2.13 DESIGNATION PROCEDURES

(a) Any person, group, or government agency may nominate a resource under its ownership or jurisdiction for listing in the Garfield County Register of Outstandingly Remarkable / Relevant-Important Cultural Resources. The nomination and listing procedures are as follows:

(1) Documentation for each nominated property must be submitted to the Cultural Preservation Commission.

(A) For archaeological resources, a Level III survey is required.

(B) For all resources, completed intensive level survey information is required.

(C) Evidence the resource meets minimum criteria of Section 2.12 is required.

(D) A legal description and accurate plat to planning grade standards is required.

(2) The Cultural Preservation Commission will review and consider properly submitted nominations at its next scheduled meeting. The Cultural Preservation Commission will notify the nominating party prior to the meeting that the nomination will be considered and will place that item on the agenda posted for the meeting.

(3) The Cultural Preservation Commission will review the documentation for completeness, accuracy and compliance with the criteria listed in section 2.12 and will schedule a public hearing accordingly.

(A) The public hearing will be advertised in a newspaper of local circulation for a minimum of 30 days prior to the hearing.

(B) Advertising costs will be borne by the nominating entity.

(C) In the case of economic hardship, the advertising costs may be borne by the County.

(4) The Cultural Preservation Commission will conduct the public hearing and receive all pertinent information. Upon completion of the public hearing, the Cultural Preservation Commission will forward a recommendation to the County Commission for approval/denial of Outstandingly Remarkable / Relevant-Important status.

(5) The County Commission will review the recommendation of the Cultural Preservation Commission and any other pertinent information at a regularly scheduled Commission meeting and will schedule a second public hearing.

(A) The public hearing will be advertised in a newspaper of local circulation for a minimum of 30 days prior to the hearing.

(B) Advertising costs will be borne by the nominating entity

(C) In the case of economic hardship, the advertising costs may be borne by the County.

(6) The County Commission will conduct the public hearing and receive all pertinent information. Within 30 days of the public hearing, the County Commission will approve or deny Outstandingly Remarkable / Relevant-Important Cultural Resource status.

(A) The County Commission's decision will be made in an open public meeting.

(B) The County Commission will provide written notice to the nominating entity its decision.

(7) No resource shall be included on the Garfield County Register of Outstandingly Remarkable / Relevant-Important Cultural Resources if the property owner or manager with jurisdiction over the resource is not in favor of the designation.

(b) Designation of a resource to the Garfield County Register of Outstandingly Remarkable / Relevant-Important Cultural Resources results in the following:

(1) Owners/managers of designated cultural resources may consider the resource for Areas of Critical Environmental Concern, Wild and Scenic River or other special designation status.

(2) The Garfield County travel Council will be encouraged to include the resource in its tourism related activities.

(3) Resources designated on the Cultural Landmark Register may receive special consideration in the granting of variances or conditional use permits in order to encourage development for the benefit, use and enjoyment by the public.

(4) The County Commission shall record the Outstandingly Remarkable / Relevant-Important Cultural Resources Register designation for each resource with the County Recorder's Office.

(5) Owners/managers of Outstandingly Remarkable / Relevant-Important Cultural Resources may seek assistance from Garfield County in applying for grants or tax credits for rehabilitating or developing their resources for the benefit, use and enjoyment by the public.

(6) Proposed work or management actions on resources designated as Outstandingly Remarkable / Relevant-Important Cultural Resources is subject to the review and approval of the County. The purpose of this review is to ensure the preservation, development and enhancement of cultural properties to the

greatest degree possible. This review applies to individually designated landmark resources, resources located in designated landmark districts, and public resources.

(c) Properties which, in the opinion of the Garfield County Commission, no longer meet the criteria for eligibility may be removed from the Garfield County Register of Cultural Resources after review in a public hearing and proper consideration.

(d) This ordinance provides objective criteria for evaluation and recognition of Outstandingly Remarkable / Relevant-Important Cultural Resources. Absent federal or state authority which overrides this ordinance, actions of public and private entities located in Garfield County shall comply therewith. Actions, which do not comply with this ordinance, are inconsistent with the Garfield County General Management Plan and are a violation of law.

2.14 SCENERY

(a) Scenery is an integral part of the landscape and is a vital part of the history, custom and culture of an area. This section describes criteria for including elements of Garfield County's scenery in the registers indicated above.

(b) Elements of scenery may be included in the Register of Cultural Resources if it can be graphically described with identifiable limits and meets all of the following criteria:

(1) It is located within the official boundaries of the County.

(2) It retains its historic integrity, in that there are no major alterations or additions that have obscured or destroyed the significant cultural features.

(3) It is designated as Class A Scenery or equivalent.

(4) It has a scenic quality rating greater than 20 or equivalent.

(5) All of the land proposed for designation meets the criteria

(c) If the scenery does not meet the integrity requirements outlined above, it may qualify for designation if it can be graphically described with identifiable limits and meets one of the following requirements:

(1) It is directly associated with events of historic importance in the County.

(2) It is closely associated with the lives of persons who were of historic importance to the County.

(3) It is locally renowned.

(d) Elements of scenery may be included in the Cultural Landmark Register if it can be graphically described with identifiable limits and meets all of the following criteria:

(1) It is located within the official boundaries of the county.

(2) It retains its historic integrity, in that there are no major alterations or additions that have obscured or destroyed the significant cultural features.

- (3) It is designated as Class A Scenery or equivalent.
- (4) It has a scenic quality rating greater than 25 or equivalent.
- (5) It is specifically named on one of the following:
 - (A) USGS 7.5 Minute Quadrangle maps
 - (B) 1:100,000 Surface Management Status maps
 - (C) Utah State Highway maps
 - (D) Other maps considered equivalent by the Cultural Preservation Commission.
- (6) All of the land proposed for designation meets the criteria
 - (e) If the scenery does not meet the requirements outlined above, it may qualify for designation if it can be graphically described with identifiable limits and meets one of the following requirements:
 - (1) It is a specific location and is well known among the residents of the County.
 - (2) It is directly associated with events or lives of persons who were of historic importance to the County.
 - (3) It is renown in Southern Utah and is the primary attraction for more than 120 people per year.
 - (A) Visitor use surveys should be used to document visitation figures.
 - (B) Visitor use information may be waived if it is common knowledge that minimum visitation figures are met.
 - (f) Elements of scenery may be included in the Register of Outstandingly Remarkable / Relevant-Important Cultural Resources if it can be graphically described with identifiable limits and meets all of the following criteria:
 - (1) It is located within the official boundaries of the County.
 - (2) It is designated as Class A Scenery or equivalent.
 - (3) It has a Scenic Quality Rating greater than 28 or equivalent.
 - (4) It has a land form rating of 5 or equivalent.
 - (5) It has a vegetation rating of 5 or equivalent.
 - (6) It has a color rating of 5 or equivalent.
 - (7) It has a scarcity rating of 5 or greater.
 - (8) It is renown throughout the state.
 - (9) It is the primary destination for more than 2400 visitors per year as verified by actual visitor counts.
 - (10) All of the land proposed for designation meets all of the criteria

(g) If the scenery does not meet the requirements outlined above, it may qualify for designation if it can be graphically described with identifiable limits and meets one of the following requirements:

(1) It is a National Park or National Monument administered by the National Park Service and has a Scenic Quality Rating greater than 28 or equivalent.

(2) It is part of a congressionally designated area and:

(A) Has a minimum Scenic Quality Rating 30.

(B) Is the destination of more than 6000 visitors per year as verified by actual visitor counts.

(3) It is a legislative designated area by the state of Utah and

(A) Has a minimum of 28 or equivalent

(B) The governor of the State of Utah has requested its inclusion on the Garfield County Register of Outstandingly Remarkable / Relevant-Important Cultural Resources.

(h) No scenery shall be designated on the Register of Outstandingly Remarkable / Relevant-Important Cultural Resources if management actions restrict or prohibit activities or impacts that are lesser in nature than activities or impacts that were used to justify its designated status.

(i) Criteria for identifying Outstandingly Remarkable / Relevant-Important scenery is identified in Section 2.17(f) and Section 2.17(g). The criterion applies to scenic resources in Garfield County whether or not they are proposed for designation on the Register of Outstandingly Remarkable / Relevant-Important Cultural Resources. Scenic resources that fail to meet the criteria identified in Section 2.14(f) and Section 2.14(g) are not Outstandingly Remarkable or Relevant-Important.

(j) This ordinance provides objective criteria for evaluation and recognition of Outstandingly Remarkable / Relevant-Important Scenery. Absent federal or state authority which overrides this ordinance, actions of public and private entities located in Garfield County shall comply therewith. Actions, which do not comply with this ordinance, are inconsistent with the Garfield County General Management Plan and are a violation of law.

2.15 SEVERABILITY

The provisions of this ordinance are severable.

2.16 REPEALER

The provisions of all prior ordinances that are inconsistent or in conflict with this Ordinance are hereby repealed.

2.17 EFFECTIVE DATE

(a) This Ordinance shall take effect THIRTY (30) days after its passage or TWENTY (20) days after its publication, whichever is sooner.

(b) The effective date identified in Section 2.17(a) shall apply for all management actions that have a final record of decision (or equivalent) signed after the effective date.

(c) For management actions that have a final record of decision (or equivalent) signed prior to the

effective date, the effective date shall be:

(1) The initiation of a new planning process (programmatic, implementation, or project level) that includes management actions that are impacted by the ordinance.

(2) The recommended review/revision date established by agency regulation, policy or guideline.

(3) January 1, 2012.

(4) Whichever is comes first.

APPENDIX A2.12 Visual Resources

Existing Federal, State and Local statutes, laws, ordinances, regulations, and procedures are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

Visual Resource Class definitions are as follows:

Class I To preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention.

Class II To retain the existing character of the landscape. The level of change to the characteristic landscape should be low.

Class III To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate.

Class IV To provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high.

Source: BLM Handbook H-8410-1, Visual Resource Inventory

The County contains many areas with a high degree of scenic quality and a high level of visual sensitivity as noted below. Scenic quality is rated as level A, level B, or level C, with level A having the highest scenic quality and level C the lowest. Much of the area has been rated scenic quality level B, which means the area is dominated by a moderate level of visual appeal. The more striking scenery have been rated as level A (high level of visual appeal), a few valleys and lowlands and sage brush flats have been rated as level C (low level of visual appeal). In general, high scenic quality within the decision area is a product of the area's varied topography, striking geology, and cultural history.

These visual resources are appreciated by the local population as well as by the visiting public, both of whose numbers are steadily increasing. Areas with high visual sensitivity result in a high degree of visitor interest level and use. Most of the County has been determined to be moderately sensitive with the highly sensitive areas located in National Parks and other congressionally designated areas.

Distance areas measure the relative visibility from travel routes or observation points with zone one being the closest to a point or route and zone three being the furthest. Most of the County has been determined to be in distance areas two and three. Much of the most striking scenery is located in the "seldom seen" (distance zone three) associated with Garfield County's recommended wilderness and in National Parks.

The main locations within the decision area that have both outstanding scenic quality and high visual sensitivity include the National Parks, portions of the National Monument and the National Recreation area and lands identified by the County as suitable for wilderness.

APPENDIX A2.13 Non WSA Lands With Wilderness Character

Appendix information for Non WSA lands with wilderness character is included in Appendix A4.4.1. Additional information may be added as Plan Maintenance without public comment.

RESOURCE USES

APPENDIX A3.1 Forestry and Woodland Products

Intentionally left blank. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A3.2 Livestock Grazing

Intentionally left blank. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A3.3 Recreation

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, and procedures are incorporated by reference. BLM Manual 8300, Recreation Management is incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A3.4 Transportation

Existing Federal, State and Local transportation systems, transportation facilities depicted on Federal, State and Local maps, Garfield County's Class B road network, Garfield County's Class D road network, Garfield County's RS 2477 assertions submitted as part of the Henry Mountains and Kanab/Escalante RMPs, GLO plats, transportation facilities identified in studies conducted under authority of the Wilderness Act, transportation facilities identified in studies conducted under the wilderness re-inventory of 1996, Garfield County's road network adopted at public hearing in October 1994, transportation inventories conducted by federal, state and local agencies, Garfield County's OHV Ordinance, and historical transportation systems are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A3.5 Lands and Realty

Intentionally left blank. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A3.6 Minerals and Energy

Intentionally left blank. Additional information may be added as Plan Maintenance without public comment.

SPECIAL DESIGNATIONS

APPENDIX A4.1 Introduction

Intentionally left blank. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.2.1 Park Service Units

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, and procedures, County services/billing records, Park Service wilderness recommendations, County ROS analysis, and Park Service management plans are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.2.2 Forest Service Units

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, and procedures, County services/billing records, Forest Service wilderness recommendations, County ROS analysis, and Forest Service management plans are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.2.3 Grand Staircase-Escalante National Monument

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, and procedures, County services/billing records, BLM wilderness inventories, studies, documents, and recommendations, County ROS analysis, Appendix A3.4 Transportation, and BLM management plans are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.2.4 State Parks

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, and park management plans are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.2.5 Wilderness

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, and procedures, Forest Service wilderness recommendations, County ROS analysis, inventories, studies and analysis conducted under authority of the Wilderness Act, agreements regarding wilderness between the United States and the State of Utah, and Forest Service management plans are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.3.1 Research Natural/Geological/Botanical Areas

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, and management plans are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.3.2 Scenic Highways

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, management plans, and Appendix A3.4 Transportation are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.3.2 Areas of Critical Environmental Concern

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, management plans, Appendix A3.4 Transportation, federal and local wilderness recommendations, County ROS analysis, inventories, studies and analysis conducted under authority of the Wilderness Act, County Outstandingly Remarkable / Relevant-Important criteria, and the County Land Use Management Policy are incorporated by reference.. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.3.4a Wilderness Study Areas

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, and management plans, Appendix A3.4 Transportation, Appendix A4.2.5 Wilderness, federal and local wilderness recommendations, County ROS analysis, federal guidance, directives, orders, inventories, studies documentation, files, and analysis conducted under authority of the Wilderness Act, County Outstandingly Remarkable / Relevant-Important criteria, and the County Land Use Management Policy are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.3.4b BLM WSA Analysis Summary

Significant data was developed as part of the wilderness process directed by the Wilderness Act of 1964. The initial inventory included wilderness inventory situation evaluations, public comment forms, record of decision, unit recommendations, unit evaluations, maps, submittals, reports, draft, and final EIS. Some BLM offices continue to maintain the original files, other offices have archived the information. All information, data, studies, reports, inventories, environmental impact statements, and other material was completed by the BLM prior to January 1, 1991. The Forest Service prior to 1985 completed similar information and Park Service wilderness processes were completed prior to 1978. All information associated with these processes is incorporated by reference and serves as the baseline information for the Garfield County General Management Plan. Additionally, information regarding Wilderness Study Areas in Garfield County is summarized as follows:

Unit 22 – The Blues-This area is located north and east of Henrieville, Utah. This WSA contains 19,030 acres of public land and 640 acres of state land. The conclusion of the study was there would be significant impact to local or regional economic conditions, except for the potential future leasable minerals for oil, gas and coal resources. This area has been described as having only 8% outstanding solitude. 16% outstanding recreational values and was not recommended for wilderness except in the all wilderness category. Under the VRM classification system 4,730 acres was Class III and 14,000 acres is Class IV. This area should be MU or Multiple Use but is in the Monument.

Unit 23 – Mud Springs Canyon-This area is approximately 9 miles east of Henrieville, Utah. The WSA contains approximately 38,075 acres in both Kane and Garfield Counties. The Garfield portion of the unit is 22,500 acres. About 2,401 acres of state land is captured in the WSA. Again the final conclusion of the study is there would be no significant impact to either the local or regional economies with the exception for those leaseable minerals such as oil, gas and coal development. Also, because of the prohibitions of certain range developments, the impact to grazing would be the loss of 125 AUMs. This area has 47% outstanding solitude, 16% outstanding recreation and is not recommended for wilderness in any alternative except the all wilderness category. Under the VRM classification system,

there is 3,775 acres was Class III and 34,300 acres in Class IV.

Unit 28 – Death Ridge-The total size of this WSA is 62,870 acres. The size of this Garfield County portion of the area is about 22,500 acres. There are 3,841 acres of state lands captured in the unit. The final EIS did make some very minor changes to the boundaries of the unit, however did not appreciably change the makeup of the unit. Again only two alternatives were discussed the No Action/No Wilderness Alternative and the all wilderness alternative. Again the conclusion of the study is that there would be no significant impact to the local or regional economy because of wilderness designation. The area contains 50% outstanding solitude or about 11,250 acres, 0% outstanding recreational values and is proposed for wilderness only in the cluster and all wilderness categories.

