insert adoption ordinance
# TABLE of CONTENTS

1 RESOURCE MANAGEMENT PLAN INTRODUCTION ................................................................. 5
2 AGRICULTURE .................................................................................................................. 7
3 AIR QUALITY .................................................................................................................... 9
4 CULTURAL, HISTORICAL, GEOLOGICAL, and PALEONTOLOGICAL RESOURCES ........ 11
5 DITCHES, CANALS, and PIPELINES ............................................................................. 15
6 ENERGY ........................................................................................................................... 17
7 FIRE MANAGEMENT ....................................................................................................... 21
8 FISHERIES ..................................................................................................................... 23
9 FLOODPLAINS and RIVER TERRACES ......................................................................... 25
10 FOREST MANAGEMENT ............................................................................................... 27
11 IRRIGATION .................................................................................................................. 30
12 LAND ACCESS ............................................................................................................. 32
13 LAND USE POLICY ....................................................................................................... 34
14 LAW ENFORCEMENT ................................................................................................... 36
15 LIVESTOCK + GRAZING .............................................................................................. 38
16 MINING and MINERAL RESOURCES ........................................................................ 42
17 NOXIOUS WEEDS ........................................................................................................ 44
18 PREDATOR CONTROL ................................................................................................. 46
19 RECREATION + TOURISM .......................................................................................... 48
20 RIPARIAN AREAS ......................................................................................................... 51
21 THREATENED, ENDANGERED & SENSITIVE SPECIES ............................................ 53
22 WATER QUALITY + HYDROLOGY ............................................................................... 56
23 WATER RIGHTS ........................................................................................................... 59
24 WETLANDS ................................................................................................................... 60
25 WILD and SCENIC RIVERS ......................................................................................... 62
26 WILDERNESS ................................................................................................................ 64
27 WILDLIFE ..................................................................................................................... 67
28 RESOURCE MAPS ......................................................................................................... 69
29 ACKNOWLEDGEMENTS .............................................................................................. 70
1 RESOURCE MANAGEMENT PLAN INTRODUCTION

1.1 BACKGROUND AND PURPOSE
Utah State Statute provides for the development of county-level plans under Title 17-27a-401. 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.

Uintah County will continue to encourage the responsible use and development of its natural resources and support associated industries and businesses. Decisions affecting public land resource use and development directly impact the County. In this regard, it is in the County's interest, and their expectation, that federal and state resource management planning efforts provide the County with every opportunity to proactively participate in all relevant public land and resource planning processes.

Over 70 percent of the land within Uintah County is public land (defined herein as federal or state managed, non-private, non-Tribal properties). Due to the County's historical use of these lands and the accompanying resources, decisions made by public land agencies directly impact County residents and the economy. With respect to "public land management", the County continues to support "multiple-use" management practices, public-land resource use and development, and improved public and private access to and across public lands.

The abundance and availability of natural resources within the region provide a variety of economic development opportunities including, but not limited to, mineral extraction; gas, oil, oil shale and tar sands development; timber production; agriculture and grazing; tourism and outdoor recreation. Uintah County will continue to encourage the use and development of these resources and support associated industries and businesses. The County also supports the development of additional natural resources as they become available and as new technology is available.

Uintah County depends on the use and development of natural resources for economic stability. Decisions affecting public land resource use and development directly impact the County. In this regard, it is in the County’s interest that federal and state resource management plans provide better access to public land resources and allow resource exploration and development. In order to effectively articulate and protect their interests, the County will proactively participate in all relevant public land and resource planning processes.

It is expected that the Federal Agencies will follow the local policies found in the Unitah County Resource Management Plan 2017, in accordance with all applicable federal laws.

1.2 PLAN ORGANIZATION AND MAINTENANCE
In order to convey the County’s desired future conditions, each resource discussed in this plan includes:
1. Issue overview and definition
2. References to related resources
For this document to function as a valuable decision-making tool, it should be reviewed and amended as necessary to address County issues and interests as they develop. It is anticipated that future County planning efforts will expand on the "values and objectives" identified in the County’s General Plan. With respect to this purpose, County priorities and the issues facing the County will most likely change over time.

1.3 **CHAPTERS IN THE RESOURCE MANAGEMENT PLAN**
2.1 **OVERVIEW**

Agriculture is fundamental to establishing food security. Agriculture was not new to the western United States, but the intensity and scale of crop production significantly increased due to the demand created by the pioneer settlers. Crops including fruits, vegetables, and grains are all grown in Utah’s soils, though livestock feed crops make up much of the state’s production. Additionally, many materials used for technological purposes are derived from crops, such as building materials and medical supplies. Although Utah does not have as much agricultural production as other states, Utah’s agriculture contributes to the local, regional and national food security, as well as the economy.

2.2 **RELATED RESOURCES**

<table>
<thead>
<tr>
<th>Water rights</th>
<th>Land Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigation</td>
<td>Land Access</td>
</tr>
<tr>
<td>Canals &amp; Ditches</td>
<td>Livestock and Grazing</td>
</tr>
<tr>
<td>Noxious Weeds</td>
<td>Economic Considerations</td>
</tr>
<tr>
<td>Water Quality</td>
<td></td>
</tr>
</tbody>
</table>

2.3 **ECONOMIC CONSIDERATIONS**

- "Agricultural sales account for about $1.5 billion annually. Food growers, processors, and other agriculture related businesses employ more than 66,000 people and contribute approximately 14 percent to the State’s economy. Grocers are not included in these figures" (Utah Department of Agriculture and Food 2012).

2.4 **OBJECTIVES AND POLICIES**

a) Encourage the preservation of agricultural land. Balance this objective with a reasonable growth focused approach that recognizes the value of expanded residential and commercial development in the county.

b) Support current agricultural lands through educational, clerical, and financial assistance.

c) Stimulate community involvement in agriculture for cultural enrichment and public health.

d) Continue to allow access, and increase access to public lands for agricultural development in a manner that 1) satisfies local needs and provides for economical and environmentally sound agricultural practices; and 2) is consistent with, and complementary to, the Uintah Basin’s lifestyle, character, and economy.

e) Support and encourage the continuation of greenbelt for agricultural lands.

f) Adopt zoning ordinances that support agricultural land, while also reflecting a reasonable, growth-focused approach.

g) Establish incentives and guidelines to encourage the preservation of agricultural lands.

h) Support voluntary efforts initiated by agricultural landowners to create Agriculture Protection Areas covering their properties per state code (Utah Code Title 17/Chapter 41).
i) Encourage interested agricultural landowners to take advantage of voluntary tax incentives by placing agricultural conservation easements on property that they own and wish to keep in agriculture.

j) Continue to offer increased residential density as an incentive for developers to set aside irrigated agricultural land voluntarily and keep some of the property in agricultural production.

k) Support the programs that educate the public regarding the needs of agriculture, grazing, and ranching enterprises.

l) Recognize the unique and diverse agricultural areas and interests within the County.

m) Agricultural land use regulations should be tailored according to the specific objectives and needs of each area.

n) Maintain the County’s position that agricultural land uses remain the priority/primary land use within designated agricultural areas.
3 AIR QUALITY

3.1 OVERVIEW

“Air quality” is the degree to which the ambient air is pollution-free, measured by a number of indicators of pollution. Air pollutants are those substances present in ambient air that negatively affect human health and welfare, animal and plant life, property, and the enjoyment of life or use of property. Ambient pollutant concentrations result from interaction between meteorology and pollutant emissions.

3.2 RELATED RESOURCES

<table>
<thead>
<tr>
<th>Fire Management</th>
<th>Mineral Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>Land Use</td>
</tr>
<tr>
<td>Mining</td>
<td>Agriculture</td>
</tr>
</tbody>
</table>

3.3 ECONOMIC CONSIDERATIONS

- Economic consequences of poor air quality may include: Increased time away from work and health care costs. Decreased appeal of tourism. Deterring new businesses and industries from moving to the area. Increased operating expenses for all pollutant sources due to pollution control measures as required by air quality management plans. Threat of additional federal regulation and potentially reduced highway funding. For these reasons, maintaining air quality is important to Uintah County.

3.4 OBJECTIVES AND POLICIES

a) Maintain or improve air quality to protect the health and well-being of county residents, and maintain or improve the desirability of the county as a place to visit and recreate.

b) Promote economic development without sacrificing local air quality. Air quality should be protected to prevent potential restrictions on future development.

c) Work cooperatively as full partners with other agencies and entities to identify baseline air quality for the Uintah Basin.

d) Work cooperatively as full partners with other agencies to establish an understanding of contributions from non-area emission sources.

e) Participate with regulatory authorities in determining air monitoring needs.

f) Cooperate with the Ute Tribe, EPA, the State of Utah and industry to create workable agreements to address air quality issues.

g) Continue to encourage and support research and studies to inform the decision-making process for better air quality.
h) Support research and improve knowledge of the wintertime O3 in the Uintah Basin, including understanding non-area emission sources.

i) Work cooperatively with other agencies to develop solutions to reduce the O3 problem based on research outcomes.

j) Support the implementation of developed solutions for O3 reductions.

k) Encourage industry to reduce VOCs and NOx to help address the O3 problem.

l) When possible, consider sponsoring air quality forecasting for winter months and sending alerts to companies when impaired air quality is likely to help reduce emissions.

m) Collect and disseminate information about low-emission technologies that could be used by industry, and encourage voluntary adoption of those technologies.

n) Encourage incentives to industry for the adoption of emission reduction technologies (e.g., awards, an unofficial certification program).

o) Implement county policies to maintain good air quality and to avoid nonattainment (hazardous days).

p) Publish county requirements online for local burning. Encourage all residents to follow the requirements (e.g., the clearing index), especially during winter inversions.

q) Only allow agricultural burning during times when atmospheric conditions will disperse smoke efficiently.

r) Assist local health departments in enforcing Utah Administrative Code R307-202 (Emission Standards: General Burning), which prohibits open burning at sites used for the disposal of community garbage and other waste, and prohibits a person from burning petroleum wastes, demolition or construction debris, residential rubbish, garbage, vegetation, wood, and other types of waste.

s) Educate county communities about air quality issues and what they can do to help (e.g., reduce idling).

t) Work with natural gas providers and developers to encourage the wider availability of natural gas so that it can be used to replace more polluting fuels.

u) Work with the local health department and regulators to address fugitive dust issues. Implement measures to reduce fugitive dust from roads, gravel pits, etc. Such measures could include water applications, chemical applications such as magnesium chloride, and covering truck loads.

v) Support programs that educate the public about fugitive dust and about ways to reduce fugitive dust emissions. Work to prevent degradation from non-area sources, after the sources are better understood.

w) Encouraging the expansion of natural gas infrastructure for heating homes, as an alternative to wood stoves. Residents switching to natural gas would ultimately reduce PM2.5 levels in the county.
4 CULTURAL, HISTORICAL, GEOLOGICAL, AND PALEONTOLOGICAL RESOURCES

4.1 OVERVIEW

Definition: Generally speaking, this refers to human and natural resources which have intrinsic value because of their age, anthropological, heritage, scientific or other intangible significance.

Cultural: of or relating to culture; societal concern for what is regarded as important in arts

Historic: of, or pertaining to, history or past events more than 50 years of age

Geological: the study of the Earth, its rocks, and their changes

Paleontological: includes the study of non-human fossils to determine organisms’ evolution and interactions with each other and their environments.

Cultural and historical resources are defined as the physical evidence or place of past human activity, such as a site, an object, a landscape, or a structure. Archaeological sites and historic built environments (such as buildings) are two of the most common types of cultural and historical resources.

Cultural and historical resources can be further defined as non-archaeological sites and non-structural sites (such as waterways, viewsheds, and resource procurement areas) that have been identified as important for traditional and/or ideological reasons by either Native American groups or other organizations with ancestral and/or present ties to an area.

4.2 RELATED RESOURCES

Recreation and Tourism
Land Use
Land Access
Energy
Law Enforcement
Mining
Mineral Resources

Energy
Air Quality
Water Quality and Hydrology
Agriculture
Livestock Grazing
Fire Management

4.3 ECONOMIC CONSIDERATIONS

- In 2014, Dinosaur National Monument reported 250,625 visitors, which was an 8.7% decrease from the previous year. However, in 2015 there were 291,800 visitors to Dinosaur National Monument. According to the NPS website, visitors in 2015 spent $17,079,100 in communities near the monument. This spending supported approximately 233 jobs in Uintah and Moffat counties.

- “During the first nine months of FY15, the Utah Field House Museum of Natural History State Park reported 29,435 visitors (remained flat), Red Fleet State Park reported 12,738 visitors (down 10%) and Steinaker State Park reported 13,741 visitors (remained flat)” (Leaver 2016).
• The value of cultural, historical, geological, and paleontological resources is difficult to quantify. However, there is intrinsic value to each resource for its contribution to the shaping of our current civilization, culture, economy, tourism and lifestyle. Cultural, historical, geological, and paleontological resources are often connected with tourism and recreation. For example, the Utah Geological Survey has created a GeoSites online interactive map to help people explore Utah’s geological sites.

• Historic buildings and districts provide character, a sense of stability, and a unique marketing angle for businesses; thus, community planners can draw upon local historic resources to stimulate economic development.

4.4 OBJECTIVES AND POLICIES

a) Preserve the significant cultural, historical, and paleontological heritage of the Uintah Basin.

b) Support the protection, and study, of significant cultural and historical resources that occur within the Uintah Basin, including the responsible stewardship of these resources through balancing resource protection with community values.

c) Provide for the protection of cultural, historical, and paleontological resources through management decisions that are based on the quality and significance of each individual resource.

d) Allow for public education, visitation opportunities, and site protection for cultural, historical, and paleontological resources (where appropriate).

e) Preserve and perpetuate the heritage and culture of the Uintah Basin for all communities.

f) Mitigate as practical all adverse effects to cultural, historical, and paleontological resources.

g) The county will participate in all management decisions regarding cultural, historical, and paleontological resources.

h) Where significant prehistoric and historic sites and scientifically important resources can be protected, consider developing them for education and tourism (where appropriate).

i) Manage potential adverse effects to significant and scientifically important cultural, historical, and paleontological resources to the extent possible through avoidance before other protections are considered (such as removal/excavation and mitigation).

j) All federal undertakings that could affect significant cultural values require, under NHPA, an archaeological review and inventory before they are implemented. Historic and cultural sites inventoried will be evaluated for significance by a qualified archaeologist in cooperation with the state historic preservation officer.

k) Additionally, state legislation such as Utah Code 9-8-401 states that "The Legislature determines and declares that the public has a vital interest in all antiquities, historic and prehistoric ruins, and historic sites, buildings, and objects which, when neglected, desecrated, destroyed or diminished in aesthetic value, result in an irreplaceable loss to the people of this state." Cultural and historical resources that have been evaluated and determined to be significant (such as those listed on the NRHP) will have special consideration.

l) In accordance with Utah Code 63J-8-104 (i) regarding state land use planning and management, federal lands shall be managed "so as to protect prehistoric rock art, three-dimensional structures, and other artifacts and sites recognized as culturally important and significant by the state historic preservation officer or each respective county by imposing reasonable and effective stipulations and conditions reached by agreement between the federal agency and the state authorized officer pursuant to the authority granted by the National Historic Preservation Act, 16 USC 470 et seq."
m) Federal and state agencies must not jeopardize private property rights or existing land uses, such as oil and gas exploration, mining, logging and harvesting of forest products, road maintenance, and grazing, through the protection of cultural and archaeological sites. This can be accomplished by carefully assessing the sensitivity and importance of the site relative to the economic and cultural impacts associated with land management decisions based around cultural and archaeological sites in the Uintah Basin.

n) Consider a historic preservation committee for the purpose of protecting cultural resources.

o) Establish a county register of cultural and heritage resources to discover and describe the nature of cultural resources. Assess and rank resources according to need relevant to preservation and enhancement.

p) Give priority to the retention and display of locally collected artifacts within the Uintah Basin.

q) In the case of natural and built forms upon the land, and in accordance with the protocols and rankings set forth above, measures to stabilize and enhance historic sites and objects shall be an ongoing objective of the county and its historic preservation committee.

r) Many of the cultural and historical sites in the Uintah Basin represent a unique culture and are closely related to early settlements of the area. They continue to have historical significance and are held by many residents as reverent or consecrated sites. Preserve these sites and keep them accessible.

s) Any alteration of landforms, waterways, closure of roads, and other such matters shall be carried out only after full consideration of each county's prehistoric and historical cultural heritage.

t) Develop mitigation measures and treatment options when it has been determined that a project will have an adverse effect on significant cultural and historical resources. Mitigation measures can range from preservation through avoidance to analysis and research through scientific study, although they should be project specific and tailored in such a way that each resource is specifically analyzed and dealt with.

u) Although this land use document addresses such issues as roadways and trails access, wildlife, water, timber and range use, it shall be referred to on all matters regarding the use of natural resources as part of cultural identity. Traditional ways of life such as harvesting cedar posts, running cattle on the open range, and agriculture shall be protected.

v) Preserve all remnants of prehistoric lifeforms, geological traces, and cultural elements in accordance with existing laws, and ensure that they remain within the county, either in appropriate museums or archives. These items shall be made available to the public in an appropriate setting of discovery and study.

w) Utah Code 79-3-501 through 79-3-510 state that paleontological resources are important and require the preservation of scientifically significant fossil resources on state lands. These code sections mandate that those removing or excavating critical fossils on state lands must be qualified and permitted under joint jurisdictional cooperation from the Utah Geological Survey, the Utah Museum of Natural History, and the State of Utah School and Institutional Trust Lands Administration. Additional state codes (Utah Code 53B-17-603, Utah Administrative Code R807-1) also require that important extracted fossils be curated by an approved and qualified institution. These mandates will be followed.

x) All scientifically important fossils found in the area should remain in each particular county. The County recognizes that vertebrate fossils may be collected from BLM–administered lands under a permit issued to qualified individuals and that such fossils remain the property of the federal government and must be placed in a suitable repository (such as a museum or university) identified at the time of permit issuance. Additionally, the County recognizes that all scientifically significant fossils collected on Utah state lands must be curated with the Natural History Museum of Utah. Recreational collectors may collect and retain reasonable amounts of common invertebrate and plant fossils for personal, non-commercial use. No vertebrate fossils or associated trace fossils such as tracks, eggs, etc. may be collected without a permit. Any fossils collected on non-federal lands belong to the landowner.
y) Management plans must provide the opportunity for amateur collectors and students of natural resource-related sciences to study, explore, and collect related items as provided by law.

z) Public land management agencies should promote these resources with educational material, signage, and information centers where appropriate.

aa) When designating locations for sites, trails and other public use spaces, consider the following for cultural, historical, and paleontological resources: physical location and non-tangible elements (such as its sense of place or historical value).

bb) The County will not support designations under the Antiquities Act unless it has been thoroughly vetted, and has local community support.
5 DITCHES, CANALS, AND PIPELINES

5.1 OVERVIEW

Ditches, canals, and pipelines are used to convey diverted water from the source to the location where its beneficial use is taken. The term "conveyance" is used to describe the movement of water from source to application. Water pipelines are used to convey water when open channels are not desirable or suitable, such as for drinking water.

5.2 RELATED RESOURCES

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Riparian Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Access</td>
<td>Fisheries</td>
</tr>
<tr>
<td>Livestock and Grazing</td>
<td>Recreation and Tourism</td>
</tr>
<tr>
<td>Irrigation</td>
<td>Wild and Scenic Rivers</td>
</tr>
<tr>
<td>Agriculture</td>
<td>Wildlife</td>
</tr>
<tr>
<td>Water Rights</td>
<td>Fire Management</td>
</tr>
<tr>
<td>Water Quality and Hydrology</td>
<td>Threatened, Endangered, and Sensitive Species</td>
</tr>
<tr>
<td>Wetlands</td>
<td></td>
</tr>
</tbody>
</table>

5.3 ECONOMIC CONSIDERATIONS

- Ditches, canals, and pipelines are essential to agriculture in Uintah County.
- Water deliveries are an essential component of agricultural production, and may also be relied upon for urban landscape watering and gardens. The shift from crop irrigation to landscape irrigation can help water rights holder maintain beneficial use and avoid forfeiture of water rights.
- Piped water and enhanced irrigation systems can improve efficiency, but increase cost. "Traditional irrigation methods, such as flood or furrow, use gravity to disperse water over a field. These methods have low costs of adoption, but are also relatively inefficient with water use. Modern technologies such as micro-sprinkler or drip irrigation have higher adoption costs, but deliver the water directly to the crop, applying water in a more precise fashion than traditional technologies" (Schoengold and Zilberman 2007).

5.4 OBJECTIVES AND POLICIES

a) Continue to allow access, and increase access to public lands for canals and ditches and agricultural development in a manner that 1) satisfies local needs and provides for economical and environmentally sound water conveyance practices; and 2) is consistent with, and complementary to, the Uintah Basin’s lifestyle, culture, and economy.

b) Support special service districts and canal companies in maintaining and obtaining access through public lands for necessary water conveyance needs.
c) Establish cooperative relationships with irrigation companies, maintain open communication, and assist with resolving public safety concerns, and to facilitate resolution of potential conveyance issues that have (or will) result from development.

d) Establish long-term plans for integrating urbanization, which coordinates historic and future use of water rights.

e) Encourage the development and implementation of the most efficient irrigation systems, and the best technologies towards that end.

f) Support the creation of a secondary water system to give residents an alternative to irrigating with culinary water.

g) Establish a flood-protection strategy, which identifies high-risk features or areas.

h) Encourage canal companies to provide updated mapping information, and/or having a central repository of canal infrastructure to help with planning.

i) If canals are relied upon for flood or stormwater management, the county should work closely with irrigation companies to help assure canal maintenance and flow capacity.

j) The County recognizes and will protect the existence of all legal canals, laterals, pipelines, or ditch rights-of-way.
6 ENERGY

6.1 OVERVIEW
In the context of this plan, "energy" refers to the renewable or nonrenewable resources used to obtain energy. Public and private utilities draw upon Utah’s renewable and nonrenewable resources to provide electricity and fuel (natural gas, propane, oil, gasoline, coal) energy supplies. Uintah County has a great deal of economic potential because of the presence of its energy supplies.

6.2 RELATED RESOURCES
- Mining
- Mineral Resources
- Cultural, Historical, Geological, and Paleontological
- Water Quality and Hydrology
- Water Rights
- Air Quality
- Land Use
- Land Access
- Wildlife

6.3 ECONOMIC CONSIDERATIONS
- The energy industry is vital to the Uintah County economy. (See the economic development section of the general plan).
- "Oil made the largest contribution to the value of Utah fuel production in 2014, with a value of $3.2 billion, which was about $265 million (9%) more than in 2013. About 96% of the oil produced in Utah during 2014 came from Duchesne, Uintah, San Juan, and Sevier Counties (in decreasing production order). The five largest producing oil fields in 2014, Monument Butte (Duchesne and Uintah), Altamont (Duchesne), Greater Aneth (San Juan), Bluebell (Duchesne and Uintah), and North Myton Bench (Duchesne), accounted for about 51% of Utah oil production" (Boden et al. 2014).
- "Deflating natural gas prices in 2014 and 2015 decreased production, while dropping oil prices significantly reduced development by most conventional and unconventional oil producers. Well-servicing and drilling companies experienced the most immediate impacts, resulting in job losses and reduced workloads. However, many producing companies continue to maintain some level of production and have positioned themselves to handle low prices" (Rural Planning Group 2015).
- Estimating the amount of oil and natural gas reserves within county boundaries can be difficult because plays are often uneven and extend under many borders. Additionally, as extraction technology improves, the amount of resources considered available will increase.
- "Natural gas made the second-largest contribution to the value of fuel commodities produced in Utah during 2014, with an estimated value of $2.4 billion (including natural gas liquids), a $245 million (12%) increase from 2013. About 96% of the gas produced in Utah during 2014 came from Uintah, Carbon, Duchesne, and San Juan Counties (in decreasing production order). The five largest producing gas fields in 2014 were Natural Buttes (Uintah), Drunkards Wash (Carbon), Brundage Canyon (Duchesne), Altamont (Duchesne), and Red Wash (Uintah). Together
they accounted for 73% of the 2014 gas production. Notably, production from Natural Buttes accounted for more than half (57%) of the gas produced in Utah during 2014” (Boden et al. 2014).

- “Employment directly related to energy produces earning at a rate almost twice that of other jobs in the state.” (Governor’s Office of Energy Development 2014).

- “Federal lands comprise a large share of Uintah County, which can at times be challenging for state and local officials. For example, in March 2013 the Department of the Interior drastically reduced the amount of federal land available for oil shale projects and oil sands leasing in Utah, Wyoming, and Colorado. Uintah County Commission Chairman Mike McKee expressed concern about the decision, saying, ‘It is a tragedy for our state ... Why would the federal government want to put a stranglehold on this when information shows it is energy-rich communities that are doing the best in this country?’” (Yonk and Simmons 2013).

### 6.4 OBJECTIVES AND POLICIES

a) Support balanced and responsible natural-resource development that benefits the public and generates revenues for public service providers to help pay for public infrastructure improvements needed to achieve economic diversity.


c) Maintain federal lands available for oil and gas leasing and development with least restrictive stipulations while considering the impacts to other public land resources and uses.

d) Avoid unnecessary federal rules associated with hydraulic fracturing and master leasing plans.

e) Withhold county support for mineral development provisions within federal land management plans until the appropriate land management plan and environmental impact statement clearly demonstrate the following:

- That the authorized planning agency has considered and evaluated the mineral and energy potential in all areas of the planning area as if the areas were open to mineral development under standard lease agreements.

- That a baseline is established from which the effect of management prescriptions can be analyzed and evaluated for its impact on the area’s baseline mineral and energy potential.

- That the development provisions do not unduly restrict access to public lands for energy exploration and development.

- That the authorized planning agency has supported any closure of additional areas to mineral leasing and development or any increase of acres subject to NSO restrictions by adhering to the relevant provisions of the Federal Land Policy and Management Act, 43 United States Code 1701 et seq.; other controlling mineral development laws; and the withdrawal and reporting procedures set forth in the Federal Land Policy and Management Act, 43 United States Code 1701 et seq.

- That the authorized planning agency has evaluated whether to repeal any moratorium that may exist on the issuance of additional mining patents and oil and gas leases.

f) Continue to support Utah Department of Transportation’s (UDOT’s) 2015–2040 Long-Range Transportation Plan (UDOT 2015). With energy development comes the need for sufficient transportation facilities to support the industries. This plan supports the widening of U.S. Highway 40 and the development of passing lanes in Duchesne and Uintah Counties.
g) Support infrastructure that conveys energy resources such as pipeline development (e.g., pipeline from the Uintah Basin to existing railroads).

h) Encourage projects that would allow for the transport of crude oil.

i) Utilize and encourage the development of technology that would increase the extractability of energy resources.

j) Eliminate or reduce the amount of federal agency approval requirements for development to simplify and encourage investment in the area.

k) Promote all forms of energy development including renewables.

l) Support and encourage the development of a local refinery.

m) For generating electricity for sale or for use on-site, support the development of wind and solar energy at large and small scales on public and private lands throughout the county. The county will establish policies, guidelines, and/or goals to support the development of wind and solar energy resources on public and private lands in the county.

n) Support the development of technologies that will further the development of the vast oil shale and tar sands resources in the Uintah Basin.

o) Support the continued regulation of oil and gas production, including hydraulic fracturing, by the State of Utah, and oppose efforts by the federal government, such as federal fracking rules, that add unnecessary layers of bureaucracy and increased costs to producers.

p) Promote the efficient use of natural resources and the conservation of energy.

q) Object to the cancellation or withdrawal of existing lease rights, and uphold existing lease rights, and the intent of the original lease terms without modification or cancellation.

r) Extractable resource development should occur with science-based reclamation practices and responsible land stewardship.

s) Cooperation between water user groups, energy development companies, land use agencies, and citizens to both protect water rights and ensure opportunities for needed energy development.

t) The County should be involved in any initiative, mitigation or compensatory mitigation programs or studies.

u) Promote energy development through education, coordination and pooling of lands for more efficient development and landowner participation.

v) Support analysis of all fiscal and economic impacts to the minerals industry and the county from any proposed land management changes or natural-resource related plans.

w) Support agencies in providing opportunities for mineral exploration and development under the mining and mineral leasing laws subject to legal requirements to protect other resource values.

x) Open all federal lands shown to have reasonable mineral potential leasing with stipulations and conditions that will analyze resource values.

y) Call upon the federal agencies who administer lands within the Uintah Basin Energy Zone Minerals Management Plan to do the following:

- Fully cooperate and coordinate with the county to develop, amend, and implement land and resource management plans and to implement management decisions that are consistent with the purposes, goals, and policies described in this plan to the maximum extent allowed under federal law.

- Expedite the processing, granting, and streamlining of mineral and energy leases and applications to drill, extract, and otherwise develop all existing energy and mineral resources located within the Uintah Basin.
Energy Zone, including oil, natural gas, oil sands, gilsonite, phosphate, gold, uranium, copper, solar, and wind resources.

- Allow continued maintenance and increased development of roads, power lines, pipeline infrastructure, and other utilities necessary to achieve the goals, purposes, and policies described in this section.
- Refrain from any planning decisions and management actions that will undermine, restrict, or diminish the goals, purposes, and policies for the Uintah Minerals Management Plan.

1. Refrain from implementing any policy that is contrary to the goals and purposes of the Uintah Minerals Management Plan.

The county calls upon U.S. Congress to establish an intergovernmental standing commission among federal, state, and local governments to guide and control planning decisions and management actions in the Uintah Basin Energy Zone in order to achieve and maintain the goals, purposes, and policies described in this resolution.

The decisions of the BLM Vernal ROD/RMP should remain in effect until they are amended so that projects are not held up for an undetermined amount of time while a decision is considered.

Support the State of Utah’s Conservation Plan for Greater Sage-grouse in Utah (Utah Division of Wildlife Resources 2013) as opposed to the BLM and U.S. Forest Service sage-grouse land use plan amendments.

Maintain open lands subject to moderate constraints and standard terms and conditions from the 2008 Vernal BLM Record of Decision.

Promote the development of infrastructure to more freely transport oil and gas raw or refined materials from the Uintah Basin to refineries and population centers.

Encourage the development of local refineries.

Support and encourage the domestic use of natural gas and natural gas delivery throughout the county.

Encourage open communication between well drillers and private landowners.

Ensure plug and abandoned sites are reclaimed in a timely and appropriate manner, utilizing native seeds to ensure erosion control. Ensure that county roads remain open for public access.

Promote the development of shale oil production technologies.
7 FIRE MANAGEMENT

7.1 OVERVIEW
Fire management refers to the principles and actions to control, extinguish, use, or influence fire for the protection or enhancement of resources as it pertains to wildlands. It involves a multiple-objective approach strategy including ecosystem restoration, community preparedness, and wildfire response.

7.2 RELATED RESOURCES
<table>
<thead>
<tr>
<th>Recreation &amp; Tourism</th>
<th>Noxious Weeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Use</td>
<td>Forest Management</td>
</tr>
<tr>
<td>Land Access</td>
<td>Livestock Grazing</td>
</tr>
<tr>
<td>Energy</td>
<td>Mineral Resources</td>
</tr>
<tr>
<td>Law Enforcement</td>
<td>Cultural, Historical, Geological and Paleontological Resources</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Threatened, Endangered and Sensitive Species</td>
</tr>
<tr>
<td>Water Quality &amp; Hydrology</td>
<td></td>
</tr>
<tr>
<td>Wildlife</td>
<td></td>
</tr>
</tbody>
</table>

7.3 ECONOMIC CONSIDERATIONS
- Wildfires come with serious costs; the cost of fire suppression is only a fraction of the true, total costs associated with a wildfire event. Some of the costs associated with wildfire suppression include the direct costs (resources lost and structures burned, etc.), rehabilitation costs (post-fire floods and land restoration), indirect costs (lost sales and county taxes), and additional costs (loss of life and damage to air quality). (Western Forestry Leadership Coalition 2009).

7.4 OBJECTIVES AND POLICIES
a) Use active and adaptive forest management to improve forest health and support multiple use and sustained yield with emphasis on employment, forest product production, open space, wildlife habitat, forage, recreation, and other social and economic benefits.
b) Encourage management of forest resources to reduce the risk of catastrophic fires, which cause unacceptable harm to resources and assets valued by society, including ecosystem and community health and resilience.
c) Encourage and support the expansion of the local forest product market at sustainable harvest levels.
d) Encourage the development of new markets for timber and forestry products that are available for harvest (e.g., use timber products for bracing in nearby coal mines or biofuels industry).
e) When sustainable and based on scientific knowledge and local data, increase grazing allotments, AUMs, or seasonal use to reduce fuel loads.
f) Identify and remove fire hazards on public lands.
g) Encourage State and Federal Land Managers to seek opportunities to use and harvest forest products that have been affected by wildfire or pests (e.g., beetle).

h) Encourage timely processing for National Environmental Policy Act projects associated with timber harvests so that economic benefits can be maximized.

i) Participate in the planning for and revision of USFS forest management plans and Bureau of Land Management resource management plans affecting forest management.

j) Encourage State and Federal Land Managers to open appropriate areas for commercial timber harvest.
8 FISHERIES

8.1 OVERVIEW
A fishery is an aquatic system that includes a target organism, a community of species on which that organism depends, the habitat in which they reside, and the humans that affect or utilize the resource within the ecosystem. In the context of this plan, “fisheries” are also the places where fish breed and live, or where people hunt for fish. The term also includes game and nongame fish species.

8.2 RELATED RESOURCES

<table>
<thead>
<tr>
<th>Canals &amp; Ditches</th>
<th>Water Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigation</td>
<td>Wetlands</td>
</tr>
<tr>
<td>Floodplains &amp; River Terraces</td>
<td>Wild &amp; Scenic Rivers</td>
</tr>
<tr>
<td>Riparian Areas</td>
<td>Wildlife</td>
</tr>
<tr>
<td>Water Quality &amp; Hydrology</td>
<td>Recreation &amp; Tourism</td>
</tr>
</tbody>
</table>

8.3 ECONOMIC CONSIDERATIONS

- “Recreational fishing provides a significant economic impact to the Utah economy and economic benefit to anglers” (Kim and Jakus [103]).
- “Economic impacts or contributions are based on anglers’ expenditures associated with the fishing trips. Expenditures affect the local and regional economy through the interrelationships among different sectors of the economy. Input-output (IO) analysis of expenditure patterns traces the effects “upstream” and “downstream” through the economy, resulting in the multiplier effects. The angler survey, conducted in the months of March, April and May of 2012, revealed that a typical angler spent $84 per trip on a fishing trip in Utah in 2011. Average expenditure to visit a BRF was estimated to be $90 per trip” (Kim and Jakus [103]).
- Fishing of over 78 species in Utah represents a significant sector of Utah’s tourism economy. Almost $400 million was spent in association with fishing, hunting, and wildlife appreciation activities in 1985 (Powell 1994).

8.4 OBJECTIVES AND POLICIES

a) Support the Maintenance, enhancement, and expansion of sport fishing opportunities.

b) Encourage the protection and preservation of water quality and fish habitat while balancing the needs of other water users, including those holding water rights.

c) Enhance public access to fishing opportunities.

d) Support policies that help prevent the spread of invasive species or diseases that negatively affect fish populations.

e) Support economic development associated with fishing, including private businesses and facilities.

f) Support and encourage public land management agencies to provide and maintain sufficient opportunities for fishing on public lands through participation in planning efforts.
g) Support DWR’s efforts to educate the recreating public about preventing the spread of aquatic invasive species and diseases.

h) Support efforts to protect water quality and the quality of the associated fisheries.

i) Support efforts to improve fish habitats while balancing the rights of adjacent landowners and holders of water rights.

j) Support tourism and associated businesses and commercial enterprises that are supported by local fisheries such as destination resorts and guide services.

k) Promote land uses that are compatible with maintaining healthy fisheries on lands adjacent to fish bearing streams, lakes, and reservoirs.

l) Continue coordination between the county and federal land management agencies on treatments, such as rotenone.
9 FLOODPLAINS AND RIVER TERRACES

9.1 OVERVIEW
Uintah County has a currently-adopted floodplain area. Floodplains are the low-lying, flood-prone areas adjacent to a river. River terraces are the bench or stepped areas that extend along river valleys. River terraces usually represent former levels and paths of floodplains of a stream or river. Rivers are dynamic systems. They can migrate laterally as a result of bank erosion and deposition, and move vertically as a result of bed aggradation or degradation. Floodplains and terraces are formed during these channel migration processes. Therefore, floodplains and terraces are essentials parts of the river system.

9.2 RELATED RESOURCES
- Livestock & Grazing
- Land Use
- Noxious Weeds
- Fisheries
- Wildlife
- Water Quality & Hydrology
- Wetlands
- Wild & Scenic Rivers
- Canals, Ditches and pipelines
- Irrigation
- Riparian Areas
- Recreation & Tourism
- Agriculture

9.3 ECONOMIC CONSIDERATIONS
- Higher development costs to mitigate flood risks are the major economic consideration for floodplains. Flood-control costs may be passed on to municipal and county governments during emergencies. Another economic consideration is the cost of floodplain insurance to homeowners. Floods also have the potential to cause severe financial impacts in the form of damages to structures, transportation systems, and other infrastructure.

9.4 OBJECTIVES AND POLICIES
a) Restore floodplain connectivity for wildlife that rely on these locations in areas outside human habitation while preserving the health and safety of residents.

b) Encourage the restoration of floodplain connectivity for improved flood control in suitable areas.

c) Support Utah Division of Water Rights Dam Safety Program that assesses existing dam condition to prevent dam failure or uncontrolled release of water.
d) Develop floodplain ordinances and overlays as appropriate in an effort to coordinate with FEMA on floodplain mapping.
10  FOREST MANAGEMENT

10.1  OVERVIEW
Forest management consists of the principles and actions for the regeneration, use, and conservation of forests. Forests, woodlands, and urban forests add to the quality of life in Uintah County because of their ecological and recreational benefits.