Unit 29 – Phipps Death Hollow-This area is 42,731 acres in size. It is a BLM Instant Study Areas, which takes it directly to wilderness suitability phase, and must be recommended to the President. For all intent and purpose, this area was being managed for its primitive characteristics already. It is adjacent to the Forest Service designated Wilderness known as the Box Death Hollow wilderness area. In the conclusion portion of this study, BLM concludes that there would be no adverse impacts to the local economy, but then states that there could be up to \$822,000.00 added to the local economy. This conclusion does not square with past experience associated with primitive and unconfined recreation experiences in the county. About 84%, or 35,894 acres, of the area is categorized as having outstanding solitude. The area is considered for wilderness in all alternatives, except the commodity production or now wilderness category. Under VRM it is classified as a Class I area. The Phipps Death Hollow area was approved for wilderness designation by the Garfield County Commissioners.

Unit 30 – Steep Creek-This area has about 21,896 acres. There were four alternatives analyzed for this WSA. A no action/no wilderness alternative, an all wilderness alternative (21,896 acres), a large partial wilderness (20,806 acres) and a small partial wilderness alternative (18,350 acres). Of this 71% of the area, or 15,546 acres, has outstanding solitude, and 83% is classified as having outstanding recreational values. The study concludes that opportunities to improve elk winter range would be precluded, and that there would be no impacts to threatened, endangered or other special status species. There is no mention of economic impacts, other than to say that on a regional basis, there would be little to none. It is recommended that the boundary be modified according to the ROS system using the partial or smaller alternative.

Unit 31 – North Escalante Canyon-Again, BLM has classified this as an Instant Study Area (ISA) meaning that the study goes directly to the suitability phase of the process. The area is approximately 5 miles east of the town of Escalante, Utah. The area is separated from the Phipps-Death Hollow area by State Highway 12. This unit is the largest of all the inventory units and contains about 119,300 acres. Wilderness Study recommendations show a smaller or partial wilderness alternative, which is carried over as the proposed or paramount wilderness alternative. This unit analyzed four alternatives. Those being no action/no wilderness, all wilderness (119,752 acres), a large partial wilderness (91,558 acres), and a small partial wilderness (54,500 acres). From an economic point of view, about the only conclusion coming from this study is that impacts are basically confined to local economies, and over all are deemed insignificant. Out of this perhaps 75% has some opportunity for outstanding solitude. Primitive Recreation would be 13,400 – CI, another 22,102 acres is classified CII, then 5,600 acres is C-

III, and

78,650 is Class IV. It is recommended that the area be further modified using the ROS system to be plus or minus 52,000 acres. The rest be managed under a multiple-use and sustained scheme.

Unit 32 - Carcass Canyon-This unit is totals 46,711 acres but is split between Garfield and Kane Counties. The Garfield County portion of this unit contains 30,748 acres and is only recommended for wilderness under the all wilderness alternative, however the no action/no wilderness alternative was analyzed. The study concludes that economic impacts would not be significantly impacted; however, the study also concludes that potential sales and revenues from coal development, etc., would be forgone. This statement seems paradoxical in that coal and energy resources tend to pay higher wages and generate more revenue to local economies than does recreation, especially dispersed recreation. Under the partial and paramount alternatives no wilderness is recommended. In fact the proposed action recommends no wilderness. Only 57% of this area contains any outstanding solitude and only 25% has any outstanding recreational values.

Unit 33 – Scorpion-This area has a total size of 35,884 acres, but the Garfield portion of this study area is only 9,631 acres. There were three alternatives analyzed in this for this area, one being no action/no wilderness, all wilderness (35,884 acres) and a partial wilderness alternative (14,978 acres). Of this only 25% contains outstanding solitude, with 32% of the area having some outstanding primitive qualities. Actual impacts to the socio-economic portion of this study are significantly lacking, because the study lumps those impacts into such a large geographic area. While this area is larger, about 35,000 acres, we have only looked at the portion in Garfield County.

Unit 36 – Mount Ellen-This unit contains 81,732 acres. This unit is split between Wayne County and Garfield County. The Garfield County Portion containing 23,700 acres. This area is about 10 miles west of Hanksville, Utah. The alternatives discussed for potential recommendation are first the no action/no wilderness alternative, the second is all wilderness (81,732 acres) and a partial wilderness proposal (65,804 acres). In the wilderness alternatives an area of 65,804 acres is proposed in both the partial wilderness proposal and in the paramount alternative. The study concludes that in the short term, the partial wilderness alternative would not affect local economic conditions. In the long term, the study says that economic conditions would significantly be affected by a 5% increase in employment in Wayne and Garfield Counties. Another conclusion is that critical bison ranges will be protected because of wilderness designation. (note: In the past helicopters have been used in bison roundups to aid in preserving health needs and thinning and transporting excess animals, will this be allowed to continue). This area has 73% outstanding solitude, and 45% outstanding recreation. 63,950 acres is deemed to be in VRM Class II, 2,454 acres in VRM Class III, and 15,387 in VRM Class IV. The County proposes that 65,804 acres be used for commodity production. This is because even the reduced area has low value for primitive and unconfined recreation. This area is important because it is Bison habitat.

Unit 37 – Bull Mountain-The Bull Mountain Wilderness Study Area is 13,620 acres split between Wayne and Garfield Counties. It is part of the Henry Mountain Range. It is about 13 miles southwest of Hanksville, UT. In the BLM Wilderness Inventory process it shows Garfield County as having 10,120 acres in the all wilderness proposal and is carried forward in the partial and paramount wilderness proposals as well. Another 3,500 acres of this area is located in Wayne County. Three alternatives were analyzed in the wilderness EIS. One, the no action/no wilderness alternative, second the all wilderness proposal (13,620 acres of which 10,120 acres are in Garfield County), and lastly a partial wilderness

alternative containing 11,800 acres. True socio-economic impacts are weak at best tying them to larger regions and discounting the importance of resource use to local economies. The study does conclude that 3 miles of roads or ways will be closed, impacting two grazing allotments. Of this 100% of the area probably has outstanding solitude as does the opportunity for outstanding recreation. Of this acreage 10,790 acres is VRM Class II, and 2830 acres is VRM Class IV. In the long run this area is not judged to have the highest quality recreation quality.

Unit 41 – Fiddlers Butte-This area is 73,100 acres in northeastern Garfield County. This area is located about 25 miles southeast of Hanksville, Utah and is immediately adjacent to Glen Canyon National Recreation Area. The BLM Final Wilderness EIS considered four alternatives. They are no action/no wilderness, all wilderness (73,100 acres), a large partial wilderness (32,700 acres), and a small partial wilderness (27,000 acres). Of this acreage 32,700 acres is carried in the partial wilderness and paramount wilderness proposal. Once again socio-economic impacts are weak, and do not truly analyze the true impacts to local economies. It is believed that only 35% of the area has any opportunity for outstanding solitude, and 45% has outstanding opportunity for primitive recreation. About 30,550 acres is classified in VRM as being Class II, while 42,550 is classified as Class III.

Unit 42 – Mount Pennell-This unit has 73,300 acres in the all wilderness alternative, no acres in the paramount alternative, and 25,800 acres in both the partial and BLM proposed action. In addition there was a no action/no wilderness alternative discussed. According to the conclusions reached in the analysis, it says, “Designation would result in temporary impacts through 32 potential jobs being forgone in the locatable mineral industry. Other economic factors would not be significantly affected.” The inventory shows that only 24% of the area has outstanding solitude, and 24% has any outstanding recreational values. There are 23,885 acres of VRM classification Class II, 20,951 in Class III, and 29,464 acres in Class IV.

Unit 43 – Mount Hillers-This area has 20,000 acres in the all wilderness proposal. There are no acres recommended in the paramount proposal. However 16,360 acres are proposed in the partial and BLM wilderness proposals. A no action/no wilderness alternative are also discussed. Of this acreage, 78% has opportunity for outstanding solitude, with another 78% having outstanding recreation. Another 19,235 acres is classified as Class II, 291 acres Class III, and 29,464 acres as being Class IV.

Unit 44 -Little Rockies-This area contains 37,000 acres in the all wilderness proposal. The paramount and BLM proposed alternatives show 38,700 acres. The only other alternative considered in this phase of the study was no action/no wilderness. The conclusion of the study was that wilderness designation would not significantly affect local economic conditions. Benefits to the local economy from mineral development would be slightly reduced by wilderness designation by a reduction of 10 jobs in the locatable mineral industry. The area is said to have 72% having opportunity for outstanding solitude, with another 72% having outstanding recreational values. Of this, 38,060 acres have been classified under VRM as Class II, 640 acres Class III with no acres of Class IV.

APPENDIX A4.3.5 National Trails

Intentionally left blank. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.3.6 Wild and Scenic Rivers

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, and management plans, Appendix A3.4 Transportation, Appendix A4.2.5 Wilderness, federal and local wild and scenic river recommendations, County ROS analysis, federal guidance, directives, orders, inventories, studies documentation, and analysis conducted under authority of the Wild and Scenic Rivers Act, County Outstandingly Remarkable / Relevant-Important criteria, and the County Land Use Management Policy are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.3.7 Backcountry/Roadless/Primitive Areas

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, visitor use surveys, and management plans, Appendix A3.4 Transportation, Appendix A4.2.5 Wilderness, federal and local wilderness recommendations, County ROS analysis, federal guidance, directives, orders, inventories, studies documentation, and analysis conducted under authority of the Wilderness Act, County Outstandingly Remarkable / Relevant-Important criteria, agreements regarding wilderness between the United States and the State of Utah, and the County Land Use Management Policy are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.3.8 Special Recreation Management Areas

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, visitor use surveys, and management plans, Appendix A3.4 Transportation, Appendix A4.2.5 Wilderness, federal and local wilderness recommendations, County ROS analysis, federal guidance, directives, orders, inventories, studies documentation, and analysis conducted under authority of the Wilderness Act, County Outstandingly Remarkable / Relevant-Important criteria, agreements regarding wilderness between the United States and the State of Utah, BLM Manual 8300 Recreation Management, and the County Land Use Management Policy are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.4.1a Non WSA Lands With Wilderness Character

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, and management plans, Appendix A3.4 Transportation, Appendix A4.2.5 Wilderness, federal and local wilderness recommendations, County ROS analysis, federal guidance, directives, orders, inventories, studies documentation, files, and analysis conducted under authority of the Wilderness Act, County Outstandingly Remarkable / Relevant-Important criteria, UTAH Wilderness Inventory 1999, and the County Land Use Management Policy are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.4.1b Non WSA Lands With Wilderness Characteristic

Inconsistencies in UTAH Wilderness Inventory 1999 by Garfield County Commissioner Clare Ramsay.

JUNE 15, 1999

MS. LINDA COLVILLE
UTAH STATE ASSOCIATE DIRECTOR
US BUREAU OF LAND MANAGEMENT
P.O. BOX 45155
SALT LAKE CITY, UTAH 84145

RE: 1999 UTAH WILDERNESS INVENTORY

DEAR LINDA:

AS A CITIZEN OF GARFIELD COUNTY, AND
TROPIC, UTAH I WOULD LIKE TO COMMENT
ON SOME OF THE UNITS LISTED IN THE
NEW WILDERNESS INVENTORY BOOK.
AS I HAVE READ AND STUDIED THE BOOK
I HAVE BEEN SHOCKED TO NOTICE THE
BLATANT DISREGARD THE INVENTORY
TEAM HAS SHOWN IN ADHERING TO THE
LANGUAGE (LAW) OF THE 1964
WILDERNESS ACT. NOW WE ALL KNOW
JUST WHAT CHARACTERISTICS MUST BE
PRESENT IN ORDER FOR AN AREA TO
BE DESIGNATED AS WILDERNESS, SO I
WOULD LIKE TO DRAW YOUR ATTENTION
TO JUST SEVERAL UNITS THAT ARE
BEING CONSIDERED FOR WILDERNESS,

AND POINT OUT TO YOU JUST HOW
FLAWED THE INVENTORY IS.

EXAMPLE #1: EAST OF BRYCE

I CALL YOUR ATTENTION TO P. 39 OF THE
INVENTORY BOOK. EAST OF BRYCE

QUOTING FROM THE BOOK: "THE UNIT
CONSISTS OF A PORTION OF A LARGE MESA
PROVIDING OVERVIEWS OF TROPIC VALLEY
TO THE EAST AND BRYCE CAUYON NATIONAL
PARK TO THE WEST." EAST OF BRYCE

"PROVIDES AN EXTENSION OF THE
OUTSTANDING OPPORTUNITIES FOR
SOLITUDE FOUND WITHIN THE PARK.

HOWEVER, THE SIGHTS AND SOUNDS
OF THE TOWN OF TROPIC AND UTAH
HIGHWAY 12 COULD DIMINISH SOLITUDE
OPPORTUNITIES IN THOSE PARTS
DIRECTLY ADJACENT TO THE VILLAGE
AND ROAD."

ONE WOULD NATURALLY ASK, "WHY WOULD
AN AREA BE CONSIDERED FOR WILDERNESS
WHEN NONE OF THE CHARACTERISTICS REQUIRED
ARE FOUND THERE?" SOLITUDE IN THIS
AREA WOULD BE A GOOD EXAMPLE.

AS I MENTIONED AT FIRST I AM A
RESIDENT OF TROPIC AND I CAN SEE
A BIG PORTION OF EAST OF BRYCE UNIT

FROM MY FRONT PORCH, AND I AM
CONVINCED THAT A SPOT IN ALL
THE 800 ACRES OF THE UNIT
CANNOT BE FOUND WHERE VEHICLE
NOISE FROM HI-WAY 12 CANNOT
BE HEARD. SOLITUDE?

THERE IS ALSO A PIPE LINE AND A
CANAL RUNNING THROUGH THE UNIT.
A GOOD 90% OF THE UNIT PROVIDES
A GREAT VIEW OF THE TOWN OF
TROPIC. MAN'S WORK SUBSTANTIALLY
UNNOTICEABLE??

THE UNIT IS 800 ACRES. 5000 ACRES?

EXAMPLE #2 BOX CANYON

P. 40 QUOTING:

"EVIDENCE OF HUMAN ACTIVITY INCLUDES
AN OLD BULLDOZIER SCRAPER, 1 1/2 MILES
OF VEHICLE WAY (ROAD) 3.1 MILES OF
FENCE, A STOCK POND, AND A CANAL
AND ASSOCIATED ACCESS."

ARE THE ABOVE NOTATIONS FROM YOUR
OWN BOOK NOT SHOWING AN AREA
THAT HAS BEEN TRAMMELED BY MAN?

FROM THIS POINT ON I WILL LIST THE
INTROSIONS FOUND ON EACH UNIT ADMITED
TO BY THE INVENTORY TEAM IN YOUR

OWN BOOK.

EXAMPLE #3 THE BLUES

ROAD - COAL MINE - FENCING - VEHICLE WAYS -
POWER LINES - TRAFFIC ON HI-WAY 12.

EXAMPLE #4 WAHWEAP - DEATH RIDGE

BULLDOZER WAYS AND DRILL PADS - POWER LINES
VEHICLE ROUTES - CHAINED AREAS - SIX
CHERRY-STEMMED ROADS.

EXAMPLE #5 CARCASS CANYON

CHAININGS - STOCK PONDS - CORRALS - FENCES -
ROADS - SEISMIC LINES - OIL DRILL PADS - SIX
MILES OF ROADS.

EXAMPLE #6 HORSE SPRING CANYON

ROADS - ATV PLAY AREAS - BORROW PIT -
CORRALS - POWER LINE - TRASH DUMP - WATER
PIPELINES - NINE ROADS (CHERRY STEMMED)
OIL EXPLORATION AND PRODUCTION SITES.

EXAMPLE #7 LAMP STAND

MINERAL EXPLORATION - BULLDOZER SCARS -
ROAD (CHERRY STEMMED)

EXAMPLE #8 NORTH ESCANANTE CANYONS

COMMUNICATION SITES - ROADS - (91 MILES) - AIRSTRIP
STOCK PONDS - VEHICLE WAYS (ROADS) DRILL PADS.

EXAMPLE #9 LITTLE EGYPT

ROADS - RANGE DEVELOPMENTS - SIX VEHICLE WAYS -
TWO FENCE LINES - TWO SEISMIC LINES - SPRING AND
STOCK TANK DEVELOPMENT - FOUR ROADS AND TWO
VEHICLE WAYS (CHERRY STEMMED)

EXAMPLE #10 SCORPION

FOUR ROADS (CHERRY-STEMMED) - SEISMIC LINES -
FOUR MILES OF BURIED PIPELINE - WATER TROUGHS
20 MILES OF WAYS (ROADS) - BLADED ROAD
ALIGNMENTS.

EXAMPLE #11 STEEP CREEK

RANGE DEVELOPMENTS - DRILL SEEDINGS - CHAININGS -
BARBED WIRE FENCE - UNDER GROUND PIPELINE -
VEHICLE WAYS

EXAMPLE #12 STUD HORSE PEAKS

MINERAL EXPLORATION - STOCK PONDS - OIL WELL PAD -
WOOD CUTTING DISTURBANCE - GRAVEL MIXING PAD -
BLADED FENCE - SEISMIC LINES - ACCESS ROUTES -
FIVE ROADS (CHERRY STEMMED) - EXPLORATION ROUTES.

EXAMPLE #13 COLT MESA

ABANDONED STRUCTURES - STOCK PONDS - MINING
IMPAIRS - VEHICLE ROUTES - TWO ROADS (CHERRY
STEMMED) MINERAL EXPLORATION - RANCHING AND
RECREATION ACTIVITIES - BULLDOZER ROUTES -
AIRSTRIIP - STOCK PONDS - DRILL PAD.

EXAMPLE #14 NOTOM BEACH

WAYS (ROADS) FOR MINERAL EXPLORATION - FENCE -
SEISMIC LINES - MAINTAINED ROAD - IRRIGATION
DITCH - ROAD LEADING TO A TRAIL HEAD

EXAMPLE #15 LONG CANYON
VEHICLE WAYS - STOCK PONDS - THREE
ROADS (CHERRY-STEMMED) - SEISMIC/
ASSESSMENT VEHICLE WAYS - AIRSTRIP -
TWO STOCK PONDS.

EXAMPLE #16 DOWATER CREEK
WAYS - STOCK POND - FENCE -
SEISMOGRAPHIC SURVEY LINE.

EXAMPLE #17 MOUNT ELLEN - BLUE HILLS
SCATTERED ROADS - VEHICLE WAYS -
LIVESTOCK RESERVOIRS - NUMEROUS
ROADS - WATER PIPELINE - STOCK WATERING
TROUGHES - RANGE DEVELOPMENTS.

EXAMPLE #18 RAGGED MOUNTAIN
ACTIVE MINING OPERATIONS - VEHICULAR
WAYS - CHAININGS - .75 MILE DRIFT
FENCE - CAMPING SITES - CORRAL -
CHERRY-STEMMED ROADS - LIVESTOCK
DEVELOPMENTS - MINING CLAIMS - RADIO
TRANSMITTING STATION - A SHORT ROAD -
ABANDONED VEHICLE WAYS - RESERVOIRS -
A WELL - FENCE LINE - PIPELINE -
CHAININGS - SMALL CABINS - CORRALS -
SPRING DEVELOPMENTS.

EXAMPLE #19 MOUNT PENNELL
CHAINED WOODLANDS - CHERRY-STEMMED
TRAVEL ROUTES - DISTURBANCE RESULTING
FROM LIVESTOCK GRAZING - MINERAL
EXPLORATION - TWO VEHICLE ROUTES (CHERRY-

STEMMED)

EXAMPLE #20 BULLFROG CREEK

HIGH CONCENTRATION OF INTRODUCTIONS -
MAINTAINED ROADS - RANGE DEVELOPMENTS
STOCK PONDS - VEHICLE TRACKS - SPUR
ROAD NEAR EGGNOB - MAINTAINED ROAD -
TO CLAYSEEP - SEVERAL SHORT SPUR
ROADS TO OVERLOOKS ALONG BARR TRAIL.

EXAMPLE #21 MOUNT HILBERS

DISTURBANCE FROM MINING EXPLORATIONS -
VEHICLE WAYS - GOLD CREEK RESIDENTIAL
DEVELOPMENT - VEHICLE WAYS - MINING
CABIN.

EXAMPLE #22 LITTLE ROCKIES

SIX ROADS (CHERRY-STEMMED) STOCK
RESERVOIR - CORRAL - BARN - THREE ROADS -
MAIDENWATER RESERVOIR - HIGHWAY
RESERVOIR.

EXAMPLE #23 FIDDLER BUTTE

NUMEROUS OLD SEISMOGRAPHIC SURVEY
LINES - VEHICLE WAYS - OIL, GAS, AND
URANIUM EXPLORATIONS HAS OCCURRED.

EXAMPLE #24 BULL MOUNTAIN

URANIUM EXPLORATION SCARS - EXTENSIVELY
DISTURBED AREA - OLD MINING SCARS - VEHICLE
WAYS - ROAD EXTENDING TO THE STOCK POND
(CHERRY-STEMMED) - OLD URANIUM EXPLORATION
WAYS - A 100 ACRE AREA IMPACTED BY
URANIUM EXPLORATION

I HAVE COMMENTED ON TWENTY FOUR UNITS FOUND WITHIN GARFIELD COUNTY AND HAVE FOUND THAT NOT ONE INVENTORIED UNIT MEETS ALL THE REQUIREMENTS TO QUALIFY FOR WILDERNESS DESIGNATION. AND THAT IS USING THE EXACT LANGUAGE FOUND WITHIN YOUR OWN INVENTORY DOCUMENT. I STRONGLY OBJECT TO THE CONCEPT OF CHERRY-STEMMING ROADS TO MAKE IT POSSIBLE TO DECLARE AN AREA AVAILABLE FOR WILDERNESS DESIGNATION. THERE IS NO MENTION OR ALLOWANCES MADE FOR CHERRY-STEMMING IN THE WILDERNESS ACT OF 1964. USING CHERRY-STEMMING, ANY HIGHWAY, EVEN INTER-STATE HIGHWAYS RUNNING THROUGH PUBLIC LANDS COULD BE CHERRY-STEMMED AND THEREFORE CAUSING ALL PUBLIC LANDS ADJACENT TO ANY ROAD SUBJECT TO WILDERNESS DESIGNATION. CONTIGUOUS IS ANOTHER WORD TO BE WARY OF. AT LEAST EIGHT UNITS INVENTORIED IN GARFIELD COUNTY WOULD NOT MEET THE SIZE REQUIREMENT OF 5000 ACRES WITHOUT BEING ADDED TO "CONTIGUOUS" LANDS.

I AM VERY MUCH OPPOSED TO THE BLM WILDERNESS INVENTORY OF 1999.

LOCAL GOVERNMENTS AND CITIZENS HAVE
BEEN COMPLETELY LEFT OUT OF THE
INVENTORY PROCESS, LEAVING THE DATA
GATHERING TO ENVIRONMENTAL GROUPS,
AND OTHERS HAVING VERY LITTLE IF
ANY KNOWLEDGE OF THE AREAS
BEING CONSIDERED FOR WILDERNESS.
I URGE YOU TO SCRAP THE 1999 INVENTORY
AND ALLOW AN HONEST AND FAIR
PROCESS TO TAKE PLACE.

SINCERELY,
Clare M. Ramsey
BOX 37
TROPIC, UTAH 84776

APPENDIX A4.4.1c BLM Wilderness Inventory Situation Evaluations

WILDERNESS INVENTORY
SITUATION EVALUATION

I. WILDERNESS UNIT IDENTIFICATION

Area/Island Name (if available): _____

Inventory Unit No.: UT-050-243

State UTAH District RICHFIELD

II. UNIT ANALYSIS

Describe the following applicable factors in a concise narrative; use additional sheets if necessary; supplement with photographs.

- A. Ownership : This roadless unit contains 10,560 acres of public lands, and 1,120 acres of state and privately owned lands.

- B. Size of unit or number and size estimates of multiple units.

The total acreage within this roadless unit is 11,680 acres

- C. Easements : NONE

D. Leases: Active grazing leases exist for these lands.

E. Mining Claims : A mining claim search was not made.

F. Permanent improvements : Those permanent facilities found on privately owned lands within the unit are the only ones existing.

G. Existing uses : The primary existing use is livestock grazing and related activities. A limited amount of recreational use occurs during deer hunting season.

H. Human Activity: Human activity is mainly related to the care of livestock. During deer season hunters visit the area.

I. Land treatment/manipulations ; Several "chained" areas exist within this unit, covering approx. 1,500 acres.

J. General vegetation and topographic features : Elevation of the unit ranges from 6,00 to 8,000. Vegetation generally consists of scattered pinion/juniper interspersed with sagebrush and other low growing shrubs.

K. Contiguous lands: This roadless unit is almost completely surrounded by BLM Administered land. Two state sections, and two privately owned parcels adjoin this unit.

List sources of information utilized: BLM LAND PLATS
AERIAL PHOTOS
DIST. RESOURCES STAFF

I. UNIT EVALUATION

A. Select one of the following:

1. The area appears to have potential for further wilderness consideration.
- ② The area obviously and clearly does not have potential for wilderness.
3. Part of the area appears to have potential for further wilderness consideration, the remainder clearly does not. (see map on map overlay).

RATIONALE FOR THE ABOVE SELECTION: Due to the relatively small size of this unit; the intrusions of the several chainings and private lands within the unit significantly detract from the naturalness of the area. The imprint of Man's work is clearly evident.

B. Is area or island of sufficient size? Yes

C. Is there enough public support for intensive wilderness inventory of the area or island or any part. None Known

IV. UNIT RECOMMENDATION

- A. Area or island (or grouping) is recommended for intensive wilderness inventory.
- (B.) Area or island (or grouping) is recommended as not qualifying for further inventory and should be dropped from the wilderness review process.

Herbert W. Schmitt
Team Member

2/14/79
Date

Team Member

Date

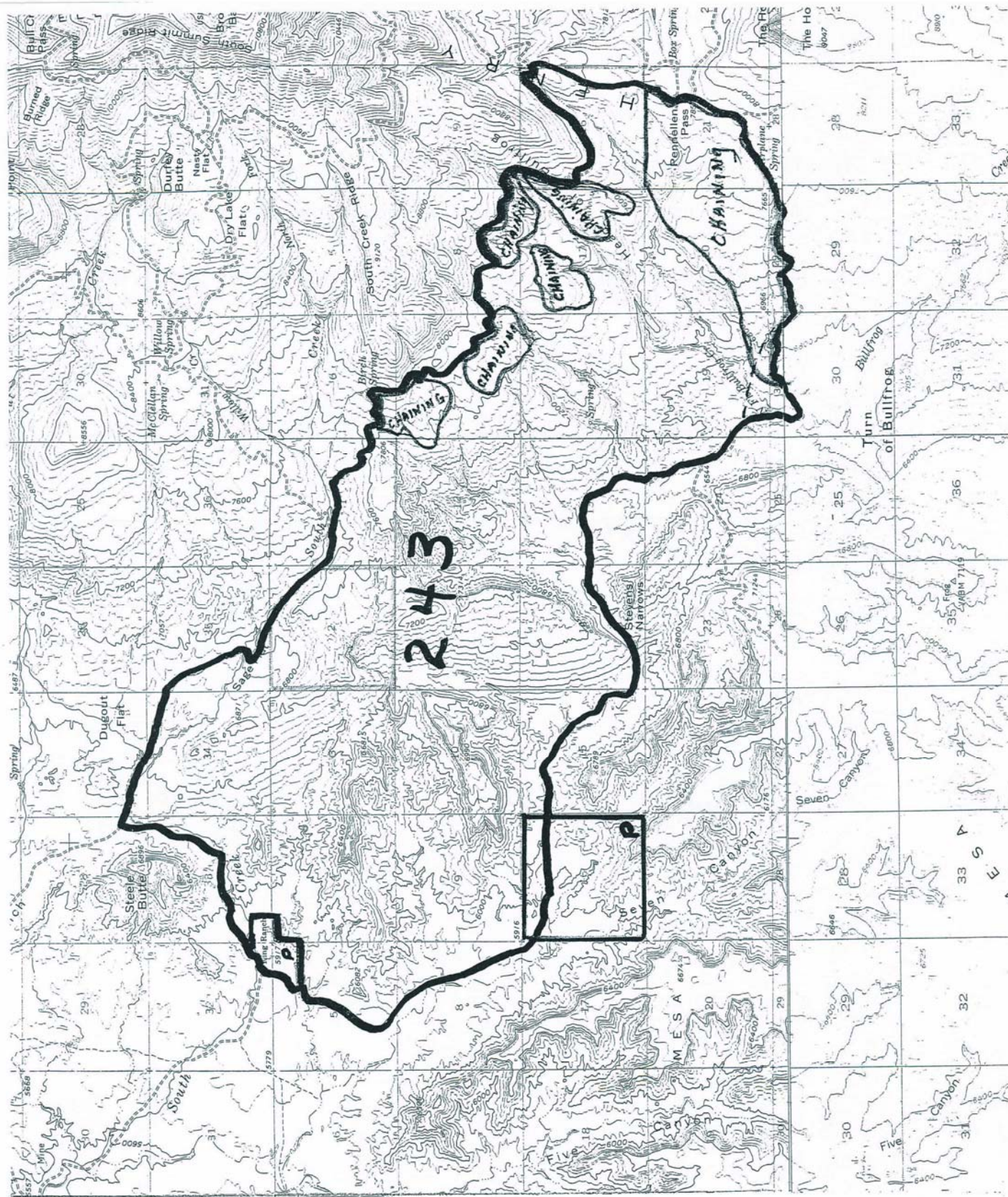
Timothy L. Lipp
Area Manager

2/26/79
Date

V. APPROVAL

Edward L. Fisk
District Manager

2-20-79
Date



WILDERNESS INVENTORY
SITUATION EVALUATION

I. WILDERNESS UNIT IDENTIFICATION

Area/Island Name (if available): Ragged Mountain
Inventory Unit No.: UT-050-244
State UTAH District RICHFIELD

II. UNIT ANALYSIS

Describe the following applicable factors in a concise narrative; use additional sheets if necessary; supplement with photographs.

A. Ownership

The roadless unit contains 29,140 acres of public lands, and 3,360 acres of state and privately owned lands.

T. GORDON
Revision
7/23/79

PRIVATE	STATE	PUBLIC	TOTAL
2,560	28,615	31,175	

B. Size of unit or number and size estimates of multiple units.

The total acreage within this roadless unit is 32,500 acres.

C. Easements

Unknown

D. Leases: Active grazing leases exist for these lands.

E. Mining Claims : A mining claim search was not made.

F. Permanent improvements : Those permanent facilities found on privately owned lands within the unit are the only ones existing.

G. Existing uses : The primary existing use is livestock grazing and related activities. A limited amount of recreational use occurs during deer hunting season.

H. Human Activity: Human activity is mainly related to the care of livestock. During deer season hunters visit the area.

I. Land treatment/manipulations ; Several "chained" areas exist within this unit, covering approx. 1,500 acres.

J. General vegetation and topographic features : Elevation of the unit ranges from 6,00 to 8,000. Vegetation generally consists of scattered pinion/juniper interspersed with sagebrush and other low growing shrubs.

K. Contiguous lands: This roadless unit is almost completely surrounded by BLM Administered land. Two state sections, and two privately owned parcels adjoin this unit.

List sources of information utilized: BLM LAND PLATS
AERIAL PHOTOS
DIST. RESOURCES STAFF

I. UNIT EVALUATION

A. Select one of the following:

1. The area appears to have potential for further wilderness consideration.
- ② The area obviously and clearly does not have potential for wilderness.
3. Part of the area appears to have potential for further wilderness consideration, the remainder clearly does not. (see map on map overlay).

RATIONALE FOR THE ABOVE SELECTION: Due to the relatively small size of this unit; the intrusions of the several chainings and private lands within the unit significantly detract from the naturalness of the area. The imprint of Man's work is clearly evident.

B. Is area or island of sufficient size? Yes

C. Is there enough public support for intensive wilderness inventory of the area or island or any part. None Known

IV. UNIT RECOMMENDATION

- A. Area or island (or grouping) is recommended for intensive wilderness inventory.
- (B.) Area or island (or grouping) is recommended as not qualifying for further inventory and should be dropped from the wilderness review process.