10.2  RELATED RESOURCES
- Fire Management
- Noxious Weeds
- Wilderness
- Wildlife
- Water Quality and Hydrology
- Livestock and Grazing
- Recreation and Tourism
- Agriculture

10.3  ECONOMIC CONSIDERATIONS
- Visitors from around the world, together with Utah locals, enjoy Utah’s renowned forests that span from Canyonlands to the alpine zone. While Utah is only 29% forested, these forests have high scenic, recreation, wildlife and other forest use values that make forest health very important (FFSL and USFS 2014).
- The market for forest products is very small in Utah, but it does exist. Forest products may be sold by board feet, by volume, or by piecemeal depending upon the product and the buyer. A professional forester can assist the seller in choosing the correct unit of measure and in determining value of the product.
- The non-extractive products and benefits that come from Uintah County’s forests, such as recreation, water quality, wildlife habitat, and aesthetics are important as economic functions. These contribute to the quality of life in Utah and should be considered valuable.

10.4  OBJECTIVES AND POLICIES
a) Use active and adaptive forest management to improve forest health and support multiple use and sustained yield with emphasis on employment, forest product production, open space, wildlife habitat, forage, recreation, and other social and economic benefits.
b) Manage forest resources to reduce the risk of catastrophic fires, which cause unacceptable harm to resources and assets valued by society, including ecosystem and community health and resilience.
c) Encourage and support the expansion of the local forest product market at sustainable harvest levels.
d) Develop new markets for timber and forestry products that are available for harvest (e.g., use timber products for bracing in nearby coal mines or biofuels industry).
e) When sustainable and based on scientific knowledge and local data, increase grazing to historic levels (allotments, AUMs, or seasonal use) to reduce fuel loads, support local economies, and support rural lifestyles for county residents.

Comment [MC13]: Get % for Uintah County.
f) Manage forest watersheds for optimal yield without compromising other resources.

g) Seek opportunities to use and harvest forest products that have been affected by wildfire or pests (e.g., beetle).

h) Reduce time required for National Environmental Policy Act processes associated with timber harvests so that economic benefits can be maximized.

i) Support best management practices that incorporate multiple use and sustained yield for all forest resources.

j) Participate in the planning for and revision of USFS forest management plans and Bureau of Land Management resource management plans affecting forest management.

k) Encourage USFS to open appropriate areas for commercial timber harvest.

l) Encourage USFS to find commercial uses for timber and forest products affected by wildfire or pests.

m) When revising or updating a forest plan, USFS should engage with the county in developing alternative management strategies and management policies.

n) Collect and provide data to USFS regarding appropriate forest management methodologies. Data may include published scientific literature, local case studies, inventories, or other pertinent information.

o) USFS forest plans should address commercial tree species selection, stocking levels, age class distribution, integrated pest management, and fuel loading. Additionally, areas for timber and non-timber product harvest and wildlife habitats shall be identified for the forest. Long- and short-term productive capacities and targets shall be established.

p) Removal of forest products shall be viewed as achievable and sustainable provided that appropriate science and technology are used.

q) Management programs must provide opportunities for citizens to harvest forest products for personal needs, economic value, and forest health. Sound economic approaches, considering both long- and short-term goals, shall be used when considering the harvesting of both wood and non-wood products, and appropriate social values shall be considered.

r) Forest management plans shall be written, and effective management techniques should be adopted to promote a stable forest economy and enhanced forest health, in accordance with the National Healthy Forest Initiative.

s) Grazing access on national forest land should be tied to historic levels and healthy forest conditions.

t) Manage forest watersheds for optimal yield without compromising other resources.

u) USFS forest plans should address commercial tree species selection, stocking levels, age class distribution, integrated pest management, and fuel loading. Additionally, areas for timber and non-timber product harvest and wildlife habitats shall be identified for the forest. Long- and short-term productive capacities and targets shall be established.

v) Removal of forest products shall be viewed as achievable and sustainable provided that appropriate science and technology are used.

w) Management programs must provide opportunities for citizens to harvest forest products for personal needs, economic value, and forest health. Sound economic approaches, considering both long- and short-term goals, shall be used when considering the harvesting of both wood and non-wood products, and appropriate social values shall be considered.

x) Forest management plans shall be written, and effective management techniques should be adopted to promote a stable forest economy and enhanced forest health, in accordance with the National Healthy Forest Initiative.

y) Grazing access on national forest land should be tied to historic levels and healthy forest conditions.
2) All forested lands must be managed for sustained yield, multiple use and forest health.

aa) Fire, timber harvesting, and treatment programs must be managed to prevent waste of forest products.

bb) Management programs must provide for fuel load management and fire control to prevent catastrophic events and reduce fire potential at the urban interface.

cc) Management and harvest programs must be designed to provide opportunities for local citizens and small businesses.

dd) It is the County’s policy to protect timber resources and promote the continuation of a sustainable wood products industry.

ee) Sale sizes should provide opportunities for a wide spectrum of producers and allows for local entrepreneurship.

ff) Commercial firewood harvesting is needed and could be a help in fuel load management and fire control.
11 IRRIGATION

11.1 OVERVIEW
Irrigation is the practice of supplemental application of water to land beyond that directly received from precipitation. Irrigation expands agricultural output of cropland and sustains additional vegetation growth throughout the landscape. Irrigation is critical to the success of agriculture in the Uinta Basin environment.

11.2 RELATED RESOURCES
<table>
<thead>
<tr>
<th>Land Use</th>
<th>Forest Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>Predator Control</td>
</tr>
<tr>
<td>Water Quality &amp; Hydrology</td>
<td>Noxious Weeds</td>
</tr>
<tr>
<td>Wilderness</td>
<td>Canal and Ditches</td>
</tr>
<tr>
<td>Water Rights</td>
<td></td>
</tr>
</tbody>
</table>

11.3 ECONOMIC CONSIDERATIONS
- Irrigation is vital to agriculture in Uintah County.
- Irrigation companies service approximately 122,400 acres of agricultural land.

11.4 OBJECTIVES AND POLICIES

a) Work with irrigation managers to provide public safety by limiting access to dangerous structures, as well as training to practice safety and identify safety concerns.

b) Encourage agricultural irrigators to:
   - Modernize and provide resources to assist with upgrades such as pressurized pipe systems that reduce traditional flood irrigation and favor transitioning to sprinkle and drip application.
   - Practice sound irrigation strategy such as: "Deficit Irrigation" which balances water cost with the crop yield to achieve ideal economic outcomes; limit irrigation runoff and control pollution from that runoff.

1. Encourage measurement of all water usage to determine needs and where efficiency may be gained.

2. Encourage local public land managers to allow access, and increase access to public lands for irrigation development and maintenance in a manner that 1) satisfies local needs and provides for economical and environmentally sound agricultural and irrigation practices; and 2) is consistent with, and complementary to, the Uintah Basin’s lifestyle, culture, and economy.

3. Map existing irrigation lines that occur inside the County.

4. Explore the development of a secondary irrigation system and monitor the conversion of agriculture irrigation water to secondary water.
c) Require development proposals to identify potential impacts to existing irrigation systems.

d) Encourage participation in the Colorado River Basin Salinity Control Program, as well as other programs, to improve irrigation management and water conservation.
12  LAND ACCESS

12.1  OVERVIEW
Land access refers to the ability to physically and legally access a given parcel of land. This typically has to do with roads, rights-of-way (ROWs) and property inholdings. Land access also concerns administrative restrictions on the methods or timing of land access, such as motorized vs. non-motorized access, and access that may be restricted at certain times. Finally, access can also refer to crossing or visiting lands via trails or other non-motorized methods. Common land access issues in Uintah County include private land surrounded by federal lands, private lands within designated wilderness areas, and public lands accessed by crossing through private property.

12.2  RELATED RESOURCES

<table>
<thead>
<tr>
<th>Recreation and Tourism</th>
<th>Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Use</td>
<td>Law Enforcement</td>
</tr>
<tr>
<td>Irrigation</td>
<td>Fire Management</td>
</tr>
<tr>
<td>Livestock and Grazing</td>
<td></td>
</tr>
</tbody>
</table>

12.3  ECONOMIC CONSIDERATIONS
Uintah County’s economy is closely tied to accessing public lands for resource development and recreation. Physical access via roadways, especially for motorized vehicles, is required for the development and utilization of energy, mineral, recreation areas, or other resources. Of special concern are state inholdings managed by SITLA, and private lands surrounded by BLM properties.

12.4  OBJECTIVES AND POLICIES

a)  The County shall support recreation and tourism on state and federal lands and associated businesses in the County including activities ranging from motorized to non-motorized primitive outdoor activities on public lands.

b)  Access to and across public lands is critical to the use, management, and development of those lands and adjoining lands.

c)  The County supports access to public lands for all users including the elderly and the physically impaired.

d)  No roads, trails, rights-of-way, easements or other traditional access for the transportation of people, products, recreation, energy or livestock may be permanently or temporarily closed, abandoned, withdrawn, or have a change of use without full consultation and coordination with the County and public disclosure and analysis.

e)  Uintah County is working on a trails master plan and will implement the plan in the future.

f)  County roads on public lands shall remain open unless it has been determined by the County that the subject road is no longer needed as part of the County’s transportation system.
g) Motorized administrative access to all water related facilities such as dams, reservoirs, delivery systems, monitoring facilities, livestock water and handling facilities or other access needed for full enjoyment of property rights, permits, etc., must be provided. Access must be economically feasible with respect to the method and timing of such access.

h) Seasonal and wet weather closures will be based on calendar with exceptions allowed by current weather and road conditions.

i) Promote the use of existing roads and trails.

j) The County will support designation of future transportation and energy corridors between Uintah County and neighboring areas for the purpose of facilitating responsible transportation of local products, resources, or services, and to decrease dependence on external imports.

k) Work with state and federal land managers to upgrade certain roads in preparation for turning those roads into Class B County Roads.

l) The County does not support the closure of any more Forest Service roads. The County Supports re-opening of the closed Forest Service roads.

m) Emergency access is exempt from OHV restrictions.

n) Maintain county infrastructure and encourage state and federal land managers to maintain infrastructure such as, structures, bridges, cattleguards, etc., to be structurally sound and safe for use.

o) State and federal agencies should recognize all roads on the currently adopted Uintah County Transportation System Map

p) Uintah County will continue to assert and pursue the RS 2477 rights regarding the roads of Uintah County. Both state and federal agencies must recognize these rights.

q) Address public lands and resources in the County’s land use plan. Involve relevant public land management agencies in plan development and implementation activities.

r) Conduct public outreach efforts designed to educate the public and property owners regarding the pros and cons of developing recreational trails and public access corridors.
13 **LAND USE POLICY**

13.1 **OVERVIEW**

For the purposes of the Uintah County Resource Management Plan, "land use policy" refers to the designation, modification and management of land for agricultural, environmental, industrial, recreational, residential, or any other purposes. The intent of this section is to outline the legal frameworks and county’s positions associated with resource management planning and public lands issues. This section of the County’s Resource Management Plan is intended to provide a broad outline of the parameters for influence and should not be considered an exhaustive dissertation of all possibilities.

13.2 **RELATED RESOURCES**

- Cultural, Historical, Geological, and Paleontological
- Wilderness
- Recreation and Tourism
- Energy
- Land Access
- Wild and Scenic Rivers
- Law Enforcement
- Water Quality and Hydrology
- Threatened, Endangered, and Sensitive Species

13.3 **OBJECTIVES AND POLICIES**

a) Discourage or eliminate land use restrictions or special designations that restrict economic growth and activity, especially on federal lands.

b) Federal lands shall be available for disposal when lands are difficult to manage or lie in isolated tracts, when such disposal meets the important public objective of community expansion or economic development, or when the disposal would serve the public interest.

c) There shall be no net loss of the private lands within the county. No “net loss” shall be measured in acreage and in fair market value.

d) The county should be consulted prior to any state or federal land acquisition or disposal actions.

e) Lands must be made available for use under the Recreation and Public Purposes Act of 1954 as amended. Lands should be made available for disposal in resource management plans and upon request by an appropriate entity.

f) The county shall encourage and participate in coordination and communication among various federal, state, tribal, and local land management authorities.

g) Federal land management policies and standards shall not interfere with the property rights of any private landowner to enjoy and engage in uses and activities on an individual’s private property consistent with controlling county zoning and land use laws.

h) A private landowner or a guest or client of a private landowner should not be denied the right of motorized access to the private landowner’s property consistent with past uses of the private property.

i) BLM and USFS should produce planning documents consistent with state and local land use plans to the maximum extent consistent with federal law and FLPMA’s purposes, by incorporating the county’s and state’s land use
planning and management program for the subject lands that preserve traditional multiple use and sustained yield management on the subject lands including but not limited to the following:

- Achieve and maintain in perpetuity a high-level annual or regular periodic output of agricultural, mineral, and various other resources from the subject lands.
- Support valid existing transportation, mineral, and grazing privileges in the subject lands at the highest reasonably sustainable levels.
- Produce and maintain the desired vegetation for watersheds, timber, food, fiber, livestock forage, wildlife forage, and minerals that are necessary to meet present needs and future economic growth and community expansion in each county where the subject lands are situated without permanent impairment of the productivity of the land.
- Meet the needs of wildlife, provided that the respective forage needs of wildlife and livestock are balanced.
- Protect against adverse effects to historic properties.
- Provide for the protection of existing water rights and the reasonable development of additional water rights.

The county opposes the use of buffer zones beyond the scope and boundaries of the designations. Lands should only be managed as wilderness when they have been properly designated by congress or pending designation in a WSA. WSA’s not recommended to be designated as wilderness should be dissolved.

In general, objectives of special designations can be met by well-planned and managed development of natural resources. For this reason, no special designations shall be proposed until the need has been determined and substantiated by verifiable scientific data available to the public. Furthermore, it must be demonstrated that protection cannot be provided by other means and that the area in question is truly unique compared to other area lands.

The County supports Utah Code 63J-4-401 (8)(c).

In accordance with Utah Code 63J-8-104(m), it is the policy of the county that a BLM VRM Class I or II rating is generally not compatible with the county’s plan and policy for managing federal lands, but special cases may exist where such a rating is appropriate if jointly considered and created by state, local, and federal authorities as part of an economic development plan for a region of the state, with due regard for valid existing rights, school trust lands and private lands within the area.
14 LAW ENFORCEMENT

14.1 OVERVIEW
The designated personnel group who has federal, state, or local authority within a jurisdiction to enforce the law or respond to an emergency. Law enforcement is concerned with the specific, and sometimes overlapping, jurisdictions of law enforcement, response personnel, and emergency management across Uintah County.

14.2 RELATED RESOURCES
Recreation and Tourism
Land Use
Land Access
Fire Management
Water Rights

14.3 ECONOMIC CONSIDERATIONS
• An appropriate level of service for law enforcement is essential for all levels of government to protect the health, safety, and welfare of the County, which will in turn positively impact the local industry. Benefits are direct and indirect.
• Annual operating costs for local law enforcement (County Sheriff’s departments) are influenced by public lands law enforcement activities, including coordination activities with state and federal law enforcement agencies. Costs associated with search and rescue operations are increasing in many areas of the state, particularly with increased recreation use of remote lands. Utah counties have the option to charge people who are rescued and/or can receive reimbursement through the state’s Search and Rescue Financial Assistance Program.
• The Utah Search and Rescue Assistance Card (USARA Card) offers expense-paid rescue to individuals (hunters, hikers, other backcountry enthusiasts) for an annual fee. Money raised by the program will support the State’s Search and Rescue Financial Assistance Program. County Search and Rescue teams will receive reimbursement for equipment, training and rentals from the program. Such expenses are often borne by the counties.

14.4 OBJECTIVES AND POLICIES
a) Coordinate interagency law enforcement (civil, wildlife resources, and recreation public use regulations) between the County, cities, tribes, Utah Division of Wildlife Resources, BLM, Forest Service, and the Utah Division of State Parks.
b) Maintain law and order (on public lands) to protect the health and safety of persons using the area.
c) Control litter, discourage vandalism, and perform search and rescue operations as appropriate.
d) Notify the county sheriff’s office immediately when there is a life-threatening situation, criminal act, project structure failure, resource contamination, natural phenomenon (landslides and fire), cultural resource site(s) disturbance, and/or discovery of human remains.
e) Law enforcement agreements between State and Federal land agencies should be done as a benefit to the community.

f) Primary law enforcement will be under the jurisdiction of the County Sheriff.

g) Assess ways to financially support search and rescue operations in the county.
15 LIVESTOCK + GRAZING

15.1 OVERVIEW

“Livestock” is domesticated animals raised in an agricultural setting to create food, fiber, labor, or other products. “Grazing” refers to a method of feeding whereby domestic livestock consumes plant material and then converts it into meat, milk and other products. Public lands are often used for livestock grazing in Uintah County.

15.2 RELATED RESOURCES

<table>
<thead>
<tr>
<th>Land use</th>
<th>Water Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>Forest Management</td>
</tr>
<tr>
<td>Water Quality &amp; Hydrology</td>
<td>Predator Control</td>
</tr>
<tr>
<td>Wilderness</td>
<td>Noxious Weeds</td>
</tr>
</tbody>
</table>

15.3 ECONOMIC CONSIDERATIONS

- There has been a 25% increase in the number of farms in Uintah County and a 41% increase in the market value of products sold (U.S. Department of Agriculture [USDA] 2007, 2012). See Table LG2 for more information.

- The average per farm receiving payments has dramatically increased (269%). Uintah County has seen slight increases in each of 5% and 7%, respectively (see Table LG2).

<table>
<thead>
<tr>
<th>Uintah County</th>
<th>2007</th>
<th>2012</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of farms</td>
<td>981</td>
<td>1,231</td>
<td>+25</td>
</tr>
<tr>
<td>Market value of products sold</td>
<td>$33,147,000</td>
<td>$46,627,000</td>
<td>+41</td>
</tr>
<tr>
<td>Crop sales = 46%, livestock sales = 54%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government payments</td>
<td>$620,000</td>
<td>$653,000</td>
<td>+5</td>
</tr>
<tr>
<td>Average per farm receiving payments</td>
<td>$7,560</td>
<td>$8,064</td>
<td>+7</td>
</tr>
</tbody>
</table>


- According to the USDA National Agricultural Statistics Service, the top livestock inventory items in Uintah County are cattle and calves, sheep and lambs, and horses and ponies. The market value of livestock sales in the County was over $25 million in 2012, accounting for 54% of all agricultural products sold. The average market value of products sold per farm (including crop sales) was $37,877 in 2012.
15.4 **OBJECTIVES AND POLICIES**

a) Maintain cattle and sheep grazing on BLM and U.S. Forest Service lands at historic levels and historic seasons of use.

b) Cooperate with state and federal land managers to address the transmission of disease from domestic sheep to wild sheep.

c) Manage lands to maintain or increase forage allocation for livestock grazing. Require annual checking and verification that lands are still up to standard.

d) Public land agencies should not decrease livestock grazing permits and grazing allocations below present levels considering the impacts of fire and drought.

e) The county does not support retirement of any grazing units through purchase or conversion of permits.

f) Public land agencies should properly notify permit-holders of any changes to their permits.

g) Uintah County supports efforts to manage nuisance species that are detrimental to rangelands (i.e. Mormon Crickets).

h) Support good monitoring and allotment management plans. Encourage third-party data collection for allotment management plans. The Utah Department of Agriculture and Food should be involved in areas of dispute regarding range conditions.

i) The county opposes the reduction, relinquishment, or retirement of grazing AUMs in favor of conservation, wildlife, and other uses.

j) The county expects the Utah Division of Wildlife Resources to participate in managing forage and grazing allotments in relation to wildlife populations.

k) Wildlife populations should not be increased nor should new species be introduced until forage allocations have been provided and until an impact analysis has been completed for the effects on other wildlife species and livestock.

l) Reduction in forage allocation resulting from forage studies, drought, or other natural disasters will be shared proportionately by wildlife, livestock, and other uses.

m) Increases in forage allocation resulting from improved range conditions should be shared proportionately by wildlife, livestock, and other uses.

n) Wildlife target levels and/or populations must not exceed the forage assigned in the resource management plan forage allocations. Revise allocations as appropriate using recent forage data.

o) Land management plans, programs, and initiatives should provide the amount of domestic livestock forage, expressed in AUMs, for permitted, active use as well as the wildlife forage included in that amount, be no less than the maximum number of AUMs sustainable by range conditions in grazing allotments and districts, based on an on-the-ground and scientific analysis.

p) The county favors the best management practices that are jointly sponsored by cattlemen's, sportsmen's, and wildlife management groups such as chaining, logging, seeding, burning, and other direct soil and vegetation prescriptions that are demonstrated to restore forest and rangeland health, increase forage, and improve watersheds in grazing districts and allotments for the mutual benefit of domestic livestock and wildlife. When the practices described above increase a grazing allotment's forage beyond the total permitted forage use that was allocated to that allotment in the last federal land use plan or allotment management plan still in existence as of January 1, 2005, a reasonable and fair portion of the increase in forage beyond the previously allocated total permitted use should be allocated to livestock as recommended by a joint, evenly balanced committee of livestock...
and wildlife representatives that is appointed and constituted by the governor for that purpose. The county favors quickly and effectively adjusting wildlife population goals and population census numbers in response to variations in the amount of available forage caused by drought or other climatic adjustments, and state agencies responsible for managing wildlife population goals and population census numbers will give due regard to both the needs of the livestock industry and the need to prevent the decline of species to a point where listing under the terms of the Endangered Species Act is possible, when making such adjustments.

q) The county recognizes grazing permits on public lands as an asset, which may be transferred by the permit owner. Such transactions must be processed by the land management agency promptly after proper notification. Any reduction in the size of the permit or forage allocation as a result of the transaction shall not be made without a specific scientific justification.

r) When grazing permits are withdrawn from a livestock operator because of grazing violations, the permit should not be reallocated to other uses and should be made available for continued livestock use as soon as possible.

s) Motorized access to public rangeland is vital to the permit holders and the land management agency for planning, management, and development. Motorized access should be maintained as open and improved as management needs require. Valid existing rights should be maintained.

t) The permit holder should be compensated for the remaining value of improvements made by the permit holder on reduced allotments, unless the permit was canceled for non-compliance with grazing regulations.

u) Uintah County adopts House Report No. 101-405 (February 21, 1990) which was implemented by Congress under the Arizona Desert Wilderness Act of 1990 (H.R. 2570), as follows:

- Section 4(d)(4)(2) of the Wilderness Act states: “the grazing of livestock, where established prior to the effective date of this Act, shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the Secretary of Agriculture”.

- The legislative history of this language is very clear in its intent that livestock grazing, and activities and the necessary facilities to support a livestock grazing program, will be permitted to continue in National Forest wilderness areas, when such grazing was established prior to classification of an area as wilderness.

- Including those areas designated in 1964 by the Wilderness Act, Congress has designated a large number of wilderness areas, including areas which are managed the Forest Service, Fish and Wildlife Service, and Bureau of Land Management. A number of these areas contain active grazing program, which are conducted pursuant to existing authorities. In all such cases, when enacting legislation classifying an area as wilderness, it has been the intent of the Congress that the cited language of the Wilderness Act would apply to grazing within wilderness areas administered by all Federal agencies.

v) These guidelines and policies should be promptly, fully, and diligently implemented and made available to all federal agencies with land management responsibilities with Uintah County and to all holders of permits for grazing in the wilderness areas designated by Congress. The guidelines and policies are as follows:

- There shall be no curtailments of grazing in wilderness areas simply because an area is, or has been designated as wilderness, nor should wilderness designations be used as an excuse by administrators to slowly “phase out” grazing. Any adjustments in the numbers of livestock permitted to graze in wilderness areas should be made as a result of revisions in the normal grazing and land management planning and policy setting process, giving consideration to legal mandates, range condition, and the protection of the range resource from deterioration.

- Uintah County agrees that it has been the intent of congress that the number of livestock permitted to graze in wilderness would remain at the approximate levels at the time an area enters the wilderness system. If land management plans reveal conclusively that increased livestock numbers or animal unit months (AUMs) could be made available with no adverse impact on wilderness values such as plant
communities, primitive recreation, and wildlife populations or habitat, some increases in AUMs may be permissible. This is not to imply, however, that wilderness lends itself to AUM or livestock increases and construction of substantial new facilities that might be appropriate for intensive grazing management in nonwilderness areas.

- The maintenance of supporting facilities, existing in an area prior to its classification as wilderness (including fences, line cabins, water wells and lines, stock tanks, etc.), is permissible in wilderness. Where practical alternatives do not exist, maintenance or other activities may be accomplished through the occasional use of motorized equipment. This may include, for example, the use of backhoes to maintain stock ponds, pickup trucks for major fence repairs, or specialized equipment to repair stock watering facilities. Such occasional use of motorized equipment should be expressly authorized in the grazing permits for the area involved. The use of motorized equipment should be based on a rule of practical necessity and reasonableness. For example, motorized equipment need not be allowed for the placement of small quantities of salt or other activities where such activities can reasonably and practically be accomplished on horseback or foot. On the other hand, it may be appropriate to permit the occasional use of motorized equipment to haul large quantities of salt to distribution points. Moreover, under the rule of reasonableness, occasional use of motorized equipment should be permitted where practical alternatives are not available and such use would not have a significant adverse impact on the natural environment. Such motorized equipment uses will normally only be permitted in those portions of a wilderness area where they had occurred prior to the area’s designation as wilderness or are established by prior agreement.

- The replacement or reconstruction of deteriorated facilities or improvements should not be required to be accomplished using “natural materials”, unless the material and labor costs of using natural materials are such that their use would not impose unreasonable additional costs on grazing permittees.

- The construction or new improvements or replacement of deteriorated facilities in wilderness is permissible if in accordance with these guidelines and management plans governing the area involved. However, the construction of new improvements should be primarily for the purpose of resource protection and the more effective management of these resources rather than to accommodate increased numbers of livestock.

- The use of motorized equipment for emergency purposes such as rescuing sick animals or the placement of feed in emergency situations is also permissible. This privilege is to be exercised only in true emergencies, and should not be abused by permittees.

In summary, subject to the conditions and policies outlined in this report, the general rule of thumb on grazing management in wilderness should be that activities or facilities established prior to the date of an area’s designation as wilderness should be allowed to remain in place and may be replaced when necessary for the permittee to properly administer the grazing program. Thus, if livestock grazing activities and facilities were established in an area at the time Congress determined that the area was suitable for wilderness and placed the specific area in the wilderness system, they should be allowed to continue. With respect to areas designated as wilderness prior to the date of this Act, these guidelines shall not be considered as a direction to reestablish uses where such uses have been discontinued.
16 MINING AND MINERAL RESOURCES

16.1 OVERVIEW
In the context of this plan, “mining” is the process or industry of extracting minerals or other geological materials from a mine or other extractive process, and “mineral resources” are the natural resources in the form of minerals (solid inorganic substances). Mineral development (mining) is regulated and managed depending on the extracted resource, and are grouped into three categories: locatable, leasable, and saleable.

16.2 RELATED RESOURCES
- Water Rights
- Land Use
- Air Quality
- Water Quality and Hydrology
- Energy
- Cultural, Historical, Geological, and Paleontological
- Land Access

16.3 ECONOMIC CONSIDERATIONS
- Mineral resources have a large impact on our economy. State and Federal Government have control over the majority of these minerals, so how they manage them can affect the economy.
- Mining made up 4.2% of Utah’s GDP in 2012. In 2014, Utah produced 1.8% of the coal in the United States, 30% of that production was shipped out of the state. Employment in mining especially has changed in recent year; as of March 2016, 9,500 miners are employed in Utah, this is down 12.8% from March 2015 (U.S. Energy Information Administration).

16.4 OBJECTIVES AND POLICIES
a) Continue to allow access, and increase access to public lands for mining and mineral resource development in a manner that 1) satisfies local and national needs and provides for economical and environmentally sound exploration, extraction, and reclamation practices; and 2) is consistent with, and complementary to, the Uintah Basin’s lifestyle, character, and economy.
b) Mining and mineral resource exploration and development are consistent with the multiple use philosophy for management of public lands. These activities constitute a temporary use of the land that will not impair its use for other purposes in the future. All mineral resource exploration activities shall comply with appropriate laws and regulations.
c) Those portions of the Uintah Basin shown to have reasonable mineral potential should be open to leasing and other access with reasonable stipulations and conditions, including mitigation, reclamation, and bonding measures where necessary, that will protect the lands against unnecessary and undue damage to other significant resource values.
d) Any existing lease restrictions in the Uintah Basin that are no longer necessary or effective should be modified or removed.
e) Any moratorium that may exist against the issuance of qualified mining patents in the Uintah Basin, and any barriers that may exist against developing unpatented mining claims and filing for new claims, should be carefully evaluated for removal.

f) Permanent withdrawals of land from mineral exploration and development should be avoided.

g) Protecting culinary water is a priority. The Ashley Springs Protection Zone is not conducive to mining or mineral resource extraction.

h) The development of mining and mineral resources should be conducted in a manner that minimizes adverse impacts to water quality in accordance with local, state, and federal standards.

i) The development of mining and mineral resources should be conducted in a manner that uses water in accordance with terms set forth by the Utah Division of Water Rights and the State Engineer, county zoning ordinances, and is in compliance with other applicable laws and regulations. **Limits by January 1, 2020.**

j) Provide, as appropriate, incentives to encourage economic development and stimulate natural resource-based business recruitment, retention, and expansion activities.

k) Support and encourage a broad spectrum of educational and vocational programs relating to natural resource use and development.

l) All mining permits and applications should be processed on a timely basis, provided that the applicant follows proper procedures and submits all required information at the time of application.
17 NOXIOUS WEEDS

17.1 OVERVIEW

Noxious weeds are plants that are considered harmful to agricultural or horticultural crops, natural habitats, or ecosystems, or humans or livestock. Often times they are non-native species, which spread rapidly due to habitat disruption or poor land management. In Uintah County, they are typically (but not always) nonnative species that spread rapidly at the expense of native vegetation. Noxious weeds have significant economic considerations because of their impacts on rangeland health, increased wildfire, and direct control costs such as weed removal, crop and seed contamination, and equipment cleaning costs.

17.2 RELATED RESOURCES

Forest Management
Fire Management
Agriculture
Livestock and Grazing
Riparian Areas

17.3 ECONOMIC CONSIDERATIONS

- "The invasion of non-native plant species not only produces various ecological modifications, but also results in substantial socioeconomic impacts, particularly to the livestock industry and land management agencies responsible for fire suppression. Invasive plant species cause more economic loss on rangeland than all other pests combined. Invasive plants reduce the carrying capacity for livestock by lowering the forage yield. Consequently, the costs of managing and producing livestock increase" (Utah State University 2009).

- "The importance of herbicides in modern weed management is underscored by estimates that losses in the agricultural sector would increase about 500% from $4.1 billion to $20 billion per year without the use of herbicides" (Whitesides 2004).

- "The implementation of one control method is rarely effective in achieving the desired results for curtailing the spread of invasive plants. Successful long-term and cost effective management programs should integrate a variety of mechanical, chemical, biological, and cultural control techniques. Integrated management involves the deliberate selection, combination, and implementation of effective invasive plant management strategies with due consideration of economic, ecological, and sociological consequences... Presently, there are several examples of integrated strategies used to manage invasive plants and improve rangeland communities. Much attention has been focused on the integration of targeted or prescription grazing with other control methods, as the incorporation of grazing management is an essential component in successfully addressing invasive plant problems" (Utah State University 2009).
17.4 **OBJECTIVES AND POLICIES**

- a) Reduce or eliminate noxious weed infestations and minimize the establishment of new weed species across jurisdictional boundaries using adaptive management and integrated weed management approaches.
- b) Accomplish weed control without adverse human, grazing, and environmental effects.
- c) In areas where weeds have been treated, revegetate and restore with desirable native plant species.
- d) Manage noxious weeds to enhance wildlife habitat and farmland.
- f) Comply with existing state, county, and federal rules, regulations, ordinances, and directives pertaining to noxious weeds and the application of herbicides.
- g) Work cooperatively with other agencies and entities to reduce or eliminate noxious weed species and minimize or prevent the establishment of new infestations and new weed species.
- h) Implement weed monitoring programs in addition to county weed mapping programs.
- i) Create noxious weed awareness and education programs to teach people about the economic and environmental impacts of weeds.
- j) Employ a variety of (integrated) weed management techniques including prevention, biological controls, chemical controls, and mechanical controls.
- k) Work with all landowners and managers to ensure a well-funded and coordinated effort in prevention as well as an attack against already established weeds.
- l) Continue support for the County’s noxious weed program and participation in the Cooperative Weed Management Association.
18  PREDATOR CONTROL

18.1  OVERVIEW

The strategies and practices to control the actions of predators, or bringing into natural ecological balance predator populations, or reduce the number of conflicts with predator animals. Predator and prey populations require balance to avoid adverse impacts from either population. Predator control is primarily a function of the Utah Department of Wildlife Resources (DWR) and the US Department of Agriculture's Animal and Plant Health Inspection Service (APHIS). In addition to predators control, DWR and APHIS work to manage nuisance animals, which are native and introduced species of wildlife that thrive in urban environments and have become problematic. In Uintah County, the APHIS program and DWR coordinate efforts to resolve wildlife conflicts on public and private lands. Conflicts can occur for many reasons, including the following: (1) predators injuring or killing livestock, (2) wildlife damaging farm crops or raiding livestock feed stocks, and (3) wildlife populations becoming problematic in residential areas.

18.2  RELATED RESOURCES

Agriculture  
Livestock & Grazing  
Threatened, Endangered, and Sensitive Species

Wildlife  
Land Use

18.3  ECONOMIC CONSIDERATIONS

Losses due to predation can be significant. According to the APHIS (USDA 2015), in Utah, 5,200 sheep and 12,100 lambs were killed by predators for a total value loss of nearly $3 million. Coyotes were by far the largest contributor to predation deaths (2,800 sheep and 8,500 lambs), bears were second (1,100 sheep and 1,700 lambs), and mountain lions third (700 sheep and 900 lambs).

Utah cattle are also killed by predators, though not in as many numbers. According to the APHIS (USDA 2011), in Utah, 300 head of cattle and 2,300 calves were killed by predators for a total value loss of $1.1 million. Coyotes are responsible for the majority of cattle predation, including 58% of calf losses and 44% of cows. Bears were responsible for 43% of the cow losses.

18.4  OBJECTIVES AND POLICIES

a) While ravens cannot currently be controlled due to the Migratory Bird Treaty Act, crows can, and should, be controlled to protect sage grouse in the County.

b) Include both lethal and nonlethal methods in predator control. Nonlethal methods focus on physically separating livestock from predators, employing techniques to repel predators, or disrupting mating and reproductive cycles to reduce the number of predators born each year. Lethal methods seek to reduce predator numbers by killing them.
c) Support the Utah Predator Control Program, which provides a cash bounty for coyotes killed in the state.

d) Uintah County supports a change of state law and policy to move money and authority to allow for local predator control programs.

e) Chemical control where legal and properly managed is a safe and effective predator control and should be utilized.

f) Trapping is a historic, and scientifically proven method of controlling predatory animals and should be maintained.

g) Predator numbers must be controlled at a level that protects livestock, private property and other wildlife species from loss or damage.
19 RECREATION + AND TOURISM

19.1 OVERVIEW
Recreation is an activity done for enjoyment. Tourism is the social, cultural, and economic phenomenon of visiting places for pleasure. Outdoor recreation is a significant and growing part of Uintah County’s economy. Tourism is beneficial to the County’s economy by bringing in sales tax and transient room tax revenue. Uintah County’s public lands provide a variety of recreational opportunities for local residents and visitors. Popular activities include camping, fishing, climbing, picnicking, OHV use, horseback-riding, snowmobiling, hunting, and photography.

19.2 RELATED RESOURCES
- Land Access
- Cultural, Historical, Geological, and Paleontological Wilderness
- Land Use
- Cultural, Historical, Geological, and Paleontological Wilderness

19.3 ECONOMIC CONSIDERATIONS
- Between 2010 and 2013, statewide leisure and hospitality employment grew 12%, whereas all other employment grew at a lesser rate of 10%. Approximately 10% of jobs in eastern Utah (defined as Daggett, Duchesne, Uintah, Carbon, and Emery Counties) were in the leisure and hospitality sector. This is the lowest of all the regions analyzed in Utah.

- “Total tourism related tax revenue decreased in 2015, except for restaurant tax revenue which remained flat. Overall, total taxable sales in the leisure and hospitality sector decreased 14.3%. However, leisure and hospitality jobs in Uintah County increased 1.7%. Since 2010, every spring/summer season leisure and hospitality jobs have increased 11% from fall/winter – or by an average of 120 jobs – with summer as the peak tourist season” (Kem C. Gardner Policy Institute 2015).

- The County can influence recreation by providing adequate recreation infrastructure, opportunities and advertising recreation resources. The County will continue to support new travel and tourism events in our area.

- In 2016, the lottery for public high-season boating permits for the Green and Yampa Rivers in Dinosaur National Monument saw a record number of applications for the 300 available launches (this number did not include the ongoing permits for commercial guides and outfitters). A total of 7,447 applications (up 724 from the previous year) were submitted from all 49 states, three Canadian Provinces, and four foreign countries. This equated to approximately 7,500 visitors.