Herbert W. Schmitt
Team Member

2/14/79
Date

Team Member

Date

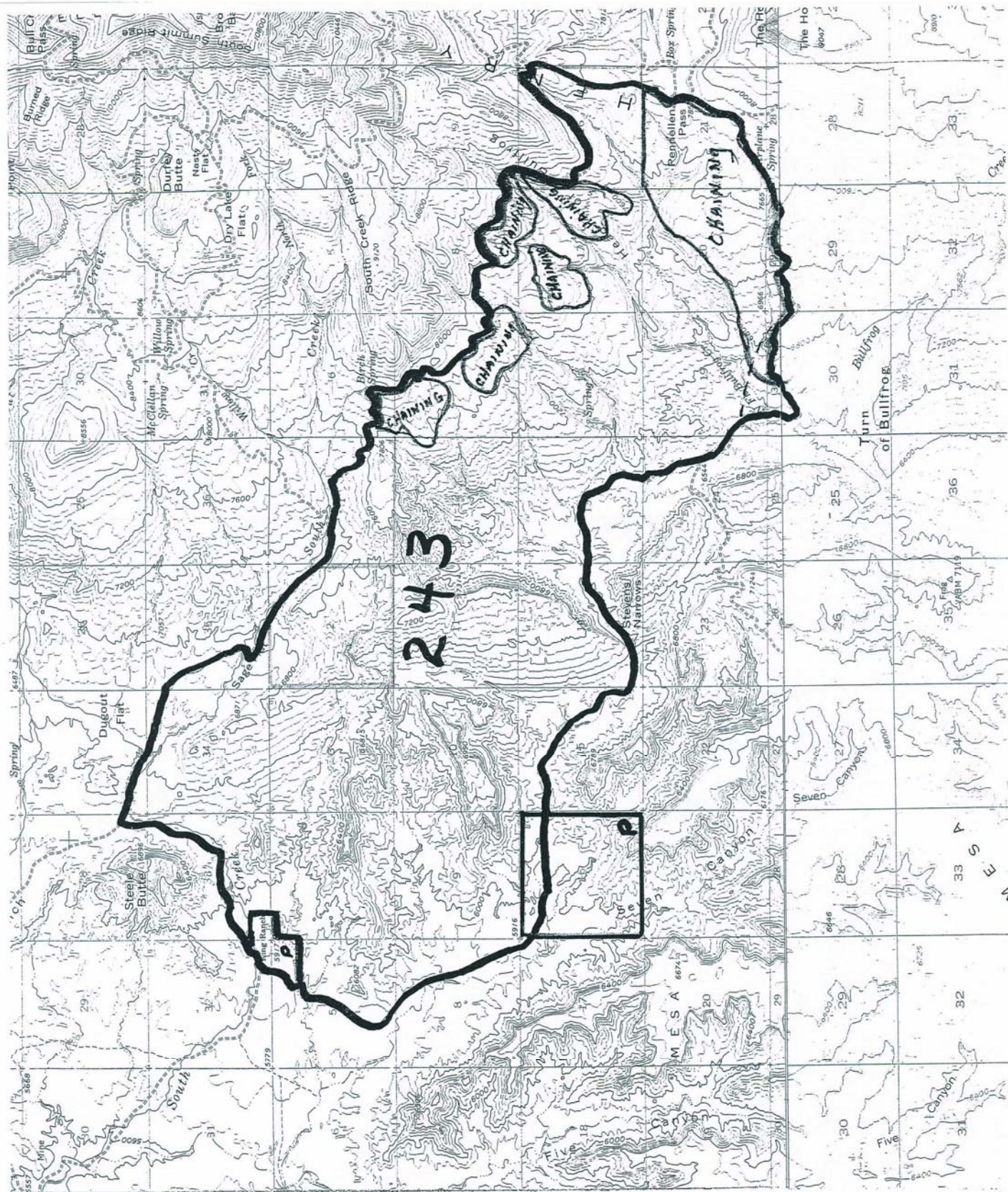
Timothy L. Lipp
Area Manager

2/26/79
Date

V. APPROVAL

Edward L. Fisk
District Manager

2-20-79
Date



WILDERNESS INVENTORY
SITUATION EVALUATION

I. WILDERNESS UNIT IDENTIFICATION

Area/Island Name (if available): TRAIL CANYON

Inventory Unit No.: UT-050-245

State UTAH District RICHFIELD

II. UNIT ANALYSIS

Describe the following applicable factors in a concise narrative; use additional sheets if necessary; supplement with photographs.

A. Ownership

This roadless unit contains 7,680 acres of public lands, and 960 acres of state and privately owned lands.

B. Size of unit or number and size estimates of multiple units.

The total acreage within this roadless unit is 8,640 acres

C. Easements

D. Leases

This unit is wholly within the trachyte point grazing allotment

E. Mining Claims

A mining claim search was not made, however, several claims are known to exist in the southern half of this unit.

F. Permanent improvements

The only known permanent improvements within the unit are water catchments and stock watering reservoirs.

G. Existing uses

The primary use of these lands is for livestock grazing

H. Human Activity

Human activity is generally limited to that associated with grazing use.

I. Land treatment/manipulations

None Unknown

J. General vegetation and topographic features

The ^vvegetative cover is sparse, and consists of sagebrush and scattered juniper trees. The unit is relatively flat with a range in elevation of only 600' (5,000'-5,600')

K. Contiguous lands

Most lands surrounding this unit are public lands administered by BLM. One section of state and one section of privately owned land are immediately adjacent.

List sources of information utilized:

Aerial photos
BLM land plats
Richfield District Resources Staff

I. UNIT EVALUATION

A. Select one of the following:

1. The area appears to have potential for further wilderness consideration.
2. The area obviously and clearly does not have potential for wilderness.
3. Part of the area appears to have potential for further wilderness consideration, the remainder clearly does not. (see map on map overlay).

RATIONALE FOR THE ABOVE SELECTION:

The area is heavily intruded by roadways and past mining activities. Considering the small size of the unit, and the relative flatness and sparseness of vegetation; opportunities for "solitude" and/or "a primitive and unconfined type of recreation" are clearly lacking.

B. Is area or island of sufficient size? YES

C. Is there enough public support for intensive wilderness inventory of the area or island or any part.

None known

IV. UNIT RECOMMENDATION

- A. Area or island (or grouping) is recommended for intensive wilderness inventory.
- ☒ B. Area or island (or grouping) is recommended as not qualifying for further inventory and should be dropped from the wilderness review process.

Marshall W. Hunt
Team Member

2/16/79
Date

Team Member

Date

Henry L. Lipp
Area Manager

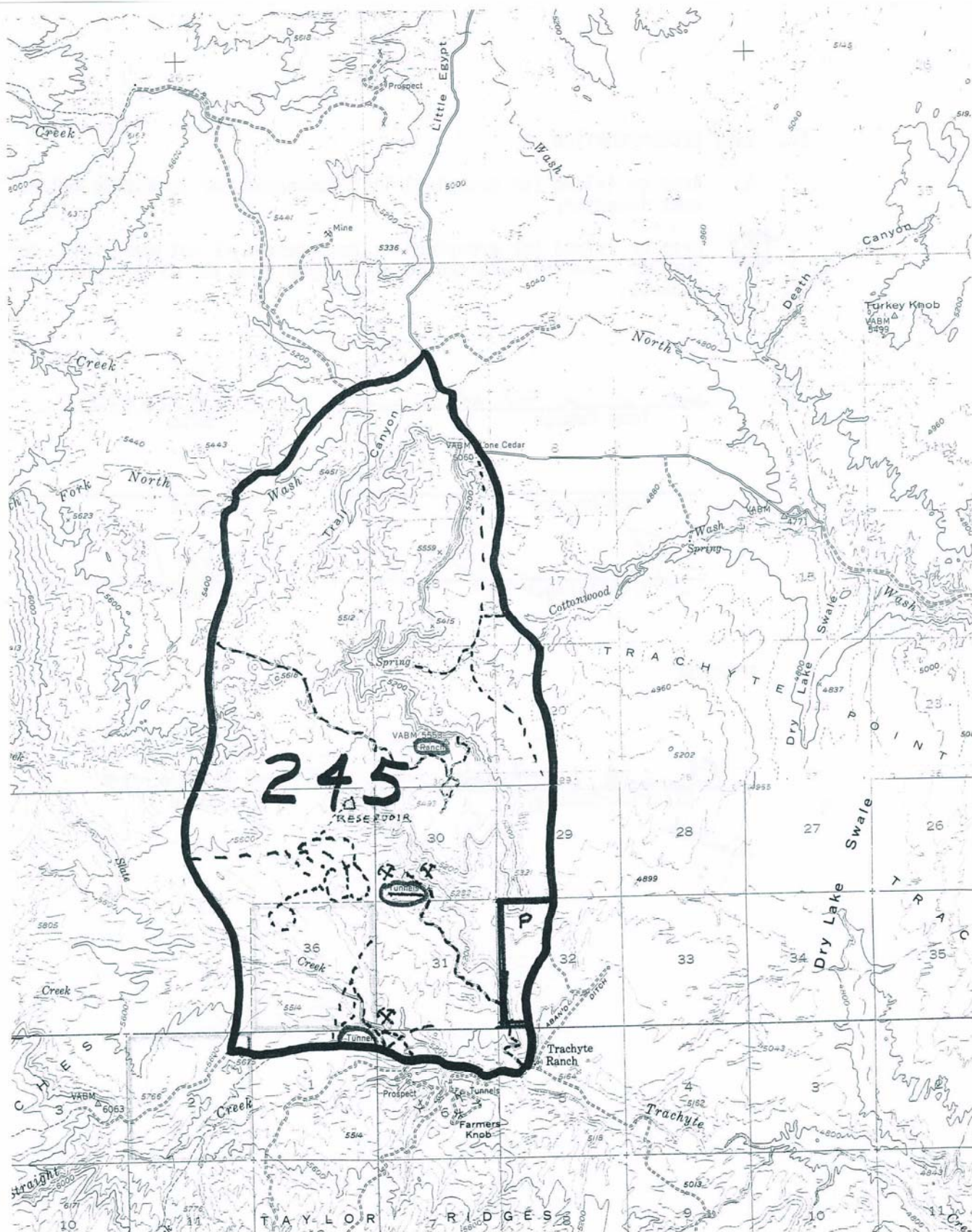
2/26/79
Date

V. APPROVAL

Edward L. Fisk
District Manager

2-20-79
Date

Assist.



WILDERNESS INVENTORY
SITUATION EVALUATION

I. WILDERNESS UNIT IDENTIFICATION

Area/Island Name (if available): Trachite Point

Inventory Unit No.: UT-050-246

State Utah District Richfield

II. UNIT ANALYSIS

Describe the following applicable factors in a concise narrative; use additional sheets if necessary; supplement with photographs.

A. Ownership

This roadless unit contains 7,840 acres of public land, and 2,400 acres of state and private lands.

B. Size of unit or number and size estimates of multiple units.

The total acreage within this roadless unit is 10,240 acres.

C. Easements

NONE

D. Leases

Grazing leases exist on most of the public lands within the unit.

E. Mining Claims

No known mineral claims are located within this unit.

F. Permanent improvements

Ranch corrals, fences, and buildings are found on the privately owned lands.

G. Existing uses

The major use of the lands within this unit is agricultural, primarily livestock grazing. Little or no recreational activity occurs on these lands.

H. Human Activity

Human activity is related to the agricultural use.

I. Land treatment/manipulations

Some cultivation for the purpose of growing hay has and is occurring on privately owned lands within the unit.

J. General vegetation and topographic features

Elevations within this unit range from 4,800 to 5,200 and is generally flat to gently sloping. Vegetative cover consists of *Sagebrush and other Low growing shrubs and grasses.*

K. Contiguous lands

The unit is almost entirely surrounded by public lands, however, there are adjacent privately owned lands on the southwest and northwest of the unit.

List sources of information utilized:

BLM land plats, aerial photos, and personal contacts were used to develop this information.

I. UNIT EVALUATION

A. Select one of the following:

1. The area appears to have potential for further wilderness consideration.
- X(2.) The area obviously and clearly does not have potential for wilderness.
3. Part of the area appears to have potential for further wilderness consideration, the remainder clearly does not. (see map on map overlay).

RATIONALE FOR THE ABOVE SELECTION:

Over 15 miles of penetrating roads and ways intrude upon the unit. The character of the land is such that almost all the unit is visible from the surrounding roads and opportunities for solitude are negligible. The lands are not considered to be natural because of the agricultural use which has been occurring for many years within and adjacent to this unit.

B. Is area or island of sufficient size?

Yes, there is over 5,000 acres of roadless Federal Lands.

C. Is there enough public support for intensive wilderness inventory of the area or island or any part.

No, because of present lack of naturalness.

IV. UNIT RECOMMENDATION

- A. Area or island (or grouping) is recommended for intensive wilderness inventory.
- X (B.) Area or island (or grouping) is recommended as not qualifying for further inventory and should be dropped from the wilderness review process.
- C. Part of the area or island (or grouping) is recommended for intensive wilderness inventory; the remainder is not recommended and should be dropped from the wilderness review process (See attached map overlay).

Robert W. Schmitt
Team Member

2/9/79
Date

Team Member

Date

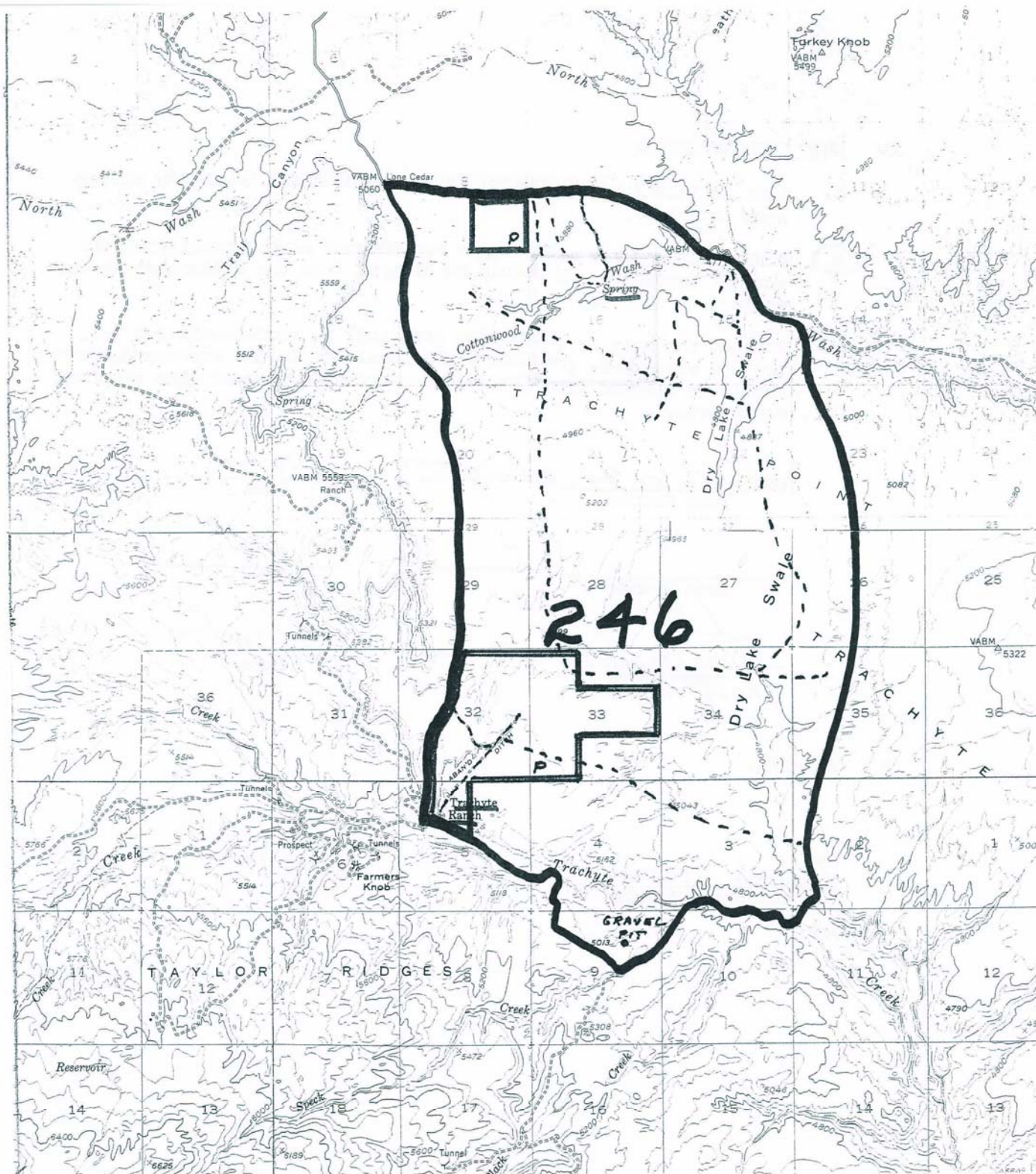
Ken [Signature]
~~Team Member~~
AREA MANAGER

2/26/79
Date

V. APPROVAL

Edward L. Fisk
District Manager
assist.

2-12-79
Date



WILDERNESS INVENTORY
SITUATION EVALUATION

I. WILDERNESS UNIT IDENTIFICATION

Area/Island Name (if available): _____

Inventory Unit NO.: _____ UT-050-251

State _____ Utah _____ District _____ Richfield _____

II. UNIT ANALYSIS

Describe the following applicable factors in a concise narrative;
use additional sheets if necessary; supplement with photographs.

A. Ownership

This roadless unit contains 19,320 acres of public lands, and 2,120
acres of state lands.

B. Size of unit or number and size estimates of multiple units

The total acreage of this roadless unit is 21,440 acres.

C. Easements

Unknown

D. Leases

All of this unit is within the Rockies grazing allotment.

E. Mining Claims

Active exploration activities are being conducted within this unit for uranium, and mining will be underway soon on state lands within the unit. A mining claim search has not been conducted, but several are known to have been filed within this unit.

F. Permanent improvements

An aircraft landing strip exists in the northeast corner of the unit. Stock watering reservoirs are also located within the unit.

G. Existing use

Grazing and mineral exploration activities are the primary present uses. Some recreational use occurs in the form of rockhounding.

H. Human Activity

Human activity is primarily that related to the above noted uses. Some rockhounds visit the unit in search of petrified wood found in the west central portion of the unit.