19.4 OBJECTIVES AND POLICIES
a) Support outdoor recreation as part of a balanced plan of economic growth and quality of life.

b) Leverage federal and state recreation areas, parks, and sites as county-based scenic and recreation economic assets.
c) Coordinate county recreation and economic development efforts and activities with federal, state, local, and private interests, e.g., destination resorts and private facilities.

d) Identify and preserve locally important recreation resources (amenities, viewsheds, etc) for future generations.

e) Support active management of conflicting recreational uses so that multiple users, e.g., motorized and non-motorized user groups, are accommodated to the greatest extent practicable.

f) State and federal land managers must coordinate and closely consult with county and municipal governments who are conducting inventories related to recreation resources and opportunities or scenic values. Public land agencies must evaluate proposed plans and actions for impacts on existing recreational resources and activities and potential future activities. This should be coordinated with county and municipal governments. Management plans and decisions must provide opportunities to meet the increased demand for dispersed and developed recreational opportunities. Plan and manage recreational activities to be compatible with resource development. Resource development, recreation, and tourism are compatible when properly managed.

g) County land use plans and regulations will support expanding recreation opportunities and the protection and enhancement of traditional recreation areas and sites.

h) BLM or U.S. Forest Service must coordinate and consult closely with county and municipal governments on any proposals for special designations (Special Recreation Management Areas, wilderness, etc.) that may affect current and future recreation use.

i) During land use planning processes, the county will identify potential locations of desired recreational facilities.

j) County-identified public recreation areas and lands with unique natural features may be preserved through easements or other common open space preservation strategies.

k) Federal and state land management should support recreation and tourism and associated businesses in the county, including the broad range of activities from off-road vehicle use to primitive outdoor activities.

l) Management decisions should provide for the continuation or expansion of outfitting and lodge operations. They are an important part of local history and tradition and they contribute substantially to the local economy.

m) Encourage recreation-oriented entrepreneurial and economic development activities that are consistent with the Uintah Basin’s character and lifestyle.

n) State and federal land management agencies shall achieve and maintain traditional access to outdoor recreational opportunities available on federal lands as follows:

- Hunting, trapping, fishing, hiking, camping, rock hounding, OHV travel, biking, geological exploring, pioneering, recreational vehicle camping, and sightseeing are activities that are important to the traditions, customs, and character of the county and should be allowed to continue.

- Wildlife hunting, trapping, and fishing should continue at levels determined by the Utah Wildlife Board and the Utah Division of Wildlife Resources. Traditional levels of group camping, group day use, and other traditional forms of outdoor recreation, both motorized and non-motorized, should be allowed to continue.

- The broad spectrum of outdoor recreational activities available on the subject lands should be available to citizens for whom a primitive, non-motorized, outdoor experience is not preferred, affordable, or physically achievable.

Recreation resource protection and management must provide for continued and reasonable access to and development of property rights within the area and provide for full use and enjoyment of these rights.
Existing levels of motorized public access to traditional outdoor recreational designations in the county must be continued, including both snow machine and OHV use.

OHV loops should be provided to connect communities with the region. Open area riding as well as looped and stacked trail systems should be offered, with a variety of levels of trail difficulty.

Group camping and day use sites and availability must be continued and expanded to meet demand.

With respect to regional recreational trails and open spaces, Uintah County will work with the Uintah Recreation District, Bureau of Land Management (BLM), United States Forest Service (USFS), Dino Trails Committee, communities, and other relevant interests and agencies to develop an Uintah County trails plan. Once identified, these corridors should be included in the County's land use map.
20 RIPARIAN AREAS

20.1 OVERVIEW
Riparian areas are ecosystems that occur along watercourses or water bodies. They are distinctly different from the surrounding lands because of unique soil and vegetation characteristics that are strongly influenced by free or unbound water in the soil. Riparian ecosystems occupy the transitional area between the terrestrial and aquatic ecosystems. Similar to wetlands, riparian areas provide benefits to Uintah County, including wildlife habitat area, hydrologic recharge areas, and water quality improvements.

20.2 RELATED RESOURCES

<table>
<thead>
<tr>
<th>Riparian Areas</th>
<th>Floodplains &amp; River Terraces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock &amp; Grazing</td>
<td>Wildlife</td>
</tr>
<tr>
<td>Wild &amp; Scenic Rivers</td>
<td>Noxious Weeds</td>
</tr>
<tr>
<td>Canals &amp; Ditches</td>
<td>Fisheries</td>
</tr>
<tr>
<td>Irrigation</td>
<td>Recreation &amp; Tourism</td>
</tr>
<tr>
<td>Agriculture</td>
<td>Fire Management</td>
</tr>
<tr>
<td>Water Rights</td>
<td>Land Use</td>
</tr>
<tr>
<td>Water Quality &amp; Hydrology</td>
<td></td>
</tr>
<tr>
<td>Wetlands</td>
<td></td>
</tr>
</tbody>
</table>

20.3 ECONOMIC CONSIDERATIONS
- It is difficult to quantify the economic benefits of riparian areas. They are intertwined with nonmarket ecosystems and services like clean water, wildlife habitat, recreation, and tourism. Pre- or post-water treatment methods that utilize passive bioengineering techniques, including riparian area management, can significantly reduce water treatment costs, thereby avoiding some of the costs associated with engineered water treatment plants, which are extremely expensive.

20.4 OBJECTIVES AND POLICIES

a) Inventory and map riparian areas so that appropriate measures can be taken to protect or avoid impacts to them, when possible.

b) Conserve and protect riparian areas through application of best management practices.

c) Participate in state, federal and local riparian planning opportunities.

d) Support the eradication of invasive species, e.g., Phragmites, tamarisk, and Russian olive, which can degrade habitat value and impact groundwater levels.

e) Use naturalized flow management regimes from dams or other impoundments to enhance aquatic and riparian habitat along waterways, where appropriate, and not in conflict with human habitation.

f) Use guzzlers, reservoirs, and wells to attract livestock and wildlife away from riparian areas, which can help decrease soil disturbance and impacts to aquatic resources.
g) Use scientific methodology, e.g., proper functioning condition or multiple indicator monitoring, to guide management decisions in riparian areas.

h) Use riparian overlays at local levels to guide protection of riparian zones.

i) Consider releasing northern tamarisk beetle (Diorhabda carinulata) as a biological control of tamarisk, an invasive plant species. Follow release with revegetation treatments to re-establish riparian area, stabilize streambanks, and protect water quality. Support for biological control and restoration is available from organizations like the Tamarisk Coalition out of Grand Junction, Colorado.

j) Support application of aquatic-approved herbicides to remove undesired vegetation.

k) Modify grazing use to avoid overgrazing if appropriate.

l) Encourage efforts to enhance streambeds and control erosion. Increase coverage and composition of vegetation.
21 THREATENED, ENDANGERED AND SENSITIVE SPECIES

21.1 OVERVIEW
Species of plants, animals, and other living organisms which are, to some degree, threatened by extinction. Critically imperiled plant and animal species are federally listed according to the Endangered Species Act (ESA). Under the ESA the US Fish & Wildlife Service (USFWS) is responsible for conservation of terrestrial and freshwater aquatic species that are endangered or threatened with extinction due to loss of habitat, overutilization, disease, predation, inadequate protection, and other factors both human-made and natural. For sensitive species in Utah that are not protected by the ESA, the Utah Department of Wildlife Resources (DWR) is tasked with conservation. Utah’s primary objective for managing sensitive species is to maintain wildlife and wildlife habitat well enough to prevent federal designation. Once a species is federally listed, the state loses primacy for the management of that species. This implies federal regulation of activities on state and private lands that may directly threaten listed species or that species’ habitat. From state and local perspectives, federal designation of endangered species means less local control of land use issues, which might cause harm to the designated species.

21.2 RELATED RESOURCES
Wildlife
Land Use
Fisheries
Livestock and Grazing
Noxious Weeds
Fire Management

21.3 ECONOMIC CONSIDERATIONS
• Much of the funding for conservation activities comes from hunter and angler license fees and habitat stamps, as well as federal excise taxes on shooting, boating, and fishing equipment. These sources may indirectly benefit some “non-game” species, but in general funding is harder to come by for these species (DWR 2015).

• In 1997, as part of the state water tax, the Utah Legislature created the Endangered Species Mitigation Fund (ESMF) which significantly expanded the funding base for conservation of wildlife species which are designated as Utah Sensitive Species or are ESA-listed. The purpose of this fund is to avoid, reduce, and/or mitigate impacts of ESA listings on the people of Utah.

• The ESA prohibits consideration of economic impacts when determining whether to list a species, but it does require consideration of economic impacts when designating critical habitat.

• In 2013 the USFWS and the National Marine Fisheries Service issued a final rule regarding how and when these agencies evaluate the economic impacts of critical habitat designation.

21.4 OBJECTIVES AND POLICIES
a) Delist species and designated critical habitats that were erroneously listed (e.g., listed based on incorrect data or assumptions) and/or that are no longer threatened and endangered species or sensitive based on criteria
established by USFWS, or the State of Utah. The county believes that some species may have been erroneously listed or maintained under the ESA. For example:

- Pariette cactus (Sclerocactus brevispinus)
- Ute ladies'-tresses (Spiranthes diluvialis)

b) Delist the white-tailed prairie dog (Cynomys leucurus) from the BLM Vernal Field Office’s sensitive species list. The County believes this species is included primarily to protect the Black Footed Ferret, which is an experimental population.

c) Reduce the impacts of endangered and sensitive species listings on private and public lands. Listings typically include land use restrictions and hamper multiple use of public lands.

d) Do not support special management of lands and associated land use restrictions associated with reintroduction of large predators that are listed as threatened or endangered (e.g., wolf, wolverine (Gulo gulo), grizzly bear (Ursus arctos), and Canada lynx (Lynx canadensis)).

e) Oppose reintroduction of large predators that are listed as threatened or endangered unless there are no land use restrictions.

f) Ensure federal agencies accurately inventory threatened, endangered, and sensitive species across all state, federal, and tribal lands.

g) Support efforts to update and modernize the ESA, such as those undertaken by the Western Governors’ Association, to address issues, including the following:

- Improve the process for delisting species.
- The use of the ESA by special interest groups in efforts to influence land use decisions by petitioning USFWS to list large groups of species as threatened or endangered.

h) Support alternatives to listing under the ESA, including conservation plans, initiatives, or agreements to address threats to species and their habitats. Examples of successful collaborative conservation agreements include the Conservation Agreement and Strategy for Graham’s beardtongue (Penstemon grahamii) and White River beardtongue (P. scariosus var. albifluis) (SWCA 2014) and the State of Utah’s Conservation Plan for Greater Sage-Grouse in Utah (DWR 2013).


j) Do not support actions to list any species as a threatened or endangered species or designation of critical habitat under the ESA or actions to add any species to the State of Utah’s sensitive species list until verifiable scientific data have been available to the public that demonstrate the need for the designation; that protections cannot be provided by other methods, and that the area in question is truly unique compared to other area lands.

k) Focus necessary conservation efforts on species identified on the State of Utah’s sensitive species list.

l) Recovery plans, reintroduction plans, guidelines, and protocols for species listed as threatened or endangered under the ESA should be developed with full public disclosure and in coordination with private property owners and local governments that will be affected by the recovery plan. Recovery plans must contain indicators of effectiveness and recovery progression, identifiers of recovery completion, self-terminating provisions upon successful recovery, and management provisions after the plan is terminated.

m) Recovery plans for species listed as threatened or endangered should clearly identify the parties responsible for collecting data to monitor species recovery and how that data will be collected. Funding adequate to collect the data required to monitor progress toward recovery must be included in federal agencies budgets at the time of listing.
n) Do not support buffer zones around habitat for the protection of threatened and endangered species.

o) USFWS shall avoid economic damage when designating critical habitat. USFWS shall involve local and county government representatives in their assessment of the economic impact of critical habitat designations.

p) When developing recovery plans for species listed as threatened or endangered, it is not necessary to restore a species to all habitats once occupied by the species to achieve a population that is not at risk of extinction. Recovery plans should establish objectives that restore and preserve only the amount of habitat and population size needed to protect the species from extinction.

q) Do not support the creation or expansion of grizzly bear, wolf, wolverine, and Canada lynx populations or the protection of their habitats, ranges, or migration corridors within the county.

r) Do not support designation of critical habitats for threatened and endangered species. Reintroductions must not be allowed to grow beyond the originally intended physical boundaries and scope.
22 WATER QUALITY AND HYDROLOGY

22.1 OVERVIEW
In the context of this plan, "water quality" is the condition of water based on biological, chemical, and physical properties, and "hydrology" is the science of the distribution, effects, and properties of water. Water quality is highly affected by flow and timing (the poorest water quality usually occurs during periods of low flow). Maintaining high water quality standards has economic benefits because it requires less treatment for drinking. Good water quality can have positive cascading benefits to other resources such as recreation and tourism, wetlands, wildlife, fisheries, and agriculture. The County desires to maintain and/or improve watersheds and water quality to maintain public water supply and provide stable and productive riparian and aquatic ecosystems and groundwater resources on public lands. The county also desires to reduce pollutant loads entering waterways to improve water quality.

22.2 RELATED RESOURCES
- Agriculture
- Land Use
- Fire Management
- Wild & Scenic Rivers
- Wetlands
- Water Rights
- Canals & Ditches
- Irrigation
- Livestock & Grazing
- Riparian Areas
- Recreation & Tourism
- Fisheries
- Threatened Endangered & Sensitive Species

22.3 ECONOMIC CONSIDERATIONS
- Water is essential for life. Recreation, culinary water, agriculture and ecology are impacted by water quality.
- It is more cost effective to protect the water resource at its source and prevent contamination than to treat it in a wastewater treatment plant. The Utah DEQ estimates that nationwide, every $1 spent on source water protection saves an average of $27 in wastewater treatment costs.
- Prepare60, a center established by four water conservancy districts in Utah, published a 2014 report illustrating that $17.9 billion spent on water infrastructure maintenance alone enables $5.4 trillion in ongoing economic activity. An investment in water resources of $15 billion would create 930,000 new jobs, $93 billion in incremental economic output, and $71 billion in additional personal income.
22.4 **OBJECTIVES AND POLICIES**

a) Maintain or improve water quality to protect the health and well-being of county residents and the desirability of the county as a place to visit and recreate.

b) Balance water resource allocation among beneficial uses, e.g., agricultural, recognizing that growing populations will require larger portions of municipal and industrial water and an increased interest in water-based recreation.

c) Support ongoing water quality and quantity monitoring to inform water and land management activities that protect surface water and groundwater.

d) Manage state and federal lands and watersheds for optimal water yield.

e) Integrate multiple strategies for meeting future water demands not limited to conservation, conversion, water transfers, water development, conjunctive use of surface and ground water, aquifer storage and recovery, secondary irrigation systems, cooperative agreements (arrangements with other water suppliers to share/lease their excess supplies), and water reuse (recycling wastewater effluent).

f) Take an active role in state and federal water resource management processes, including revisions to the definition of waters of the U.S. and groundwater management.

g) Adhere to state-developed water quality standards.

h) Support ongoing water quality monitoring to establish baseline conditions to track potential surface and groundwater contamination that could result from changes in land use, e.g., oil shale and oil sands development.

i) Recognize that natural conditions and processes may affect achievement of state water quality standards and might not be indicative of impairment.

j) Adhere to Division of Water Quality standards and those mitigation strategies outlined for nonpoint and point sources in local total maximum daily load documents.

k) Water quality studies undertaken by or on behalf of the public land management must be coordinated with the counties.

l) Support the creation of water source protection areas and plans, e.g., Ashley Springs Protection Zone.

m) Support projects that improve water quality and increase quantity and dependable of water supply.

n) Work toward recognition of industrial applications, e.g., mining processes, as a beneficial use.

o) Participate in integrated water resource management processes that seek to coordinate development and management of water, land, and related resources in order to maximize economic and social welfare without compromising the sustainability of vital ecosystems.

p) Use the best available water resource data when conducting planning activities.

q) Support maintenance of existing water quantity measurement equipment, e.g., U.S. Geological Survey gauges and SNOTEL, to document water resource availability.

r) Protect property rights associated with implementation of state and federal water development projects.

s) Decreases in consumptive and non-consumptive water rights downstream of the Ashley National Forest are not supported.

t) Incorporate a watershed approach for water quality protection and restoration that supports current and potential future uses.
u) Encourage and support local water management planning that addresses water supply and demand for agriculture, industry, recreation, culinary, ecosystem, and other uses and coordinate with local water conservancy districts and DWR plans (or planning processes) that currently extend into the future.

v) Use existing local water resource knowledge and develop future knowledge through education.

w) Coordinate with county landowners, e.g., public, tribal, and private, to assess potential water storage sites to meet increased demands for water.

x) Direct water development for livestock outside of sensitive riparian, stream, and wetland areas.

y) Encourage participation in the Colorado River Basin Salinity Control Program, as well as other programs, to improve irrigation management and water conservation.

z) Increase education efforts in training water managers, producers, public representatives, and the public on water storage needs, water delivery systems, and water conservation efforts.
23 WATER RIGHTS

23.1 OVERVIEW
Water is a renewable natural resource, available in finite supply, and subject to competition between stakeholders as annual supplies vary. The demand to supply water to Utah’s various interests is expected to be a continually complex issue for stakeholders to coordinate. “Water rights” are the legal right to make use of water from a stream, lake, canal, impoundment, or groundwater. The County has a legitimate interest in seeing that all reasonable steps are taken to preserve, maintain, and enhance water resources for the public.

23.2 RELATED RESOURCES
Water Quality & Hydrology
Agriculture
Canals & Ditches
Irrigation

23.3 OBJECTIVES AND POLICIES

a) Balance water resource allocation among beneficial uses, e.g., agricultural, recognizing that growing populations will require larger portions of municipal and industrial water and an increased interest in water-based recreation.

b) Support state jurisdiction over water rights.

c) Integrate multiple strategies for meeting future water demands not limited to conservation, conversion, water transfers, water development, conjunctive use of surface and ground water, aquifer storage and recovery, secondary irrigation systems, cooperative agreements (arrangements with other water suppliers to share/lease their excess supplies), and water reuse (recycling wastewater effluent).

d) Water rights held by federal entities must be obtained through the state water appropriation process and will not infringe upon downstream water rights.

e) Establish reasonable water conservation objectives as one way to meet future water demands. Use and adapt water conservation education strategies developed by the state and other entities that focus on water supply and demand and on diverse strategies for meeting demand.

f) Assess potential water storage sites to meet increased demands for water.

g) Protect water rights and interests. It is the County’s position that water available to the County and citizens should be used within the County.
24.1 **OVERVIEW**
A wetland is a land area that is saturated with water, permanently or seasonally, such that it takes on the characteristics of a distinct ecosystem. The US Army Corps of Engineers and the EPA are the agencies that have legal jurisdiction over wetlands, including wetlands on private property. Wetlands provide numerous benefits to society but a few of the most important of these include wildlife habitat area, hydrologic recharge areas, and water quality improvements. The County desires to maintain and improve wetlands found on public lands for the benefit of its watershed, water quality, flood control, and wildlife habitat.

24.2 **RELATED RESOURCES**
- Livestock & Grazing
- Land Use
- Noxious Weeds
- Wildlife
- Water Quality & Hydrology
- Wetlands
- Wild & Scenic Rivers
- Canals & Ditches
- Irrigation
- Riparian Areas
- Recreation & Tourism
- Agriculture
- Water Rights

24.3 **ECONOMIC CONSIDERATIONS**
- Wetlands provide recreational value as well as ecological, social or economic value.
- Possibly the most significant economic and social benefit of wetlands is flood control, but wetlands also provide essential functions in filtering water/improving water quality and providing habitat for waterfowl and other wildlife (World Wildlife Fund 2004). Wetlands also recharge aquifers.
- From a regulatory standpoint, certain bodies of water and associated wetlands are regulated by the EPA and the US Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act (CWA), even on private property. Activities that involve excavation or placement of fill in jurisdictional waters or wetlands require a permit issued by the Corps and may be reviewed by EPA. The extent of jurisdiction is determined on a project-by-project basis in consultation with the Corps.
- Permitting processes take significant time and have real economic costs.

24.4 **OBJECTIVES AND POLICIES**

a) Identify high-priority or ecologically sensitive wetland areas.

b) Track proposed changes and provide comments regarding federal regulations that affect wetland jurisdiction and permitting to avoid overreach by the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers.

c) Support wetland management through planning.

Comment [MC21]: Combine this section with Riparian areas.
d) Support the eradication of invasive species, e.g., Phragmites, tamarisk, and Russian olive, which can degrade habitat value and impact groundwater levels.

e) Participate in federal, tribal, state, and local wetland conservation planning processes.

f) Support use of scientific methodology, e.g., proper functioning condition, to guide management decisions regarding recreation and grazing exclusions in wetlands.

g) Consider release of northern tamarisk beetle (Diorhabda carinulata) as a biological control of tamarisk, an invasive plant species.

h) Cooperate with Natural Resources Conservation Service, Utah State University Extension, and other entities responsible for integrated weed management in wetland areas.
25 WILD AND SCENIC RIVERS

25.1 OVERVIEW
An administrative designation created under the National Wild and Scenic Rivers Act of 1968 applied to preserve certain free-flowing rivers that "possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values". Wild and scenic rivers are designated by the US Congress after federal land managers recommend specific river or stream segments for designation.

25.2 RELATED RESOURCES
- Recreation & Tourism
- Land Use
- Livestock & Grazing
- Irrigation
- Canals & Ditches
- Water Rights
- Water Quality & Hydrology
- Wetlands
- Floodplains & River Terraces
- Riparian Area
- Fisheries
- Wildlife
- Threatened Endangered Sensitive Species

25.3 ECONOMIC CONSIDERATIONS
- At present the economic implications of Wild and Scenic River designation are not quantifiable. The tradeoff between increases in recreation and tourism sectors and the potential economic loss of future river development should be considered. An analysis of Wild and Scenic River designation done by Utah State University, made some observations: primary impacts of designation relate to a reduction in the grazing in riparian areas; and other impacts include further regulations on adjacent public and private land uses which would impact the natural resource extraction industry.

25.4 OBJECTIVES AND POLICIES
a) Avoid designating rivers as wild and scenic if the designation would adversely affect the economic interests of the county, including enjoyment of private property rights, mineral extraction, timber harvest, agriculture, water rights, water storage, or water delivery.

b) The county will be actively involved in all studies, plans or legislation that may consider or evaluate eligibility or may recommend inclusion of rivers in the National Wild and Scenic River System.

c) Potential reservoir sites should be protected from designation as wild and scenic rivers.

d) Through consultation with the County support may be given for recreation designations on river segments.

e) Any instream water right created by the designation of wild and scenic rivers is junior to all absolute and conditional water rights existing before the special designation is finalized.
f) US Congress should act on recommended wild and scenic river designations within five (5) years or the river should be released.

g) County support for the addition of a river segment to the National Wild and Scenic Rivers System or its management to protect wild and scenic values while awaiting congressional action shall be withheld until the requirements of Utah Code 63J-4-401 are complied with.
26 WILDERNESS

26.1 OVERVIEW

The County does not support designation of additional areas within the County as federally designated wilderness. According to the Wilderness Act of 1964, federal lands must have specific characteristics to be considered by Congress for wilderness preservation:

- Generally, appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable.
- They must have outstanding opportunities for solitude or a primitive and unconfined type of recreation.
- Has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition.
- They may also contain ecological, geological, or other features of scientific, scenic, or historical value.

26.2 RELATED RESOURCES

Recreation and Tourism
Land Use
Livestock and Grazing
Fire Management

Noxious Weeds
Water Quality and Hydrology
Forest Management

26.3 ECONOMIC CONSIDERATIONS

Economic considerations of wilderness designation should include:

- Mineral and energy development potential
- Logging and forest products
- Grazing management - grazing is allowed in wilderness areas but must meet wilderness guidelines. (see Livestock and Grazing Chapter)
- Private and state land inholdings
- Land transfers
- Motorized recreational uses
- Water management
- Vegetation management
- Recreation
26.4 OBJECTIVES AND POLICIES

a) The County does not support designation of additional areas within the County as federally designated wilderness.

b) The County does not support management of any additional federal lands within the county as non-WSA lands with wilderness characteristics, natural areas, inventoried roadless areas, or similarly intentioned management regimes.

c) The County supports removal of management provisions from federal lands that promote their management for wilderness characteristics and roadless qualities over other uses consistent with the multiple-use and sustained-yield management standard.

d) The county’s support for any recommendations made under a statutory requirement to examine the wilderness option during the revision of land and resource management plans or other methods will be withheld until the following are clearly demonstrated:

  e) The adopted transportation plans of the state and county or counties within the federal land management agency’s planning area (National Forest or BLM land) are fully and completely incorporated into the baseline inventory or information from which plan provisions are derived.

  f) Valid state or local roads and rights-of-way are recognized and not impaired in any way by the recommendations.

  g) The possibility of future development of mineral resources by underground mining or oil and gas extraction by directional or horizontal drilling or other non-surface disturbing methods are not affected by the recommendations.

  h) The need for additional administrative or public roads necessary for the full utility of the various multiple uses, including recreation, mineral exploration and development, forest health activities, operation and maintenance of water facilities, and grazing operations on adjacent land, or on subject lands for grand-fathered uses, are not impaired by the recommendations.

  i) Minimization criteria is applied in proposed areas.

  j) The analysis compares the full benefit of multiple-use management to the recreational, forest health, and economic needs of the state and the county to the benefits of the requirements of wilderness management.

  k) Public lands that were determined to lack wilderness character during previous wilderness review processes cannot be managed as if they were wilderness based on new or revised views of wilderness character.

  l) Any proposed wilderness designations in the county forwarded to U.S. Congress for consideration must be based on a collaborative process in which support for the wilderness designation is unanimous among federal, state, and local officials.

  m) Winter Ridge WSA must be released and allow multiple use and sustained yield. The management plans must be amended in a timely manner to reflect changes in status. The county defines a "timely manner" as not to exceed 2 years.

  n) Wilderness management must provide for continued and reasonable access to and development of valid, existing rights within the area and provide for full use and enjoyment of these rights.

  o) BLM inventories for the presence of wilderness characteristics must be closely coordinated with inventories for those characteristics conducted by state and local governments, and they should reflect a consensus among those governmental agencies about the existence of wilderness characteristics, as follows:

    p) Any inventory of wilderness characteristics should reflect all of the criteria identified in the Wilderness Act of 1964, including a size of 5,000 acres or more, containing no visible roads and the presence of naturalness, the opportunity for primitive and unconfined recreation, and the opportunity for solitude.
Geographic areas found to contain the presence of naturalness must appear pristine to the average viewer and must not contain any of the implements, artifacts, or effects of human presence (including visible roads, whether maintained or not) and must not contain human-made features such as vehicle bridges, fire breaks, fisheries, enhancement facilities, fire rings, historic mining, and other properties, including tailings piles, commercial radio and communication repeater sites, fencing, spring developments, linear disturbances, stock ponds, visible drill pads, pipeline and transmission line rights-of-way, and other similar features.

Factors, such as the following, though not necessarily conclusive, should weigh against a determination that a land area has the presence of naturalness, the area is or once was the subject of mining and drilling activities, mineral and hard rock mining leases exist in the area, and the area is in a grazing district with active grazing allotments and visible range improvements.

Geographic areas found to contain the presence of solitude should convey the sense of solitude within the entire geographic area identified; otherwise boundary adjustments should be performed.

Geographic areas found to contain the presence of an opportunity for primitive and unconfined recreation must find these features within the entire area and provide analysis about the effect of the number of visitors to the geographic area upon the presence of primitive or unconfined recreation, otherwise boundary adjustments should be performed.

In addition to the actions required by the review for roads pursuant to the definitions of roads contained in BLM Manual H 6301, or any similar authority, BLM should, pursuant to its authority to inventory, identify and list all roads or routes identified as part of a local or state governmental transportation system, and consider those routes or roads as qualifying as roads within the definition of the Wilderness Act of 1964.

BLM should adjust the boundaries for a geographic area to exclude areas that do not meet the criteria of lacking roads, offering solitude, and offering primitive and unconfined recreation, and the boundaries should be redrawn to reflect an area that clearly meets the criteria above, and which does not employ minor adjustments to simply exclude small areas with human intrusions; specifically, the boundaries of a proposed geographic area containing lands with wilderness characteristics should not be drawn around roads, rights-of-way, and intrusions; and lands located between individual human impacts that do not meet the requirements for lands with wilderness characteristics should be excluded.

It is the policy of the county that federal land management agencies shall comply with Utah Code 63J-8-104 as it pertains to wilderness.

Recognize that even if BLM were to properly inventory an area for the presence of wilderness characteristics, BLM still lacks authority to make or alter project level decisions to automatically avoid impairment of any wilderness characteristics without express congressional authority to do so.

Management of WSAs must provide for continued and reasonable access to and development of property rights within the area and provide for full use and enjoyment of these rights.
27 WILDLIFE

27.1 OVERVIEW
Undomesticated animals usually living in a natural environment, including both game and nongame species. The County enjoys a diverse and abundant wildlife population, which contributes to a productive natural environment. Wildlife also yield important social and economic resources including recreation opportunities such as photography, wildlife observation, and hunting. Uintah County seeks to maintain healthy wildlife populations.

27.2 RELATED RESOURCES

<table>
<thead>
<tr>
<th>Threatened, Endangered, or Sensitive Species</th>
<th>Land Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predator Control</td>
<td>Fisheries</td>
</tr>
<tr>
<td>Agriculture</td>
<td>Forest Management</td>
</tr>
<tr>
<td>Livestock and Grazing</td>
<td>Recreation and Tourism</td>
</tr>
</tbody>
</table>

27.3 ECONOMIC CONSIDERATIONS

- Revenue from hunting and other wildlife recreation is generated for Uintah County through harvest permits, pursuit permits, guide fees and gas, motel, restaurant and grocery expenditures.
- Greater Sage-grouse habitat and management may impact other land uses and development.

27.4 OBJECTIVES AND POLICIES

a) Encourage the WRI to focus on projects that include private landowner involvement by having county representatives attend meetings of the WRI regional teams, expressing their views, advising the WRI to involve private land owners, and advocating for the kinds of watershed restoration efforts they feel are most important.

b) Maintain healthy populations of mule deer while minimizing negative impacts from winter migration, including vehicle collisions and residential and commercial vegetation damage.

c) It is the policy of Uintah County that Greater Sage-grouse shall be managed in accordance with the Conservation Plan for the Greater Sage-grouse in Utah, as implemented by the State of Utah, with the map of the Uintah Sage-Grouse Management Area, included in the appendix, and incorporated by reference, as it applies to those portions of the Uintah Sage-grouse Management Area within Uintah County.

d) Ensure that BLM keeps the Bonanza area free of wild horses.

e) Support BLM decision to zero out Hill Creek and Winter Ridge Herd Areas.

f) Avoid damage caused by cranes by any legal means including the use of chemical repellents that have low toxicity and low environmental impact.

g) The County does not support the introduction of additional prairie dogs. Support local land owner in managing prairie dogs on private property.

h) Minimize the loss or fragmentation of habitats and disturbance during sensitive periods.
i) Meet municipal and industrial water needs while preserving traditional agricultural uses and ensuring aquatic habitat to support wildlife.

j) Wildlife management agencies, public land management agencies, and the county shall work together to manage and conserve big-game populations and their habitats, identify their migration corridors, and seek to remove barriers along those corridors in a manner that respects private property rights.

k) Wildlife agencies shall find effective ways to mitigate and compensate landowners for damage caused by big-game animals on private property. The county recognizes that DWR is mandated by Utah Code to mitigate damage to agricultural crops, equipment, and improvements and that a process to do so is in place.

l) Wildlife populations shall not be increased nor shall new species be introduced until forage allocations have been provided and an impact analysis that includes participation and concurrence by the county, wildlife management agencies, public land management agencies, and private landowners is completed for the effects on other wildlife species and livestock.

m) Reduction in forage allocation resulting from forage studies, drought, or other natural disasters will be shared proportionately by wildlife, livestock, and other uses.

n) Increases in forage allocation resulting from improved range conditions shall be shared proportionally by wildlife, livestock, and other uses.

o) Wildlife populations shall be consistent with the forage assigned in the resource management plan forage allocations.

p) Livestock, other private property, and habitat of wildlife species will be protected by controlling predator and wildlife numbers.

q) Federal land management decisions should be coordinated with state wildlife management agencies and should support state-sponsored initiatives or programs designed to stabilize wildlife populations that may be experiencing a scientifically proven decline in numbers.

r) It is the policy of the county to support the efforts of the DWR to maintain a healthy population of pronghorn in the area described above, provided that the rights of farmers, ranchers, and mineral owners are protected.

s) It is the policy of the county to oppose any future proposals to introduce bison into the county because of the impacts this action would have on available forage for livestock and wildlife.

t) No forage allocations or permits shall be provided for feral horses on public lands in the county.

u) All feral horses found roaming on public lands in the county are trespassing and shall be removed.

v) It is the policy of the county to support efforts by DWR to manage bighorn sheep populations for recreational purposes such as hunting and viewing and to ensure their contribution to ecosystems, provided that such management can be accomplished in coordination with the domestic sheep industry in a manner that does not force domestic sheep operators from their ranges or force them out of business. The County supports efforts to manage and augment the bighorn sheep population as long as there is not competition or interference with domestic animals.

w) All federal or state wildlife management agencies shall coordinate with the county before establishing regulatory measures associated with wildlife that could impact energy development.

x) It is the policy of the county that wildlife shall be managed on public and private lands in a manner that keeps water resources from being degraded below state or federal standards.
RESOURCE MAPS

Insert RMP Maps
ACKNOWLEDGEMENTS

County Commission
Bill Stringer
Brad Horrocks
Duane Shepherd
Mike McKee- Former Commissioner
Mark Raymond- Former Commissioner

Planning Commission
Troy Ostler, Chair
Marilyn Wallis, Vice Chair
Kenn Shields
Jim Lekas
Jeremey LeBeau
Robert Jolley
Mike Maguire
Troy Allred
Guy Collett

County Planning Staff
Matt Cazier, Community Development Director
Robert Barnhill, Planner
Tammy McKee- Administrative Assistant

Consulting Team
Rural Community Consultants, LLC
Mike Hansen, Shannon Ellsworth, Isaac Hansen
www.rural-community.com
IN ASSOCIATION WITH:
Planning and Development Services, LLC
Bruce Parker, AICP
pds@utahplanning.com
# TABLE of CONTENTS

update with final

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STATE STATUTE .................................................................................................................. 3</td>
</tr>
<tr>
<td>2</td>
<td>DEVELOPMENT OF THIS PLAN ............................................................................................. 5</td>
</tr>
<tr>
<td>3</td>
<td>AGRICULTURE FINDINGS ..................................................................................................... 7</td>
</tr>
<tr>
<td>4</td>
<td>AIR QUALITY FINDINGS ....................................................................................................... 10</td>
</tr>
<tr>
<td>5</td>
<td>CULTURAL, HISTORICAL, GEOLOGICAL, and PALEONTOLOGICAL RESOURCE FINDINGS ........ 16</td>
</tr>
<tr>
<td>6</td>
<td>DITCHES, CANALS, and PIPELINE FINDINGS ..................................................................... 21</td>
</tr>
<tr>
<td>7</td>
<td>ENERGY FINDINGS ............................................................................................................... 23</td>
</tr>
<tr>
<td>8</td>
<td>FIRE MANAGEMENT FINDINGS ........................................................................................... 29</td>
</tr>
<tr>
<td>9</td>
<td>FISHERIES FINDINGS .......................................................................................................... 34</td>
</tr>
<tr>
<td>10</td>
<td>FLOODPLAINS and RIVER TERRACE FINDINGS .................................................................. 39</td>
</tr>
<tr>
<td>11</td>
<td>FOREST MANAGEMENT FINDINGS ....................................................................................... 42</td>
</tr>
<tr>
<td>12</td>
<td>IRRIGATION FINDINGS ....................................................................................................... 48</td>
</tr>
<tr>
<td>13</td>
<td>LAND ACCESS FINDINGS .................................................................................................... 50</td>
</tr>
<tr>
<td>14</td>
<td>LAND USE POLICY FINDINGS ............................................................................................. 53</td>
</tr>
<tr>
<td>15</td>
<td>LAW ENFORCEMENT FINDINGS .......................................................................................... 60</td>
</tr>
<tr>
<td>16</td>
<td>LIVESTOCK + GRAZING FINDINGS ...................................................................................... 61</td>
</tr>
<tr>
<td>17</td>
<td>MINING and MINERAL RESOURCES FINDINGS .................................................................. 65</td>
</tr>
<tr>
<td>18</td>
<td>NOXIOUS WEEDS FINDINGS ................................................................................................ 73</td>
</tr>
<tr>
<td>19</td>
<td>PREDATOR CONTROL FINDINGS ......................................................................................... 81</td>
</tr>
<tr>
<td>20</td>
<td>RECREATION + TOURISM FINDINGS ..................................................................................... 84</td>
</tr>
<tr>
<td>21</td>
<td>RIPARIAN AREAS FINDINGS ................................................................................................ 88</td>
</tr>
<tr>
<td>22</td>
<td>THREATENED, ENDANGERED, and SENSITIVE SPECIES FINDINGS .................................. 91</td>
</tr>
<tr>
<td>23</td>
<td>WATER QUALITY + HYDROLOGY FINDINGS ....................................................................... 100</td>
</tr>
<tr>
<td>24</td>
<td>WATER RIGHTS FINDINGS .................................................................................................. 110</td>
</tr>
<tr>
<td>25</td>
<td>WETLANDS FINDINGS ......................................................................................................... 113</td>
</tr>
<tr>
<td>26</td>
<td>WILD and SCENIC RIVERS FINDINGS ............................................................................... 116</td>
</tr>
<tr>
<td>27</td>
<td>WILDERNESS FINDINGS ...................................................................................................... 120</td>
</tr>
<tr>
<td>28</td>
<td>WILDLIFE FINDINGS ........................................................................................................... 128</td>
</tr>
</tbody>
</table>
1 STATE STATUTE

Effective 5/10/2016


(1) To accomplish the purposes of this chapter, each county shall prepare and adopt a comprehensive, long-range general plan:
   (a) for present and future needs of the county;
   (b) (i) for growth and development of all or any part of the land within the unincorporated portions of the county; or
      (ii) if a county has designated a mountainous planning district, for growth and development of all or any part of the land within the mountainous planning district; and
   (c) as a basis for communicating and coordinating with the federal government on land and resource management issues.

(2) To promote health, safety, and welfare, the general plan may provide for:
   (a) health, general welfare, safety, energy conservation, transportation, prosperity, civic activities, aesthetics, and recreational, educational, and cultural opportunities;
   (b) the reduction of the waste of physical, financial, or human resources that result from either excessive congestion or excessive scattering of population;
   (c) the efficient and economical use, conservation, and production of the supply of:
      (i) food and water; and
      (ii) drainage, sanitary, and other facilities and resources;
   (d) the use of energy conservation and solar and renewable energy resources;
   (e) the protection of urban development;
   (f) the protection or promotion of moderate income housing;
   (g) the protection and promotion of air quality;
   (h) historic preservation;
   (i) identifying future uses of land that are likely to require an expansion or significant modification of services or facilities provided by each affected entity; and
   (j) an official map.

(3) (a) The general plan shall contain a resource management plan for the public lands, as defined in Section 63L-6-109, within the county.
   (b) The resource management plan shall address:
      (i) mining;
      (ii) land use;
(iii) livestock and grazing;
(iv) irrigation;
(v) agriculture;
(vi) fire management;
(vii) noxious weeds;
(viii) forest management;
(ix) water rights;
(x) ditches and canals;
(xi) water quality and hydrology;
(xii) flood plains and river terraces;
(xiii) wetlands;
(xiv) riparian areas;
(xv) predator control;
(xvi) wildlife;
(xvii) fisheries;
(xviii) recreation and tourism;
(xix) energy resources;
(xx) mineral resources;
(xxi) cultural, historical, geological, and paleontological resources;
(xxii) wilderness;
(xxiii) wild and scenic rivers;
(xxiv) threatened, endangered, and sensitive species;
(xxv) land access;
(xxvi) law enforcement;
(xxvii) economic considerations; and
(xxviii) air.
(c) For each item listed under Subsection (3)(b), a county's resource management plan shall:
(i) establish findings pertaining to the item;
(ii) establish defined objectives; and
(iii) outline general policies and guidelines on how the objectives described in Subsection (3)(c)(ii) are to be accomplished.

(4) ...

(5) The general plan may define the county's local customs, local culture, and the components necessary for the county's economic stability.

(6) Subject to Subsection 17-27a-403(2), the county may determine the comprehensiveness, extent, and format of the general plan
2 DEVELOPMENT OF THIS PLAN

Uintah County placed a high priority on data quality and public involvement for the development of this plan. This was gathered through six different avenues:

- **Natural resource issue database.** Information on current local policy and on environmental conditions was gathered and compiled into a database. This information can be found online at (http://www.basinpublicresources.com/).

- **Online public surveys.** A website was created for the initiative (http://UintahGeneralPlan2016.com). It was advertised through the County’s social media channels, local radio, signs, and over 4,600 postcard invitations. There were 27 questions on community issues (housing, land use, transportation, etc), and 27 individual surveys (one for every issue addressed in the Resource Management section). There were 234 respondents to the community survey, and each resource issue generated a different number of responses.

- **Subject matter stakeholder interviews.** Individual interviews were conducted with different stakeholder groups and subject matter experts. These interviews were conducted via telephone or in-person by the project consultant. The results of these interviews were incorporated into the plan, but the commenters were promised anonymity.

- **Focus group surveys.** County staff conducted individual presentations and conducted surveys with a number of groups. The County Planning Commission and Public Lands Committee served as the primary focus groups.

- **State Agency review.** As drafts were developed for each natural resource issue, they were reviewed and edited by state agency subject matter experts.

- **Public open house events and hearings.** Open house events were held in different locations throughout the County. The Planning Commission and County Commission meetings also followed standard noticing protocol.

2.1 PUBLIC OPINION

The findings of these efforts shaped the policies recommended by this plan. The most influential findings included:

- Three out of four survey respondents indicated that they are “satisfied” or “very satisfied” with their quality of life in Uintah County.

- 90% of survey respondents indicated that “maintaining rural character” is important to them in Uintah County.

- When asked about which issues needed more attention from the County, the top three answers included: economic growth (58%), parks and recreation (53%), and farmland preservation (46%).

- When asked about the efficiency of transportation system in the County, 70% of residents stated that it was “efficient” or “very efficient”. Respondents were less favorable on road maintenance.

- There seems to be strong support for transportation corridor preservation.
• Every response to the public survey was positive on whether the library was a good investment of resources.
• High speed internet was the utility identified as needing more investment.
• Only 10 of 178 responses stated that the County should not invest its time and resources into diversifying the local economy. Tourism and manufacturing were felt to be the most viable industries to recruit.
3 AGRICULTURE FINDINGS

3.1 OVERVIEW + BACKGROUND

- Agriculture in Uintah County is important for the natural, cultural, social, and economic benefits it provides. Agriculture successfully balances those benefits and continues to be a valuable source of jobs and income locally. In the County, agriculture provides jobs, local tax base, a variety of environmental benefits, scenic beauty, food and fiber for human consumption.

- According to the USDA Farm Service Agency (2016), the primary crops produced in Uintah County are alfalfa, yellow corn, and mixed forage. These crops were grown on 258 farms in the county, however, forage and grazing crops are also grown in areas of the county that are not officially farms (Farm Service Agency 2016). The market value of crop sales in the County was over $14.9 million in 2015, accounting for 38% of all agricultural products sold (Headwaters Economics 2016). In Uintah County the growing season averages four months (Utah State University 2005).

- Farmers and land managers in Uintah County are committed to proper stewardship of their property. Wildlife presents challenges to agriculture production.

- Although agriculture plays a significant role in the economic, environmental, and cultural well-being of the county, many farms are in jeopardy. According to the Utah Agriculture Sustainability Task Force (2012), “The number and size of farms and ranches has dramatically changed in Utah. From 1900 to 1990, the number of Utah farms decreased. Beginning in 1990 the number of farms began to increase again. The 2011 Utah Agricultural Statistics report recorded 16,600 farms.” The number of farms in Uintah County increased from 981 in 2007 to 1,231 in 2012 according to the USDA Census of Agriculture (2102). Most of the farms in the county are between 1-179 acres in size (U.S. Department of Agriculture 2012).

- “Although the number of farms have increased through the 1990s, since 1997 the size of those farms has decreased. Twenty years ago, the average size of a Utah farm was approximately 200 hundred acres larger than it is today” (Utah Department of Agriculture and Food 2012).

- “The average age of farmers continues to increase nationally and in Utah. Current farmers are aging while still working to maintain their lands. The average age of a Utah farmer is 57. Farming is losing its successors as many children are choosing other occupations. It is more difficult now to transfer the farm to the next generation” (Utah Department of Agriculture and Food 2012).
“Sediments consisting of alluvium, colluvium, terrace and bench deposits, talus, landslide deposits, glacial outwash, and eolian or dune deposits have all been deposited within [the County]. The river valleys and drainageways contain alluvium and colluvium that generally consist of clay, silt, sand, gravel, and cobbles. The terrace and bench deposits are predominantly medium to coarse grained sediments (silt, sand, gravel, and boulders) occurring as remnant erosional terraces or pediment surfaces between the steep slopes of the Uinta Mountains and the basin floor. The landslide and talus deposits form mainly as mass-wasting products from the steeper slopes of the Uinta Mountains and in steep-sided canyon drainageways on the northern and southern edges of the Uinta Basin. Glacial outwash is a coarse grained deposit (sand, gravel, cobbles, and boulders) which grades into the terrace deposits nearer the upper slopes of the northern edge of the Uinta Basin. The eolian or dune deposits generally are associated with sandstone bedrock outcrops, consist of predominantly sand- to silt-sized particles, and generally occur in the middle portion of the Uinta Basin. Because the Uinta Basin sediments were deposits created from an inland sea (Cretaceous age) and a large lake (early Miocene-Oligocene age), saline and calcium carbonates and associated evaporites are major constituents of some of the soils within the survey area” (Natural Resources Conservation Service 2003).

Most crop farming happens on private land with little outside influence. The agency with the most influence on agriculture in the County is the Natural Resources Conservation Service. The County and municipalities have influence over land uses and zoning which will impact agriculture.

3.2 CUSTOM + CULTURE

Since the 1880’s when Uintah County first saw an influx of settlers, people have been raising livestock to support their lives and lifestyle. Dozens of Century Farms have been designated in Uintah County including the W. S. Powell Farm Homestead 1877. The County considers livestock, grazing, and agriculture to be part of its history, custom, and culture. This tradition is still practiced and celebrated locally.

As explained in Beyond the Wasatch: The History of Irrigation in the Uinta Basin and Upper Provo River Area of Utah (1991), agriculture and the canals and irrigation that sustain it are part of the current and historical custom and culture of the Uintah County and the region; “Today, the canals are still operating and represent the lifelines in a valley that averages 5 to 7 inches of rainfall per year. Farmers continue to plant crops, primarily grains associated with the livestock business. However, success must not be gauged only in economic terms. There were other measurements. Most important was the establishment of a new farming settlement representing a cultural expansion of Mormonism. For the Mormon community, farming and living off the land was a social system which they treasured.”

During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of agriculture, there was a general sentiment that even though the County doesn’t directly control the industry, it could be more supportive of smaller farms. Producers, in particular were appreciative of the agriculture protection efforts, but they also want to maintain the right to dispose of their land as they wish. There were also concerns about the shifting demographic in people choosing agriculture as their profession, specifically with the retiring ‘baby boomer’ generation.

3.3 PRIORITY DATA SOURCES


4 AIR QUALITY FINDINGS

4.1 OVERVIEW + BACKGROUND

- Air pollutants are those substances present in ambient air that negatively affect human health and welfare, animal and plant life, property, and the enjoyment of life or use of property. Ambient pollutant concentrations result from interaction between meteorology and pollutant emissions. Because meteorology can’t be controlled, emissions are what we can manage to control pollutant concentrations.

- “The Clean Air Act (CAA) requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. 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... 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... The Division of Air Quality monitors each of these criteria pollutants, as well as several non-criteria pollutants for special studies at various monitoring sites throughout the state” (Division of Air Quality 2015).

- The Division of Air Quality has studied ozone and particulate matter. Monitoring has taken place since at least 2006. The Vernal monitoring station has indicated that Duchesne and Uintah Counties have been in compliance with the NAAQS, with the exception of occasional exceedance of the O3 standard.

- O3 is present in the atmosphere even in the absence of significant, local, human-caused emissions of NOx and VOC. Background O3 is often higher in areas of higher elevation (such as the Uintah Basin) because natural stratospheric O3 impacts and international transport impacts increase with altitude, whereas O3 lifetimes are longer (EPA 2014). Understanding the mechanics of the Uintah Basin airshed in the winter and summer, including O3 transport within and from outside the basin, will be important before regulatory policies are enforced.

- In December 2015, EPA lowered the primary and secondary O3 standard from 0.075 to 0.070 parts per million. According to EPA and DAQ (based on 2012–2014 data), a couple of sites in Uintah County do not meet the updated standard. EPA will likely designate nonattainment areas in late 2017 based on 2014–2016 data. If a nonattainment area is designated, a state implementation plan may be required depending on the classification (a plan is not needed for marginal a classification.

- The Clean Air Act (1970) and its amendments set the laws and regulations regarding air quality, give authority to the US Environmental Protection Agency to set standards and rules, and delegate regulatory authority to individual states with EPA oversight, provided certain standards are met. The purpose of air quality NAAQS regulations, enforced by the EPA and the DAQ in Utah, are to protect public health and welfare by decreasing pollutant concentrations through emissions reduction. Construction and mining projects require assessment of air quality impacts and may require an emissions permit and/or a fugitive dust control plan from the DAQ. Fines of up to $10,000 per day may be issued if rules/laws are not properly followed.
The Clean Air Act, last amended in 1990, requires that U.S. Environmental Protection Agency (EPA) set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. Standards have been set for six criteria pollutants: carbon monoxide (CO), lead, nitrogen dioxide (NO_{2}; also known as nitrogen oxides, oxides of nitrogen, or NO_{x}), ozone (O_{3}), sulfur dioxide (SO_{2}), and particulate matter (PM). Once emitted into the atmosphere, NO_{x} and volatile organic compounds (VOC) emissions react together to form O_{3}. Sunlight provides the energy for the reaction, and extremely reactive gases called radicals serve as catalysts. The Utah Department of Environmental Quality (UDEQ), Division of Air Quality (DAQ) operates a network of permanent air monitoring stations across the state to measure air quality and to determine NAAQS compliance, including one station in Roosevelt (Duchesne County) and one station in Vernal (Uintah County). The Roosevelt and Vernal stations monitor for meteorological conditions, NO_{2}, O_{3}, and PM less than 2.5 micrometers in diameter (PM_{2.5}). Both stations indicate that Duchesne and Uintah Counties have been in compliance with the NAAQS, with the exception of occasional exceedances of the O_{3} standard.

In addition to the air monitoring stations operated by the DAQ in Vernal and Roosevelt, EPA, the Ute Tribe, Bureau of Land Management (BLM), and National Park Service (NPS) maintain permanent air monitoring stations in the Uintah Basin. EPA and the Ute Tribe operate stations in Indian Country in Myton, Ouray, Redwash, and Whiterocks. NPS operates a station in Dinosaur National Monument, and BLM operates a station in the community of Fruitland. A semi-permanent air monitoring station at Horsepool has been used as a National Oceanic and Atmospheric Administration research site during winter intensive studies. Up to two dozen temporary, portable air monitors are also set up at different locations throughout the Uintah Basin during the winter to measure meteorological conditions, O_{3} concentrations, and levels of O_{3} precursors. Utah State University has been involved in operating a number of the temporary monitors as well as assisting with permanent monitoring stations. Uintah County has also been supportive of identifying the dynamics of the air quality in the Uintah Basin.

The Uintah Basin is in the northeast corner of Utah and is bounded on the north by the Uinta Mountains, on the south by the Tavaputs Plateau, on the west by the Wasatch Mountains, and on the east by elevated terrain that separates it from the Piceance Basin in Colorado. The Uintah and Ouray Indian Reservation covers a significant portion of Uintah Basin lands, as do Duchesne and Uintah Counties. Because the Uintah Basin is surrounded on all four sides by mountains, it is shaped physically like a basin and tends to trap polluted air and facilitate inversion formation. In recent years, concentrations of wintertime O_{3} in the Uintah Basin have been elevated and at times exceed the NAAQS. High episodes are typically observed during winter inversion periods when the ground is covered by snow and stagnant air conditions are present. A multi-year study (the Uintah Basin Ozone Study) led by DAQ and other partners began in the winter of 2011–2012 to study the problem. According to DAQ (2016), key findings from this study to date indicate the following:

- Elevated winter O_{3} is episodic and only occurs with snow cover and a persistent temperature inversion.
- Oil and gas operations were responsible for 98% to 99% of VOC emissions and 57% to 61% of NO_{x} emissions.
- The primary chemical drivers of winter O_{3} formation in the Uintah Basin differ greatly from those of summer O_{3} formation in urban areas.
- Formaldehyde and other aldehydes are the dominant contributors to the creation of radicals that drive O_{3} formation in the Uintah Basin.
- Research indicates that VOC controls focused on these reactive species will be particularly effective.
• Air monitoring station data from the 2014 Uinta Basin Winter Ozone Study are shown in Table A2. O₃ exceedances have also occurred in the summer in the Uintah Basin, especially at higher elevations (Lyman 2016).

• In October 2015, EPA lowered the primary and secondary O₃ standard from 0.075 to 0.070 parts per million. According to EPA and DAQ (based on 2012–2014 data), Uintah County does not meet the updated standard. Utah submitted the Governor’s recommendation for area designation on September 29, 2016. Two areas are recommended for ozone nonattainment designation: the Wasatch Front Area (Salt Lake and Davis counties, and portions of Weber, Tooele, and Utah counties) and the Uinta Basin Area (portions of Uintah and Duchesne counties at and below 6,000 feet of elevation, and not under EPA or Tribal jurisdiction for air quality purposes). The Uintah Basin Area excludes a large portion of tribal land; the Ute Indian Tribe will make a separate recommendation to the EPA for area designation on tribal lands. Final ozone area designations would be promulgated by the EPA no later than October 1, 2017. States may be required to develop, depending on classification, federally-enforceable State Implementation Plans (SIPs) to identify how the primary and secondary NAAQS would be attained in nonattainment areas. The Ute Tribe and EPA would also be required to develop a plan covering Indian Country. Through these plans, the state and the Ute Tribe would design control measures and strategies to reduce pollutant levels in the area, and if appropriate, any emissions of precursor pollutants.

• The time period for ozone nonattainment areas to achieve attainment depends on the area’s classification as marginal, moderate, serious, severe, or extreme. A higher classification would mean more stringent requirements, but allow for a longer time to reach attainment. Although the classification of the Utah-recommended nonattainment areas is unknown at this time, they are expected to be either marginal (3 years to attainment from date of classification) or moderate (6 years to attainment from date of classification). An attainment SIP is not required for marginal nonattainment areas, but states must implement control mandates such as new source review and emission limitations for major sources. Clean Air Act permitting in Utah is the responsibility of UDEQ. In Indian Country, the permitting authority is EPA. Economic development could be impacted by a nonattainment designation. Consequences of a nonattainment designation could include requiring new facilities wanting to locate in the nonattainment area to install pollution controls or take stringent operational limits, requiring emission offsets, or requiring the implementation of voluntary measures to reduce emissions. Emissions reductions from existing sources are also likely to be required.

• In May 2016, EPA finalized the federal implementation plan to implement the Minor New Source Review Program for oil and gas production and processing segments (EPA 2016). Permit options include the general permit, permit-by-rule, and true minor source registration. The final rule also incorporates emission limits and other requirements from eight federal standards and applies limits for a range of equipment and processes used in oil and natural gas production and natural gas processing (New Source Performance Standards [NSPS] subparts D, Kb, III, JJJJ, KKKK, and OOOOa and National Emission Standards for Hazardous Air Pollutants subparts HH, ZZZZ, and DDDDD). NSPS subpart OOOO is the first set of federal air standards to limit VOC emissions at natural gas wells that are hydraulically fractured and to establish requirements for several other oil and gas industry sources of air pollution (e.g., storage tanks, pneumatic controllers, and glycol dehydrators) that were constructed, modified, or reconstructed after August 23, 2011. NSPS subpart OOOOa is a follow-on to subpart OOOO that limits VOC and methane emissions from affected equipment and processes in the oil and gas industry that were constructed, modified, or reconstructed after September 18, 2015. These new regulations will affect multiple emission sources in the county.
- UDEQ finalized rules (Utah Administrative Code R307-504) in 2014 that established requirements to ensure that existing oil and gas equipment is maintained and operated as designed, that bottom filling or submerged filling is used when loading a product into tanker trucks, that high-bleed pneumatic controllers are replaced with low-bleed controllers, and that self-igniters are installed on flares. UDEQ also inspects, audits, and enforces actions to ensure facilities are meeting applicable regulatory requirements. In addition, UDEQ compares Utah Division of Oil, Gas and Mining production data with their air permits database to verify that oil and gas facilities have obtained the necessary air permits. These regulations also affect multiple emission sources in the County.

- \(O_3\) is present in the atmosphere even in the absence of significant, local, human-caused emissions of \(NO_x\) and \(VOC\). This background \(O_3\) is a result of natural emissions and of human-caused emissions transported from outside the Uintah Basin or outside the United States. Background \(O_3\) is beyond the ability of local regulators to control (Lyman 2016). Background \(O_3\) is often higher in areas of higher elevation (such as the Uintah Basin) because natural stratospheric \(O_3\) impacts and international transport impacts increase with altitude, whereas \(O_3\) lifetimes are longer (EPA 2014). Some research suggests that increased transport of \(O_3\) and precursors from outside the United States are counteracting domestic emissions reductions in the west (Cooper et al. 2012). \(O_3\) and precursors from outside the Uintah Basin, combined with wildfires and intrusions of \(O_3\)-rich air from the stratosphere, have occasionally led to exceedances of the \(O_3\) NAAQS during the summer in the Uintah Basin. Understanding the mechanics of the Uintah Basin airshed in the winter and summer, including \(O_3\) transport within and from outside the basin, will be important before policies are developed.

- “Particulate matter (PM) is a mixture of solid particles and liquid droplets. Fine particulates are less than or equal to 2.5 micrometers in diameter and are measured in micrograms per cubic meter (µg/m³). Because of their small size (approximately 1/30th the width of the average human hair), fine particulates can pass through the nose and throat, lodge deeply in the lungs, and pass across the lungs into the cardiovascular system. They aggravate health conditions such as asthma, chronic obstructive pulmonary disorder (COPD), and other respiratory illnesses. Fine particulates are a specific concern for the very young, the elderly, and anyone with respiratory disorders” (UDEQ 2013).

- Utah’s mountain valleys and wintertime temperature inversions provide ideal conditions for the formation of fine particulates, or PM2.5. Concentrations of PM2.5 build as temperature inversions persist. Utah’s unique geography and weather, when combined with emissions, creates unusual chemical and photochemical conditions that lead to the formation of PM2.5. During most of the year, Utah meets the 24-hour PM2.5 standard. However, during prolonged winter inversions high concentrations of fine particulates can exceed the national health standards. . . Sources that emit PM2.5 include fuel combustion from vehicles, wood burning, and industrial processes, as well as vapor releases from paints, solvents, consumer products, and coatings” (UDEQ 2013).

- Increasing domestic use of natural gas could reduce the amount of PM2.5 in the atmosphere around Uintah County. Many residents rely on wood-burning stoves which emit more particulates compared to natural gas. Encouraging the expansion of natural gas infrastructure, and helping homes connect to gas lines could give residents a cleaner alternative, and ultimately reduce PM2.5.
A state may request that EPA exclude data showing exceedances or violations of the NAAQS that are related directly to an exceptional event (40 Code of Federal Regulations [CFR] 50.14(a)(1)). An exceptional event is defined in 40 CFR 50.1(j) as “an event that affects air quality, is not reasonably controllable or preventable, is an event caused by human activity that is unlikely to recur at a particular location or a natural event, and is determined by the Administrator in accordance with 40 CFR 50.14 to be an exceptional event. It does not include stagnation of air masses or meteorological inversions, a meteorological event involving high temperatures or lack of precipitation, or air pollution relating to source noncompliance.” Examples of exceptional events include fireworks and prescribed fire. The county supports this regulation and agree that exceptional events should not count toward nonattainment status.

Senate Bill 2072 would require EPA to establish a program (Early Action Compact program) under which the EPA administrator would defer the designation of an area as a nonattainment area for purposes of the 8-hour O₃ NAAQS if the area achieves and maintains certain standards under a voluntary early action plan. The bill was introduced in September 2015, and a hearing was held in June 2016. The county supports the passage of this bill because it allows the use of locally crafted solutions to improve air quality and achieve compliance with the NAAQS.

Currently as of late 2016, Uintah County is not designated by the EPA as a nonattainment area (EPA 2016). This means that all criteria pollutants are within permissible levels. Nevertheless, maintaining air quality remains a priority for the County.

4.2 CUSTOM + CULTURE

Uintah County has always valued clean air.

During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of air quality, there was a general dissatisfaction with air quality in the County. There was strong support for electrification of the oil fields in part to help reduce impacts on the airshed.

4.3 PRIORITY DATA SOURCES


5 CULTURAL, HISTORICAL, GEOLOGICAL, AND PALEONTOLOGICAL RESOURCE FINDINGS

5.1 OVERVIEW + BACKGROUND

5.2 CULTURAL AND HISTORICAL

- Cultural resources include archaeological sites, standing structures (e.g., buildings, bridges), and even places of importance that are more than 50 years of age. Many historical and cultural resources are very sensitive and protected by law; however, it is important to remember that not all cultural sites are important or significant, and that those not considered as such would not be adversely affected by any planned projects.

- “Humans first arrived in Uintah County about 10,000 to 12,000 years ago. Many archaeologists believe these ancient men were descendants of immigrants who came to the North American continent across the Bering Strait during the late Pleistocene Period. It was a time of nomadic life with temporary campsites located along routes where food and water were more easily obtainable” (Burton 1996).

- “Rock art and other archaeological evidence located in Uintah County indicate these prehistoric people or “mo-cutz” as the Ute Indians call them, occupied this area for centuries before the present Indian culture. With the advent of modern equipment and new methodologies, archaeologists are gaining new insight and constantly updating ideas about the Uintah County prehistoric people. Just what happened to these ancient Indians and the time the Utes actually arrived in Uinta County are not certain” (Burton 1996).

- “Spanish explorers crossed the region in the 1700s. In the 1800s, settlers from Europe and the eastern United States arrived in the area and left their mark on the landscape with their homesteads. Those who had access to the rivers and a constant flow of water survived, while others dried up with drought and moved away. Now, many of the remains of homesteads are found alongside the Indian art work of the past” (National Parks Service n.d.).

- “Geological changes over the eons fashioned the immense mountains, exquisite valleys, and beautiful canyons of Uintah County. These canyons are the setting for famous rock art, so famous as to have given its name – Classical Vernal Style – to a whole class of rock art. This fabulous collection of petroglyphs, pictographs, and other forms of rock art have attracted worldwide attention. The famous “Three Kings” in Dry Fork Canyon are exceptional in detail and workmanship. Some of the most prominent figures in the Little Brush Creek sites are also a variation of the Classic Vernal Style. One such figure wears a helmet with rays extending from either side and holds a mask or head of the same inverted bucket-style helmet. The Prayer Rock and Indian Sundial are also located at the Brush Creek Site. The ancient people have scratched the surface leaving a brief history of their existence” (Burton 1996).

- The National Historic Preservation Act is legislation intended to preserve archaeological and historical sites in the US. The act created the National Register of Historic Places, the list of National Historic Landmarks, and the State Historic Preservation Offices (SHPO). The National Register of Historic Places, managed by the National Park Service, is the nation’s official list of buildings, districts, sites, structures, and objects worthy of preservation, and are officially designated “historic properties”, either archaeological or historic. The State Historic Preservation Office (SHPO) and Officer was created in order to coordinate a statewide inventory of historic properties, nominate properties to the National Register, manage the statewide preservation plan, and educate and consult locals.
The National Register of Historic Places has listed 19 properties and districts on the National Register in the county.

The Utah Antiquities Act (UCA 9-8-404 et seq.) protects significant resources and applies to all paleontological resources that are on or eligible for inclusion in the State Register.

Geological

- Geologic resources include fossils (paleontological resources) that are defined as the remains, traces, or imprints of ancient organisms preserved in or on the earth’s crust, providing information about the history of life on earth.
- Geology is another important part of planning because of the area’s unique geologic features and sights, as well as to identify potential development hazards, including faults, landslides/rockfalls, and soil liquefaction and other problem soils.
- “Uintah County is part of two geographical provinces. The Uinta Mountains are of the east-west spur of the Rocky Mountains, which forms the Rocky Mountain Geographical Province” (Burton 1996).
- “The Uintas are one of the few mountain ranges in the world that lie in an east-west direction. The main canyons are Brush Creek Gorge, north of Vernal, Ashley and Dry Fork to the northwest, and Whiterocks and Uintas in the extreme northwest” (Burton 1996).
- “The Tavaputs Plateau which includes southern Uintah County is a northward-sloping area bounded on the south by outward-facing retreating escarpments known as the Roan Cliffs and the Book Cliffs. Elevation at the southern county line attains 8,000 feet. The average elevation of the basin floor is 5,000 feet. Uintah County is unique in its geological display of one billion years of prehistoric life” (Burton 1996).

Seismicity

- “Utah straddles the boundary between the extending Basin and Range Province to the west and the relatively more stable Rocky Mountains and Colorado Plateau to the east. This boundary coincides with an area of earthquake activity called the Intermountain Seismic Belt (ISB). Utah’s longest and most active fault, the Wasatch fault, lies within the ISB. Unfortunately, the heavily populated Wasatch Front (Ogden – Salt Lake City - Provo urban corridor) and the rapidly growing St. George and Cedar City areas are also within the ISB, putting most of Utah’s residents at risk” (Utah Seismic Safety Commission, 2008).
- Uintah County is not within the Intermountain Seismic Belt.

Paleontological and Archeological
“Dinosaur National Monument is famous for its remarkable dinosaur quarry. Today, visitors have the opportunity to see the bones in-situ, which means that bones have been carefully exposed but left in the ground as they were found. However, in the early 1900s, the quarry was very active and many dinosaurs were removed, studied, and put on display. Even a century later, paleontologists come to Dinosaur to study and discover more information about dinosaurs and small animals that lived with them (National Park Service n.d.).

"Although Uintah County is most famous for Dinosaur National Monument and its Jurassic dinosaurs, the county is also home to a wealth of fossil resources from throughout geologic time. Examples include an interpreted dinosaur track site at Red Fleet Reservoir State Park, fossil plants from the Green River Formation, and a diverse fauna of fossil mammals including the Uintatherium, named for Uintah County." (Utah Division of State History 2016).

“Laws are in place to make sure that federal and state projects don’t carelessly destroy cultural resources... State and federal agencies that undertake projects must “take into account” how their project activities will affect historic and archaeological resources. Common projects include construction, rehabilitation, demolition, licensing, permitting, or transfer of public lands... The State Historic Preservation Office (SHPO) provides guidance to agencies and governments who are affected by these laws” (Utah Division of State History 2016).

The Uinta Basin and its surrounding counties have a large quantity and variety of cultural and historical resources. The history of the Uintah Basin is broken down into five major periods: 1) the PaleoArchaic period (ca. 10,000–6000 B.C.), 2) the Archaic period (ca. 6000–500 B.C.), 3) the Formative period (ca. 500 B.C.–A.D. 1300), 4) the ProtoHistoric or Historic Ute period (ca. A.D. 1300–1800), and 5) the Historic Euro-American period (ca. 1800–present). Sites from the Formative and Historic Euro-American periods dominate the archaeological and historical record in the Uintah Basin and include resources such as granaries, rock art, villages (as seen in sites found in Nine Mile Canyon), ranches, irrigation systems, and forts (as seen in Fort Duchesne).

Federal laws, procedures, and policies affecting the treatment of cultural resources include the Antiquities Act of 1906, Public Law 59-209, Executive Order 11593, Section 106 of the National Historic Preservation Act (NHPA) of 1966 (Public Law 91-190), the Federal Land Policy Management Act (Public Law 94-579), and 36 Code of Federal Regulations (CFR) 60 and 36 CFR 800. The American Indian Religious Freedom Act (42 United States Code [USC] 1996) has also been established to protect religious practices, ethnic heritage sites, and land uses of federally recognized Native Americans. The Native American Graves Protection and Repatriation Act applies to human remains found on federal lands,

The preservation of historic properties and cultural landscapes has the potential to add economic value to an economy by balancing preservation and need. A county that is a certified local government (CLG) with a historic preservation committee can apply for federal grants and gain the tools and resources needed to integrate historic buildings into the community’s social and economic fabric. Supporting information and a model Historic Preservation Ordinance are found on the Utah Division for State History website.

Ground disturbance (e.g., new development) can create opportunities for preserving and studying paleontological resources. These opportunities include 1) avoiding the destruction of scientifically significant resources, 2) identifying areas where scientifically important fossils may exist, 3) collecting and preserving scientifically significant fossils, and 4) allowing and maintaining access to the study of scientifically significant fossils.

Both state and federal legislation has been passed to encourage the preservation of paleontological resources while allowing for personal, professional, and academic study and research.
Federal laws, policies, and guidelines affecting fossil resources include the Paleontological Resources Preservation Act (PRPA) of 2009. The PRPA is codified in Title VI of the Omnibus Public Lands Management Act of 2009 (Public Law 111-011, Title VI, Subtitle D), which defines paleontological resources, resource-use permit criteria, requirements for curation, and the criminal and civil penalties. In addition, the Federal Land Management and Policy Act of 1976 (Public Law 94-579; 90 Stat. 2743; USC 1701-1782), the National Environmental Policy Act (Public Law 91-190; 31 Stat. 852; 42 USC 4321-4327), and general procedural guidelines for management are provided in the BLM’s Instructional Memorandum (IM) 2008-009 (2007), Manual H-8270-1 (BLM 1998), and IM 2009-011 (BLM 2008), which define management, preservation, and protection of paleontological resources.

5.3 CUSTOM + CULTURE

The custom and culture of Uintah County is to respect all cultures and preserve or honor significant historical stories, figures, objects, structures, or events. It is the custom of the County and its residents to rely on the land and geology for fuel, fiber, food, and minerals. Mining, mineral extraction, and ranching have been a way of life for more than a century. Historic photos and accounts evidence the tradition of resource utilization and dependence in Uintah County.

During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. One common concern was of vandalism that might result from increased recreation and tourism activity.

5.4 PRIORITY DATA SOURCES


Utah Division of State History. 2016. SHPO compliance. Utah Department of Heritage & Arts.


6 DITCHES, CANALS, AND PIPELINE FINDINGS

6.1 OVERVIEW + BACKGROUND

- Water deliveries are an essential component of agricultural production, and may also be relied upon for urban landscape watering and gardens.

- The shift from crop irrigation to landscape irrigation can help water rights holder maintain beneficial use and avoid forfeiture of water rights.

- “The major rivers in the county include the Green River, Duchesne River, Uintah River, Whiterocks River, Dry Fork River, and White River, as well as the many other smaller creeks that feed them. These rivers are fed by springs, storm runoff, and snowmelt form the high Uinta Mountains and foothills and by groundwater discharge. Lakes, reservoirs and pipelines are used to provide irrigation and flood control as well as water for domestic use in towns and communities” (Uintah County Conservation District 2012).

- With the increase in oil and gas extraction industry, higher demand for water for industry has accrued in Uintah County. This industry has two different water classifications that are now needed. The first is the need for fresh water used in the drilling process and the second is the need of disposal of production water that is extracted with the oil and gas“ (Uintah County Conservation District 2012).

- Canal and irrigation companies are outside of the County's control but could be influenced by private shareholders. There are numerous companies that deliver water throughout the County.

- The Ashley Valley Flood Control Storm Water Master Plan briefly mentions canals. Canal safety plans are protected by law and held private by the irrigation companies. The canals generally are maintained by individual canal companies and a good amount of drainage water has unrestricted access to dump into canals.

6.2 CUSTOM + CULTURE

- To sustain early farmers and settlers, canals and ditches were constructed throughout Utah making agriculture possible despite the semi-arid climate. Subsequent development of agriculture brought further expansion of ditches, canals, and pipelines. Traditionally, irrigation water has been distributed via a network of canals and ditches from rivers and streams; but with time and circumstances dictating, many have been piped. Additionally, because of the extensive conversion of agricultural lands to urban development, some irrigation water is now distributed through secondary irrigation supply lines that parallel the municipal culinary water supply allowing people to irrigate residential lawns using water previously allocated to farming.

- Historic records illustrate how Albert William Wilkins was one of the original builders of the Burns Bench Canal and served as a canal director for years. Photos from the Uintah County Library show how Ab Price, twelve years old in 1906, helped John Timothy with the water assessment during the building of a government canal in the west part of the county. Another historic photo show two men near Jensen, Utah, watching water flow from the pump out of the Green River into the Burns Bench Canal.

- During the County's general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of ditches and canals, there was strong support for the installation of trails along ditch and canal corridors.
6.3 PRIORITY DATA SOURCES


7 ENERGY FINDINGS

7.1 OVERVIEW + BACKGROUND

- “The unique geologic history, geography, and climate of Utah have resulted in an abundance of nonrenewable and renewable energy resources. Nonrenewable energy resources include fossil fuels, such as oil, coal, and natural gas, as well as naturally occurring elements, such as uranium. Renewable energy resources are those that are replenished by natural processes and include geothermal, solar, and wind energy” (Utah State University 2009).

- Oil and natural gas extraction are a major component of Uintah County’s economy. Uintah County has always believed in managing land for multiple uses and feels that a strong, diverse economy comes from a variety of sources related to land.

- “Federal land managers should maintain or increase mineral development.” (Cheryl A Meier May 18, 2017).

- The Bureau of Land Management Vernal Field Office Record of Decision and Approved Resource Management Plan (BLM Vernal ROD/RMP) makes the following allocations for oil and gas leasing (BLM 2008):
  
  Unavailable: 190,434 acres:
  
  - 53,058 acres of wilderness study areas (WSAs) in the BLM Vernal Field Office plus 2,750 acres of WSA in the BLM Moab Field Office.
  - 99,498 acres in 14 areas identified as lands with wilderness characteristics (LWC) (does not include 6,680 acres of LWC in BLM White River Field Office that are no surface occupancy [NSO]).
  - 35,128 acres within the Hill Creek Extension.

  Open subject to NSO: 86,789 acres:
  
  - 0.25-mile area around greater sage-grouse (Centrocercus urophasianus) leks.
  - High-use recreation areas such as Pelican Lake.
  - White River LWC.
  - Areas of critical environmental concern (ACECs) includes the Pariette Wetlands (10,437 acres, the bulk of which are in Uintah County)

  Open subject to moderate constraints: 890,280 acres

  Open subject to standard terms and conditions: 750,131 acres

- More upgraded pipeline and crude oil infrastructure is needed to bring crude oil products produced in the Uintah Basin to market.

- On March 23, 2015, the Utah Legislature established the Uintah Basin Energy Zone for the purpose of maximizing efficient and responsible development of energy and mineral resources.

- The business environment for renewable energy and non-renewable energy is not on a level playing field because renewable energy is heavily subsidized.
• The management of the greater sage-grouse by federal and state entities have implications on the level of mineral development that is allowed in the counties.

• Voluntary management provisions in the Conservation Plan for Greater Sage-grouse in Utah (Utah Division of Wildlife Resources 2013) are as follows:
  a) Avoid disturbance within a lek if possible. Project proponents must demonstrate why avoidance is not possible.
  b) If avoidance is not possible, use minimization as appropriate to the lek.
  c) If minimization is not sufficient, mitigation is required. Mitigation should be calculated at a minimum of a 4:1 ratio starting with the first acre disturbed. Mitigation must produce lands capable of supporting greater sage-grouse as habitat before the proposed disturbance occurs, although birds do not need to be using the mitigated area.
  d) The proponent of the disturbance must demonstrate that the conditions have been met. Cumulative new permanent disturbance should not exceed 5% of the surface area of other habitat within the sage-grouse management area.