I. Land Treatment Manipulations

None known

J. General vegetation and topographic features

The northern portion of the unit is of scattered pinion/juniper type, while the southern portion is sparsely vegetated desert type cover.

k. Contiguous lands

Most of the adjacent lands are public lands administered by BLM. Three sections of state lands are immediately adjacent.

List sources of information utilized:

Aerial photos
BLM land plats
Topographic maps
Richfield District Resources Staff

I. UNIT EVALUATION

A. Select one of the following:

1. The area appears to have potential for further wilderness consideration.
- ☒ 2. The area obviously and clearly does not have potential for wilderness.
3. Part of the area appears to have potential for further wilderness consideration, the remainder clearly does not. (See map or map overlay).

Rationale for the above selection.

This unit is heavily intruded by roadways created during mineral exploration activities, stock watering reservoirs, and an airstrip. Consequently, the unit lacks the naturalness necessary to qualify for wilderness potential.

- B. Is area or island of sufficient size? Yes. The unit contains some 19,000 acres of public lands.
- C. Is there enough public support for intensive wilderness inventory of the area or island or any part. None known

IV. UNIT RECOMMENDATION.

- A. Area or island (or grouping) is recommended for intensive wilderness inventory.
- (B.) Area or island (or grouping) is recommended as not qualifying for further inventory and should be dropped from the wilderness review process.
- C. Part of the area or island (or grouping) is recommended for intensive wilderness inventory; the remainder is not recommended and should be dropped from the wilderness review process (See attached map overlay)

Robert W. Schmitt
Team Member

2/20/79
Date

Team Member

Date

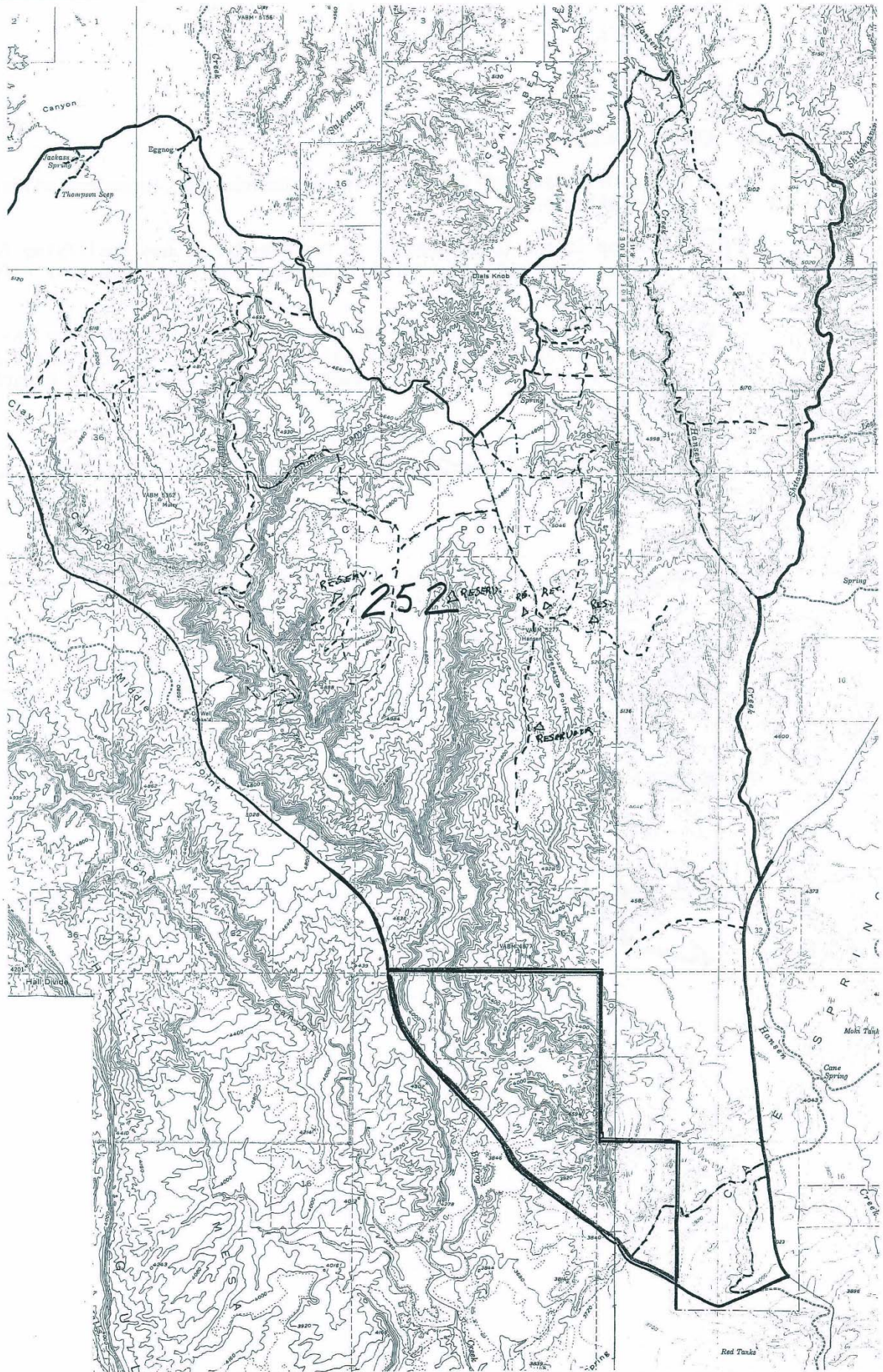
Lang Sig
~~Team Member~~
Area Manager

2/26/79
Date

V. APPROVAL

Edward L. Fisk
District Manager
Assist.

2-20-79
Date



WILDERNESS INVENTORY SITUATION EVALUATION

I. WILDERNESS UNIT IDENTIFICATION

Area/Island Name (if available): Long Canyon

Inventory Unit NO.: UT-050-253

State Utah District Richfield

II. UNIT ANALYSIS

Describe the following applicable factors in a concise narrative; use additional sheets if necessary; supplement with photographs.

A. Ownership

This roadless unit contains 17,500 acres of public lands, and 1,230 acres of state lands.

ROADS	PRIVATE	STATE	PUBLIC	TOTAL
REVISION	—	640	16,554	17,194
7/22/79				

B. Size of unit or number and size estimates of multiple units

The total acreage within this roadless unit is 18,800 acres.

C. Easements

Unknown.

D. Leases

This entire unit is included in either the Waterpocket or Bullfrog grazing allotments.

E. Mining Claims

A mining claim search has not been made.

F. Permanent improvements

Several stock watering reservoirs and an airstrip are located within this unit.

G. Existing use

The primary use of these lands is for livestock grazing.

H. Human Activity

Human activity is generally related to livestock grazing. Some recreational use occurs along the maintained roads.

I. Land Treatment Manipulations

None.

J. General vegetation and topographic features

The area is generally sparsely vegetated, with sagebrush and other low growing shrubs predominating. Topographically the area is cut by several deep canyons and washes. Elevations range from 3,900 in canyon bottoms to 5,400 on mesa tops.

k. Contiguous lands

This roadless unit adjoins Glen Canyon NRA on the south for approximately seven miles. The balance of the unit is surrounded by public lands administered by BLM.

List sources of information utilized:

Aerial Photos
On-Site Inspection
Richfield District Resources Staff

IV. UNIT RECOMMENDATION

- (A.) Area or island (or grouping) is recommended for intensive wilderness inventory.
- B. Area or island (or grouping) is recommended as not qualifying for further inventory and should be dropped from the wilderness review process.
- C. Part of the area or island (or grouping) is recommended for intensive wilderness inventory; the remainder is not recommended and should be dropped from the wilderness review process (See attached map overlay)

Robert W. Schmitt
Team Member

2/20/79
Date

Team Member

Date

Lang Lip
Team Member

2/26/79
Date

V. APPROVAL

Donald L. Pennington
District Manager

2/24/79
Date

WILDERNESS INVENTORY
SITUATION EVALUATION

I. WILDERNESS UNIT IDENTIFICATION

Area/Island Name: Long Canyon

Inventory Unit No.: Ut-050-253

State: Utah

District: Richfield

II. UNIT ANALYSIS

Describe the following applicable factors in a concise narrative; use additional sheets if necessary; supplement with photographs.

- A. Ownership: Bureau of Land Management and the state of Utah.
- B. Size of unit or number and size estimates of multiple units: 16,550 acres
- C. Easements: NONE
- D. Leases: Oil & Gas Leases in: T.35S., R9E., Sec. 29,33. T36S., R9E., Sec. 14,23,24,25. T.37S., R10E., Sec. 4,5. Restricted leases in: T.36S., R10E., Sec. 18,19,20,28,31,33.
- E. Mining Claims: Not available.
- F. Permanent improvements: Halls Creek Overlook (see Inventory Analysis)
- G. Existing uses: Sightseeing, access to Capitol Reef National Park, livestock operations, mineral exploration.
- H. Human activity: Impacts usually unnoticeable.
- I. Land treatment/manipulations: Generally minor, a small amount of grazing and assessment work.
- J. General vegetation and topographic features: Main vegetation consists of juniper, tumble weed and rabbit brush. The topography consists mainly of canyonlands and mesa tops.
- K. Contiguous lands: The unit abuts Capitol Reef National Park for the entire western side, while the southern portion of the unit reaches Canyonlands National Recreation Area.

III. UNIT EVALUATION

A. Select one of the following:

1. The area appears to have potential for further wilderness consideration.
2. The area obviously and clearly does not have potential for wilderness.

Explain your rationale for selection.

B. Is area or island of sufficient size? YES

C. Is there enough public support for intensive wilderness inventory of the area or island or any part? UNDETERMINED

IV. UNIT RECOMMENDATION (Check appropriate block.)

- ☒ A. Area or island (or groupings) is recommended for intensive wilderness inventory.
- ☐ B. Area or island (or groupings) is recommended as not qualifying for further inventory and should be dropped from the wilderness review process.

A. J. [Signature]
STAFF SIGNATURE

9/11/79
DATE

V. APPROVAL

DISTRICT MANAGER

DATE

RECOMMENDATION:

The unit was not proposed as a WSA due to lack of outstanding opportunities. The area lacks topographic and vegetative screening and primitive recreation opportunities are limited. No information was provided to change this proposal. It is recommended that this unit be dropped from further study.

Donald L. Pennington
District Manager

11/5/80
Date

I concur with the above recommendation:

Sam J. Wick
State Director

11/10/80
Date

WILDERNESS INTENSIVE INVENTORY

PUBLIC COMMENT REVIEWUT-050-253 - LONG CANYONSUMMARY OF INDIVIDUAL COMMENTS:

1. AMAX Corporation: Agrees with the proposal to drop the unit from further study.
2. Governor of Utah: Believes that outstanding opportunities for solitude and primitive and unconfined recreation would be of short duration and not outstanding. Does not recommend WSA designation, but suggests possibility of BLM development to enhance sightseeing opportunities.
3. Elaine Taylor, Boulder, Colo.: Believes solitude is enhanced by proximity to Capitol Reef. Recommends WSA designation.
4. Gary McFarlane, Salt Lake City, Utah: Recommends WSA designation based on naturalness and proximity to National Park.
5. Garfield County Commission, Panguitch, Ut.: State that imprints do exist in the unit. Feel that topographic and vegetative screening lack in the unit and that recreational values are few. Recommends dropping the unit from further study.
6. Larry Siebert, Richfield, Utah: Feels unit is "too wide and open" to offer wilderness experience.
7. Ken Goldsmith, Northford, Connecticut: Feels that "wide, open flat areas give a wilderness experience" and that views and the size of the unit provides outstanding opportunities (same comment addressed eight (8) units). Supports WSA designation.

PUBLIC COMMENT SHEET

05-27

UNIT NO. ~~UT-050-238, 241, 242,~~
~~244, 247, 248,~~
~~249, 253~~
Henry Mountain Ranges

Name: Larry J. Siebert, Director
Address: Office of Community & Natural Resource
Planning, Box 725, Richfield, UT 84701
Representing: (if any) Six-County
Commissioners Organization

Send Comment Sheets to:
State Director
ATTN: Wilderness
Bureau of Land Management
University Club Building
136 East South Temple
Salt Lake City, Utah 84111

Do you recommend that this unit be intensively inventoried for Wilderness characteristics?

YES _____

NO xx

WHY? Please provide factual information to support your recommendation.
The following is the criteria set out in the law, which must be considered:

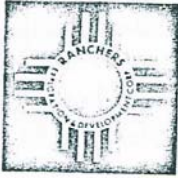
NATURAL CONDITION OF THE UNIT (CONSIDER THE IMPRINT OF MAN'S WORK, SUCH AS
ROADS, STRUCTURES, OR OTHER DEVELOPMENTS, IF PRESENT).

There are literally hundreds of two-wheel drive roads throughout the Henry
Mountain area. Mining and mineral exploration is abundant. There are fence lines,
extensive private property holdings, many livestock grazing permits, tremendous
hunting pressures, chaining areas, and so forth that make the area much more suit-
able to the multiple use concept than the single use concept.

OUTSTANDING OPPORTUNITIES FOR SOLITUDE (CONSIDER THE PHYSICAL CHARACTERISTICS
OF THE UNIT THAT WOULD ALLOW AN OPPORTUNITY FOR BEING ALONE OR ISOLATED
FROM OTHERS).

NONE

*PLEASE CONTINUE ON THE OTHER SIDE.



RANCHERS EXPLORATION AND DEVELOPMENT CORPORATION

Box 6217 / 1776 Montano Road, N.W. / Albuquerque, New Mexico 87197 / Telephone (505) 344-3542

UTAH STATE OFFICE			
June 29, 1979			
Rt.	Ctl.	Ink	Date
1	SD		
2		<i>[Signature]</i>	7/3
3			
Action:	<i>[Checkmark]</i>		
Info:			
Di. Info:			

State Director
Attention - Wilderness
Bureau of Land Management
University Club Bldg.
136 East South Temple
Salt Lake City, Utah 84111

Re: BLM initial wilderness inventory

Gentlemen:

It has come to our attention that one of your "roadless" areas covers mining claims owned by Ranchers and that roads (as defined by the Organic Act) do exist in such area. I enclose a map which clearly shows the location of the roads.

These roads are regularly maintained with bulldozers; they cut through bedrock; they have no grass in the center; and they are continuously used for purposes of uranium exploration and mining assessment work.

Should you require additional information, please contact either David Fitch or me at this office.

Very truly yours,

Very truly yours,

James M. Rosel
Attorney at Law

JMR:bbh
Enc.

INTENSIVE INVENTORY

RECOMMENDATION

UNIT NUMBER UT-050-253

UNIT NAME LONG CANYON

SIZE OF ORIGINAL UNIT _____ Acres.

SIZE OF WSA PROPOSAL _____ Acres.

RATIONALE FOR RECOMMENDATION: Long Canyon, while meeting both the size
and naturalness criteria, does not invite adequate opportunities for
outstanding solitude nor exhibit any exceptional recreational potential.
Therefore, no Wilderness Study Area recommendation is forthcoming
out of this inventory.

The Long Canyon bottom is free of any noticeable man-caused in-
trusions that might detract from the natural character of the area.
However, owing to the wide but not vast expanses within the unit,
lack of sufficient vegetative cover and general absence of outstanding
opportunities for solitude, the area falls short of the prerequisites.

STAFF SPECIALIST

DATE

WILDERNESS INVENTORY
WILDERNESS SUMMARY SHEET

I. LOCATION

Inventory Unit Number UT-050-253Area Name: LONG-CANYONDistrict: Richfield State: Utah

II SUMMARY

A. Results of Wilderness Characteristics analysis.

1. Does the area appear natural? X Yes No
2. Does the area offer outstanding opportunities for solitude or a primitive or unconfined type of recreation? Yes X No
3. Does the area meet any of the size requirements? X Yes No
4. Does the area have supplemental values? Yes X No

B. Resulting Map.

Attach a map showing inventory unit, roads, area with possibility of returning to a natural state, recommended boundary of wilderness study area (WSA).

III. RECOMMENDATION

Check one:

- Area should be approved as a WSA.
X Area does not qualify for wilderness study.
 A portion of the area(s) should be approved as a WSA for further study and reported to the President. The restrictions imposed by Section 603 will no longer apply (reference map) on the remainder of the area.

IV. APPROVAL

A. District Manager: *Donald E. Hamilton* 03/31/80
DateB. State Director: *Gay J. Wick* MAR 31 1980
Date

WILDERNESS INVENTORY
SITUATION EVALUATION

I. WILDERNESS UNIT IDENTIFICATION

Area/Island Name (if available): _____

Inventory Unit No.: _____ UT-050-254

State _____ UTAH _____ District _____ RICHFIELD

II. UNIT ANALYSIS

Describe the following applicable factors in a concise narrative; use additional sheets if necessary; supplement with photographs.