• The BLM Vernal ROD/RMP manages the greater sage-grouse in Utah with some of the following provisions: 1) NSO in a 0.25-mile zone around leks year-round; 2) no permanent facilities or structures allowed within 2 miles of a lek when possible; 3) no surface-disturbing activities within 2 miles of active greater sage-grouse leks allowed from March 1 to June 15; 4) within 0.5 mile of known active leks, the best available technology used to reduce noise, e.g., installation of multi-cylinder pumps, hospital sound-reducing mufflers, and placement of exhaust systems.

• Applications for permit to drill (APD) have decreased dramatically in Uintah County between 2012 and 2016 (Table EM1).

<table>
<thead>
<tr>
<th>Year</th>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>150</td>
</tr>
<tr>
<td>2015</td>
<td>451</td>
</tr>
<tr>
<td>2014</td>
<td>798</td>
</tr>
<tr>
<td>2013</td>
<td>737</td>
</tr>
<tr>
<td>2012</td>
<td>1,213</td>
</tr>
</tbody>
</table>

Source: Utah Division of Oil, Gas and Mining (2016a).

• Table EM2.

<table>
<thead>
<tr>
<th>Year</th>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016 (as of October)</td>
<td>8,322,737</td>
</tr>
<tr>
<td>2015</td>
<td>12,735,440</td>
</tr>
</tbody>
</table>
Over the last five years, Uintah County has produced roughly 1/3 of all oil in the state (Utah Geological Survey, 2017).

In 2015, the County had more producing wells than any other county. The cumulative amount of oil that has been produced in Uintah County is +330 million barrels.

It is widely believed that Uintah County has great oil potential.

Over the last five years, Uintah County has produced more natural gas than all other counties combined (Utah Geological Survey, 2017).

The USGS estimates that the area in and around Uintah contains trillions of cubic feet of gas and natural gas liquids.

Estimating the amount of natural gas reserves within county boundaries can be difficult because plays are often uneven and extend under many borders. Additionally, as extraction technology improves, the amount of resources considered available will increase.

Oil Shale & Oil Sands
“Oil shale and tar sands are two natural resources that can be converted into petroleum products. Utah contains some of the largest deposits in the world of both of these materials” (Utah State University 2009).

“The upper Green River Formation in the Uinta Basin of Utah contains one of the largest deposits of oil shale in the world. The oil shale deposit contains an estimated in-place resource of 1.3 trillion bbls (USGS Oil Shale Assessment Team, 2011) and a potentially economic resource of 77 billion bbls (Vanden Berg, 2008). The richest Green River oil shale horizon is the Mahogany zone, where individual beds can yield 80 gallons of oil per ton of rock. The Mahogany zone is 70 to 120 feet thick and is accessible via extensive outcrops along the eastern and southern flanks of the basin” (Boden et al. 2014).

“Utah oil sands, though small compared to Canadian resources, are the largest resource in the United States. Utah oil sand deposits contain 14 to 15 billion bbls of in-place oil, and have an additional inferred resource of 23 to 28 billion bbls. Twenty-four individual deposits exist in the Uinta Basin, mainly around its periphery, and an additional 50 deposits are scattered throughout the southeastern part of the state. Utah’s major oil sand deposits individually have areal extents ranging from 20 to over 250 square miles, as many as 13 pay zones, gross thickness ranging from 10 to more than 1000 feet, and overburden thickness ranging from zero to over 500 feet” (Boden et al. 2014).

“With the current glut of conventional crude oil and the attendant low price, there is less incentive for new drilling or the employment of bitumen extraction and upgrading techniques developed in Canada to move Utah’s oil sands toward successful and sustainable development in the near future. Meanwhile, factors such as site accessibility, adequate infrastructure, water availability, environmental concerns, permitting, and the problems associated with the heterogeneity of reservoir sands should continue to be researched to realize economically viable oil sand development in Utah when market conditions improve in the future” (Boden et al. 2014).

Nuclear

“Nuclear power is a source of energy derived from the fission (splitting) of atoms. It accounts for approximately 19 percent of total electricity generated in the United States. Utah neither generates nor imports power from nuclear power plants. By-products of nuclear energy are cleaner than those produced by burning fossil fuels for power (near-zero emissions of carbon dioxide, sulfur oxides, nitrogen oxides, and ash), but it does produce solid waste by-products that must be stored. While these waste products are small compared to the electricity produced, they require specific safety measures” (Utah State University 2009).

There are currently no nuclear operations in Uintah County. However, nuclear power may be a viable option for the County in the future.

Renewable

The Utah Governor’s Office of Energy Development includes solar, wind, geothermal, hydroelectric, and biomass in its list of renewable energy.


<table>
<thead>
<tr>
<th>Energy</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geothermal</td>
<td>367,476</td>
</tr>
<tr>
<td>Solar</td>
<td>403,988</td>
</tr>
</tbody>
</table>

Wind 35,871

- The National Renewable Energy Laboratory estimates that all of Uintah County has “very good” solar power potential based on the average solar energy available to a flat plate collector oriented at an angle from horizontal equal to the latitude of the collector location. [http://www.nrel.gov/gis/solar.html](http://www.nrel.gov/gis/solar.html)

- The National Renewable Energy Laboratory has mapped wind power classes for Uintah County ranging from poor to superb. The following tables illustrates acres of each class. [http://www.nrel.gov/gis/wind.html](http://www.nrel.gov/gis/wind.html)

<table>
<thead>
<tr>
<th>Energy</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>2,673,222</td>
</tr>
<tr>
<td>Marginal</td>
<td>187,101</td>
</tr>
<tr>
<td>Fair</td>
<td>15,317</td>
</tr>
<tr>
<td>Good</td>
<td>4,369</td>
</tr>
<tr>
<td>Excellent</td>
<td>1,964</td>
</tr>
<tr>
<td>Outstanding</td>
<td>1,315</td>
</tr>
<tr>
<td>Superb</td>
<td>238</td>
</tr>
<tr>
<td>Unclassified</td>
<td>127</td>
</tr>
<tr>
<td>Total</td>
<td>2,883,675</td>
</tr>
</tbody>
</table>

Geothermal

- “Exploitable geothermal resources come from the transport of heat to the surface through several geological and hydrological processes. Geothermal resources commonly have three components: 1) a heat source, 2) relatively high permeability reservoir rock, and 3) water to transfer the heat. Numerous high temperature resources occur in the Basin and Range Province of the western United States as the result of deep circulation along major faults in a region of high heat flow. Utah has high-temperature resources that are suitable for electricity generation, as well as direct use and heat pump applications, and is one of only four states with geothermal electric power plants” (Utah State University 2009).

7.2 CUSTOM + CULTURE

- Uintah County has always believed in multiple uses for land and feels that a diverse economy and ecosystem is stronger than one, dominating homogenous influence.

- During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of energy, there was widespread recognition of the industries’ economic impact, and there were questions as to why the County would delineate anything to be outside of a potential energy zone because of the prevalence of the resource. Questions and concerns about sustainability were also voiced. The opportunity for a pipeline or local refining operation was also regarded highly.
7.3 PRIORITY DATA SOURCES


8 FIRE MANAGEMENT FINDINGS

8.1 OVERVIEW + BACKGROUND

- While primarily responsible for structure and accident response, the Uintah Fire Suppression District also provides wildland training and is often the first responder to fires in incorporated municipalities and unincorporated areas. These resources are often assigned to structure protection operations.

- In less developed areas at lower elevations a key management concern is the spread of cheatgrass that predominantly invades semidesert shrub communities. Cheatgrass has been blamed for much of the reduction of fire return intervals and the occurrence of larger fires (Utah State University 2009).

- Response to fire incidents, especially wildland fires, relies on proper oversight, guidance, and partnership among a variety of trained professional organizations. Establishing a fire management system is a critical step to the protection of both urban and rural communities. Fire management refers to the principles and actions to control, extinguish, use, or influence fire for the protection or enhancement of resources as it pertains to wildlands. It involves a multiple-objective approach strategy including ecosystem restoration, community preparedness, and wildfire response (U.S. Forest Service 2016). “Response to a wildland fire can involve a basic monitoring status placed on a remote wilderness fire, or involve multiple agencies overseen by an incident-management team encompassing hundreds of firefighters to manage. Numerous personnel are trained to respond to wildfires throughout the Uinta Basin and the services they provide are dependent upon the role of their organization as assigned during an incident. At a basic level, firefighting resources can be grouped into two broad categories: ground resources and air resources. Often times, both types of resources are dispatched to a fire.

- There are two main firefighting groups that fall within the “ground resources” category; they include handcrews and engines. Handcrews are specifically trained to fight wildfires. Wildland engines are specially equipped fire engines, often with all-terrain capabilities, to transport water to firelines. Both handcrews and engine crews are sponsored by federal land management agencies such as the Forest Service, BLM, National Park Service, US Fish and Wildlife Service, and the US Bureau of Indian Affairs. In addition to having access to federal crews, the State of Utah trains and provides both handcrews and engine crews.

- In Utah, the state legislature tasked the Utah Division of Forestry, Fire, and State Lands to devise a comprehensive statewide wildland fire prevention, preparedness, and suppression policy, which is now known as SB-56 (2015). Under this plan, a master cooperative wildland fire management and Stafford Act response agreement is signed each year between numerous federal land management agencies and the State of Utah for cooperation during wildland fire incidents that occur throughout the state (Utah Department of Natural Resources 2013).

- The 2016 fire season included 1,072 fires totaling 101,328 burned acres. Most individual fires were less than 100 acres, the largest of which was 5,000 acres (FFSL and USFS 2016). In Uintah County, 17,297 acres of hazard fuel treatments have been performed (USDA 2016a).

- Air quality conditions deteriorate unnecessarily when inactive forest management results in wildfire.

- According to the interagency report Utah Forest Health Report A Baseline Assessment 1999 - 2001 (Keyes et al. 2003), deteriorated air quality (e.g., increase in ozone) can damage vegetation and predispose plants to other disturbance. Some effects can include a decrease in lichen richness, tree crown thinning, and discolored foliage.
• Average net annual growth of trees in Utah is -4,556 thousand cubic feet per year indicating more mortality than growth (FFSL and USFS 2014).

• Spruce (Picea sp.) and fir (Abies sp.) mortality continues to increase from beetles, although mortality in pines (Pinus sp.) appears to have decreased from 2013 (FFSL and USFS 2014). Western Bark Beetle Strategy activities in Utah, including Uintah County center on three objectives: 1) increasing safety to ensure that people and community infrastructure are protected from the hazards of falling bark beetle-killed trees and elevated wildfire potential, 2) facilitating recovery to re-establish forests damaged by bark beetles, and 3) cultivating resiliency to prevent or mitigate future bark beetle impacts (U.S. Department of Agriculture 2016c). Acres of Western Bark Beetle Strategy activities, timber harvest, and brush disposal activities are described in Table FF3.

### Table FF3. Acres of Western Bark Beetle Strategy Activities, Timber Harvest, and Brush Disposal Activities in Uintah County in the Years 2004-2016

<table>
<thead>
<tr>
<th>Western Bark Beetle Strategy (WBBS) activities*</th>
<th>4,560</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber harvest†</td>
<td>24,924</td>
</tr>
<tr>
<td>Brush disposal‡</td>
<td></td>
</tr>
<tr>
<td>Burning of piled material</td>
<td>–</td>
</tr>
<tr>
<td>Certification of natural regeneration without site prep</td>
<td>–</td>
</tr>
<tr>
<td>Other stand tending</td>
<td>580</td>
</tr>
<tr>
<td>Piling of fuels, hand or machine</td>
<td>10061</td>
</tr>
<tr>
<td>Rearrangement of fuels</td>
<td>1330</td>
</tr>
<tr>
<td>Stocking survey</td>
<td>33</td>
</tr>
<tr>
<td>Wildlife habitat regeneration cut</td>
<td>–</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,002</strong></td>
</tr>
</tbody>
</table>

* Data from U.S. Department of Agriculture (2016c).
† Data from U.S. Department of Agriculture (2016d).
‡ Data from: U.S. Department of Agriculture (2016e).
A decline in aspen (Populus tremuloides) has been mapped since 2003 and is caused largely by drought, canker diseases, and insect borers (FFSL and USFS 2014).

Forests are an important natural resource and contribute to the quality of life by providing employment, forest products, open space, wildlife habitat, forage for livestock, recreation, and numerous other social and economic benefits. The timber resources and woodlands of Uintah County are considerable and are mostly located on public lands.

Significant issues impacting the timber resource in Uintah County include declining forest health, declining productive capacity of forest ecosystems, forest habitat fragmentation, and socioeconomic concerns (e.g., decline of the commercial timber industry). Because of the lack of active vegetation (forest) management, forests have become more susceptible to intense wildfire, insects, and diseases. Sustaining a full range of services and benefits that people desire from forests will require a diverse mosaic of forest conditions and a full suite of active management strategies across the landscape.

Proper forest management techniques, such as selective harvest and thinning projects, create healthier forests that are more resistant to insect damage and less likely to contain fuel loads that can result in catastrophic wildfire. A study of ponderosa pine (Pinus ponderosa) forests by Arizona State University with funding from The Nature Conservancy indicates that harvesting small diameter wood (8 to 12 inches) is critical to restoring the structure, pattern, and composition of fire-adapted ecosystems, and also provides for fuels reduction, forest health, and wildlife and plant diversity. Costs typically borne by state and federal agencies can be reduced through development of a wood products supply chain, which includes lumber, pellets, and chips (Arizona State University 2013).

8.2 CUSTOM + CULTURE

Firefighting and management is, and always has been, important to citizens in Uintah County. Proper fire prevention, management, and mitigation is critical to protecting the health, safety, welfare of the County and its residents. As evidenced in historic photos, people in Uintah County have been training and preparing for structure and wildland fires for decades.

During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. The common concern with fire potential on federal lands was the potential for a catastrophic wildfire due to the bark beetle.

8.3 PRIORITY DATA SOURCES


9 FISHERIES FINDINGS

9.1 OVERVIEW + BACKGROUND

- Statewide Utah’s current fish and wildlife resource is highly diverse. Approximately 647 vertebrate species inhabit the state; of these, 381 are considered permanent residents, including 78 species of fish (Powell 1994).

- In Utah, the Utah Division of Wildlife Resources (DWR) manages the state’s fisheries. Fish habitats (that is the state’s streams, rivers, lakes, ponds, and reservoirs) are managed by the underlying landowner, which can include state and federal agencies.

- In Utah, sport fish species are usually grouped into 1) cold water species, which typically include whitefish, trout, char, and salmon; and 2) warm water-cool water species, which include sportfish such as bass, pike, walleye, perch, catfish, bluegill, and crappie. Rare fish species and those subject to federal listing under the Endangered Species Act (ESA) are referenced more fully in the Threatened, Endangered, and Sensitive Species section. In general, sport fishing for these species is not permitted.

- Angling preferences have evolved over time, and DWR has adapted its management of fisheries to these changing preferences. Within the last decade, DWR has begun focusing its sportfish management direction more on 1) the protection and enhancement of conservation sportfish species (e.g., cutthroat trout), 2) quality and trophy fishing opportunities, 3) recruiting and retaining new anglers through development of community fisheries, 4) biological control of undesirable species through the stocking of predators like “wipers” (white bass-striped bass hybrids) and tiger muskie, and 5) management of multi-story fisheries.

- DWR stocks fish in many waters around the state. Utah’s system of state fish hatcheries makes it possible to supply more people with a better quality fishing experience involving higher catch rates and/or larger fish specimens than would otherwise be possible given the capacity of our waters to produce fish and the population’s demand for fishing opportunities.

- Healthy fisheries require good water quality and high-quality fish habitat. The Utah Department of Environmental Quality’s Division of Water Resources monitors water quality in Utah. Fish habitat is managed by the landowner or the public land management agency. The DWR has begun implementing fish habitat development projects, beginning at Red Fleet Reservoir with the introduction of Black Crappie attractors. These same structures have been approved for Steinaker and once funded, will be installed.

- Managing for self-sustaining fisheries in Utah streams should be a priority. Protecting native aquatic species and avoiding the spread of undesirable non-native species and aquatic diseases (e.g., whirling disease) are principal concerns for fisheries managers. Undesirable non-native species and aquatic diseases are easily and inadvertently spread by the recreating public.

- DWR develops management plans for certain high-profile waters. These plans are developed in cooperation with the public through internet-based surveys as well as committee-based approaches involving interested members of the public. When completed, these plans are presented to regional advisory councils for additional public review and input.
Recreational fishing provides a significant economic benefit to the Utah economy. Economic impacts or contributions have been estimated based on anglers' expenditures associated with the fishing trips. Estimates by the Department of Applied Economics at Utah State University (USU) indicate that in 2011 a typical angler spent $90 per fishing trip to identified Blue Ribbon waters in Utah (Kim and Jakus 2013). This resulted in $184 million in direct expenditures made by anglers for Utah goods and services, which generated an additional $143 million in economic output, resulting in a total economic output of nearly $327 million (Kim and Jakus 2013). Approximately 3,976 jobs were associated with this expenditure related to Blue Ribbon waters. Tax revenue generated by this increased level of output, labor income, and value added was estimated to be $35 million for state and local government (Kim and Jakus 2013). The variety of angling experiences available to Utahans is important, and it helps to sustain recreational activity in a number of state parks associated with reservoirs.

Fishing also provides economic benefits and employment opportunities for local residents through the operation of outfitter and guide businesses and destination hunting and fishing resorts.

Blue Ribbon fisheries are waters that provide highly satisfying fishing and outdoor experiences for diverse groups of anglers and enthusiasts. A Blue Ribbon water is a water feature that has been reviewed by DWR biologists and the Blue Ribbon Fisheries Advisory Council and is found to have fishing quality, a quality outdoor experience, quality fish habitat, and economic benefits. Criteria such as water quality and quantity, water accessibility, natural reproduction capacity, angling pressure, and specific species are factored into the designation. The council allocates funds generated by the sale of fishing licenses on an annual basis to projects that benefit Blue Ribbon fisheries.

Blue Ribbon fisheries in Utah draw visitors from across the United States and around the world. In 2010, over 120,000 non-resident fishing licenses were sold, which constituted 23% of all fishing licenses sold (DWR 2013).

In Uintah County, DWR lists Blue Ribbon fishing opportunities at Steinaker Reservoir.

DWR has developed and stocks a series of community fisheries to provide a fun, easy way to spend quality time with family and friends outdoors. These fisheries offer a setting for parents and kids to talk, enhance family interaction, and keep busy Utahans in touch with the natural world. Fishing can provide families with opportunities to get away from their day-to-day tasks and share time together. Unfortunately, there are no community fisheries currently in Uintah County.

A December 2008 report published by Utah State University entitled Public Lands and Utah Communities: A Statewide Survey of Utah Residents finds that 92.2% of residents surveyed in the three-county region felt that opportunities to fish in area lakes, streams, and rivers are moderately important (23.6%) or very important (68.6%) to the overall quality of life in the community (Krannich 2008). Of these same respondents, only 7.2% had moderate (4.1%) or strong (3.1%) opposition to public land managers increasing the extent to which protection of important fish and wildlife habitat occurs on Utah's public lands (Krannich 2008).

Some fish from specific areas in Utah may contain chemicals that could pose human health risks. When contaminant levels are unsafe, Utah public health officials issue fish consumption advisories. These advisories outline recommendations for limiting intake of specific fish at specific locations. Fish advisories have been issued in Utah because of elevated levels of arsenic, mercury, selenium, and polychlorinated biphenyls. Some of these contaminants occur naturally, whereas others are from anthropogenic sources.

Federally protected species
Federally protected fish species for the region include humpback chub, Colorado pikeminnow, bonytail chub, and razorback sucker.

“In 1988, the Governors of Colorado, Utah and Wyoming; the Secretary of the Interior; and the Administrator of Western Area Power Administration entered into a cooperative agreement to initiate the Recovery Program. The Recovery Program is a cooperative partnership involving Federal and State agencies, environmental groups and water and power user organizations. Pursuant to the Endangered Species Act of 1973 (16 USC 1531 et seq.), the Recovery Program seeks to recover four species of endangered fish (Colorado pikeminnow, razorback sucker, humpback chub, and bonytail) while water development proceeds in accordance with Federal and State laws. Recovery is defined as achieving and maintaining natural self-sustaining populations of the species” (U.S. Department of the Interior 2004).

Sport Fishing

Sport or recreational fishing is an important part of the outdoor recreation industry. The Utah Division of Wildlife Resources (UDWR) is responsible for managing fisheries in Utah with the primary goal of providing quality recreational fishing opportunities. Assisting the UDWR in decision making and establishing management priorities are five Regional Advisory Councils (RACs) who provide local input on fisheries-related issues.

Rivers, lakes, and reservoirs that provide exceptional angling experiences are given Blue Ribbon Fisheries (BRF) status. Blue Ribbon Fisheries in Uintah County include Calder Reservoir, Steinaker Reservoir, Brough Reservoir, and Pelican Lake. These fisheries can be a point of promotion to attract recreational anglers.

In Utah, sport fish species are usually grouped into 1) cold water species, which typically include whitefish, trout, char, and salmon; and 2) warm water-cool water species, which include sportfish such as bass, pike, walleye, perch, catfish, bluegill, and crappie. Rare fish species and those subject to federal listing under the Endangered Species Act (ESA) are referenced more fully in the Threatened, Endangered, and Sensitive Species section. In general, sport fishing for these species is not permitted.

UDWR stocks fish in many waters around the state. Utah’s system of state fish hatcheries makes it possible to supply more people with a better quality fishing experience involving higher catch rates and/or larger fish specimens than would otherwise be possible given the capacity of our waters to produce fish and the population’s demand for fishing opportunities.

Aquatic Invasive Species
Aquatic Invasive Species (AIS), also referred to as Aquatic Nuisance Species, are defined by the UDWR as nonnative species of aquatic plants and animals that cause harm to natural systems and/or human infrastructure. Not all nonnative fish species are considered AIS, such as those that are desirable for sport fishing. These may include nonnative Rainbow Trout, Largemouth Bass, and catfish.

Invasive mussels in Utah waters have no natural competitors, so once they are established, they spread quickly, colonizing nearly any and all underwater surfaces. They are currently impossible to remove from contaminated waterbodies and are easily spread to other waterbodies. The mussels can clog water transmission and power generation infrastructure, harm water-based recreational equipment, and outcompete both native and nonnative game species for nutrients. All these impacts can have profound impacts on sportfish populations.

Preventing the spread of AIS is currently the most effective management action. The UDWR has a statewide system of boat cleaning/decontamination stations, inspection check-points, and angler education efforts.

The UDWR is responsible for managing fisheries in Utah. Fish habitats (that is the state's streams, rivers, lakes, ponds, and reservoirs) are managed by the underlying landowner, which can include state and federal agencies.

9.2 CUSTOM + CULTURE

Recreational fishing has been part of the local custom and culture for more than one hundred years. Individual stories as related below are representative of the regional outdoor pastime: fishing.

“Ira Burton bought 160 acres southeast of Ashley Town and built the Burton’s Resort on this property in 1900. He built a house on the property along with a manmade lake and dance hall. On forty acres of his property he built a race track. The lake was fed by the Ashley Creek. It was stocked with fish and was used for swimming and boating in the summer and ice skating in the winter. Ira built a bathhouse where swimming suits and boats were rented. The dance hall was thirty-six by eighty-two feet and was located next to the lake. A weekly dance complete with a live band was always enjoyed by a large group. A concession stand offered candy, ice cream, sandwiches, soft drinks and beer. Crowds gathered from all over the basin to enjoy baseball games, horse racing, rodeos, dances and special events at the resort. On special occasions fireworks were shot from rafts on the lake.” Uintah County Library Regional History Center.

Whiterocks State Fish Hatchery has been operating since 1923. Located in western Uintah County, today it is operated by the Utah Division of Wildlife Resources (Construction photo 1922). The original hatchery produced about 35,000 pounds of fish per year to stock waterbodies in the Uinta basin and Strawberry Reservoir. Mitigationcommission.gov.

“The Central Utah Project and other reclamation projects created many reservoirs in Utah. These flatwater areas provide for a variety of water-related recreation opportunities including fishing. Most reservoir fisheries are heavily used and not able to sustain themselves through natural recruitment, requiring management programs dependent on stocking hatchery-reared fish. Fish stocking demands in Utah for reclamation projects have been met in the past through both State and Federal hatcheries” (USFS 1998).

During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. Most concerns around fisheries were related to invasive species. There was a recognition that the State provides oversight on fisheries, and the feeling was that additional monitoring by the County was unnecessary.
9.3 PRIORITY DATA SOURCES


10 FLOODPLAINS AND RIVER TERRACE FINDINGS

10.1 OVERVIEW + BACKGROUND

- Rivers are dynamic systems. River channels can migrate laterally as a result of bank erosion and deposition, and vertically as a result of bed aggradation or degradation. Floodplains, terraces, and other features are formed by these processes, and are therefore part of the river system.

- When a river channel reaches its maximum capacity, often during times of heavy rain or snow melt, water overflows the river’s streambanks and floods into nearby areas that would otherwise remain dry land. This is especially true when water is delivered at a rate faster than the associated soils can absorb. Floods also occur when a bank or dam gives way and large amounts of water are released. Under most circumstances, flooding is a natural process. Floodplains support rich ecosystems, in quantity and biodiversity. Nevertheless, floods can cause severe human impacts and therefore must be among resource planning considerations. Worldwide, floods are the leading cause of natural disaster deaths.

- Flooding most often occurs from two distinct event types: (1) spring runoff from melting snowpack at high elevations (both local and regional), and (2) summer rainstorms (Hyland and Mulvey 2003). While either event can trigger flooding, the dynamics of each are different. Snowmelt is a relatively predictable occurrence dependent on the amounts of winter snowpack and rising spring temperatures. Snowpack melting in spring contributes to some localized flooding, but more commonly flooding happens along the region’s larger rivers. In contrast, summer cloudburst events cause sporadic flooding events on otherwise dry washes. Both kinds of events can have impacts on the communities within the area (Wasatch Front Regional Council 2003). At the federal level, the Federal Emergency Management Agency (FEMA) provides flood data that classifies areas based on their different flood hazards through the National Flood Hazard Layer (NFHL) and National Flood Insurance Program (NFIP). This enables elected officials, emergency responders, and the public to be informed and to reduce, or avoid altogether, impacts from floods, guide development, and reduce risk of floods.

- Best floodplain and river terrace management practices typically focus on avoiding structures and other development within these dynamic and sensitive areas. For flood hazards in these areas, officials often resort to designating setbacks between potential floodplains and the built environment.

- Flooding on the Green River is sometimes controlled at the discretion of the dam operators. According to the Automated Geographic Reference Center (2015), there are 27 dams within Uintah County.

- Federal Emergency Management Agency (FEMA) flood zones exist for Uintah (Table FR1). Uintah County has also predicated worst case scenario inundation flood zones as described in Table. There are no flood zone data associated with Starvation Reservoir, Strawberry Reservoir, or Strawberry River.

- Flood events in the Uintah Basin result from snowmelt associated with above-average snow packs, rain-on-snow events, and summer storm precipitation events.

- Flood events are part of a stream’s natural hydrograph, and development in active floodplains often results in property damage.

- Annual flooding of the Green River for threatened and endangered species habitat enhancement can conflict with private property.
Dams serve a variety of purposes including water storage and flood control. Table FR1 illustrates the number of dams in Uintah County as recorded by Automated Geographic Reference Center (AGRC) and Utah Division of Water Rights (DWRi). AGRC data refer to those dams labeled or symbolized on U.S. Geological Survey quadrangles. DWRi data refer to those dam locations in the Utah Dam Safety Regulatory Database administered by the DWRi.

**Table FR1. Number of Dams per County and Acres of Mapped Flood Zones in Uintah County**

<table>
<thead>
<tr>
<th>Uintah County</th>
<th>Dams - AGRC (number of)*</th>
<th>27</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dams - DWRi (number of)†</td>
<td>255</td>
<td></td>
</tr>
<tr>
<td>Flood zones (acres)‡</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (100-year floodplain, no base flood elevation)</td>
<td>138,133</td>
<td></td>
</tr>
<tr>
<td>AE (100-year floodplain, with base flood elevation)</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>D (undetermined but possible flood hazards)</td>
<td>321,519</td>
<td></td>
</tr>
<tr>
<td>X (outside the 100-year and 500-year floodplains)</td>
<td>2,422,661</td>
<td></td>
</tr>
<tr>
<td>Worst case inundation</td>
<td>120,790</td>
<td></td>
</tr>
</tbody>
</table>

* Data from Automated Geographic Reference Center (2015)  
† Data from Utah Division of Water Rights (2015).  
‡ Data from Automated Geographic Reference Center and Federal Emergency Management Agency (2014).

### 10.2 CUSTOM + CULTURE

- Preventing floods and mitigating natural disasters has always been a priority for landowners in Uintah County. Neighbors help neighbors when these disasters occur. The custom and culture of the area is to be responsible about structure and infrastructure placement, and respect the inevitable changes in flowing water.
- During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. There were suggestions that the County strengthen zoning restrictions in areas prone to flooding.

### 10.3 PRIORITY DATA SOURCES


11 FOREST MANAGEMENT FINDINGS

11.1 OVERVIEW + BACKGROUND

- Utah forests are as diverse as the landscape itself. Over 15.1 million acres of forests are administered by federal, state, and local agencies. Another 3 million acres are privately owned (Utah Division of Forestry, Fire & State Lands [FFSL] and U.S. Forest Service [USFS] 2014).

- Several factors have contributed to the decline in forest health including a decline in historic logging, grazing patterns, fire exclusion, and invasive or noxious weeds. Drought conditions can negatively affect forest health causing detrimental changes in vegetative conditions, especially if combined with these other management practices (FFSL and USFS 2014).

- Proper forest management techniques, such as selective harvest and thinning projects, create healthier forests that are more resistant to insect damage and less likely to contain fuel loads that can result in catastrophic wildfire.

- About 5.2 million acres, or 25 percent, of northern Utah is forested. Fifty-two percent of this forest area is capable of producing commercial wood products and is classified as timberland. Forty-eight percent is classified as woodland, primarily pinyon-juniper. The predominant forest types on the timberland are aspen, Douglas-fir, lodgepole pine, and spruce-fir. The National Forest System manages 70 percent of the timberland; 23 percent is under private ownership, and 7 percent is under other public ownership (local, State, and other Federal). Thirteen percent of the timberland is withdrawn from commercial timber production and is in a reserved status. Most reserved timberland is found under National Forest System management. The total volume of growing stock on nonreserved timberland in northern Utah is 3.4 billion cubic feet. In order, Douglas-fir, lodgepole pine, aspen, Engelmann spruce, and subalpine fir species account for most of the volume. Net annual growth averages 38.6 million cubic feet after the impact of mortality, which averaged 47.9 million cubic feet annually. (Brown and O’Brien 1993)

- The National Forest administers lands within its jurisdiction including the Ashley National Forest. Forestry, Fire, and State Lands manages state lands and forests in Utah, while Utah State University contributes forestry research and the developing best practices for private landowners.

- Forest lands make up 29% of the Utah landscape and provide scenic, recreation, wildlife, and other forest values underscoring the importance of forest health (FFSL and USFS 2014).

- National Land Cover Database (NLCD) geospatial data use a 16-class land cover classification scheme at a spatial resolution of 30 meters (Homer et al. 2015). Acres of forested NLCD land cover types predicted to occur the county are listed in Table FF1.

<table>
<thead>
<tr>
<th>Forest Cover Type</th>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deciduous Forest</td>
<td>39,638</td>
</tr>
<tr>
<td>Evergreen Forest</td>
<td>676,571</td>
</tr>
<tr>
<td>Mixed Forest</td>
<td>5,176</td>
</tr>
</tbody>
</table>

Table FF1. Acres of Forested National Land Cover Database Land Cover Types in Uintah County
Table FF1. Acres of Forested National Land Cover Database Land Cover Types in Uintah County

<table>
<thead>
<tr>
<th>Forest Cover Type</th>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shrub/Scrub</td>
<td>1,806,941</td>
</tr>
<tr>
<td>Woody Wetlands</td>
<td>54,434</td>
</tr>
<tr>
<td>Total</td>
<td>2,582,760</td>
</tr>
</tbody>
</table>


- In Utah, approximately 15 million acres of forest are administered by federal, state, and local agencies with another 3 million acres held privately (FFSL and USFS 2014).
- Table FF2, taken from the USFS-published report Forest Resource Statistics for Northern Utah, (1993) illustrates acres of timberland by county. Timberland is defined as forested areas “capable of producing commercial wood products” (Brown and O’Brien 1993) and differs from other estimates of forest (vegetation community) or USFS-managed forest lands.

Table FF2. Acres of Hazardous Fuel Treatments and Burn Areas in Uintah County in the Years 2004-2016

<table>
<thead>
<tr>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard fuel treatments*</td>
</tr>
<tr>
<td>Burn areas†</td>
</tr>
</tbody>
</table>

* Data from U.S. Department of Agriculture (2016a)
† Data from U.S. Department of Agriculture (2016b).
In recent years, timber harvesting has decreased on the Ashley National Forest. The risk of timber loss from wildfire, insects, and disease and from reduced water yields from watersheds is increased as a result of these management policies. Economic opportunities are also lost. Research on water yield and fire and forest management practices has been conducted in Utah.

In 2008, the Ashley National Forest published a review of vegetation management and water yield. This document considers precipitation to be the primary parameter affecting water yield. Therefore, maximizing or appreciably changing the amount and timing of water is unrealistic. However, optimizing water yield can result in maintenance of healthy vegetation in aquatic ecosystems, which in turn supplies clean water for both consumptive and non-consumptive uses (Muir 2008).

A 1998 Government Accounting Office report titled Forest Service Barriers to Generating Revenue or Reducing Costs portrays the importance of ‘economic sustainability’ on USFS lands and demonstrates the critical importance of multiple uses for the lands (Government Accounting Office 1998). The report provides good examples for a more ‘capitalistic’ approach to public land management based on private land models.

Table FF3 illustrates management actions on the Ashley National Forest in 2010 and 2014 and are taken from the Ashley National Forest 2010 Year and 2014 In Review Newsletters.

**Table FF3.** Acres of Western Bark Beetle Strategy Activities, Timber Harvest, and Brush Disposal Activities in Uintah County in the Years 2004-2016

<table>
<thead>
<tr>
<th>Uintah County</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Bark Beetle Strategy (WBBS) activities*</td>
<td>4,560</td>
</tr>
<tr>
<td>Timber harvest†</td>
<td>24,924</td>
</tr>
<tr>
<td>Brush disposal‡</td>
<td></td>
</tr>
<tr>
<td>Burning of piled material</td>
<td>–</td>
</tr>
<tr>
<td>Certification of natural regeneration without site prep</td>
<td>–</td>
</tr>
<tr>
<td>Other stand tending</td>
<td>580</td>
</tr>
<tr>
<td>Piling of fuels, hand or machine</td>
<td>10061</td>
</tr>
<tr>
<td>Rearrangement of fuels</td>
<td>1330</td>
</tr>
<tr>
<td>Stocking survey</td>
<td>33</td>
</tr>
<tr>
<td>Wildlife habitat regeneration cut</td>
<td>–</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,002</strong></td>
</tr>
</tbody>
</table>

* Data from U.S. Department of Agriculture (2016c).
† Data from U.S. Department of Agriculture (2016d).
‡ Data from: U.S. Department of Agriculture (2016e).
Spruce (Picea sp.) and fir (Abies sp.) mortality continues to increase from beetles, although mortality in pines (Pinus sp.) appears to have decreased from 2013 (FFSL and USFS 2014). Western Bark Beetle Strategy activities in Utah, including Uintah County, center on three objectives: 1) increasing safety to ensure that people and community infrastructure are protected from the hazards of falling bark beetle–killed trees and elevated wildfire potential, 2) facilitating recovery to re-establish forests damaged by bark beetles, and 3) cultivating resiliency to prevent or mitigate future bark beetle impacts (U.S. Department of Agriculture 2016c). Acres of Western Bark Beetle Strategy activities, timber harvest, and brush disposal activities are described in Table FF3.

### Table FF4. Acres of Timberland in Uintah County

<table>
<thead>
<tr>
<th>Land Management</th>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Forest</td>
<td>201,637</td>
</tr>
<tr>
<td>Other public</td>
<td>66,031</td>
</tr>
<tr>
<td>Non-industrial private</td>
<td>26,685</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>294,354</strong></td>
</tr>
</tbody>
</table>


A decline in aspen (Populus tremuloides) has been mapped since 2003 and is caused largely by drought, canker diseases, and insect borers (FFSL and USFS 2014).

Forests are an important natural resource and contribute to the quality of life by providing employment, forest products, open space, wildlife habitat, forage for livestock, recreation, and numerous other social and economic benefits. The timber resources and woodlands of Uintah County are considerable and are mostly located on public lands.

Significant issues impacting the timber resource in Uintah County include declining forest health, declining productive capacity of forest ecosystems, forest habitat fragmentation, and socioeconomic concerns (e.g., decline of the commercial timber industry). Because of the lack of active vegetation (forest) management, forests have become more susceptible to intense wildfire, insects, and diseases. Sustaining a full range of services and benefits that people desire from forests will require a diverse mosaic of forest conditions and a full suite of active management strategies across the landscape.

Proper forest management techniques, such as selective harvest and thinning projects, create healthier forests that are more resistant to insect damage and less likely to contain fuel loads that can result in catastrophic wildfire. A study of ponderosa pine (Pinus ponderosa) forests by Arizona State University with funding from The Nature Conservancy indicates that harvesting small diameter wood (8 to 12 inches) is critical to restoring the structure, pattern, and composition of fire-adapted ecosystems, and also provides for fuels reduction, forest health, and wildlife and plant diversity. Costs typically born by state and federal agencies can be reduced through development of a wood products supply chain, which includes lumber, pellets, and chips (Arizona State University 2013).
11.2 CUSTOM + CULTURE

- It is the custom and culture of Uintah County to use and manage landscapes and resources, including forests, for multiple uses. Logging has been a part of the custom and culture of the County. Historical photos show planks being cut into fireplace length of wood at the Caldwell Lumber Yard. Ernest Caldwell owned a sawmill located behind his home. He operated his first mill at Big Park. With a lack of water the mill had to be moved about a half-mile to the northwest at the top of Big Park and the bottom of Summit Park near a large spring. The Forest Service eventually removed all of the mills from the forest.

- Livestock and grazing in forests has always been part of the tradition of Uintah County. To continue the overall agriculture industry in the region requires the use and good stewardship of forests in Uintah County.

- During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of forestry, there was expressed hope for a new timber industry.

11.3 PRIORITY DATA SOURCES


12 IRRIGATION FINDINGS

12.1 OVERVIEW + BACKGROUND

- Irrigation is the practice of supplemental application of water to land (beyond that water which is directly received by the land from naturally occurring precipitation) for the purpose of increasing the agricultural output of cropland and to sustain additional vegetation growth throughout the landscape. Much of Utah’s agriculture would not be possible if not for irrigation. Utah’s arid climate provides limited and frequently unreliable annual rainfalls. Many of the canals and ditches remain open, but over time many have been lined or piped to improve operational efficiency.

- Dams, canals, and pipelines are constructed to take advantage of the topography of each watershed and redistribute water from rivers and streams outward to lower elevation lands, which are more suitable for crop production.

- Within each watershed, various entities or individuals have legal claims (i.e., water rights) to use the water for “beneficial use” and are permitted to divert waters from streams into the storage dams, canals, and pipelines. The distribution of water is governed by state law and is based largely on geographic proximity, available supply, and ownership of the water rights.

- Irrigation in Uintah County is controlled by irrigation companies and shareholders. These companies and systems deliver water throughout the area.
12.2 CUSTOM + CULTURE

- Since the 1870's when Uintah County first saw an influx of families, residents have been relying on irrigation to cultivate crops and sustain their lives and lifestyles. “Pardon Dodds, former Uintah Indian Agent, is credited by most as the valley’s first permanent settler... Pardon Dodds was the first to divert water from Ashley Creek to Irrigate pasture lands for his livestock. Others soon made additional diversions. These first canals were often crudely constructed without the aid of surveying equipment. In order to operate efficiently a canal had to lose elevation at a regular rate so that the water could move through it without depositing silt or sediment. Conversely, water must not drop too sharply, erosion of the canals lining and ultimately breaching of the canal could occur. Lacking proper surveying equipment farmers often used simple devices such as pans or water to help them determine the proper alignment and fall of the canal. Often the only way to ascertain the adequacy of a level was to allow the water to flow through a portion of the canal and then observe the speed of its flow” (Kendrick and Peterson 1991).

- “The first officers of the Ashley Central Irrigation Company Included Jeremiah Hatch, Israel J. Clark, Alvah Hatch, J. Hackling, W. H. Gagin, George Bankhead, C.C. Bartlett, James B. Henry, and Porter Merrill. At the time of incorporation 57 shareholders owned shares valued at approximately $12.50 per share. Control over the distribution of water was placed in the hands of local water masters. County courts empowered these Individuals to distribute the fair share of water to farmers with appropriated water rights. Watermasters regulated the opening and closing of canal headgates so no farmer could take more water than his fair share” (Kendrick and Peterson 1991).

- The use, upgrade, and maintenance of Utah’s network of canals, ditches, and dams continues today.

- During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of irrigation, most of the concerns expressed were related to proper maintenance of systems.

12.3 PRIORITY DATA SOURCES


13 LAND ACCESS FINDINGS

13.1 OVERVIEW + BACKGROUND

- Uintah County land ownership pattern is largely federal land with state lands checkerboarded within. Tribal and private lands tend to be in chunks. Concerns arise where recreational users once had access but now do not, or where land owned by an entity is surrounded by or accessible only by crossing land owned by a different entity.

- Access to land for recreational traveling is especially important. Motorized and non-motorized vehicle access, as well as pedestrian and equestrian access is an issue on and between, private, State, and federal lands.

R.S. 2477 Roads

- In 1866 the Revised Statute 2477 (commonly known as RS 2477) was enacted by the United States Congress. This revised statute encouraged the development of a highway network to facilitate western settlement. This formerly self-executed statute did not require a record of the roadway. Under the Federal Land Policy and Management Act (FLPMA) RS 2477 was repealed in 1976 subject to “valid existing rights”.

- Uintah County continues to assert their RS 2477 rights.

- Uintah County claims the same rights and privileges on all Class D Roads as are claimed on Class B Roads. This position reflects the Highway Jurisdiction and Classification Act, 17-03 Part 1 of Utah State Code.

Best Management Practices (BMPs)
• Gaining or maintaining access to lands is typically accomplished through right-of-way (ROW) acquisition. The process for obtaining a right-of-way is different for each land owner or management agency as each has unique administrative procedures and objectives.

• US Bureau of Land Management (BLM): The BLM manages ROWs through resource management plans authorized by the Federal Lands Policy and Management Act (FLPMA) established in 1976 (BLM 2001). Prior to FLPMA, ROWs on BLM lands were enabled by Revised Statute 2477 (Section 8 of the Mining Act of 1866) and are generally considered to be available for accessing property within and across US Bureau of Land Management (BLM) property, though this is not always the case. The Vernal Field Office manages the BLM land within Uintah County.

• US Forest Service Roads (USFS): Right of ways on USFS lands are managed through the Forest Planning and National Environmental Policy Act (NEPA) processes.

• State of Utah School and Institutional Trust Lands Administration (SITLA): SITLA is mandated by state law to maximize financial gain from their properties through sale, lease, or exchange (Utah Administrative Code, Title R850). Originally allocated to western states upon statehood by the federal government to support state institutions like schools and hospitals. Utah was given sections 2, 16, 32, and 36 in each township. The resulting checkerboard pattern of ownership means many SITLA parcels are surrounded by federal lands with limited or no access. Land transfers are a solution to this situation. SITLA has a successful track record of working with the BLM, US Forest Service, and private land holders to enable mutually beneficial consolidations of property.

• Private Property: Counties can establish new ROWs through private lands in three ways. First, for developing lands, counties can identify ROWs on the transportation component of the General Plan. With ROW’s identified, counties can work with developers to construct ROWs as the land develops over time. Second, counties can work with willing landowners to negotiate a mutually beneficial solution to purchase a public ROW or easement across property. Finally, in cases where landowners do not want a public ROW or easement across their property, counties can use eminent domain to condemn private property. As of 2014, state law enables the right of eminent domain for roadways for public vehicles but not for recreational uses (78B-6-501 3f).

• Tribal Land: “The Uintah and Ouray Reservation, located in Duchesne, Uintah, and Grand counties, was established in 1861 when President Abraham Lincoln set aside the Uintah Valley Reservation under the Treaty of Spanish Fork” (USU 2009). According to a report published by the Ute Indian Tribe of the Uintah and Ouray Reservation (2006), “The foundation of Indian sovereignty and self-determination, in the context of energy ROW, is the tribal right to consent. . . Tribes have recently begun to empower themselves by entering into partnerships with energy companies and other industries. This relatively new, active approach to tribal fiscal and resource management flows from the tribe’s right to consent to requests to use its lands by others. . . ROWs are a component part of complex negotiations. In this context, energy industry participants have come to recognize the value of engaging in positive, mutually-beneficial partnerships with tribes through negotiations over new or renewal ROWs and associated mineral resource development agreements. The process of negotiations does not appear to be chilling access to tribal lands; in fact, energy companies are being able to renew their ROW agreements and obtain new ones as well” (Ute Indian Tribe of the Uintah and Ouray Reservation 2006). Uintah County may sometimes become involved in these ROW negotiations to facilitate connectivity with the external borders of tribal land.

• The Ute Tribe has entered into agreements regarding ROWs with specific energy companies to develop and transport energy resources.

• The County’s role is to acquire and maintain ROWs or easements across property of all kinds. The County may also acquire and enforce access by participating in planning processes of federal and state agencies and via litigation.
The land owner or manager generally controls land access. Some outside entities may influence access of lands that they do not control.

13.2 CUSTOM + CULTURE

It is the custom and culture of Uintah County to support and protect private property rights, including access to public and private lands. Historically, and today, Uintah County feels strongly that state and federal landscape and amenities should be accessible by multiple modes of transportation, be inclusive to all persons with disabilities and follow relevant accessibility guidelines. Uintah County has always and will continue to strive for maintaining access to lands within its borders, with all tools available to them.

During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of land access, there seemed be sentiment for both increasing and decreasing motorized access to public lands.

13.3 PRIORITY DATA SOURCES


14 LAND USE POLICY FINDINGS

14.1 OVERVIEW + BACKGROUND

- The majority of Uintah County includes vast areas of “public” lands. These lands and the associated resources are managed by federal agencies including the U.S. Forest Service (USFS), Bureau of Land Management (BLM), Bureau of Reclamation (BOR), U.S. Fish and Wildlife Service (FWS), and National Park Service (NPS). Traditionally, the residents of the County have used public lands and resources for economic growth and stability. These local associations with, and dependence on, public lands continues today. Specifically, local use of public lands and resources include, but are not limited to minerals, recreation, oil and gas, timber, water, agriculture, fisheries and wildlife.

<table>
<thead>
<tr>
<th>Table LU1. Acres and Percentages of Landownership Types in Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Uintah County</strong></td>
</tr>
<tr>
<td>Private lands</td>
</tr>
<tr>
<td>Conservation easement</td>
</tr>
<tr>
<td>Federal lands</td>
</tr>
<tr>
<td>USFS</td>
</tr>
<tr>
<td>BLM</td>
</tr>
<tr>
<td>NPS</td>
</tr>
<tr>
<td>Other federal</td>
</tr>
<tr>
<td>State lands</td>
</tr>
<tr>
<td>State Trust lands</td>
</tr>
<tr>
<td>Other State</td>
</tr>
<tr>
<td>Tribal lands</td>
</tr>
<tr>
<td><strong>Total Area</strong></td>
</tr>
</tbody>
</table>

Source: EPS (2016).

- The Bureau of Land Management Vernal Field Office Record of Decision and Approved Resource Management Plan (BLM Vernal ROD/RMP) identifies 32,067 acres of land for potential federal disposal and 42,550 acres of land for potential federal acquisition (BLM 2008). The breakdown by county is presented in Table LU2.

<table>
<thead>
<tr>
<th>Table LU2. Acres of Federal Lands for Disposal or Potential Federal Acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Uintah County</strong></td>
</tr>
<tr>
<td>Federal lands identified for potential disposal</td>
</tr>
<tr>
<td>Lands identified for potential Federal acquisition</td>
</tr>
</tbody>
</table>
The 2008 BLM Vernal ROD/RMP (BLM 2008) and 1986 Land and Resource Management Plan for the Ashley National Forest (U.S. Department of Agriculture 1986) identify the following VRM prescriptions for federal lands (Table LU6 and LU7):

**Table LU6.** Acres of Visual Resource Management Classes and Objectives for Federal Lands

<table>
<thead>
<tr>
<th>BLM Class (USFS objective)</th>
<th>BLM</th>
<th>USFS</th>
</tr>
</thead>
<tbody>
<tr>
<td>VRM Class I (Preservation)</td>
<td>57,776</td>
<td>338,088</td>
</tr>
<tr>
<td>VRM Class II (Retention)</td>
<td>259,734</td>
<td>473,545</td>
</tr>
<tr>
<td>VRM Class III (Partial Retention)</td>
<td>759,977</td>
<td>240,485</td>
</tr>
<tr>
<td>VRM Class IV (Modification)</td>
<td>642,450</td>
<td>332,581</td>
</tr>
</tbody>
</table>


**Table LU7.** Acres of Visual Resource Management Classes and Objectives for Bureau of Land Management Lands in Uintah County

<table>
<thead>
<tr>
<th>BLM Class</th>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>VRM Class I</td>
<td>48,363</td>
</tr>
<tr>
<td>VRM Class II</td>
<td>163,923</td>
</tr>
<tr>
<td>VRM Class III</td>
<td>654,989</td>
</tr>
<tr>
<td>VRM Class IV</td>
<td>503,290</td>
</tr>
</tbody>
</table>

Sources: BLM (2009).
In some instances, BLM has used VRM classifications as substitutes for former Wilderness Inventory Units or so-called Citizens’ Proposed Wilderness Units, or as a means to displace valid surface-occupying multiple-use activities. Such designations cause resource waste, serious impacts to other important resources and actions, and are inconsistent with the principles of multiple-use and sustained yield.

Administrative designations contained in federal land use plans, such as ACECs, special recreation management areas (SRMAs), or other prescriptive designations, can dictate practices that restrict access or use of the land and negatively impact other resources or their use. Such designations cause resource waste, serious impacts to other important resources and actions, and are inconsistent with the principles of multiple use and sustained yield.

Administrative designations identified in the 2008 BLM Vernal ROD/RMP, that are within Uintah County, include the following (BLM 2008):

**SRMAs**
- Red Mountain – Dry Fork Complex (24,258 acres)
- Blue Mountain (42,729 acres)
- Fantasy Canyon (69 acres)
- White River (2,831 acres)
- Pelican Lake (1,013 acres)
- Nine Mile Canyon (7,179 acres)
- Brown’s Park (1 acre)

**ACECs**
- Red Mountain – Dry Fork Complex (37,176 acres)
- Lower Green River Corridor (9,347 acres)
- Pariette Wetlands (9,811 acres)
- Nine Mile Canyon (7,830 acres)
- Brown’s Park (5 acres)
Local governments and citizens are often the “closest to the ground” and have the best understanding of how land use practices of federal agencies will affect local communities.

These lands and resources located on public lands cannot be separated from the culture, quality of life, and economic well-being of the county. The oil and gas, agriculture, recreation and tourism, and timber industries require access to and across public lands.

Due to the dependence of Uintah County on public lands and resources, decisions made by public land management agencies directly impact local interests and economy. Over the last several decades, Uintah has attempted to improve relationships with federal land managers and participation in agency planning and decision-making processes. These efforts have had mixed results.

The Resource Management Plans (RMPs) developed by the BLM and the USFS Land and Resource Management Plans (LRMPs) are the basis for nearly all natural resource management policy and decision-making activities that affect federal lands. Because the Federal Land Policy and Management Act (FLPMA) mandates that these RMPs are to be consistent with state and local plans “to the maximum extent…consistent with federal law…” (Bureau of Land Management 2001), it is essential that counties develop their own resource management plans to reflect local perspectives and positions regarding these interests.
14.2 CONTROL & INFLUENCE

- **Private Property**: Private lands are regulated by land use ordinances and zoning districts, as approved by local and county governments. Zoning districts, and the regulations established within the zoning districts, are authorized by Utah Code § 17-27a-505 and municipalities 10-9a-505. Land use ordinance and zoning maps are legislative decisions and are established through planning processes open to public discussion and adopted by county and city councils (Call 2005).

- **Uintah County**: Utah Code § 17-27a-401 requires counties to create a general plan that includes findings, objectives, and policy statements for the resources within its boundaries. It also allows Uintah County to “define the county’s local customs, local culture, and the components necessary for the county’s economic stability.”

- **US Bureau of Land Management (BLM)**: The Vernal Field Office is located in the northeast corner of Utah and administers lands within Daggett, Duchesne and Uintah Counties, plus a small portion of Grand County. Land use decisions for all BLM lands are made according to mandates defined by the Federal Land Policy and Management Act (FLPMA) of 1976. FLPMA requires the BLM to manage lands under multiple-use philosophy (Bureau of Land Management 2001). A component of FLPMA is the requirement for an open and public land use planning process in the development of resource management plans (RMP). Each BLM Field Office must develop a RMP to guide future land use activities on public lands. The RMP defines goals, objectives, and rules for commercial and extractive industries, transportation, recreation, and conservation. To complete an RMP, the BLM follows planning procedures outlined in the National Environmental Policy Act (NEPA).

- **US Forest Service (USFS)**: The US Forest Service (USFS) manages land use decisions by developing forest plans under the National Forest Management Act of 1976 (P.L. 94-588). Forest plans provide strategic direction for management of all resources on a National Forest for ten to fifteen years (the current plan for the Ashley National Forest was adopted in 1986). Forest plans require consideration of alternatives and public input under the National Environmental Policy Act (NEPA) process. Forest plans describe the desired conditions and provide guidance for projects. They do not make site-specific decisions or require any specific actions, but all projects conducted on a National Forest must be consistent with the strategic direction in its forest plan.

- **National Park Service (NPS)**: The National Park Service prepares a variety of planning and environmental documents to help guide management of park resources and visitor use and activity. Most plans follow planning procedures outlined in the National Environmental Policy Act (NEPA).

- **State Institutional Trust Lands Administration (SITLA)**: Trust lands are parcels of land throughout our state that were granted by Congress to Utah at the time of statehood. Although trust lands support select public institutions, they are not public lands. Trust lands were allocated specifically to generate revenue to support designated state institutions, including public schools, hospitals, teaching colleges, and universities.

14.3 CUSTOM + CULTURE
“Individual families began arriving in the 1870s. Pardon Dodds, former Uintah Indian Agent, is credited by most as the valley’s first permanent settler. Others soon followed. Charles Popper, a Jewish merchant from Salt Lake City, established a cattle ranch which soon provided meat for his slaughterhouse near Fort Douglas, Utah. Dan Moseby, Andrew Strong, Robert H. Snyder, John Kelley, and Teancum Taylor had all located in the valley by 1877. Forsaking the ideal Mormon “Plat of the City of Zion” which clustered small farms around New England-style villages, these first homesteaders established ranches and farms that were geographically scattered throughout the valley” (Kendrick and Peterson 1991).

As explained in Beyond the Wasatch: The History of Irrigation in the Uinta Basin and Upper Provo River Area of Utah (1991), agriculture and the canals and irrigation that sustain it are part of the current and historical custom and culture of the Uintah County and the region; “Today, the canals are still operating and represent the lifelines in a valley that averages 5 to 7 inches of rainfall per year. Farmers continue to plant crops, primarily grains associated with the livestock business. However, success must not be gauged only in economic terms. There were other measurements. Most important was the establishment of a new farming settlement representing a cultural expansion of Mormonism. For of the Mormon community, farming and living off the land was a social system which they treasured.”

During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of land use, there was repeated concern about the exclusive use of any land.

14.4 PRIORITY DATA SOURCES


Call, C. M. 2005. A Utah citizen’s guide to land use regulation how it works and how to work it. Utah Department of Natural Resources. Salt Lake City, USA.


15 LAW ENFORCEMENT FINDINGS

15.1 OVERVIEW + BACKGROUND

- Law enforcement in Uintah County includes many jurisdictions.
- Policies for law enforcement in the county should address public safety, property protection, and interagency coordination, as these relate to public use areas.

15.2 CUSTOM + CULTURE

- Law enforcement has always been important to citizens in Uintah County for the safety, protection, and security it provides.
- During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. There was strong support for law enforcement.

15.3 PRIORITY DATA SOURCES

None available
16 LIVESTOCK + GRAZING FINDINGS

16.1 OVERVIEW + BACKGROUND + FINDINGS

- Livestock and grazing in Uintah County is important for the natural, cultural, social, and economic benefits it provides. Livestock and grazing successfully balances those benefits and continues to be a valuable source of jobs and income locally. In the County, agriculture provides jobs, local tax base, a variety of environmental benefits, scenic beauty, food and fiber for human consumption, and fuels management. The practices of raising livestock and grazing animals is considered part of agriculture; please refer to the agriculture section in this plan for more information.

- The Livestock Grazing in Utah: History and Status (2008) report states, “Rangelands in Utah are primarily administered by the Bureau of Land Management (BLM) and Forest Service (FS). Data from the BLM indicate that use by domestic livestock has declined more than two-thirds over time. Most of this decline has been associated with the reduction of the sheep industry. Similar data for the FS indicate that declines in the use of FS lands have not been as dramatic as on BLM lands, but usage of FS lands today is about half what it was 60 years ago.”

- The Livestock Grazing in Utah: History and Status (2008) report states, “Every Utah livestock producer identified by the Utah office of the National Agricultural Statistics Service (NASS), as well as out-of-state operators with permits to graze public lands in Utah, were sent a survey that was designed to obtain information not available elsewhere. Analyses of these data indicate the following:
  - The number of animals owned by permittees is much larger than those owned by non-permittees.
  - Permittee operations are generally more dependent on livestock production than are non-permittees.
  - Most livestock operations have been owned by the same family for many years (commonly more than 50 years), and a large portion plan to have a family member operate the ranch in the future. This was especially true of permittee ranches.
  - A large portion of livestock producer sales are made to local firms, but an even larger percentage of their purchases are from local firms. As a result, firms in communities where livestock production is a large portion of the area’s economic activity are intimately concerned with the health of the livestock industry.
  - Pasture is the primary source of feed for non-permittee livestock operators when they are not being fed hay (winter), while forage from public lands is the most important source of feed for permittee operators. Pasturelands are an important source of feed for all operators, but use of federal lands allows permittees to reduce their dependency on hay, or more expensive feed sources. Without the use of federal lands, many ranching operations in Utah could not be sustained as economically viable.
  - The market for grazing permits is poorly understood and not well defined. As a result, little is known about the economic demand for grazing permits.
  - Actual use of permits was generally less than permitted use in 2006, but this is not unusual. Many permittees have and continue to take voluntary non-use of federal lands as a result of reduced forage availability. Negative impacts to these lands have come from drought, the overpopulation of non-permitted horses, the introduction (or reintroduction) of wildlife species, and a generally poor habitat and forage management by federal agencies.
Lands administered by the BLM provide the largest percentage of grazed forage by those having permits to graze federal or state administered lands. However, the percentage varies in the regions outlined in the study.

The most critical period of use of public lands for most permittees was during the summer.

It is apparent that some ranchers in counties, such as Utah, Sanpete, Summit, Carbon, Uintah, and Iron, as well as Box Elder (traditionally centers for sheep production), switched to or reallocated their resources to include cattle production.

The amount of federally permitted animal unit months (AUMs) in Utah declined four fold between 1940 and 2005. On BLM land, 2,749,000 AUMs were available in 1940 but were reduced to fewer than 675,000 AUMs in 2009. On U.S. Forest Service land, the AUMs available decreased from 2.7 million in 1940 to 614,000 in 2008. In response to these declines, 2016 House Bill 145 - the Rangeland Improvement Act was passed, and the Utah Grazing Improvement Program was established. The goals of the act are to strengthen Utah’s livestock industry, improve rural economies, and enhance the environment. Utah Department of Agriculture and Food 2016

In large part, Uintah County private property owners and farm operators control this resource when occurring on private property. Where grazing takes place on federal lands, federal land managers are responsible for the many regulations and restrictions.

Animal agriculture in Utah represents the single largest sector of farm income in Utah. At a value of more than $1 billion, 25 of the state’s 29 counties report livestock as the dominant agricultural sector (Utah Department of Agriculture and Food 2016).

In general, the number of head of cattle and calves in Utah has reduced since 2002. The number of farms raising beef cows in Utah has increased, but the number of beef cows, milk cows, sheep, and lambs has decreased (Table LG1).

<table>
<thead>
<tr>
<th>Livestock Type</th>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle and calves inventory</td>
<td>35,385 (2002)</td>
</tr>
<tr>
<td></td>
<td>43,856 (2007)</td>
</tr>
<tr>
<td></td>
<td>36,085 (2012)</td>
</tr>
<tr>
<td>Beef cows</td>
<td>20,402 (2002)</td>
</tr>
<tr>
<td></td>
<td>22,287 (2007)</td>
</tr>
<tr>
<td></td>
<td>24,950 (2012)</td>
</tr>
<tr>
<td>Milk cows</td>
<td>1338 (2002)</td>
</tr>
<tr>
<td></td>
<td>576 (2007)</td>
</tr>
<tr>
<td></td>
<td>652 (2012)</td>
</tr>
<tr>
<td>Sheep and lambs</td>
<td>16,105 (2002)</td>
</tr>
<tr>
<td></td>
<td>15,504 (2007)</td>
</tr>
<tr>
<td></td>
<td>12,857 (2012)</td>
</tr>
</tbody>
</table>


* In keeping with the provisions of Title 7 of the United States Code, no data are published that would disclose information about the operations of an individual farm or ranch. All tabulated data are subjected
The U.S. Forest Service is looking at the impacts of domestic versus bighorn sheep in the Uinta Mountains. They also converted an allotment from sheep to cattle to reduce conflicts with bighorn sheep.

Grazing on USFS land has declined. According to the Utah Department of Agriculture and Food (UDAF) in their History of Grazing in Utah summary, grazing has decreased from 2.7 million animal unit months (AUMs) in the 1940s to 614,000 AUMs in 2008 (UDAF 2016). Additional research suggests that although the percentage of forage harvested by livestock on federal lands is decreasing, the total number of AUMs in Utah has remained relatively stable over the past 60 years.

Rangelands in Utah are primarily administered by BLM and the U.S. Forest Service. The Vernal Field Office administers grazing on 167 allotments throughout its jurisdiction (BLM 2005).

16.2 CUSTOM + CULTURE

Since the 1880’s when Uintah County first saw an influx of settlers, people have been raising cattle, sheep, and horses for food, fiber, labor, and recreation. Dozens of Century Farms have been designated in Uintah County including the W. S. Powell Farm Homestead 1877. The County considers agriculture to be part of its history, custom, and culture. This tradition is still practiced and celebrated locally. The county held its first organized rodeo in 1902.

The Livestock Grazing in Utah: History and Status (2008) report states, “Livestock have been commercially grazed on lands in Utah for more than 150 years. The earliest record of grazing was by a herd of cattle owned by Miles Goodyear in the early 1840s. Native Americans probably grazed sheep and horses before that time. Grazing of lands by cattle and sheep in Utah increased rapidly after 1847, following the arrival of the pioneers in the Salt Lake Valley.”

During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of livestock and grazing, there were concerns about rangeland health as well as comments in support of the industry generally.

16.3 PRIORITY DATA SOURCES


17 MINING AND MINERAL RESOURCES FINDINGS

17.1 OVERVIEW + BACKGROUND

- Mineral resources are deposits or occurrences of organic and inorganic materials with intrinsic economic value (such as ore, aggregate, oil, and gas) that may be extracted from the earth’s crust. Mineral resources are regulated and managed based on type, and are grouped into three categories: locatable, leasable, and saleable. The primary minerals that are being extracted include gilsonite, phosphate, oil, and gas.

- “Gilsonite, a lightweight, glossy black, bituminous asphaltite, is the primary hydrocarbon mined in Utah. It has been mined commercially only in northeastern Utah, where it occurs south of Vernal and Roosevelt in parallel vertical veins that cut across the Uinta Basin. It is believed to be a solid residue of petroleum, and was initially named uintaite in 1885 by W.P. Blako. The mineral was later named in honor of Samuel H. Gilson, a Salt Lake man who brought it into prominence for commercial uses such as in paints and varnishes, and in other building products” (Powell 1994).

Locatable Minerals

- This category includes high-value minerals such as gold, silver, and copper that are subject to the Mining Law of 1872 as amended by 30 USC 2. Under the Mining Law, mining claims can be filed for these minerals. The category also includes certain industrial minerals such as gypsum, chemical grade limestone, and chemical grade silica sand. Uncommon varieties of mineral materials such as pozzolan, pumice, decorative rock, and cinders may also be regulated as locatable minerals if demonstrated to have unique market value.

Leasable Minerals

- This category includes gas, oil, oil shale, coal, oil sands, phosphate, gilsonite, and geothermal resources, and are subject to the Mineral Leasing Act of 1920, as amended and supplemented (30 USC 181, et. seq.), the Mineral Leasing Act for Acquired Lands as amended (30 USC 351-359), and the Geothermal Steam Act of 1970 (30 USC 1001-1025).

Saleable Minerals
This category includes more common mineral resources including sand, stone, gravel, pumice, clay, and petrified wood. Regulation of these minerals on public lands is authorized by 30 USC 601. State and private lands are regulated by state, county, and local jurisdiction and land use codes.

According to the BLM Vernal Field Office Mineral Potential Report for the Vernal Planning Area 2002, (this planning area encompasses approximately 5.1 million acres in Uintah, Duchesne, Daggett, and Grand counties) there is high and moderate potential for gilsonite occurrence, “and it is likely that there will be continued exploration and development of this resource within the next 15 years”.

The same report gives similar findings for phosphate. “There is high and moderate phosphate occurrence potential within the Planning Area. There are established, current economic operations for phosphate in the Planning Area. Phosphate mining on private land is anticipated to continue over the next 15 years. There is some potential for exploration on Federal lands over the next 15 years” (BLM 2002).

Mineral resources are deposits or occurrences of inorganic materials with these minerals on public lands is authorized by 30 USC 601. State and private lands are regulated by state, county, and local jurisdiction and land use codes.

The mining industry is an important part of the history and economy of the Uintah Basin.

Continued access to mineral resources associated with public lands is paramount to the well-being of Uintah Basin residents and its economy, the State of Utah, the national economy, and national security especially because mining (e.g., phosphate) is on a different economic cycle than the oil and gas industry.

“Simplot Phosphates continues to be the only active phosphate producer in Utah. The phosphate operation is located 12 miles north of Vernal in Uintah County. In 2014, the mine produced approximately 4.1 million st of ore, about 9% more than in 2013. The ore yields about 1.5 million st of phosphate concentrate (P2O5) after processing. The concentrate is transported in slurry through a 96-mile underground pipeline to the Simplot fertilizer plant near Rock Springs, Wyoming. More than 95% of the phosphate rock mined in the U.S. was used to manufacture phosphoric acids to make ammonium phosphate fertilizers and animal feed supplements (USGS, 2015a)” (Boden et al. 2014).

“Gilsonite is a shiny, black, solid hydrocarbon that occurs in a swarm of laterally and vertically extensive veins in the Uintah Basin. It has been mined since the late 1880s in Utah and Colorado. In 2014, American Gilsonite Company was the only significant producer, mining and processing gilsonite at their operation in southeastern Uintah County. Over the last decade, gilsonite production from the Uinta Basin has ranged between 60,000 and 85,000 st per year. Small quantities of gilsonite may have been produced by other small Utah mines, but this production is inconsistently reported and would not make a significant impact on the total amount of gilsonite produced in Utah. Utah is the only place in the world that contains large deposits of gilsonite, and it has been shipped worldwide for use in numerous and diverse products including asphalt paving mixes, coatings, inks, paints, and oil and gas well drilling additives (Boden and Tripp, 2012)” (Boden et al. 2014).

Uintah County’s Code of Ordinances (17.66.010) states, “The Ashley Springs Protection Zone has been established to protect the geologically and environmentally sensitive area located within the zone, to avoid pollution or disruption of water sources, and to protect other health and welfare factors. Ashley Springs is essentially the sole source of drinking water for the more than 20,000 residents of Ashley Valley (except for limited use of water in Red Fleet Reservoir).” This zone regulates mining in favor of the protection of culinary water and irrigation water sources.
The State of Utah has primacy on regulation and reclamation of mining activities on all lands within the state, and the Utah Legislature assigned responsibility for administration of mining to the Utah Division of Oil, Gas, and Mining (DOGM).

Approximately 79% of residents in the Uintah Basin believe that federal land managers should either maintain, moderately increase, or substantially increase the extent to which mineral exploration and extraction activities occur on Utah’s public lands (Krannich 2008).

Utah Code 40-8-2 states that a mining industry is essential to the economic and physical well-being of the state. It is necessary to alter the Earth’s surface to extract minerals required by our society, but such mining can be done in a manner that minimizes undesirable effects on the surroundings and provides for reclamation of the surface when mining is completed.

Utah Division of Oil, Gas and Mining permits for active or recent mining operations within the Uintah Basin include permits for the mining of aggregates (flagstone, sand, frack sand, gravel, bedrock, sandstone, limestone, mudstone, decorative stones, onyx, and calcite), industrial minerals (phosphate and Gilsonite), and energy fuels (tar sands and oil shale).

The energy industry in the Uintah Basin relies on a supply of rock and gravel aggregate products to construct roads and well pads needed to produce energy resources.

The Bureau of Land Management Vernal Field Office Record of Decision and Approved Resource Management Plan (Vernal ROD/RMP; BLM 2008) allocates the following acreages for mineral exploration and development activities on public lands (information about oil and gas leasing can be found in the Energy and Mineral Resources section):

<table>
<thead>
<tr>
<th>Description</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.1.1 Unavailable</td>
<td>190,434</td>
</tr>
<tr>
<td>17.1.2 Open (subject to major constraints such as no surface occupancy)</td>
<td>86,789</td>
</tr>
<tr>
<td>17.1.3 Open (subject to moderate constraints such as timing limitations)</td>
<td>890,280</td>
</tr>
<tr>
<td>17.1.4 Open (subject to standard terms and conditions)</td>
<td>750,131</td>
</tr>
<tr>
<td>17.1.5 Total</td>
<td>1,917,634</td>
</tr>
</tbody>
</table>

The BLM Vernal ROD/RMP (BLM 2008) includes the following management decisions regarding mining on public lands (information about oil and gas leasing can be found in the Energy and Mineral Resources section):

For leasable minerals:

36,846 acres of BLM-administered lands along 172 miles (approximately 161 miles in Uintah County) of Gilsonite veins will be available for prospecting, leasing, and development (additional veins located through field study or prospecting will also be available if such are within “open” category lands).

76,208 acres of BLM-administered lands (approximately 42,235 acres in Uintah County) will be open to phosphate prospecting, leasing, and development with standard and special stipulations within the phosphate occurrence areas.

For locatable minerals:
Operations on BLM-administered lands open to mineral entry (as well as on claim locations that pre-date withdrawal) must be conducted in compliance with 43 Code of Federal Regulations (CFR) 3809 and 3715 regulations. The three levels of operation under these regulations are casual use, notice, plan of operation. A plan will have to be filed for operations usually conducted under notice in the following:

- Areas in the National Wild and Scenic Rivers System and areas designated for potential addition to the system.
- Designated areas of critical environmental concern.
- Areas designated as part of the National Wilderness Preservation System and administered by the BLM.
- Areas designated as “closed” to off-highway vehicle use as defined in 43 CFR 8340-5.
- Any lands or waters known to contain federally proposed or listed threatened or endangered species or their proposed or designated critical habitat.
- National Monuments and National Conservation Areas administered by the BLM; see 43 CFR 3809.11(c).
- A plan must be submitted for any bulk sampling of 1,000 tons or more of presumed ore for testing (see 43 CFR 3809.11(b)).
For saleable minerals and mineral materials:

All existing mineral material sites will be evaluated to determine continual need and to ensure that they are accommodating user needs.

Mineral material common use areas, community pits, free-use permits, competitive and noncompetitive contract sales, and testing and sampling of mineral materials may be authorized by the BLM in “open” areas.

390,307 acres of BLM-administered lands (Approximately 336,762 acres in Uintah County) will be available for mineral material disposal with standard and special stipulations (BLM 2008).

Close non-wilderness study area lands with wilderness characteristics to the disposal of mineral materials (106,178 acres).

In accordance with the Federal Land Policy and Management Act of 1976 (FLPMA), the U.S. Forest Service (USFS) must consider that all National Forest system lands are available for mineral exploration and development unless they are withdrawn from mineral entry and leasing. The total area within the boundary of the Ashley National Forest is 1,405,609 acres. Approximately 20,910 acres of this area are state and private land. This leaves 1,384,699 acres available subject to the constraints imposed by the following (U.S. Department of Agriculture [USDA] 1986):

**Outstanding or Reserved National Forest System Lands Mineral Rights:** There are 22,356 acres of acquired federal lands within the Ashley National Forest where all mineral rights are outstanding or reserved. An additional 5,087 acres have the oil and gas rights only outstanding.

**Existing National Forest System Lands Withdrawals:** In total, 137,729 acres of National Forest System lands in Daggett, Duchesne, and Uintah Counties have been formally withdrawn from all forms of appropriation under the public land laws. This includes 30,379.8 acres of withdrawals in Uintah County.

**Special Legislation:** Approximately 185,645 acres of Ashley National Forest were withdrawn under Public Law 90-540 when the Flaming Gorge National Recreation Area was established on October 1, 1968. Approximately 273,426 acres were withdrawn with the passage of the Utah Wilderness Act of 1984.

**Lands with Wilderness Characteristics:** Uintah County = 209,683 acres

**Wilderness Study Areas:** Uintah County = 46,831 acres.

**Summary:** The National Forest land with the above constraints totals 523,344 acres. This leaves 861,355 acres, which include outstanding oil and gas rights (information about oil and gas leasing can be found in the Energy and Mineral Resources section) considered available for mineral appropriation and entry as follows:

- Locatable minerals: 861,355 acres
- Leasable minerals: 1,083,830 acres
- Oil and gas: 1,083,830 acres

The State of Utah School and Institutional Trust Lands Administration (SITLA) manages 3.4 million surface and subsurface acres, and an additional 1.1 million acres of mineral estate, which include land in the Uintah Basin (262,131 acres in Uintah County). The revenue generated from SITLA lands is transferred into the Permanent School Fund, and Utah’s public schools are the beneficiary of 96% of all SITLA lands.
Utah Code 53C-2-4 and Utah Administrative Code R850 define SITLA’s responsibilities regarding mineral leases.

All minerals other than oil and gas assets of SITLA are managed by the Administration’s mining group. Revenue is generated primarily through rents and production royalties. Information about oil and gas leasing can be found in the Energy and Mineral Resources section.

Minerals on Uintah and Ouray Reservation lands are managed by the Ute Tribe and the U.S. Bureau of Indian Affairs, though they may be owned by others.