A. Ownership

This roadless unit contains 21,140 acres of public lands, and 1,670 acres of state lands.

B. Size of unit or number and size estimates of multiple units.

The total acreage within this roadless unit is 22, 810 acres.

C. Easements

(known

D. Leases

This unit is within the Rockies grazing allotment.

E. Mining Claims

A mining claim search has not been made, however, uranium claims are known to have been filed within the unit. Mineral exploration has been conducted, and test holes drilled in the past.

F. Permanent improvements

Several reservoirs and stock watering facilities have been constructed within the unit. *A pumphouse exists at Cane Springs.*

G. Existing uses

The primary use of this unit is for livestock grazing.

H. Human Activity

Most human activity is related to grazing operations. Some recreation related activities occur seasonally in the form of off-roading, rock-hounding, and desert exploration.

I. Land treatment/manipulations

None

J. General vegetation and topographic features

The unit is generally sparsely vegetated with desert type shrubs and grasses. It is mostly flat to gently sloping, and cut with many dry washes and small ravines.

K. Contiguous lands

This unit is contiguous to Glen Canyon NRA on the south and east. None of the adjacent NPS lands have been proposed for wilderness designation by the National Park Service.

List sources of information utilized:

Aerial photos
Land Plats
Richfield District Resources Staff

"Wilderness Proposal - Glen Canyon NRA" - 1976

I. UNIT EVALUATION

A. Select one of the following:

1. The area appears to have potential for further wilderness consideration.
- ☒ 2. The area obviously and clearly does not have potential for wilderness.
3. Part of the area appears to have potential for further wilderness consideration, the remainder clearly does not. (see map on map overlay).

RATIONALE FOR THE ABOVE SELECTION:

This unit is heavily intruded by roads, roadways, reservoirs, and stock watering facilities. The relative flatness and sparseness of vegetation of the unit greatly reduces the opportunity for solitude or a primitive and unconfined type of recreation.

- B. Is area or island of sufficient size? Yes, the unit contains over 20,000 acres of public lands.
- C. Is there enough public support for intensive wilderness inventory of the area or island or any part.

None known

IV. UNIT RECOMMENDATION

A. Area or island (or grouping) is recommended for intensive wilderness inventory.

B. Area or island (or grouping) is recommended as not qualifying for further inventory and should be dropped from the wilderness review process.

Robert W. Hunt
Team Member

2/23/79
Date

Team Member

Date

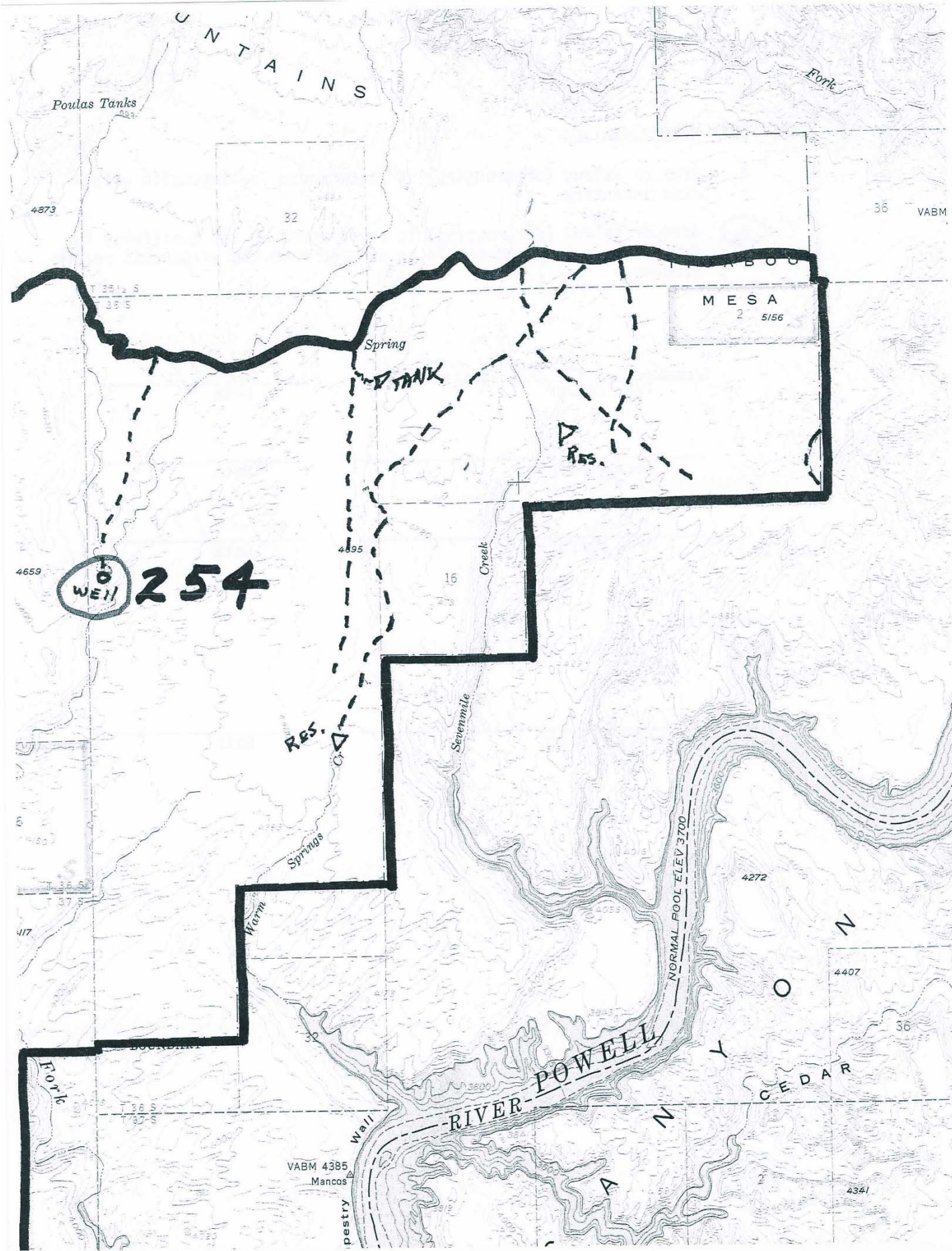
Tommy L. L.
Area Manager

2/26/79
Date

V. APPROVAL

District Manager

Date



APPENDIX A4.4.2 Visual Resource/Scenery Management

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, manuals, visitor use surveys, and management plans, Appendix A3.4 Transportation, Appendix A4.2.5 Wilderness, federal and local wilderness recommendations, County ROS analysis, federal guidance, directives, orders, inventories, studies documentation, and analysis regarding visual resources, County Outstandingly Remarkable / Relevant-Important criteria, and the County Land Use Management Policy are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.4.3 No Surface Disturbance Lands

Existing Federal, State and Local enabling legislation, statutes, laws, ordinances, regulations, manuals, visitor use surveys, and management plans, Appendix A3.4 Transportation, Appendix A4.2.5 Wilderness, federal and local wilderness recommendations, County ROS analysis, federal and state guidance, directives, orders, inventories, studies documentation, and analysis, County Outstandingly Remarkable / Relevant-Important criteria, and the County Land Use Management Policy are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A4.4.4 Special Protective Orders

Existing Federal, State and Local statutes, laws, ordinances and regulations are incorporated by reference. Additional information may be added as Plan Maintenance without public comment.

APPENDIX A5.1a

ROS

The ROS Synopsis extracted from U.S. Department of Agriculture, U.S. Forest Service General Technical Report PNW-98 December 1979 Planning, Management, and Research by Roger N. Clark and George H. Stankey.

INTRODUCTION

Today, many agencies at Federal, State, and local levels are responding to the burgeoning demand for outdoor recreation. In addition, many private firms offer facilities and services for recreation, such as campgrounds, computerized reservation systems, and equipment rentals. Along with the expansion in the demand for recreation services, a number of complex policy issues have also surfaced. What range and mix of opportunities should be provided and what are the roles of the various suppliers? Who can most effectively and efficiently serve the public's needs at national, regional, and local levels? In this section we describe a framework for outdoor recreation managers and policymakers who must answer questions concerning both the allocation and management of opportunities for recreation. This framework rests on the concept of the Recreation Opportunity Spectrum (ROS). It is distinguished by varying conditions, ranging from modern and developed to primitive and undeveloped, or as Nash (1973) succinctly phrased it, "formats the paved to the primeval." We will review the background of the recreation opportunity spectrum concept and how it has been used in the past; describe six manageable factors or setting attributes that influence the opportunities for recreation; and describe uses of the spectrum concept for identifying and measuring the consequences of alternative allocations of and management actions on opportunities for outdoor recreation. This document will focus on the setting in which recreation occurs when considering opportunities for outdoor recreation. People must make choices about activities in which to engage, settings in which to recreate, and kinds of recreation experiences to seek. We believe that, by describing the factors that influence or define the range of possible settings and by communicating this information to recreationists, they will be able to choose the experiences they desire. We define a recreation opportunity setting as the combination of physical, biological, social, and managerial conditions that give value to a place. Thus, an opportunity includes qualities provided by nature (vegetation, landscape, topography, and scenery), qualities associated with recreational uses, and conditions provided by management (developments, roads, regulations). By combining variations of these qualities and conditions, management can provide a variety of opportunities for recreationists.

Recreation opportunity setting is simply a choice for recreationists. People must be aware of the opportunities, and the opportunities must be comprised of conditions desired by recreationists. Thus, opportunities are a function of user preference and a product of management actions designed to provide desired settings and to make people aware of their existence. We recognize that the recreational value of an opportunity is a function of the perceived ability of that opportunity to provide certain activities and experiences. Our definition focuses on the social, physical, and managerial attributes of settings, not on the psychological values that may be derived. The link between the setting and experiences or "psychological outcomes" is an issue to which we will turn shortly.

The basic concept underlying ROS is not new. Many authors have remarked that a range or continuum of opportunities is needed to efficiently serve diverse public tastes for recreation. All of these continua are characterized by a range of conditions from modern to primitive. The spectrum concept is also reflected in a variety of land management descriptions. A basic recommendation of the Outdoor Recreation Resources Review Commission (1962) was for classification of recreational resources along "a spectrum from areas suitable for high-density use to sparsely used extensive primitive areas." To

implement terms of the National Forest Management Act (NFMA,) the USDA Forest Service published draft regulations that note, “a broad spectrum of dispersed and developed recreation opportunities . . . will be provided through the provisions of this spectrum, land management planners will best be able to offer the diversity deemed so important by NFMA.” To develop operational guidelines for the implementation of the ROS, the USDA Forest Service established a task force of managers and researchers.

The task called for providing a broad spectrum of dispersed and developed recreational opportunities. Those five opportunities provided recreation experience levels, ranging from those offering challenges, solitude, and demanding high skills to those involving extensive facilities and few skills. It recognizes six types of outdoor recreation settings ranging from Class I (high density recreation areas) to Class VI (historic and cultural sites). The International Scale of River Difficulty recognizes six classes of conditions, ranging from Class I (moving water with a few riffles and small waves, and no obstructions) to Class VI (nearly impossible, to very dangerous). The International Decimal System describes climbing skills ranging from Class 1.0 (hiking) to Class 5.0 to Class 5.11 (increasingly difficult to piton-protected climbing).

DIVERSITY AND QUALITY IN OUTDOOR RECREATION

The basic assumption underlying the ROS is that quality in outdoor recreation is best assured through the provision of a diverse set of opportunities. A wide range of tastes and preferences for recreational opportunities exists among the public and, as Wagar (1966) points out, “Quality seems to be a highly personalized matter.” Providing a wide range of settings varying in level of development, access, and so forth insures that the broadest segment of the public will find quality recreational experiences, both now and in the future. Wagner (1966) says, “There is importance in supplying diverse opportunities even for camping.” This generalization is true, even for specific categories of recreationists; not all campers, hikers, or wilderness users are alike. Building management programs around average tastes can greatly miss the mark, because often such averages are statistical phenomena that do not adequately account for the wide variation in tastes. The basic rationale underlying the outdoor recreation opportunity spectrum is that of providing diversity to assure quality outdoor recreation.

Diversity represents an important characteristic of any recreation system. Managing opportunities for recreation to promote a diversity of experiences is crucial for social equity (Watt 1972). Failing to provide diversity of opportunity invites charges of favoritism, elitism, and discrimination. Further, diversity insures the flexibility necessary to mitigate changes or disturbances in the recreation system. But diversity is only a means to an end. Quality recreation, producing desired satisfactions and benefits for participants, is the objective and concern of both managers and recreationists. But what is quality?

DEFINING OPPORTUNITY FACTORS

Four criteria were used to select factors that define the Recreation Opportunity Spectrum:

1. The factor is observable and measurable,
2. The factor is directly under management control,
3. The factor is related to recreationists’ preferences and affects their decisions about areas to use, and
4. The factor is characterized by a range of conditions.

When these criteria were applied to existing conceptions of the ROS, previous research on recreationists’ preferences, management experience, and state-of-the-art judgment, six factors emerged:

1. Access,

2. Other non-recreational resource uses,
3. On site management,
4. Social interaction,
5. Acceptability of visitor impacts, and
6. Acceptable level of regimentation, including, natural features (topography, scenery, water, wildlife, etc.),

which are important across the spectrum.

Also described are the endpoints of the opportunity spectrum described as modern to primitive. Other have used urban, developed, wild, natural, remote, etc. The labels are really unimportant and reflect authors' preferences rather than any conceptual difference.

Similarly, the term **Recreation Opportunity Spectrum**, refers to the 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:

1. Primitive,
2. Semi-Primitive Non-Motorized,
3. Semi-Primitive Motorized,
4. Roaded Natural,
5. Roaded Modified,
6. Rural, and
7. Urban

The Recreation Opportunity Spectrum analysis is a discretionary tool for managers. The analysis, in and of itself, is not a final decision.

APPENDIX A5.1b

ROS PRINCIPLES/ANALYSIS AND PROCEDURES

Garfield County's ROS analysis was developed using USDA Forest Service and BLM procedures. The Forest Service has detailed procedures and criteria for ROS analysis. The BLM has adopted, with the notable omission of the specific criteria, a photocopy of Forest Service procedures. National Park Service units have similar principles, but use a Visitor Experience Resource Protection (VERP) process. Garfield County's ROS analysis is consistent with requirements for the various agencies. Unless specifically directed by federal law, failure to comply with Garfield County's ROS analysis is inconsistent with the County Plan and a violation of local policy and federal procedures.

The Recreational Opportunity Spectrum, its uses and parameters, have been developed from a discussion by the U.S. Department of Agriculture, U.S. Forest Service General Technical Report PNW-98 December 1979 Planning, Management, and Research by Roger N. Clark and George H. Stankey.

Appendix A5.1a includes a synopsis of the report describing the necessities for understanding the uses and philosophies of the ROS system.

Consistent with Forest Service and BLM procedure, Garfield County has spent considerable time in developing an inventory using principles that depict the recreational opportunities in the County. It has also used the spectrum to help classify lands for other, non-recreational or consumptive uses.

Where the lands in the primitive and semi-primitive non-motorized categories are remote, have limited access, and meet criteria for outstanding opportunities for solitude and primitive recreation, they are identified for primitive, unconfined recreation, wilderness, and/or near wilderness. Designation of lands for non motorized recreation is limited to these areas until such time as visitor use exceeds acceptable limits and additional lands are approved by the Garfield County Commission.

In terms of visitor use, the following are acceptable guidelines for use numbers for the different Recreation Opportunity Spectrum categories.

MAXIMUM ACCEPTABLE VISITATION

<u>Category</u>	<u>Visitors/Square Mile/Day</u>	<u>Average Annual Visitor-Day/Acre</u>
Primitive	25	14
Semi-Primitive Non-Motorized	50	29
Semi-Primitive Motorized	100	57
Roaded Natural	200	114

Where visitor use volumes exceed acceptable limits, ROS categories may be altered to bring a particular area more in compliance with desired conditions, visitors may be directed to under utilized areas or, with approval from the County Commission, management techniques may be implemented to reduce visitation to acceptable levels. Prior to implementing management prescriptions, visitation figures shall be verified by actual field counts.