17.2 CUSTOM + CULTURE

“Utah contains a remarkable variety of energy and mineral resources. The development of these resources for over 165 years has been important to Utah and the United States. Mining plays a vital role in Utah’s economy and is the oldest nonagricultural industry in the state, employing thousands directly in mining, processing, and transportation, and indirectly in supporting occupations. The recorded mining history of Utah began in 1847. Soon after their arrival, Latter-day Saint pioneers began developing mineral resources. Their early efforts included recovering salt from Great Salt Lake, coal mining (near the communities of Coalville, Wales, and Cedar City), quarrying building stone, and production of clay and lime products” (Boden et al. 2014).

“Gilsonite, a lightweight, glossy black, bituminous asphaltite, (next to carbon) is the primary hydrocarbon mined in Utah. It has been mined commercially only in northeastern Utah, where it occurs south of Vernal and Roosevelt in parallel vertical veins that cut across the Uinta Basin. It is believed to be a solid residue of petroleum, and was initially named uintaitie in 1885 by W.P. Blako. The mineral was later named in honor of Samuel H. Gilson, a Salt Laker who brought it into prominence for commercial uses such as in paints and varnishes, and in other building products” (Powell 1994).

“Gilsonite has been produced since the 1880s, and in 1886 claims were filed by Gilson, Burt Seaboldt, and others. Seaboldt experimented with the substance and observed that it was resistant to acids and moisture” (Powell 1994).

“Uintah and Duchesne counties produced the principal Gilsonite mines—Dragon, Rainbow, Watson, Little Emma, Bonanza, and Little Bonanza were among them. In Duchesne County, the Parriette Mine (closed in 1900 because of an explosion) was located near Parriette Bench. In 1935 the main operation had been moved to Bonanza and ore was trucked to Craig, Colorado. This resulted in the eventual abandonment of the Uintah Railway” (Powell 1994).

“Other hydrocarbons found in eastern Utah which were sometimes mined on a small scale included kerogen (in the oil shales of the Green River formation), bituminous sandstone, wurlitzite (“elaterite” or mineral rubber), bituminous limestones, ozokerite (mineral wax), nigrite, and tabbyite” (Powell 1994).

Approximately 79% of residents in the Uintah Basin believe that federal land managers should either maintain, moderately increase, or substantially increase the extent to which mineral exploration and extraction activities occur on Utah’s public lands (Krannich 2008).

During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of mining, there was stronger support for activity on proven resources than on emerging resources (tar sands, etc).

Significant, past mining operations in Uintah County included iron and coal mines as well as copper mine on Dyer Mountain.
As the first significant commercial enterprise in the Uintah Basin, Gilsonite mining caused most of the early population growth in the 1880's and 1890's.

“Uintah counties produced the principal Gilsonite mines—Dragon, Rainbow, Watson, Little Emma, Bonanza, and Little Bonanza were among them. In 1935 the main operation had been moved to Bonanza and ore was trucked to Craig, Colorado. This resulted in the eventual abandonment of the Uintah Railway” (Powell 1994).

“Other hydrocarbons found in eastern Utah which were sometimes mined on a small scale included kerogen (in the oil shales of the Green River formation), bituminous sandstone, wurlitzite (“elaterite” or mineral rubber), bituminous limestones, ozokerite (mineral wax), nigrite, and tabbyite” (Powell 1994).

The State of Utah has primacy on regulation and reclamation of mining activities on all lands within the state, and the Utah Legislature assigned responsibility for administration of mining to the Utah Division of Oil, Gas, and Mining (DOGM).

During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of minerals there was general satisfaction over their management and not a lot of support to increase County monitoring.

17.3 PRIORITY DATA SOURCES


18 NOXIOUS WEEDS FINDINGS

18.1 OVERVIEW + BACKGROUND

- As defined in the Utah Noxious Weed Act (Utah Code 4-17-2), a noxious weed is “any plant the commissioner determines to be especially injurious to public health, crops, livestock, land, or other property.”

- The Utah Noxious Weed Act in Utah Administrative Code R68-9 designates five classes of noxious weeds in the state:
  
  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 1B: EDRR: Declared noxious and invasive weeds not native to the state of Utah and 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 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 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 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.

- According to the Noxious Weeds Field Guide of Utah, “Noxious weeds are currently spreading at a rate of more than 4,600 acres per day on federal lands in the United States” (Whitesides 2004).

- The State of Utah in Utah Administrative Code R68-9 identifies 54 plant species as noxious weeds (Table NX1). Eighteen of these species have been recorded in Daggett, Duchesne, and/or Uintah County (see Table NX1).

- Additionally, Uintah has also declared the common teasel (Dipsacus fullonum) as a noxious weed (Utah Department of Agriculture and Food 2015).

### Table NX1. Utah State and Noxious Weed List and County Records for Daggett, Duchesne, and Uintah Counties

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Utah Noxious Weed Class</th>
<th>County Record</th>
</tr>
</thead>
</table>
### Table NX1. Utah State and Noxious Weed List and County Records for Daggett, Duchesne, and Uintah Counties

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Utah Noxious Weed Class</th>
<th>County Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>African rue</td>
<td><em>Peganum harmala</em></td>
<td>1A</td>
<td>ND</td>
</tr>
<tr>
<td>Asian mustard</td>
<td><em>Brassica tournefortii</em></td>
<td>1B</td>
<td>ND</td>
</tr>
<tr>
<td>Bermudagrass</td>
<td><em>Cynodon dactylon</em></td>
<td>3</td>
<td>ND</td>
</tr>
<tr>
<td>Black henbane</td>
<td><em>Hyoscyamus niger</em></td>
<td>2</td>
<td>Daggett, Uintah</td>
</tr>
<tr>
<td>Camelthorn</td>
<td><em>Alhagi maurorum</em></td>
<td>1B</td>
<td>ND</td>
</tr>
<tr>
<td>Canada thistle</td>
<td><em>Cirsium arvense</em></td>
<td>3</td>
<td>Daggett, Duchesne, Uintah</td>
</tr>
<tr>
<td>Cogongrass</td>
<td><em>Imperata cylindrica</em></td>
<td>4</td>
<td>ND</td>
</tr>
<tr>
<td>Common crupina</td>
<td><em>Crupina vulgaris</em></td>
<td>1A</td>
<td>ND</td>
</tr>
<tr>
<td>Cutleaf vipergrass</td>
<td><em>Scorzonera laciniata lacinata</em></td>
<td>1B</td>
<td>ND</td>
</tr>
<tr>
<td>Dalmatian toadflax</td>
<td><em>Linaria dalmatica</em></td>
<td>2</td>
<td>Daggett, Duchesne</td>
</tr>
<tr>
<td>Dames rocket</td>
<td><em>Hesperis matronalis</em></td>
<td>4</td>
<td>ND</td>
</tr>
<tr>
<td>Diffuse knapweed</td>
<td><em>Centaurea diffusa</em></td>
<td>2</td>
<td>Uintah</td>
</tr>
<tr>
<td>Dyer's woad</td>
<td><em>Isatis tinctoria</em></td>
<td>2</td>
<td>Daggett, Duchesne, Uintah</td>
</tr>
<tr>
<td>Elongated mustard</td>
<td><em>Brassica elongate</em></td>
<td>1B</td>
<td>ND</td>
</tr>
<tr>
<td>Field bindweed</td>
<td><em>Convolvulus arvensis</em></td>
<td>3</td>
<td>Uintah</td>
</tr>
<tr>
<td>Garlic mustard</td>
<td><em>Allaria petiolata</em></td>
<td>State or Utah Class 1B</td>
<td>ND</td>
</tr>
<tr>
<td>Giant reed</td>
<td><em>Arundo donax</em></td>
<td>1B</td>
<td>ND</td>
</tr>
<tr>
<td>Goat's rue</td>
<td><em>Galega officinalis</em></td>
<td>1B</td>
<td>ND</td>
</tr>
<tr>
<td>Hoary cress</td>
<td><em>Cardaria draba</em> (Cardaria spp.)</td>
<td>3</td>
<td>Daggett, Duchesne, Uintah</td>
</tr>
<tr>
<td>Houndstongue</td>
<td><em>Cynoglossum officinale</em></td>
<td>3</td>
<td>Daggett, Duchesne, Uintah</td>
</tr>
<tr>
<td>Japanese knotweed</td>
<td><em>Polygonum cuspidatum</em></td>
<td>1B</td>
<td>ND</td>
</tr>
<tr>
<td>Jointed goatgrass</td>
<td><em>Aegilops cylindrica</em></td>
<td>4</td>
<td>Uintah</td>
</tr>
<tr>
<td>Leafy spurge</td>
<td><em>Euphorbia esula</em></td>
<td>2</td>
<td>Daggett, Duchesne, Uintah</td>
</tr>
<tr>
<td>Malta starthistle</td>
<td><em>Centaurea melitensis</em></td>
<td>1A</td>
<td>ND</td>
</tr>
<tr>
<td>Mediterranean sage</td>
<td><em>Salvia aethiopis</em></td>
<td>1A</td>
<td>ND</td>
</tr>
<tr>
<td>Medusahead</td>
<td><em>Tieniatherum caput-medusae</em></td>
<td>2</td>
<td>Duchesne,</td>
</tr>
<tr>
<td>Musk thistle</td>
<td><em>Carduus nutans</em></td>
<td>3</td>
<td>Daggett, Duchesne, Uintah</td>
</tr>
<tr>
<td>Myrtle spurge</td>
<td><em>Euphorbia myrsinites</em></td>
<td>4</td>
<td>ND</td>
</tr>
<tr>
<td>Oxeye daisy</td>
<td><em>Leucanthemum vulgare (syn. Chrysanthemum leucanthemum)</em></td>
<td>1B</td>
<td>Daggett</td>
</tr>
<tr>
<td>Perennial pepperweed</td>
<td><em>Lepidium latifolium</em></td>
<td>3</td>
<td>Daggett, Duchesne, Uintah</td>
</tr>
<tr>
<td>Perennial sorgum</td>
<td><em>Sorghum halepense</em> (S. almum, S. spp.)</td>
<td>3</td>
<td>ND</td>
</tr>
<tr>
<td>Phragmites (common reed)</td>
<td><em>Phragmites australis ssp.</em></td>
<td>3</td>
<td>ND</td>
</tr>
<tr>
<td>Plumeless thistle</td>
<td><em>Carduus acanthoides</em></td>
<td>1A</td>
<td>ND</td>
</tr>
<tr>
<td>Poison hemlock</td>
<td><em>Conium maculatum</em></td>
<td>3</td>
<td>ND</td>
</tr>
</tbody>
</table>
Table NX1. Utah State and Noxious Weed List and County Records for Daggett, Duchesne, and Uintah Counties

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Utah Noxious Weed Class*</th>
<th>County Record†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Puncturevine</td>
<td>Tribulus terrestris</td>
<td>3</td>
<td>ND</td>
</tr>
<tr>
<td>Purple loosestrife</td>
<td>Lythrum salicaria</td>
<td>2</td>
<td>Uintah</td>
</tr>
<tr>
<td>Purple starthistle</td>
<td>Centaurea calocarpa</td>
<td>1B</td>
<td>ND</td>
</tr>
<tr>
<td>Quackgrass</td>
<td>Elymus repens</td>
<td>3</td>
<td>ND</td>
</tr>
<tr>
<td>Rush skeletonweed</td>
<td>Chondrilla juncea</td>
<td>2</td>
<td>ND</td>
</tr>
<tr>
<td>Russian knapweed</td>
<td>Rhaponticum (Acroptilon) repens</td>
<td>3</td>
<td>Daggett, Duchesne, Uintah</td>
</tr>
<tr>
<td>Russian olive</td>
<td>Elaeagnus angustifolia</td>
<td>4</td>
<td>Daggett, Duchesne, Uintah</td>
</tr>
<tr>
<td>Scotch broom</td>
<td>Cytisus scoparius</td>
<td>4</td>
<td>ND</td>
</tr>
<tr>
<td>Scotch thistle</td>
<td>Onopordum acanthium</td>
<td>3</td>
<td>Duchesne, Uintah</td>
</tr>
<tr>
<td>Small bugloss</td>
<td>Anchusa arvensis</td>
<td>1A</td>
<td>ND</td>
</tr>
<tr>
<td>Spotted knapweed</td>
<td>Centaurea stoebe ssp. micranthos</td>
<td>2</td>
<td>Daggett, Duchesne, Uintah</td>
</tr>
<tr>
<td>Spring millet</td>
<td>Millium vernale</td>
<td>1A</td>
<td>ND</td>
</tr>
<tr>
<td>Squarrose knapweed</td>
<td>Centaurea virgata</td>
<td>2</td>
<td>ND</td>
</tr>
<tr>
<td>St. Johnswort</td>
<td>Hypericum perforatum</td>
<td>1B</td>
<td>Daggett</td>
</tr>
<tr>
<td>Syrian beanecaper</td>
<td>Zygophyllum fabago</td>
<td>1A</td>
<td>ND</td>
</tr>
<tr>
<td>Tamarisk</td>
<td>Tamarix ramosissima</td>
<td>3</td>
<td>Daggett, Duchesne, Uintah</td>
</tr>
<tr>
<td>Ventenata (North African grass)</td>
<td>Ventenata dubia</td>
<td>1A</td>
<td>ND</td>
</tr>
<tr>
<td>Vipers bugloss</td>
<td>Echium vulgare</td>
<td>1B</td>
<td>ND</td>
</tr>
<tr>
<td>Yellow starthistle</td>
<td>Centaurea solstitialis</td>
<td>2</td>
<td>ND</td>
</tr>
<tr>
<td>Yellow toadflax</td>
<td>Linaria vulgaris</td>
<td>2</td>
<td>Uintah</td>
</tr>
</tbody>
</table>

* Data from Utah Administrative Code R68-9, in effect on June 1, 2016.
† Data from Automated Geographic Reference Center (2005), U.S. Department of Agriculture (2016). ND = the species is not listed for a particular county in the aforementioned references.

Notes: Class 1A: EDRR Watch List; Class 1B: EDRR; Class 2: Control; Class 3: Containment; Class 4: Prohibited.

- Geospatial data for introduced plant species not classified as noxious weeds are also available for Uintah County through the Utah Automated Geographic Reference Center (Table NX2).

Table NX2. Introduced Plant Species Records for Uintah County

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual sowthistle</td>
<td>Sonchus oleraceus</td>
</tr>
<tr>
<td>Bull thistle</td>
<td>Cirsium vulgare</td>
</tr>
<tr>
<td>Bur buttercup</td>
<td>Ceratocephala testiculata</td>
</tr>
<tr>
<td>Burdock</td>
<td>Arctium minus</td>
</tr>
<tr>
<td>Cocklebur</td>
<td>Xanthium sp.</td>
</tr>
<tr>
<td>Common mullein</td>
<td>Verbascum thapsus</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>----------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Crested wheatgrass</td>
<td><em>Agropyron cristatum</em></td>
</tr>
<tr>
<td>Halogeton</td>
<td><em>Halogeton glomeratus</em></td>
</tr>
<tr>
<td>Lesser burdock</td>
<td><em>Arctium minus</em></td>
</tr>
<tr>
<td>Perennial sowthistle</td>
<td><em>Sonchus arvensis</em></td>
</tr>
<tr>
<td>Russian thistle</td>
<td><em>Salsola tragus</em></td>
</tr>
<tr>
<td>Yellow salsify</td>
<td><em>Tragopogon dubius</em></td>
</tr>
<tr>
<td>Western water hemlock*</td>
<td><em>Cicuta douglasii</em></td>
</tr>
<tr>
<td>Yellow sweetclover</td>
<td><em>Melilotus officinalis</em></td>
</tr>
</tbody>
</table>

*County-declared noxious in Duchesne County.*

According to the Land and Resource Management Plan for the Ashley National Forest (U.S. Department of Agriculture 1986):

The Ashley National Forest has been actively involved in the control of noxious farm weeds on U.S. Forest Service–administered lands in cooperation with state and local weed control organizations.

Noxious farm weeds are defined as “Those pernicious plant species occurring unnaturally on National Forest System lands that have the greatest potential of contributing to an unfavorable economic impact on crop or pasture land downstream” (U.S. Department of Agriculture 1986).

In recognition of the ecological and economic impacts of weeds, the Utah Noxious Weed Act requires landowners to control state-listed noxious weed species on their lands. The act stipulates that each county and municipality in Utah must adopt a noxious weed management plan for its jurisdiction and identify the plant species in its area that it considers noxious weeds. In addition, if landowners and managers fail to control weeds on their property, the county or municipality may legally enter the property, control weeds, and charge the landowner for the cost of control work.

The highest priority weeds in Uintah County are black henbane, Dalmatian toadflax, diffuse knapweed, dyer’s woad, leafy spurge, perennial pepperweed, poison hemlock, Russian knapweed, Russian olive, Scotch thistle, and spotted knapweed (Belliston and Cazier 2016).

An important component of adaptive management is an integrated weed management plan that uses multiple weed management techniques. Integrated weed management is a process that combines biological, chemical, mechanical, and cultural management techniques to synergistically control target weed species with minimal adverse impacts to non-target organisms (Colorado Natural Areas Program et al. 2000). Most traditional weed management concentrates only on suppression, typically by using herbicides; however, this approach does not address the ultimate causes of weed invasion. Integrated weed management uses ecological principles of plant community establishment and persistence and integrates strategies that are practical, economical, and protective of public and environmental health (Colorado Natural Areas Program et al. 2000). By implementing multiple weed control methods, the likelihood that one of the methods will control or eliminate the target weed species is increased. Objectives of an adaptive weed management process that uses the principles of integrated weed management are as follows:

- Work to establish and maintain functioning native plant communities. Disturbance—both anthropogenic and natural—is the primary factor in the degradation of native plant communities and spread of noxious weeds.
- Implement appropriate prevention methods. Preventing weeds from invading a site in the first place is the most effective and least costly method for controlling weeds.
- Choose appropriate control actions. Control strategies are a function of the biology and ecology of the target species. The appropriate strategy should also be:
  - applied at the most effective time,
  - the least damaging to non-target organisms,
  - the least hazardous to human health,
  - the least damaging to the general environment,
  - the most likely to reduce the need for weed control over the long term,
the most easily implemented, and
the most cost effective in the short term and long term.

- Cooperative weed management areas (CWMAs) can be an effective resource in the prevention, detection, and suppression of noxious and invasive weeds. Coordinated mechanical, chemical, and biological control over large areas by multiple landowners has proven successful for a variety of weed species. These areas replace jurisdictional boundaries in favor of natural boundaries the State Noxious Weed list was updated to include 54 species and prioritization categories were modified.

- “An increasing threat to rangeland biodiversity and health is the invasion by non-native plant species. Some of the most prevalent and problematic invasive plants include diffuse knapweed (Centaurea diffusa), spotted knapweed (Centaurea maculosa), yellow starthistle (Centaurea solstitialis), leafy spurge (Euphorbia esula), and cheatgrass (Bromus tectorum). The vast majority of invasive plants have been introduced from other continents. Cheatgrass, the most widespread and dominant invasive plant in the Intermountain West, was introduced during the mid-to late-1800s by means of imported grain from Eurasia. The first records of cheatgrass in the Great Basin came from Provo, Utah, in 1894; Elko, Nevada, in 1905; and Reno, Nevada, in 1906” (Utah State University 2009).

- “Invasive plants can have a significant impact on an array of ecological facets. Invasive plants have reduced species richness, plant diversity, and community productivity. Wildlife habitat and forage have been degraded; soil erosion and stream sedimentation have increased; soil moisture and nutrient levels have been depleted; and fire regimes have been altered. As cheatgrass has become a common component of sagebrush steppe vegetation communities, the nutritional quality of forage has been reduced, the intensity and frequency of fires have changed, and water cycles have been altered. Although many factors are involved, several native animals, such as sage grouse, may have declined as a result of these changes” (Utah State University 2009).

- “Attempts to manage and eradicate invasive plant species have been made utilizing various control methods. Historically, mechanical and chemical control techniques were the predominant invasive plant management methods; however, biological and cultural control techniques have been implemented and integrated with other practices. Mechanical control techniques include hand-pulling, hoeing, mowing, tilling, chaining, and bulldozing. Hand-pulling and hoeing are effective in controlling small infestations of shallow-rooted weeds in loose, moist soils. Mowing is commonly used to control invasive range annuals and some perennials; however, the success of mowing is highly dependent on timing. Annuals and some perennials can be suppressed and controlled if mowing occurs before viable seeds form. If not properly timed, mowing can promote the spread of invasive plants by encouraging the spread of seeds and stimulating the production of new stems from vegetative buds. Tilling practices can control annual species, but they rarely provide control of perennial species... More expensive mechanical control techniques, such as chaining and bulldozing, are effective in controlling invasive shrub and tree species. Although these methods require gentler terrain and are becoming increasingly expensive, they are effective in controlling shrubs and trees that do not readily resprout from root systems” (Utah State University 2009).

- Cooperative weed management areas (CWMAs) can be an effective resource in the prevention, detection, and suppression of noxious and invasive weeds. Coordinated mechanical, chemical, and biological control over large areas by multiple landowners has proven successful for a variety of weed species. These areas replace jurisdictional boundaries in favor of natural boundaries that facilitate cooperation, coordination, and implementation of effective integrated weed management programs for listed noxious weeds. Local CWMAs include the Uintah Basin CWMA and the North Ute Indian Tribe CWMA in Uintah County (USFS 2016).
The highest priority weeds in Uintah County are black henbane, Dalmatian toadflax, diffuse knapweed, dyer's woad, leafy spurge, perennial pepperweed, poison hemlock, Russian knapweed, Russian olive, Scotch thistle, and spotted knapweed (Belliston and Cazier 2016).

The USDA is the primary leader involved in preventing the introduction of invasive species, largely through the Animal and Plant Health Inspection Service (APHIS). The Natural Resource Conservation Service (NRCS) also contributes to preventative measures and education on plants that may pose a risk to cropland, rangeland, or wildlands.

The Utah Noxious Weed Act requires landowners to control state-listed noxious weed species on their lands. The act stipulates that each county and municipality in Utah must adopt a noxious weed management plan for its jurisdiction and identify the plant species in its area that it considers noxious weeds. In addition, if landowners and managers fail to control weeds on their property, the county or municipality may legally enter the property, control weeds, and charge the landowner for the cost of control work.

18.2 CUSTOM + CULTURE

- Because ranching and farming is a custom and part of the culture of the County, it is important to maintain ecological integrity in order to support and protect agricultural industries.

- During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of noxious weeds, some of the producers voiced a concern that there might be issues that are beyond management capacity.

18.3 PRIORITY DATA SOURCES


Belliston, N., and M. Cazier. 2016. Email conversation between Nathan Belliston, Uintah County Weed Supervisor, and Matt Cazier, Uintah County Community Development Director. 31 Aug 2016.


Duchesne County. 2016. Duchesne county general plan county policies, objectives, action steps & resource management plan. Copies available at the Duchesne County Office, Duchesne, Utah.

Invasive Plants

Current geographic information systems data.


Utah Department of Agriculture and Food. 2015. County declared noxious weeds in Utah.


19 PREDATOR CONTROL FINDINGS

19.1 OVERVIEW + BACKGROUND

- Predators in Utah include raptors, mountain lions, bears, wolves, coyotes, foxes, weasels, and snakes (UDWR 2015).

- The USDA established a program in 1895 called Wildlife Services (WS) through the Animal and Plant Health Inspection Service (APHIS) to assist land managers. WS focuses on predator control activities for the protection of livestock. “Currently, WS operational activities include conducting rabies control and eradication efforts, managing invasive species, completing wildlife disease surveillance, reducing the impact of predation on livestock, preventing wildlife strikes at airports, protecting transportation, infrastructure, and protecting threatened & endangered species, rare habitats, and ecosystems” (APHIS 2009).

- The Animal and Plant Health Inspection Service (APHIS) Wildlife Services (WS) also contributes to livestock resource protection. “WS personnel recommend and conduct wildlife damage management activities to protect many types of resources... WS personnel use an integrated wildlife damage management approach, in response to requests for assistance to protecting agriculture, natural resources, property, and human health & safety” (USDA 2015).

- The primary focus of predator control in Utah is protecting livestock from coyotes, black bear and mountain lion, as well as protecting mule deer from coyotes. In 2012, the State established the Mule Deer Protection Act (Senate Bill 245) which pays hunters a bounty fee for coyotes that are harvested. Predators can also be a significant threat to endangered species, and counties often support open hunting and taking by other means of predators as a support to other protection efforts.

- The Utah, livestock protection from predators rests with the Utah Department of Agriculture (UDA) as explained in the Utah Agriculture Wildlife Damage Prevention Act (Utah Code 4-23). The UDA Wildlife Damage Prevention Board, created by the Wildlife Damage Prevention Act, oversees the State role in predator damage management. Although the USDA Wildlife Services (WS) supervises and manages the initiative, it is a cooperative program that is currently 50% funded by the State, 32% funded by WS federal appropriations, 14% from private funding, and 4% by other federal agencies (M. Worthen, Iron County, personal communication).

- The program not only protects livestock from predation, but also monitors and controls zoonotic diseases transmittable by wildlife to humans, such as rabies and avian influenza, and provides protection to federally listed threatened and endangered species as requested by the Utah Division of Wildlife Resources (UDWR) and the U.S. Fish and Wildlife Service. Black bear and mountain lion are classified as big game and managed by the UDWR, whereas coyotes are classified as nuisance wildlife, and controlled primarily by UDA with the exception of mule deer or other big game protection. WS reports all big game and other DWR managed wildlife taken as a result of livestock protection to DWR (M. Worthen, Iron County, personal communication).

- Uintah County has black bear and cougar habitat. Cougar harvesting and pursuit (chasing, no-kill) is permitted in Utah and is managed by the Division of Wildlife Resources.

- All over the West, crows and ravens have affected sage-grouse populations by finding their nests and preying on their chicks. “Direct effects of nest predation on nesting productivity of birds are widely recognized, and even in high-quality sage-grouse habitat, most sage-grouse nests are lost to predators” (Dinkins et al. 2012). “An effort is underway to remove ravens from the Migratory Bird Treaty Act, which bans harming or killing the birds” (Gurrister 2014).
19.2 CUSTOM + CULTURE

- When the pioneers arrived in Utah, wildlife represented both benefits and problems. Fish became a significant part of the pioneer diet, particularly when crop failures occurred. At other times, hunting parties were formed to rid the early settlers of “pest” species. One such hunting company reported the killing of “2 bears, 2 wolverines, 2 wild cats (bobcat), 783 wolves (probably both coyotes and wolves), 400 foxes, 31 mink, 9 eagles, 530 magpies, hawks, owls, and 1626 ravens” (Powell 1994).

- One of the principles that drove for the establishment of the Forest Reserve Act of 1891 and Taylor Grazing Act 1934 was to address overgrazing and predator control.

- During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of predator control, most public comments recommended reducing oversight and monitoring, while agricultural producers stated the need for more.

19.3 PRIORITY DATA SOURCES


20 RECREATION + TOURISM FINDINGS

20.1 OVERVIEW + BACKGROUND

- Uintah County has identified the recreation and tourism industries as an important and contributing part of its economy and tax base. These industries have a stabilizing effect on the economic cycles of agriculture and the oil and gas industry. Public lands are a component of recreation and tourism in northeastern Utah.

- Federal, state, county, and even private lands offer a broad range of recreational opportunities, including camping, hiking, fishing, hunting, horseback riding, biking, nature appreciation, interpretive trips, wildlife watching, boating, and other tourism-related activities. Public lands also support businesses that offer such opportunities to the public, including outfitters and guides, whitewater rafting, outdoor camps, wilderness/survival schools, and dude ranches.

- “Uintah County, also commonly referred to as “Dinosaurland,” had a 11.3% leisure and hospitality share of total private jobs in 2015, ranking 20th statewide. Uintah County, once the land of ancient and historic Indian cultures, was later settled by fur trappers, miners, farmers and ranchers. Uintah County is best known for Dinosaur National Monument, which comprises a portion of the Green River and attracts paleontology enthusiasts as well as outdoor recreationists. The Uintah Heritage Museum, Utah Field House of Natural History State Park Museum, and Daughters of Utah Pioneers Museum are all located in the county seat of Vernal. More recently, Uintah County has been working with the Utah State Parks, USFS and BLM to develop new trails and better promote existing trails in and around the county” (Kem C. Gardner Policy Institute 2016).

- Uintah County has the spectacular scenery and terrain that attracts mountain biking enthusiasts from around the world. “The...town of Vernal boasts a network of 20 heralded single-track trails for mountain bikers. In fact, Vernal is starting to make a name for itself as a mountain biking attraction, rivaling Fruita, Colorado and Moab, Utah as a destination” (State of Utah 2013).

- Every 5 years, the State of Utah, through the Utah Division of Parks and Recreation (UDPR), develops a state comprehensive outdoor recreation plan (SCORP), which enables the state to qualify for funding under the federal Land and Water Conservation Fund. The most recent SCORP was completed in September 2013 (UDPR 2013).

- The SCORP planning process includes a survey of Utah residents to assess their perception of needed recreation facilities in the state. Uintah County residents were surveyed as part of the Uintah Basin Planning District. Survey results show that over 60% of the basin residents felt that opportunities for outdoor recreation are extremely important. Over 50% of the survey respondents stated that they are willing to travel over 25 miles to participate in outdoor recreation.

- SCORP survey respondents in the basin indicated that they frequently participate in camping, picnicking, fishing, swimming, off-highway vehicle (OHV) riding, horseback riding, hunting, hiking, motorized water sports, wildlife viewing, and birdwatching. Field-based sports, court-based sports, walking, running, and golf were also popular. Those surveyed saw a need for more swimming pools, paved trails, OHV riding areas, camping areas, and parks. The percentage of Uintah Basin respondents who participated in camping over the previous 12 months was 85.9%; the highest of any planning district in the state. Among the planning districts, the Uintah Basin also had the overall highest proportion of fishing participants at 76%. There were also relatively high proportions of participants in OHV riding, horseback riding, hunting, and wildlife viewing or birdwatching. Basin respondents placed high importance on OHV riding areas, but commented on low area availability (12%). This indicates that people in the basin are extremely engaged in outdoor recreation pursuits and that these activities are often resource based (UDPR 2013).
Responses to the importance and satisfaction rating scales indicate that Uintah Basin Planning District residents see a greater need for swimming pools, paved trails, OHV riding areas, camping areas, and parks and other parks and recreation facilities (UDPR 2013).

A variety of recreational opportunities and experiences are available for residents and visitors alike to enjoy in the basin. The Uinta Mountains have more than 1,000 natural lakes and small streams, over half of which support populations of game fish. These mountains contain Utah’s largest designated wilderness area and highest peak (Kings Peak). Many of the trailheads in this beautiful backcountry are within a 90-minute drive from Salt Lake City. (State of Utah 2013). One of the West’s most spectacular reservoirs (Flaming Gorge) is also located in this part of the state and serves as a grand playground for boaters and anglers. High desert landscapes provide unparalleled vistas and opportunities for OHV use, hunting, and other recreational pursuits.

Public lands in the Uintah Basin provide many landscapes, resources, and unique features for recreation. These lands include Ashley National Forest, Dinosaur National Monument, Browns Park National Wildlife Refuge, Ouray National Wildlife Refuge and National Fish Hatchery, four state parks (Red Fleet, Starvation, Steinaker, Utah Field House of Natural History), Jarvie Ranch, Dry Fork, Flaming Gorge-Utah National Scenic Byway, Fantasy Canyon, Green River, White River, Monroe Arch, Nine Mile Canyon, Pariette Wetlands, Pelican Lake, and the Book Cliffs with its myriad opportunities for hunting, hiking, and wildlife watching. Some of these areas have been included as part of larger special recreation management areas designated in the Bureau of Land Management Vernal Field Office Record of Decision and Approved Resource Management Plan (Bureau of Land Management [BLM] 2008). As an indication of their popularity, visitation at Starvation, Steinaker, and Utah Field House of Natural History State Parks has all increased between fiscal years 2014 and 2015 by 15%, 17%, and 10%, respectively (Leaver 2016).

Water-based recreation opportunities (e.g., boating, rafting, and fishing) in the county have relatively fewer managerial concerns than the other regions throughout the state. Steinaker provides opportunities for personal watercraft use, beach use, etc. Red Fleet is more scenic and a little quieter. Fishing is a tremendously popular recreation activity in the Uintah Basin (UDPR 2013). Fishing license sales in Uintah County outstripped sales in Duchesne and Daggett County in 2010 (Utah Division of Wildlife Resources 2013).

Dinosaur National Monument is a huge driver for tourism in the county. In 2015 the National Monument reported 291,800 visitors, but only 250,625 visitors in 2014, which was an 8.7% decrease from 2013. In 2015 visitors to the monument spent an estimated $17 million in communities near the park; this spending is believed to have supported 233 local jobs, www.nps.gov. “During the first nine months of FY15, Utah Field House Museum of Natural History State Park reported 29,435 visitors (remained flat), Red Fleet State Park reported 12,738 visitors and Steinaker State Park reported 13,741 visitors (remained flat)” (Kem C. Gardner Policy Institute 2015).

Statewide, Utah residents make up approximately 45% of visitors to Utah national and state parks. After transportation costs, non-resident visitors spend more of their total expenditures on lodging and dining out; whereas resident travelers spent larger shares of their total spending on groceries, shopping, and entertainment (Kem C. Gardner Policy Institute 2016). Non-resident visitor spending is significant because it augments and adds outside dollars to Utah’s economy. Resident spending recirculates dollars already present in the state’s economy; however, Utah resident visits do contribute non-local dollars and spend their money outside their county of origin (Bureau of Economic and Business Research [BEBR] 2014). Regarding spending in the Uintah Basin, anecdotal information suggests that because Uintah County is so close to the Wasatch Front, which comprises most of Utah’s population, Utah resident visits may involve more day trips and subsequently not spend as much locally before returning home.
Other means or sources of recreation and tourism include, but are not limited to: mountain biking, DinoTri, Ashley National Forest, Buckskin Hills Complex, Uintah Conference Center, rafting, fishing, water sports, etc. Each one of these elements contributes to the economy of Uintah County and the lifestyle of residents.

20.2 CUSTOM + CULTURE

For more than a century citizens and visitors have been taking advantage of the unique landscape in Uintah County for recreation. Locals have always valued multiple-use management strategies as to accommodate as many interests and users as possible. Historic photos document fishing, ice fishing, hiking, picnicking, ice skating, river running, etc. These pastimes add to the quality of life for the area and are essential in attracting new residents and visitors.

During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. There was widespread appreciation for the different recreation opportunities in Uintah. There were also unfavorable comments relating to Vernal City as a gateway and the potential conflict between energy and recreation uses.

20.3 PRIORITY DATA SOURCES


21 RIPARIAN AREAS FINDINGS

15.1 OVERVIEW + BACKGROUND

- Riparian zones are important in ecology, environmental management, and civil engineering because of their role in soil conservation, their habitat biodiversity, and the influence they have on fauna and aquatic ecosystems, including grasslands, woodlands, wetlands, or even non-vegetative areas.

- Riparian areas are functioning properly when adequate vegetation, landforms, or large woody debris is present to dissipate stream energy, filter sediment, capture bedload, 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 (Leonard et al. 1997).

- The Utah Division of Wildlife Resources (DWR) considers mountain riparian and lowland riparian areas as key habitats. The Utah Wildlife Action Plan references riparian areas under key aquatic habitats and includes policies promoting their protection (Utah Wildlife Action Plan Joint Team 2015). The DWR document A Handbook of Riparian Restoration and Revegetation for the Conservation of Land Birds in Utah with Emphasis on Habitat Types in Middle and Lower Elevations indicates the importance the state places on these resources (Gardner et al. 1999).

- The Utah Comprehensive Wildlife Conservation Strategy prioritizes habitat categories based on several habitat criteria important to the species of greatest conservation need. The top key habitat state-wide is Lowland Riparian (characterized by riparian areas <5,500 ft elevation; principal vegetation: Fremont cottonwood and willow), while the third most key habitat is Mountain Riparian (characterized by riparian areas >5,500 ft elevation; principal vegetation: narrowleaf cottonwood, willow, alder, birch and dogwood) (UDWR 2005).

- According to the Utah Wildlife Action Plan (2015), “riparian areas are the richest habitat type in terms of species diversity and wildlife abundance”. These areas provide habitat to a range of wildlife including amphibians, birds, mammals, fish, and insects. Riparian areas also play a significant role in the erosion processes by slowing water, trapping sediment, and stabilizing banks. Finally, riparian areas provide quality forage for livestock and are valued within grazing allotments.

- Ashley and White Creek and the Uinta and Green rivers are major water resources in Uintah County. The largest is the Green which cuts through the central part of the county.

- The Utah Bureau of Land Management (BLM) uses a statewide guidance document called Riparian Management Policy to manage riparian areas. The policies in this document generally include maintaining or improving riparian areas to proper functioning condition through enhancement, restoration, protection, and preservation in cooperation with interested federal, state, tribal, and local governments as well as private conservation and volunteer groups.

- Using the Riparian Area Management (Leonard et al. 1997), the BLM and the U.S. Forest Service (USFS) provide guidance for grazing management in riparian-wetland areas.

- Table RIP1 provides acreage of native and invasive riparian communities in the Uintah Basin counties as determined by the U.S. Geological Survey’s (USGS) National Gap Analysis Program. Figure RIP1 show these riparian communities by county.
Table RIP1. Acres of Southwestern Regional Gap Analysis Riparian Communities in Uintah County

<table>
<thead>
<tr>
<th>Riparian Community</th>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invasive Southwest Riparian Woodland and Shrubland</td>
<td>10,811</td>
</tr>
<tr>
<td>Rocky Mountain Lower Montane Riparian Woodland and</td>
<td>37,132</td>
</tr>
<tr>
<td>Shrubland</td>
<td></td>
</tr>
<tr>
<td>Rocky Mountain Subalpine-Montane Riparian Shrubland</td>
<td>5,440</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>53,383</strong></td>
</tr>
</tbody>
</table>


- Riparian areas should be managed to protect vegetation characteristics. Conservation efforts include preserving existing riparian areas as well as restoring damaged ones. Preservation should also include the dedication of sufficient water and groundwater to support vegetation. Limiting the removal of water from the system is essential in maintaining the integrity of the riparian area. Restoration efforts must consider factors like hydrology, floodplain, and adjacent land use. Restoration design of riparian areas should follow a protocol that accounts for stream hydrology, soil characteristics, vegetation, adjacent land use, recreation, and other influences. Stream or river modifications may require permits.