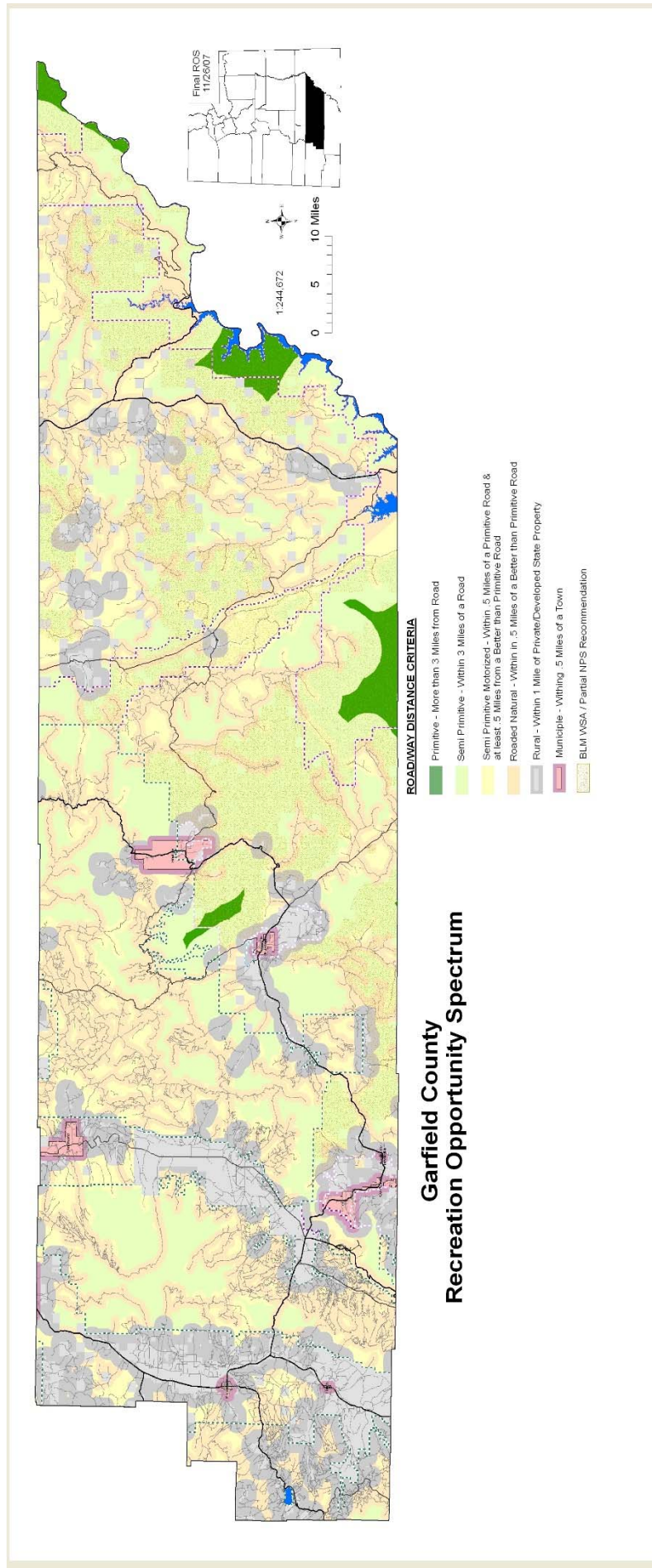
FINDINGS

The Recreation Opportunity Spectrum provides a framework for integrating recreational opportunities and non-recreational activities. The central notion of the spectrum is to offer recreation users alternative settings in which they can derive a variety of experiences. Because the management factors that give recreational value to a site are interdependent, management actions maintained consistency among the factors, so that unplanned or undesired changes in the opportunities do not occur. Focus was primarily on existing social conditions and technology, but technology and socioeconomic changes often produce impacts beyond the ability of managers to fully anticipate or control. Visitor use figures were evaluated using BLM Wilderness EIS data, Park Service Backcountry permit data, and Forest Service Visitor Surveys. Lands identified as Rec Ia and Rec Ib far exceed current and estimated future primitive recreation needs. Adequate resources also exist for semi primitive motorized and roaded natural experiences. A target value of 3% to 5% of the land reserved for cross country/open motorized recreation was also established.

Many recreational activities can be conducted in the midst of settings identified for other uses. Land use areas are not intended to prohibit recreational activities outside recreation oriented areas. The ROS identifies areas targeted for specific types of uses. Likewise, over time, primitive or semi-primitive non-motorized areas may become the subject of commodity production proposals. To the maximum extent allowed by law, commodity production should be allowed on lands identified for recreation purposes, particularly when such lands receive visitation below acceptable limits. Efforts should be made to conduct production activities in a manner which limits negative impacts to primitive settings where practical.

Land uses have been evaluated in detail, and the Management Areas Acceptability Table and VRM Management Acceptability Table describe uses for each area. The Garfield County Recreation Opportunity Spectrum Map graphically depicts the County's findings.

Garfield County considered a full range of alternatives when applying Forest Service/BLM procedures in developing the County ROS. A draft ROS was compared (for analysis purposes only) with similar maps prepared by primitive recreation interests and was found to be in reasonably close conformance. The ROS analysis is Garfield County's official position regarding ROS. The ROS analysis is embodied in the Garfield County Land Use Policy.



**APPENDIX A5.2
GARFIELD COUNTY
LAND USE MANAGEMENT
POLICY**

In order to provide for the health, safety, general welfare of the citizens of Garfield County, and to provide consistency across agency boundaries in the management of public and private lands, the Garfield County Commission hereby orders the adoption of the Garfield County Land Use Management Policy to implement the provisions of the General Plan of Garfield County adopted the 13th of March 1995 as amended, and to carry out the functions of local government as identified in the laws of the State of Utah.

WHEREAS, Garfield County is a unit of local government and a subdivision of the State of Utah; and

WHEREAS, pursuant to UCA 17-27, the County Commission is authorized to enact all ordinances, resolutions, and rules they consider necessary for the use and development of land within the County; and

WHEREAS, Garfield County is comprised of numerous Federal and State managed lands; and

WHEREAS, Federal and State land managers impact the prosperity and welfare of the County

WHEREAS, Garfield County has jurisdictional responsibilities across all agency boundaries in the County: and

WHEREAS, Garfield County desires to provide a definitive position on public land management issues.

**NOW THEREFORE, IT IS ORDERED BY THE GARFIELD COUNTY COMMISSION TO
HEREBY ADOPT THE LAND USE MANAGEMENT POLICY AS FOLLOWS:**

GARFIELD COUNTY LAND USE MANAGEMENT POLICY

An policy to regulate, by land use management areas, the acceptable, conditional, and unacceptable management practices and activities for various lands in Garfield County; and to provide consistency across agency boundaries for the enjoyment, use, and development of lands for trade, industry, recreation, or other purposes. The Board of County Commissioners in Garfield County adopts the following policy:

SECTION 1 GENERAL PROVISION

1.1 SHORT TITLE

This policy shall be known as the Garfield County Land Use Management Policy and may be so cited and pleaded.

1.2 PURPOSE

This policy is designed and enacted for the purpose of promoting the health, safety, morals, convenience, order, prosperity, and welfare of the present and future inhabitants and visitors of Garfield County Utah, including among other things, the preservation, conservation, enjoyment, use and management of public and private resources, management of public and private lands for the benefit and welfare of citizens and visitors of Garfield County, providing adequate natural resources, utilization and protection of the custom and culture, securing economy and consistency in governmental functions, fostering the County's commercial, industrial, recreational, cultural growth, and the protection of public and private lands.

1.3 INTERPRETATION

In interpreting and applying the provisions of this policy, the requirements contained herein are declared to be the minimum requirements as for the purposes set forth. Private entities and public agencies are bound to the maximum extent allowed by law to comply with the purposes and intent of this policy. Failure to do so is in violation of local law, is arbitrary and capricious and/or is inconsistent with the Garfield County General Management Plan.

1.4 CONFLICT

This policy shall not nullify more restrictive provisions, covenants, agreements, ordinances, or laws, but shall prevail - notwithstanding such provisions are less restrictive.

1.5 SEVERABILITY

If any section of this policy should, for any reason, be deemed to be invalid, by a court of competent jurisdiction, the remaining sections shall nevertheless be carried into effect.

1.6 DEFINITIONS

Unless the context requires otherwise, the following definitions shall be based on the interpretation and construction of this policy. Words using the present tense include the future; the singular number shall include the plural and the plural the singular. All definitions adopted in the General Management Plan and existing Ordinances are incorporated by reference.

1.7 COUNTY CONCURRENCE REQUIRED

The management of public and private lands shall be conducted with the concurrence of Garfield County. For private lands this shall occur through compliance with duly adopted zoning, subdivision and

building ordinances. For public lands, this shall occur through compliance with Garfield County's Land Use Management Policy, General Management Plan, Recreation Opportunity Spectrum, Transportation Plan, and through the proper public lands/ NEPA processes including opportunities for Garfield County to serve as a Cooperating or Joint Lead agency.

1.8 APPROVAL REQUIRED

For private lands, approval in the form required by Garfield County's zoning, subdivision, building and other ordinances is required. For public lands approvals shall be required in accordance with the Garfield County General Management Plan and other applicable policies, regulations, laws and ordinances.

1.9 INSPECTION

Projects and plans shall be subject to appropriate inspection by Garfield County.

1.10 ENFORCEMENT

Garfield County shall enforce all the provisions of this policy, entering actions in the court when necessary, and failure to do so shall not legalize any violation of such provisions. The County Commission may, by resolution or ordinance, from time to time entrust the administration in this policy, in whole or in part, to any other officer of Garfield County without amendment to this policy. Any management, plan, implementation, project, or activity conducted contrary to the provisions of this policy and any use of land, contrary to the provisions of this policy shall be and the same is hereby declared to be unlawful. The County Attorney or other designated counsel shall, upon request the County Commission, at once commence action or proceedings for abatement, removal, or enjoyment thereof in a manner provided by law and take other steps and apply to such courts as may have jurisdiction to grant such relief as provided by law. The remedies provided for herein shall be cumulative and not exclusive.

1.11 PENALTIES

Any person, firm, corporation, or agency, whether as principal, agent, employees or otherwise, violating or causing or permitting the violation of the provisions of this policy shall be punishable in accordance with established law.

1.12 AMENDMENTS

The County Commission may from time to time amend the number, shape, boundaries, or classification of any management area, any regulation or any other provision of the Land Use Management Policy, but any such amendment shall not be made or become effective until at least thirty day notice and public hearing and unless the same shall have been proposed by or be first submitted to the Garfield County Public Lands Steering Committee for its recommendation, which shall be returned within 30 days. In the case of an application by a property owner, public agency, or interested party for an amendment, the County Public Lands Steering Committee and/or the Board County Commissioners, as a prerequisite to the consideration of such application, may require that such applicant, at the applicant's expense, furnish to the Commission and/or board tile evidence, in such form as the committee or board may determine, indicating the ownership of the property to be affected by the proposed amendment and the interest therein of the applicant, and may also require that notice of such proposed amendment be given to all parties claiming an interest in such property.

1.13 HEARING, PUBLICATION, AND NOTICED FOR AMENDMENT

Before adopting any such amendment the County Commission shall hold a public hearing thereon. At least 30 days notice of the time and place for the hearing shall be given in at least one publication of general circulation in the County.

1.14 LICENSING

All departments, officials and public employees of Garfield County, which are vested with duty or authority to issue permits or licenses shall conform to the provisions of this policy and shall issue no permit or license for uses, projects, activities, plans, or purposes where the same would be in conflict with the provisions of this policy and any such a permit or license if issued in conflict with the provision in this policy shall be null and void.

SECTION 2 PUBLIC LANDS STEERING COMMITTEE

2.1 STEERING COMMITTEE, NUMBER OF MEMBERS, & APPOINTMENT

This committee will represent a balance of County interests and will use the expertise and experience of County residents. It is anticipated that County residents are active public land users, who have educational and/or practical expertise. The Committee may also draw from particular agency expertise regarding such things as agency rules, policies and regulations. Representatives from public agencies may be ex officio members and will not be voting members of the committee.

The formal committee structure includes a chairperson, a vice-chairperson elected by the committee, and a secretary. While it is the intent to have all relevant issues addressed by the entire committee, ad-hoc task groups may be formed and “outside” specialists invited as needed.

The Garfield County Public Lands Committee may include, but not be limited to, representatives from:

General County Populace	Recreation Interest
Grazing	Mineral/Mining Industry
Farm Bureau	Oil and Gas Industry
Sportsman/Wildlife	Tourism
Timber Industry	Water Users
Environmental Community	
Elected Official/County Representatives	
<i>Ex-Officio Members</i>	
Bureau of Land Management	U.S. Forest Service
National Park Service	Utah Division of Wildlife
Sovereign Lands & Forestry	Utah Division of State Parks
State Institutional and Trust Lands	
Resource Conservation & Development	
Natural Resources Conservation Service	

The Garfield County Commission may also assign staff support as needed.

2.2 TERMS OF OFFICE

The term of appointed members of the Garfield County Public Lands Steering Committee shall be three(3) years, and until their respective successors have been appointed. Terms shall be staggered equally between 3 years.

2.10 APPEALS

All appeals shall be heard by the Garfield County Commission at a regularly scheduled public meeting. The decision of the County Commission shall be final.

SECTION 3 USES

3.1 ACCEPTABLE USES

Land use, plans, activities, and prescriptions shall be implemented in compliance with existing laws, policies, and regulations; and the purposes and intent of this policy.

3.2 CONDITIONAL USES

Some land uses, plans, activities, and prescriptions that are special circumstances may, with Garfield County approval, be suitable for a specific management area.

3.3 UNACCEPTABLE USES

Those land uses, plans, activities, and prescriptions that are incompatible or inconsistent with the purpose and intent of this policy are unacceptable and shall not be implemented.

SECTION 4 LAND USE MANAGEMENT AREAS

4.1 RECREATION 1A (REC 1A) - WILDERNESS

Management emphasis is to provide for the protection and perpetuation of the natural biophysical conditions. Solitude and low level of encounters with other users or evidence of past use is not a part of this setting. Human travel is exclusively cross-country. These areas are primeval in nature, and man's impact is nonexistent. These areas are untrammelled by and unaffected by man's activities. They are roadless, wayless, and do not contain the imprint of man in the form of trails or evidence. They are free from exotic, non native species introduced by man. Campsites are unnoticeable, and evidence showing repeated use is beyond the limits of this area. Leave no trace principles are held to the highest standard. All resource management activities are integrated in such a way that human use leaves no evidence of man's passing. Areas with evidence of unacceptable levels of past use are rehabilitated and the affected area is restored, are removed from this management area or are reclassified to an acceptable management area. Management as Rec 1a is only suitable for lands classified in the Garfield County ROS analysis as primitive or semi primitive non-motorized and in accordance with the Garfield County Commission recommendation for wilderness. Livestock distribution and stocking rates are managed to be compatible with range land health. Visual resources are managed for retention / VRM Class I.

4.2 RECREATION 1B (REC 1B) - PRIMITIVE/SEMI PRIMITIVE NON-MOTORIZED/ NEAR WILDERNESS

This setting is characterized as having few or subtle changes by man, and with a high probability of isolation from the sights and sounds of man. Management emphasis is primarily for primitive and semi primitive non-motorized recreation opportunities. However, these areas may contain activities, impacts, and characteristics common to other management areas. The management setting provides a special kind of outdoor experience, one dependent on perception of remoteness. Visual resources are generally

managed so that management activities are not evident or remain visually subordinate. Past management activities such as historical changes caused by early mining, logging and ranching may be present, which are not visually subordinate but appear to have evolved to their present state through natural processes. Landscape rehabilitation is used to restore landscapes to desirable visual quality, including removal of undesirable species introduced by man. Enhancement aimed at increasing positive elements of the landscape to improve visual variety and the recreational experience is also used. Livestock distribution and stocking rates are managed to be compatible with range land health, and timber resources are managed using both commercial and noncommercial methods. Silva cultural prescriptions are designed to maintain the visual quality objective of partial retention with a VRM Class of II or III. Management as Rec Ib is only suitable for lands classified in the Garfield County ROS analysis as primitive or semi primitive non motorized and in accordance with Garfield County's requirements.

4.3 RECREATION II (REC II) - SEMI PRIMITIVE MOTORIZED / ROADED NATURAL

Motorized and non motorized recreation activities such as driving for pleasure, viewing scenery, picnicking, fishing, snowmobile riding, and cross country skiing are possible. Conventional use of highway type vehicles is provided for in design and construction of facilities. Motorized travel may be restricted to designated routes to protect the physical and biological resources. Visual resources are managed so that management activities maintain or improve the quality of recreation opportunities. Management activities are not evident, remained visually subordinate, or may be dominant, but harmonize and blend with the natural setting. Landscape rehabilitation is used to restore landscapes to a desirable visual quality. Enhancement aimed at increasing positive elements of the landscape to improve visual variety is also used. Dispersed recreation is only lightly managed, and management prescriptions are generally limited to situations necessary to maintain ecological stability and visual objectives of the management area. Livestock grazing is at a level that will ensure maintenance, vigor and regeneration capacity of riparian plant communities. Livestock grazing is also conducted to a level that will maintain range land health. These lands are generally managed for VRM Class III. Timber resources are managed using both commercial and noncommercial methods. Silva cultural prescriptions should be designed to maintain a visual quality objective of partial retention, enhance long-term visual quality diversity, and provide for insect and disease control. Eradication of noxious weeds and control of undesirable invasive plants is conducted using integrated weed management practices with a full range of alternatives. Local and collector roads may be constructed for non recreation purposes to a standard compatible with a roaded natural environment and located so they will not detract from the objective. Mineral and energy resource activities are generally compatible with the goals of this management prescription. Subject to appropriate stipulations, management scenarios may range from minor prescriptions to no surface occupancy based on resource protection needs and existing law. Soil, vegetation, riparian, water, range improvements, and other projects are compatible if it can be demonstrated that long-term impacts do not affect or are beneficial to the recreational experience.

4.4 RECREATION III (REC III) - DEVELOPED RECREATION/RECREATION SITES

Management emphasis is for developed recreation in existing and proposed campgrounds, open OHV areas, picnic grounds, trail heads, visitor information centers, summer home groups, along roads, and in other areas frequented by visitors to Garfield County and the traveling public. Developed sites are managed to maintain site attractiveness and fulfill the purposes for which they were developed. Facility such as roads, trails, toilets, signs, etc. may be dominant, but harmonize and blend with the natural setting. Livestock grazing is generally excluded from developed sites but may be present in

undeveloped areas.

Livestock distribution and stocking rates are managed to be compatible with range land health. Management integrates recreational activities, development, and use with other resource management to provide healthy tree stands, vegetative diversity, forage production for wildlife and livestock, and opportunities for motorized recreation. Visual resources are managed so the character is one of natural areas interspersed with openings of varying widths, shapes, and varying degrees of development. Facilities may dominate, especially along roadways, but in less developed areas facilities harmonize and blend with the natural setting. Timber resources are managed using both commercial and noncommercial methods. Silva cultural prescriptions are designed to maintain a quality objective of partial retention, enhance long-term visual quality/diversity, and provide for insect and disease control. Mineral and energy resource activities are generally compatible with the undeveloped portions of this area. Management prescriptions of minor constraints may be applied to undeveloped areas. In developed areas, mining and energy development would be limited to no surface occupancy or the sites would be withdrawn from locatable mineral entry.

4.5 MULTIPLE USE SUSTAINED YIELD (MUSY)

This area contemplates the management of lands so they are utilized in a combination that will best meet the needs of the people. “Sustained Yield” means maintenance in perpetuity of a high-level annual or regular periodic output of various renewable resources without impairment of the productivity of the land. Multiple use lands consider combining a variety of uses at the same period of time on the same land. These lands are established to maximize uses without giving preference of one use over another. Visual resources are managed only to a minimum level so that activities and uses can be unencumbered. Management activities may be evident and visually dominant. Man’s activities may also be evident and dominant on the landscape. Livestock grazing is at a level that will assure maintenance of the vigor and the regeneration capacity of the land and to maintain range land health. Visual resources are generally managed at Class IV levels. In specific instances more restrictive classifications may be approved by the County. No particular resource use or activity takes precedence over other uses or activities in multiple use areas. Uses are balanced and managed to provide the greatest benefit for all. Management scenarios which give preference to specific uses are identified in other management areas. ROS setting for this areas may be any one of the settings from primitive to urban.

4.6 COMMODITY PRODUCTION/DEVELOPMENT (CP/DEV)

These areas are where products can be produced from a parcel of land or the land can be developed in some fashion. These products may include, but are not limited to, natural resources, timber, grazing, mining, mineral, and energy production or other surface disturbing activities. Commodity Production/Development lands have been sub categorized as categories of general, forestry, forage, mining, and energy.

General - Commodity production development of natural resources and natural resource base industries, and general development of the land take priority over other uses. Natural resources are given equal weight in relation to each other. No emphasis is given to one particular commodity production over another. Private lands are subject to zoning, subdivision, and building ordinances duly adopted by Garfield County. Public lands are subject to the Land Use Management Policy. These lands are generally managed for VRM Class IV and Recreation Opportunity Spectrum Classifications are irrelevant since commodity production and development take precedence. Lands administered by the State Institutional Trust Lands Administration are classified in this category. This is a result of the

constitutional fiduciary duty SITLA has to maximize benefit to the beneficiaries.

Forestry - Management emphasis is on wood fiber production and utilization of large round wood of a size and quality suitable for saw timber. It is desired that areas generally will have a mosaic of fully stocked stands that follow natural patterns and avoid straight lines and geometric shapes. Management activities may be evident and visually dominant along arterial and collector roads and primary trails. After harvesting operations, management activities may dominate in the fore ground, middle ground, and back ground with out harmonizing or blending in with the natural setting. All levels of recreation opportunities may be provided. However, they are subordinate to the timber development and harvesting function. Visual resource management in this area is Class IV, and the setting will be dependent on the cycle of timber harvest. Best management practices for grazing, wildlife habitat, riparian management, and other resource-based uses are implemented.

Forage - This area is managed for livestock grazing. Intensive grazing management systems are generally favored over extensive systems. Range condition is maintained through the use of forage improvement practices, livestock management, regulation of other resource activities, and adaptive management. Periodic heavy forage utilization may occur. Investment in structural and non-structural range improvements to increase forage utilization is moderate to high. Structural improvements benefit or at least do not adversely affect wildlife. Conflict between livestock and wildlife are resolved in favor of livestock. Non-structural restoration and forage improvement practices include, but are not limited to, seeding, planting, burning, fertilizing, pitting, furrowing, spraying, crushing, and plowing. Cutting of encroaching trees may also occur. Mining, energy, and timber production may also occur in this area if it can be accomplished without significant detriment to grazing. New roads, which do not cause significant detriment to the resource or that are used to enhance grazing opportunities, are permitted in the area. Existing access and recreation are managed to prevent unacceptable stress on livestock. Activities in this zone are conducted in concurrence with principles of range land health.

Mining - This area is managed for mining activities. Mining operations are favored over other commodity production activities. Best management practices are implemented to reduce detrimental impacts to other uses. Mining areas will be reclaimed upon completion of use. VRM management will generally be Class IV. Roads, trails, and recreation is permitted as long as it does not negatively impact mining operations.

Energy - This area is managed for energy activities. Energy operations are favored over other commodity production activities. Best management practices are implemented to reduce detrimental impacts to other uses. Energy areas will be reclaimed upon completion of use. VRM management will generally be Class IV. Roads, trails, and recreation is permitted as long as it does not negatively impact energy operations.

Other Resources - Other resources including fish, water, riparian management, wildlife and wildlife habitat management, soil, vegetation, erosion control, wild and scenic rivers, areas of critical environmental concern, and rights-of-way impact all areas throughout the County. Generally, these impacts are specific in nature and require site specific analysis and implementation procedures.

Implementation of special stipulations, management, procedures, and activities - These techniques are site dependent, and management scenarios will be evaluated as part of land planning processes and as

needed by Garfield County. These techniques will be managed on a case-by-case basis, and will be considered in programmatic planning efforts by Garfield County.

4.7 APPLICATION

An Area Management Acceptability Table, Land Use Management Area Map, VRM Management Acceptability Table, and Visual Resource Management Map have been adopted to implement the Garfield County Land Use Management Policy.

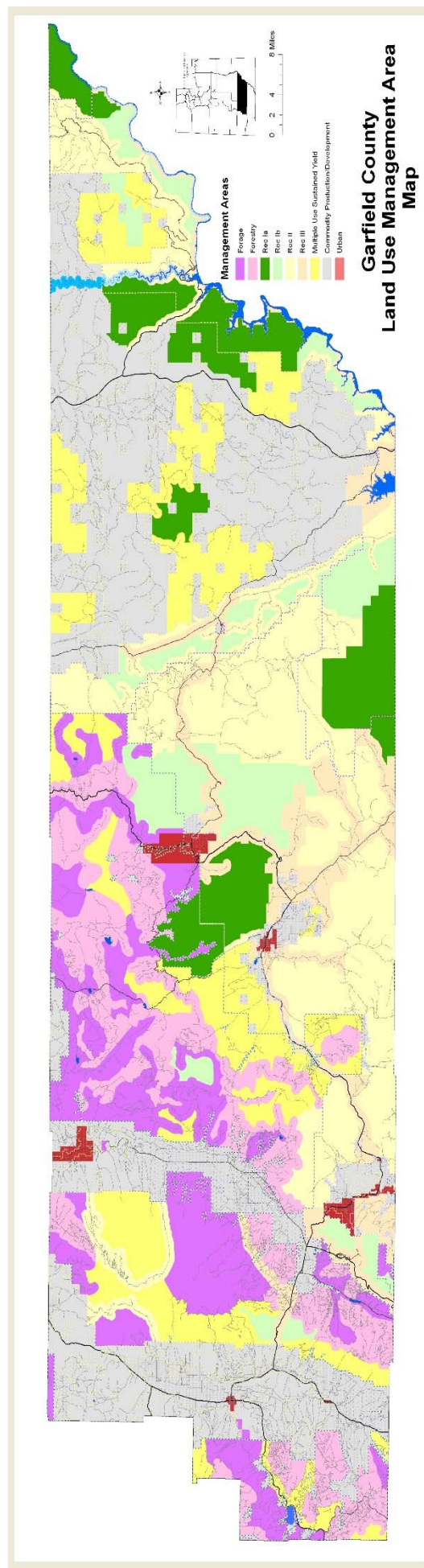
Area Management Acceptability Table

ACTIVITIES	MANAGEMENT AREAS									
Rec Ia	A	C	U	U	U	U	U	C	U	U
Rec Ib	C	A	C	C	C	U	C	C	C	C
Rec II	U	C	A	A	C	A	A	A	A	A
Rec III	U	C	C	A	C	A	A	A	A	A
MU/SY	U	C	C	C	A	C	C	C	C	C
Forestry	U	C	C	C	A	A	A	A	A	A
Veg	U	C	C	C	A	A	A	A	C	C
Mining	U	C	C	C	C	A	C	C	A	A
Energy	U	C	C	C	C	A	C	C	A	A
Fish Water Riparian	U	C	C	C	A	C	A	A	C	C
Wildlife	U	C	C	C	A	C	C	C	C	C
Soil Land Veg	U	C	C	C	A	C	C	A	C	C
WSR	C	C	C	C	C	C	C	C	C	C
ACEC	U	C	C	C	C	C	C	C	C	C
Grazing	A	A	A	C	A	A	A	A	A	A
Rights of Way	U	C	C	C	A	A	C	C	A	A

A – refers to those actions that would be allowed within a management zone

C – refers to those actions that are allowed on a conditional basis, such as a permit

U – refers to those actions that are unacceptable uses in a management zone



VRM Management Acceptability Table

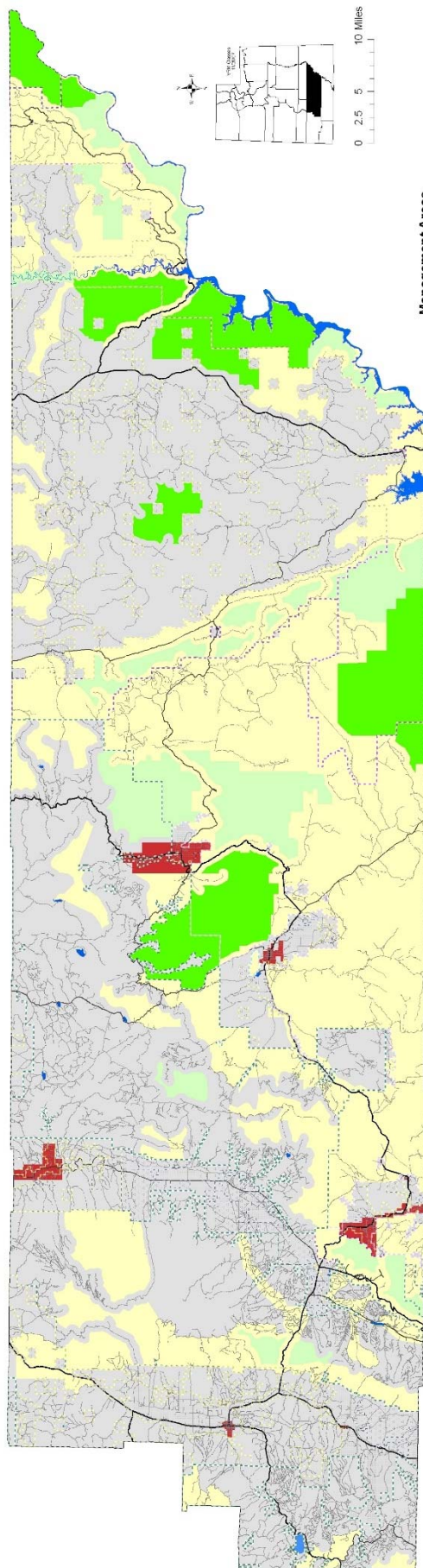
	DESIRED CLASS	I	II	III	IV
Rec Ia	I	A	U	U	U
Rec Ib	II	U	A	A	U
Rec II	III	U	C	A	C
Rec III	III	U	U	A	A
MU / SY	IV	U	U	C	A
CP / Dev	IV	U	U	C	A
Forestry	IV	U	U	C	A
Vegetation	IV	U	C	A	A
Mining	IV	U	U	C	A
Energy	IV	U	U	C	A
Fish, Water, Riparian	IV	U	C	C	A
Wildlife	IV	U	C	C	A
Soil, Land, Vegetation	IV	U	U	C	A
WSR	II – III	C	C	C	C
ACEC	II – III	C	C	C	C
Grazing	III – IV	A	A	A	A
Rights of Way	IV	U	C	A	A

A = Acceptable
C = Conditional
U = Unacceptable

4.8 EFFECTIVE DATE of this Policy shall take effect THIRTY (30) days after its passage or TWENTY (20) days after its publication, whichever comes first. The effective date shall apply for all management actions which have a final record of decision (or equivalent) signed after the effective date.

For management actions that have a final record of decision (or equivalent) signed prior to the effective date, the effective date shall be:

- (1) The initiation of a new planning process (programmatic, implementation, or project level) that includes management actions that are impacted by the Policy.
- (2) The recommended review/revision date established by agency regulation, policy or guideline.
- (3) January 1, 2012.
- (4) Whichever is comes first.

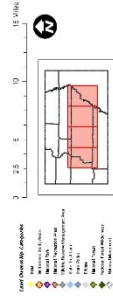


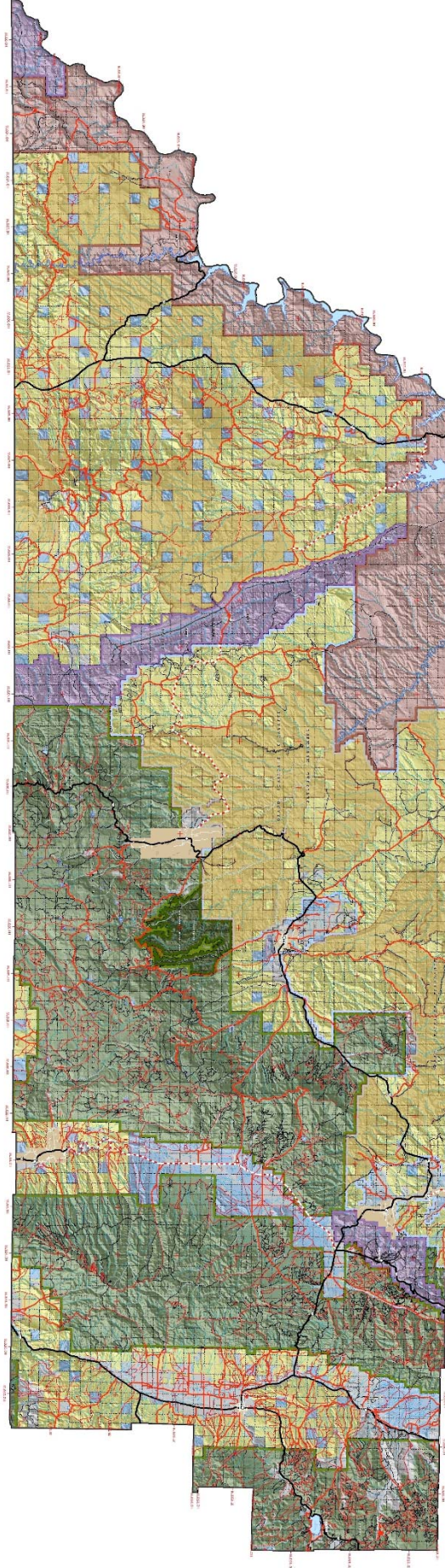
Garfield County Visual Resource Management Map

Management Areas	
VRM Class	Value
I	Very High
II	High
III	Moderate
IV	Low
Municipalities	
Objective	
Preserve	
Retain	
Partially Retain/Modify	
Modify	

**GARFIELD COUNTY
TRANSPORTATION
MAP
12/2007**

This is a detailed transportation map of Garfield County, Colorado, dated December 2007. The map displays a complex network of roads, including major highways (Interstates 70 and 130, and State Routes 163, 124, 143, 149, 157, 158, 159, 160, 161, 162, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953





Garfield County OHV Ordinance Map

Revised 04/09/07