- Federal agencies manage riparian areas and floodplains under Executive Orders 11988 and 11990, Sections 303 and 404 of the Clean Water Act, and also the Endangered Species Act. Riparian areas are also managed under individual resource management plans and other agency policies and guidelines, such as the US Bureau of Land Management’s Riparian Area Management Policy.

- The Utah Division of Water Rights processes stream alteration permits in conjunction with the US Army Corps of Engineers.

21.1 CUSTOM + CULTURE

- Fishing, hunting, canoeing, boating, ice skating, and other recreational activities done on water and in riparian areas have long been a tradition in Uintah County. Cutting and selling ice was a historical industry utilizing the Green River and other waterbodies. Today, electricity generated by hydropower contributes to the energy supply and economy of the region. Even the building of bridges is and has been a celebrated event, as documented in historical photos and recent ribbon cuttings.

- During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. There was widespread confusion and misinformation about jurisdiction and responsibilities over riparian areas. Many concerns were around perceived damage to riparian areas from energy and grazing uses.
21.2 PRIORITY DATA SOURCES


22 THREATENED, ENDANGERED, AND SENSITIVE SPECIES
FINDINGS

22.1 OVERVIEW + BACKGROUND

- Once a species of plant or animal becomes federally listed as threatened or endangered, the range of options for managing lands and waters where that species occur substantially narrows. A common approach used by federal agencies following a listing is to follow the prescriptions outlined in recovery plans or habitat conservation plans developed by U.S. Fish and Wildlife Service (USFWS), which are expensive to develop and challenging to implement.

- The Endangered Species Act (ESA) requires stringent review and management protocols for lands and waters occupied by threatened and endangered species, dramatically reducing the flexibility to address land and resource management decisions at a local or regional level.

- ESA listings often impact management regardless of landownership, although plant listings may not impact private lands as stringently.

- Threatened and endangered species and designated habitats in Uintah County as of July 2016 are presented below in Table TES1.

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Birds</strong></td>
<td></td>
</tr>
<tr>
<td>Yellow-billed cuckoo (proposed)</td>
<td>Coccyzus americanus</td>
</tr>
<tr>
<td>Mexican spotted owl</td>
<td>Strix occidentalis lucida</td>
</tr>
<tr>
<td><strong>Fish</strong></td>
<td></td>
</tr>
<tr>
<td>Humpback chub</td>
<td>Gila cypha</td>
</tr>
<tr>
<td>Bonytail chub</td>
<td>Gila elegans</td>
</tr>
<tr>
<td>Colorado pikeminnow</td>
<td>Ptychocheilus lucius</td>
</tr>
<tr>
<td>Razorback sucker</td>
<td>Xyrauchen texanus</td>
</tr>
<tr>
<td><strong>Plants</strong></td>
<td></td>
</tr>
<tr>
<td>Clay reed-mustard</td>
<td>Schoenocrambe argillacea</td>
</tr>
<tr>
<td>Shrubby reed-mustard</td>
<td>Schoenocrambe suffrutescens</td>
</tr>
<tr>
<td>Pariette cactus</td>
<td>Sclerocactus brevispinus</td>
</tr>
<tr>
<td>Uinta basin hookless cactus</td>
<td>Sclerocactus wetlandicus</td>
</tr>
<tr>
<td>Ute ladies'-tresses</td>
<td>Spiranthes diluvialis</td>
</tr>
<tr>
<td><strong>Mammals</strong></td>
<td></td>
</tr>
<tr>
<td>Canada lynx</td>
<td>Lynx canadensis</td>
</tr>
<tr>
<td>Black-footed ferret</td>
<td>Mustela nigripes</td>
</tr>
</tbody>
</table>

Table TES1. Threatened and Endangered Species for Uintah County
### Table TES1. Threatened and Endangered Species for Uintah County

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: USFWS (2016).

### Table TES2. Designated Critical Habitats for Uintah County

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birds</td>
<td></td>
</tr>
<tr>
<td>Yellow-billed cuckoo (proposed)</td>
<td><em>Coccyzus americanus</em></td>
</tr>
<tr>
<td>Mexican spotted owl</td>
<td><em>Strix occidentalis lucida</em></td>
</tr>
<tr>
<td>Fish</td>
<td></td>
</tr>
<tr>
<td>Humpback chub</td>
<td><em>Gila cypha</em></td>
</tr>
<tr>
<td>Bonytail chub</td>
<td><em>Gila elegans</em></td>
</tr>
<tr>
<td>Colorado pikeminnow</td>
<td><em>Ptychocheilus lucius</em></td>
</tr>
<tr>
<td>Razorback sucker</td>
<td><em>Xyrauchen texanus</em></td>
</tr>
</tbody>
</table>

Source: USFWS (2016).

- The State of Utah sensitive species list is prepared pursuant to Utah Administrative Code R657-48. By rule, wildlife species that are federally listed candidates for federal listing, or for which a conservation agreement is in place, automatically qualify for the list. The additional species on the Utah sensitive species list—wildlife species of concern—are those species for which there is credible scientific evidence to substantiate a threat to continued population viability. It is anticipated that wildlife species of concern designations will act as an “early warning” system to identify species for which conservation actions are needed, and that timely and appropriate conservation actions can then be implemented on their behalf, precluding the need to list these species under the provisions of the ESA. Species on the State of Utah sensitive species list are not protected by any special state regulations.

- State of Utah sensitive wildlife species in Uintah County as of July 2016 are presented below in Table TES3

### Table TES3. State of Utah Sensitive Wildlife Species for Uintah County

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birds</td>
<td></td>
</tr>
<tr>
<td>Northern goshawk</td>
<td><em>Accipiter gentilis</em></td>
</tr>
<tr>
<td>Burrowing owl</td>
<td><em>Atheene cunicularia</em></td>
</tr>
<tr>
<td>Short-eared owl</td>
<td><em>Asio flammeus</em></td>
</tr>
<tr>
<td>Ferruginous hawk</td>
<td><em>Buteo regalis</em></td>
</tr>
<tr>
<td>Greater sage-grouse</td>
<td><em>Centrocercus urophasianus</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fish</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Humpback chub</td>
<td><em>Gila cypha</em></td>
</tr>
<tr>
<td>Bonytail chub</td>
<td><em>Gila elegans</em></td>
</tr>
<tr>
<td>Colorado pikeminnow</td>
<td><em>Ptychocheilus lucius</em></td>
</tr>
<tr>
<td>Razorback sucker</td>
<td><em>Xyrauchen texanus</em></td>
</tr>
</tbody>
</table>
### Table TES3. State of Utah Sensitive Wildlife Species for Uintah County

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mountain plover</td>
<td>Charadrius montanus</td>
</tr>
<tr>
<td>Yellow-billed cuckoo</td>
<td>Coccyzus americanus</td>
</tr>
<tr>
<td>Bobolink</td>
<td>Dolichonyx oryzivorus</td>
</tr>
<tr>
<td>Bald eagle</td>
<td>Haliaeetus leucocephalus</td>
</tr>
<tr>
<td>Lewis’s woodpecker</td>
<td>Melanerpes lewis</td>
</tr>
<tr>
<td>Long-billed curlew</td>
<td>Numenius americanus</td>
</tr>
<tr>
<td>American white pelican</td>
<td>Pelecanus erythrorhynchos</td>
</tr>
<tr>
<td>American three-toed woodpecker</td>
<td>Picoides dorsalis</td>
</tr>
<tr>
<td><strong>Fish</strong></td>
<td></td>
</tr>
<tr>
<td>Bluehead sucker</td>
<td>Catostomus discobolus</td>
</tr>
<tr>
<td>Flannelmouth sucker</td>
<td>Catostomus latipinnis</td>
</tr>
<tr>
<td>Humpback chub</td>
<td>Gila cypha</td>
</tr>
<tr>
<td>Bonytail</td>
<td>Gila elegans</td>
</tr>
<tr>
<td>Roundtail chub</td>
<td>Gila robusta</td>
</tr>
<tr>
<td>Colorado river cutthroat trout</td>
<td>Oncorhynchus clarkii pleuriticus</td>
</tr>
<tr>
<td>Colorado pikeminnow</td>
<td>Ptychocheilus lucius</td>
</tr>
<tr>
<td><strong>Mammals</strong></td>
<td></td>
</tr>
<tr>
<td>Townsend’s big-eared bat</td>
<td>Corynorhinus townsendii</td>
</tr>
<tr>
<td>White-tailed prairie-dog</td>
<td>Cynomys leucurus</td>
</tr>
<tr>
<td>Spotted bat</td>
<td>Euderma maculatum</td>
</tr>
<tr>
<td>Canada lynx</td>
<td>Lynx canadensis</td>
</tr>
<tr>
<td>Black-footed ferret</td>
<td>Mustela nigripes</td>
</tr>
<tr>
<td>Fringed myotis</td>
<td>Myotis thysanodes</td>
</tr>
<tr>
<td>Big free-tailed bat</td>
<td>Nyctinomops macrota</td>
</tr>
<tr>
<td>Brown (grizzly) bear</td>
<td>Ursus arctos</td>
</tr>
<tr>
<td>Kit fox</td>
<td>Vulpes macrotis</td>
</tr>
<tr>
<td><strong>Reptiles and Amphibians</strong></td>
<td></td>
</tr>
<tr>
<td>Cornsnake</td>
<td>Elaphe emory</td>
</tr>
<tr>
<td>Smooth greensnake</td>
<td>Opheodrys vernalis</td>
</tr>
</tbody>
</table>

Source: DWR (2015a).
The Black-footed Ferret was once thought to be extinct, but in 1989 was rediscovered. “As of 2014, the minimum number of known ferrets in the wild was 295 animals. In Utah, black-footed ferrets were introduced in the Coyote Basin/Snake John Reef area of Uintah County beginning in 1999. Although the population remains small, multiple generations of wild-born kits have been documented. The historical range of the black-footed ferret coincided with ranges of the black-tailed prairie dog, Gunnison’s prairie dog, and white-tailed prairie dog…” (DWR 2015b). The Black-footed ferret was introduced under section 10(j) of the Endangered Species Act (1973), meaning that it is an experimental, non-essential program. While the species is legally treated as a threatened species, different rules apply. For example, “crucial habitat” cannot be designated based on these populations. The original protected habitat was to be only 10,000 acres (R. Barnhill, Uintah County, personal communication).

“White-tailed prairie dogs are widely distributed and abundant within their range in Utah. Occupancy has remained relatively stable since 2008 survey efforts. White-tailed prairie dogs are found in eastern Utah, northwestern Colorado, Wyoming, and a small area in southern Montana. In Utah active colonies are found in Rich, Summit, Daggett, Uintah, Duchesne, Carbon, Emery, and Grand Counties with 473,843 ha considered suitable for prairie dogs” (DWR 2015b).

Some species identified as sensitive by the State of Utah either no longer exist in Uintah County or were introduced experimentally. These species are not appropriate for the State of Utah sensitive species list.

BLM identifies a list of sensitive species on BLM-administered lands. State directors designate species within their respective states as BLM sensitive using the following criteria: There is information that a species has recently undergone, is undergoing, or is predicted to undergo a downward trend such that the viability of the species or a distinct population segment of the species is at risk across all or a significant portion of the species range, or the species depends on ecological refugia or specialized or unique habitats on BLM-administered lands, and there is evidence that such areas are threatened with alteration such that the continued viability of the species in that area would be at risk.

BLM sensitive wildlife and plant species in the BLM Vernal Field Office are presented in Table TES9 (BLM 2008).

### Table TES9. BLM Sensitive Wildlife and Plant Species in the Vernal Field Office

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birds</td>
<td></td>
</tr>
<tr>
<td>Northern goshawk</td>
<td>Accipiter gentilis</td>
</tr>
<tr>
<td>Grasshopper sparrow</td>
<td>Ammodramus savannarum</td>
</tr>
<tr>
<td>Burrowing owl</td>
<td>Athene cunicularia</td>
</tr>
<tr>
<td>Ferruginous hawk</td>
<td>Buteo regalis</td>
</tr>
<tr>
<td>Greater sage-grouse</td>
<td>Centrocercus urophasianus</td>
</tr>
<tr>
<td>Yellow-billed cuckoo</td>
<td>Coccyzus americanus</td>
</tr>
<tr>
<td>Bobolink</td>
<td>Dolichonyx oryzivorus</td>
</tr>
<tr>
<td>Bald eagle</td>
<td>Haliaeetus leucocephalus</td>
</tr>
<tr>
<td>Lewis’s woodpecker</td>
<td>Melanerpes lewis</td>
</tr>
<tr>
<td>Long-billed curlew</td>
<td>Numenius americanus</td>
</tr>
<tr>
<td>American white pelican</td>
<td>Pelecanus erythrorhynchos</td>
</tr>
<tr>
<td>Three-toed woodpecker</td>
<td>Picoisus tridactylus</td>
</tr>
</tbody>
</table>
### Table TES9. BLM Sensitive Wildlife and Plant Species in the Vernal Field Office

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fish</strong></td>
<td></td>
</tr>
<tr>
<td>Bluehead sucker</td>
<td><em>Catostomus discobolus</em></td>
</tr>
<tr>
<td>Flannelmouth sucker</td>
<td><em>Catostomus latipinnis</em></td>
</tr>
<tr>
<td>Roundtail chub</td>
<td><em>Gila robusta</em></td>
</tr>
<tr>
<td>Colorado River cutthroat trout</td>
<td><em>Oncorhynchus clarki pleuriticus</em></td>
</tr>
<tr>
<td><strong>Mammals</strong></td>
<td></td>
</tr>
<tr>
<td>Townsend's big-eared bat</td>
<td><em>Corynorhinus townsendii</em></td>
</tr>
<tr>
<td>White-tailed prairie dog</td>
<td><em>Cynomys leucurus</em></td>
</tr>
<tr>
<td><strong>Reptiles</strong></td>
<td></td>
</tr>
<tr>
<td>Smooth greensnake</td>
<td><em>Opheodrys vernalis</em></td>
</tr>
<tr>
<td><strong>Plants</strong></td>
<td></td>
</tr>
<tr>
<td>Park rockcress</td>
<td><em>Arabis vivariensis</em></td>
</tr>
<tr>
<td>Hamilton milkvetch</td>
<td><em>Astragalus hamiltonii</em></td>
</tr>
<tr>
<td>Owenby's thistle</td>
<td><em>Cirsium owenbyiowenbyii</em></td>
</tr>
<tr>
<td>Goodrich stinkweed</td>
<td><em>Cleomella palmeriana var. goodrichii</em></td>
</tr>
<tr>
<td>Untermann daisy</td>
<td><em>Erigeron untermanii untermanii</em></td>
</tr>
<tr>
<td>Alcove bogorchard</td>
<td><em>Habenaria zothecina</em></td>
</tr>
<tr>
<td>Rock hymenoxys</td>
<td><em>Hymenoxys lapidicola</em></td>
</tr>
<tr>
<td>Huber's pepperweed</td>
<td><em>Lepidium huberi</em></td>
</tr>
<tr>
<td>Goodrich blazingstar</td>
<td><em>Mentzelia goodrichii</em></td>
</tr>
<tr>
<td>Stemless penstemon</td>
<td><em>Penstemon acaulis</em></td>
</tr>
<tr>
<td>Gibbens penstemon (Gibbens beardtongue)</td>
<td><em>Penstemon gibbensii</em></td>
</tr>
<tr>
<td>Goodrich penstemon (Goodrich beardtongue)</td>
<td><em>Penstemon goodrichii</em></td>
</tr>
<tr>
<td>Graham's beardtongue</td>
<td><em>Penstemon grahamii</em></td>
</tr>
<tr>
<td>White River beardtongue</td>
<td><em>Penstemon scariosus albilulus</em></td>
</tr>
<tr>
<td>Uinta greenthread</td>
<td><em>Thelesperma caespitosum</em></td>
</tr>
</tbody>
</table>
USFS identifies a list of sensitive species on USFS-administered lands. The list of USFS sensitive species includes plant and animal species identified by a regional forester and for which population viability is a concern, as evidenced by the following:

- Significant current or predicted downward trends in population numbers or density.
- Significant current or predicted downward trends in habitat capability that would reduce a species’ existing distribution.

USFS defines policies and objectives for USFS sensitive species in Chapter 2670 of Forest Service Manual 2600 (USFS 2005).

Sensitive wildlife and plant species in the Ashley National Forest are presented in Table TES10 (USFS 2016). An update of this list is currently underway as part of the upcoming forest plan revision:

**Table TES10. Sensitive Wildlife and Plant Species in the Ashley National Forest**

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Birds</strong></td>
<td></td>
</tr>
<tr>
<td>Northern goshawk</td>
<td>Accipiter gentilis</td>
</tr>
<tr>
<td>Boreal owl</td>
<td>Aegolius funereus</td>
</tr>
<tr>
<td>Greater sage-grouse</td>
<td>Centrocercus urophasianus</td>
</tr>
<tr>
<td>Peregrine falcon</td>
<td>Falco peregrinus</td>
</tr>
<tr>
<td>Bald eagle</td>
<td>Haliaeetus leucocephalus</td>
</tr>
<tr>
<td>American three-toed woodpecker</td>
<td>Picoides dorsalis</td>
</tr>
<tr>
<td>Flammulated owl</td>
<td>Psiloscopos flammeolus</td>
</tr>
<tr>
<td>Great gray owl</td>
<td>Strix nebulosa</td>
</tr>
<tr>
<td><strong>Fish</strong></td>
<td></td>
</tr>
<tr>
<td>Colorado river cutthroat trout</td>
<td>Oncorhynchus clarkii pleuriticus</td>
</tr>
<tr>
<td><strong>Mammals</strong></td>
<td></td>
</tr>
<tr>
<td>Townsend’s western big-eared bat</td>
<td>Corynorhinus townsendii townsendii</td>
</tr>
<tr>
<td>Spotted bat</td>
<td>Euderma maculatum</td>
</tr>
<tr>
<td>Bighorn sheep</td>
<td>Ovis canadensis</td>
</tr>
<tr>
<td><strong>Amphibians</strong></td>
<td></td>
</tr>
<tr>
<td>Boreal toad</td>
<td>Bufo boreas</td>
</tr>
<tr>
<td>Columbia spotted frog</td>
<td>Rana luteoventris</td>
</tr>
<tr>
<td><strong>Plants</strong></td>
<td></td>
</tr>
<tr>
<td>Graham columbine</td>
<td>Aquilegia grahami</td>
</tr>
<tr>
<td>Petiolate wormwood</td>
<td>Artemisia campestris ssp. borealis var. petiolata</td>
</tr>
<tr>
<td>Dainty moonwort</td>
<td>Botrychium crenulatum</td>
</tr>
<tr>
<td>Slender moonwort</td>
<td>Botrychium lineare</td>
</tr>
</tbody>
</table>
Table TES10. Sensitive Wildlife and Plant Species in the Ashley National Forest

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brownie ladyslipper</td>
<td>Cypripedium fasciculatum</td>
</tr>
<tr>
<td>Rockcress draba</td>
<td>Draba globosa</td>
</tr>
<tr>
<td>Untermann daisy</td>
<td>Erigeron untermannii untermani</td>
</tr>
<tr>
<td>Goodrich stickleaf</td>
<td>Mentzelia goodrichii</td>
</tr>
<tr>
<td>Arctic poppy</td>
<td>Papaver radicatum var. pygmaeum</td>
</tr>
<tr>
<td>Stemless beardtongue</td>
<td>Penstemon acaulis var. acaulis</td>
</tr>
<tr>
<td>Caespitose greenthread</td>
<td>Thelesperma caespitatum</td>
</tr>
</tbody>
</table>

Source: USFS (2016).

- In addition to sensitive species, USFS also identifies management indicator species (MIS). MIS are defined as certain vertebrate and invertebrate species selected because their population changes are believed to indicate the effects of management activities (36 Code of Federal Regulations 219.19(a)(1)). Population trends of MIS are monitored and relationships to habitat changes are determined to assess the effects of management activities. Important characteristics of a MIS are that they have narrow habitat associations, respond to the effects of management, and can be effectively monitored.

- MIS for the Ashley National Forest are presented in Table TES11 (U.S. Department of Agriculture 1986):

Table TES11. Management Indicator Species in the Ashley National Forest

<table>
<thead>
<tr>
<th>Common Name (habitat relationship)</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birds</td>
<td></td>
</tr>
<tr>
<td>Northern goshawk (forest)</td>
<td>Accipiter gentilis</td>
</tr>
<tr>
<td>Golden eagle (other)</td>
<td>Aquila chrysaetos</td>
</tr>
<tr>
<td>Greater sage-grouse (sagebrush)</td>
<td>Centrocercus urphasianus</td>
</tr>
<tr>
<td>White-tailed ptarmigan (other)</td>
<td>Lagopus leucura</td>
</tr>
<tr>
<td>Lincoln’s sparrow (riparian)</td>
<td>Melospiza lincolnii</td>
</tr>
<tr>
<td>Song sparrow (riparian)</td>
<td>Melospiza melodia</td>
</tr>
<tr>
<td>Red-naped sapsucker (aspen)</td>
<td>Sphyrapicus nuchalis</td>
</tr>
<tr>
<td>Warbling vireo (aspen)</td>
<td>Vireo gilvus</td>
</tr>
<tr>
<td>Fish</td>
<td></td>
</tr>
<tr>
<td>Cutthroat trout (aquatic)</td>
<td>Oncorhynchus clarkii</td>
</tr>
<tr>
<td>Mammals</td>
<td></td>
</tr>
<tr>
<td>Rocky Mountain elk (other)</td>
<td>Cervus canadensis nelsoni</td>
</tr>
<tr>
<td>Mule deer (other)</td>
<td>Odocoileus hemionus</td>
</tr>
</tbody>
</table>
### Table TES11. Management Indicator Species in the Ashley National Forest

<table>
<thead>
<tr>
<th>Common Name (habitat relationship)</th>
<th>Scientific Name</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macroinvertebrates (aquatic)</td>
<td>Various</td>
<td></td>
</tr>
</tbody>
</table>

Source: U.S. Department of Agriculture (1986)

### 22.2 CUSTOM + CULTURE

- Species extinctions in the late 19th century and early 20th century triggered national awareness and response in the form of active wildlife management.
- For more than a century, local farmers, ranchers and hunters have managed the lands of Uintah county for long term biological diversity.
- During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of threatened and endangered species, concern was expressed over the introduction of new species as a tactic to impede energy development (essentially creating new “habitat” areas).

### 22.3 PRIORITY DATA SOURCES


———. 2014. Utah’s predator control program summary. Utah Department of Natural Resources.  


23 WATER QUALITY + HYDROLOGY FINDINGS

23.1 BACKGROUND + FINDINGS

- Water resources are fundamental to future prosperity and quality of life in the Uintah Basin.
- Clean water is essential to the health of county residents.
- Nationalization or federal control of water resources is opposed.
- Surface waters including perennial, intermittent, and ephemeral streams are regulated under the Clean Water Act and for these reasons are considered waters of the U.S.
- Waters of the State of Utah are generally delineated as “blue lines” on topographic maps, named features on maps, or support riparian vegetation.
- Consumptive and non-consumptive uses of surface water occur downstream of the Ashley National Forest. The U.S. Forest Service estimates that the Ashley National Forest contributes the following percentages of stream flow (U.S. Forest Service 2016):
  - 13% of the flow at the Green River at the confluence with the Colorado River
  - 4% of the flow at the Green River at the confluence with the Yampa River
  - 4% of the flow at the Green River at the confluence with the Duchesne River
  - 91% of the flow at the Ashley Creek at the confluence with the Green River
  - 24% of the flow at the Strawberry River at the confluence with the Duchesne River
  - 67% of the flow at the Duchesne River at the confluence with the Green River

23.2 SURFACE WATER RESOURCES

- The Utah Division of Water Resources (DWRe) in their 2015 publication Uintah Basin Planning for the Future describes the Uintah Basin as follows:
The Uintah Basin, located in the northeast corner of Utah, is defined in this UDRe planning document in terms of watersheds and includes Daggett, Uintah, and portions of Duchesne, Grand, Emery, Carbon, Wasatch, and Summit Counties. The Uintah Basin, receives an average of 15.5 inches of precipitation annually — only slightly more than the statewide average of 13 inches — and contains many of Utah’s largest water supply reservoirs. While much of the water stored in these reservoirs is used in the basin, a significant amount is transferred out of the basin to satisfy water needs along the Wasatch Front. The Uintah Basin is predominantly a rural agricultural area with farms distributed throughout the basin. The Uintah Basin is not densely populated like other Utah basins, and while subject to similar issues associated with providing water for a growing population, does not experience them at the same magnitude. The basin is rich in energy resources and thus highly influenced by the ebb and flow of the oil and gas industry. The potential for large scale oil shale and tar sands extraction within the basin illustrates the need for future water planning. In addition to uncertainties surrounding future energy development, not all streams and other water bodies in the basin meet Utah’s water quality standards. Increasing environmental and recreational demands bring greater competition for the water in the basin and will require more emphasis on integrated water resource management and efficient use of the basin’s water resources. (DWRe 2015)

### 23.3 Water Budget Projections

- The current and future water demand for surface waters within Daggett, Duchesne, and Uintah Counties is illustrated in Table WAT1 and is excerpted from Conceptual Analysis of Uinta and Green River Water Development Projects (Franson Civil Engineers & CH2M Hill 2007).

**Table WAT1. Summary of Overall Existing and Future Demands (acre-feet per year)**

<table>
<thead>
<tr>
<th>Demand Type</th>
<th>Total Existing Demand</th>
<th>Total Near Future Demand</th>
<th>Total Likely Future Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural</td>
<td>253,424</td>
<td>261,882</td>
<td>286,055</td>
</tr>
<tr>
<td>Municipal</td>
<td>4,228</td>
<td>14,782</td>
<td>14,782</td>
</tr>
<tr>
<td>Energy Industry</td>
<td>4,230</td>
<td>116,710</td>
<td>241,710</td>
</tr>
<tr>
<td>Total</td>
<td>261,882</td>
<td>393,374</td>
<td>542,547</td>
</tr>
</tbody>
</table>

Source: Franson Civil Engineers & CH2M Hill (2007).

### 23.4 Water Development Scenario Summary

- A summary of the water development scenarios for the Uintah Basin as defined by the DWRe is illustrated in Table WAT2 and is excerpted from Conceptual Analysis of Uinta and Green River Water Development Projects (Franson Civil Engineers & CH2M Hill 2007).

**Table WAT2. Water Development Scenario Summary**

<table>
<thead>
<tr>
<th>Project Features</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stabilize High Uinta High Mountain lakes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>(Transfer storage to downstream storage)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Uinta Reservoir (28,000 acre-feet storage)</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brown’s Draw Enlargement (1,900 acre-feet storage increase)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table WAT2. Water Development Scenario Summary

<table>
<thead>
<tr>
<th>Project Features</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montes Creek Enlargement (950 acre-feet storage increase)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bennett Reservoir (5,000 acre-feet storage)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neola Reservoir (5,000 acre-feet storage)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>East Cottonwood Reservoir (5,200 acre-feet storage)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renn Smith Reservoir</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cliffs and White Rocks High Mountain Lakes transfer to M &amp; I demand</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fill Cottonwood Reservoir with Exchange</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yellowstone Feeder Canal Extension to Area 16 (capacity = 19 cubic feet per second)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pump from Green River to Pelican Lake</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pump from Green River to Ouray Park, Cottonwood Service Area</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pump from Pelican Lake to Cottonwood Area (3,500 acres in Cottonwood Service Area)</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Franson Civil Engineers & CH2M Hill (2007)

DWRe further describes these scenarios below and in Table WAT3:

Combinations of computer models were used to estimate the water yield for each scenario. A cost estimate was developed for each project and for each scenario. Ranking criteria were then developed that, “assumed an alternative must be complete, effective, efficient and acceptable in order to be viable.” Each scenario was then ranked and assigned a score. Finally, in September 2007 a public meeting was held with all of the stakeholders participating. The outcome was a decision that scenarios two, four, six, eight and 10 would remain as viable ones to consider. In addition to being the ones most favored, these also had either the highest ranking score or lowest total cost. Figure 3 shows the preferred scenarios along with the water developed, total capital cost, cost per acre-foot and score. (DWRe 2015)

Table WAT3. Viable Scenario Summary

<table>
<thead>
<tr>
<th>Scenario</th>
<th>WATER DEVELOPED (ACRE-FEET)</th>
<th>TOTAL CAPITAL COST</th>
<th>CAPITAL COST PER ACRE- FEET OF DEVELOPED WATER</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>22,300</td>
<td>$137,468,000</td>
<td>$6,200</td>
<td>593</td>
</tr>
<tr>
<td>4</td>
<td>17,900</td>
<td>$251,865,100</td>
<td>$14,100</td>
<td>593</td>
</tr>
<tr>
<td>6</td>
<td>26,200</td>
<td>$355,523,600</td>
<td>$13,600</td>
<td>593</td>
</tr>
<tr>
<td>8</td>
<td>9,800</td>
<td>$25,133,300</td>
<td>$2,600</td>
<td>464</td>
</tr>
<tr>
<td>10</td>
<td>8,400</td>
<td>$35,978,400</td>
<td>$4,300</td>
<td>427</td>
</tr>
</tbody>
</table>

23.5 **Water Quality**

- In Utah, water quality is regulated by the state based on the source of pollutants entering waterways, defined as either “point source” or “nonpoint source” pollution. Point sources (PS) discharge pollutants directly into a waterbody, usually through pipes or ditches originating from industries or waste treatment plants. Nonpoint sources (NPS) are pollution sources that do not originate from distinct locations and tend to vary in time and space. Nonpoint source pollution occurs when runoff from rainfall or snowmelt pick up pollutants from the human and natural landscape and transport them indirectly to a waterbody.

- Water quality characteristics include:
  - Conductivity
  - Dissolved oxygen
  - Nutrients
  - pH
  - Suspended sediment
  - Water temperature
  - Turbidity
Point source pollutants are highly regulated under the Clean Water Act of 1972 and Water Quality Act of 1987 through the issuance of permits and possible fines if permit requirements are not met. The United State Environmental Protection Agency (EPA) issues discharge permits within the National Pollutant Discharge Elimination System (NPDES). In Utah, the State of Utah was granted primacy by EPA to manage the NPDES permitting program as the Utah Pollution Discharge and Elimination System (UPDES) and is operated by the Utah Department of Environmental Quality (DEQ) Division of Water Quality (DWQ).

The potential for large scale oil shale and tar sands extraction within the basin illustrates the need for future water planning. In addition to uncertainties surrounding future energy development, not all streams and other water bodies in the basin meet Utah’s water quality standards. Increasing environmental and recreational demands bring greater competition for the water in the basin and will require more emphasis on integrated water resource management and efficient use of the basin’s water resources.

Some of the Uintah Basin's watersheds, reservoirs, and other waterbodies have required total maximum daily loads prepared for them. Summaries of these TM DLs are provided below.

### 23.6 Duchesne River Watershed

The following summaries are excerpted from the 2007 TM DLs for Total Dissolved Solids in the Duchesne River Watershed (Tetra Tech, Inc. 2007):

The Duchesne River watershed drains approximately 2,679 square miles (1,714,553 acres) in northeastern Utah. It occupies approximately 102 sq miles of Wasatch County, 2,103 sq miles of Duchesne County, and 474 sq miles of Uintah County.

The Utah Department of Environmental Quality (UDEQ) listed several segments in the Duchesne River watershed on Utah’s 2004 Section 303(d) list of impaired waters for Total dissolved solids (TDS).

Surface and subsurface irrigation return flows that dissolve and transport TDS to receiving streams have been identified as a significant source of TDS in the watershed.

Sources of TDS loading in the Duchesne River Watershed include areas of surface disturbance, irrigation activities, natural sources (geology), streambank erosion/destabilization, grazing, roadways, and energy development (Tetra Tech, Inc. 2007).

### 23.7 Strawberry River Watershed

There are currently no point sources of pollution within the Strawberry watershed. Total Phosphorous loading into Strawberry Reservoir is derived from non-point sources such as soil erosion and land use. Examples of land use sources of pollution include recreation, hydrologic modifications, grazing, roads, and energy development.
23.8 **BROUGH, STEINAKER, AND RED FLEET RESERVOIRS**

The following summaries are excerpted from the 2008 Total Maximum Daily Load Water Quality Study Brough, Red Fleet, and Steinaker Reservoirs (Millennium Science & Engineering and Limno-Tech, Inc. 2008):

Brough, Steinaker and Red Fleet Reservoirs were placed on Utah’s 303(d) list of impaired waters due to failure to support these waterbodies’s designated 3A beneficial use for protection of cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain. The impairment is due to low dissolved oxygen concentrations.

Brough Reservoir is located in the Lower Green - Diamond Watershed, Hydrologic Unit Code (HUC) 14060001 as an off-stream impoundment in the Uinta Basin 16 miles southwest of Vernal, Utah. The reservoir was constructed to store and deliver water for irrigation. Water is diverted from the Whiterocks River into the Whiterocks and Ouray Valley Canal that becomes the Ouray Valley Canal near La Point, Utah, 17 miles northeast of the reservoir. The Brough Reservoir catchment area encompasses 15,786 acres.

Red Fleet Reservoir is an impoundment on Big Brush Creek located 10 miles northeast of Vernal, Utah. The reservoir lies within the Uinta Basin Watershed Assessment Unit (UT-L-14060002-006). The reservoir is within the Ashley-Brush Watershed identified with 4th order (8-digit) Hydrologic Unit Code (HUC) - 14060002. Within the Ashley-Brush Watershed, Red Fleet Reservoir is situated in the Big Brush Creek and Cottonwood Wash sub-watersheds. The catchment area encompasses 59,827 acres.

Steinaker Reservoir is located in north-eastern Utah, 3.5 miles north of Vernal and lies within the Green River Basin of the Upper Colorado River Basin. The reservoir is in the Uinta Basin Watershed Assessment Unit (UT-L-14060002-004) and part of the Ashley-Brush Watershed identified with 4th order (8-digit) Hydrologic Unit Code (HUC) - 14060002. Within the Ashley Brush Watershed, Steinaker Reservoir is situated in the Lower Ashley Creek watershed and Steinaker Reservoir sub-watershed. The catchment area encompasses 166,752 acres. (Millennium Science & Engineering and Limno-Tech, Inc. 2008)

23.9 **BROWNE LAKE**

The following summaries are excerpted from the 2003 Browne Lake, Utah Total Maximum Daily Loads for Dissolved Oxygen and Total Phosphorus (DWQ 2008):

Browne Lake is located in the southern portion of the Upper Green-Flaming Gorge Reservoir watershed (HUC 14040106) in the Uinta Mountains of northeastern Utah (Figure 1-1). The lake has been placed on Utah’s 2000 303(d) list for total phosphorus and dissolved oxygen impairments. (DWQ 2008)

23.10 **UNTA RIVER WATERSHED**

The following summaries are excerpted from the 2006 Uinta River, Deep Creek and Dry Gulch Creek TM DLs for Total Dissolved Solids (Tetra Tech, Inc. 2006):
The Uinta River and Dry Gulch Creek watersheds are located in northeastern Utah approximately 140 miles east of Salt Lake City in Uinta and Duchesne counties. The Uinta River is approximately 60 miles long and drains the southern slope of King's Peak, Utah's highest point, until it converges with the Duchesne River, a tributary of the Green River. The Uinta River has a large network of tributary streams and mountain lakes that make the river the largest on the southern slope of King's Peak. Deep Creek is a tributary of the Uinta River and drains the area northeast of the Uinta River. Dry Gulch Creek is a tributary of the Uinta River and drains the area west of the Uinta River.

The Uinta River, Deep Creek and Dry Gulch Creek are included on the state of Utah's 2003 303(d) list as a high priority for TMDL development due to impairments associated with high concentrations of total dissolved solids (TDS).

The subsurface bedrock formations in the lower basin are saline and soluble, dissolving easily and contributing TDS to any water that comes into contact with them. (Tetra Tech, Inc. 2006)

**23.11 Pariette Draw**

- The following summaries are excerpted from the 2010 TMDLs for Total Dissolved Solids, Selenium, and Boron in the Pariette Draw Watershed EPA (DWQ 2010):

  The Pariette Draw watershed, part of the Uintah Basin, is located in the northeast corner of Utah. The Uintah Basin is approximately 6,969,500 acres (10,890 mi²) and includes all of Duchesne, Uintah, and Daggett Counties and part of Summit, Wasatch, Carbon, Emery, and Grand Counties. Most of the counties lie between 5,000 to 6,000 ft in elevation and have peaks rising to over 13,000 ft. The Pariette Draw watershed receives most of its water from the Duchesne River via Pleasant Valley Canal and is ultimately drained by the Pariette Draw into the Green River.

  Pariette Draw is listed on Utah's 2002 303(d) list for impairments associated with excess concentrations of Boron (B) and Total Dissolved Solids (TDS) and on the 2004 303(d) list for Selenium (Se) (UDEQ 2004).

**23.12 Matt Warner and Calder Reservoirs**

- The following summaries are excerpted from the 2007 Matt Warner Calder Reservoirs TMDL (DWQ 2007b):

  Matt Warner and Calder Reservoirs are small stabilized lakes on Pot Creek located in Uintah County. Matt Warner Reservoir, the largest lake, is located several miles upstream of Calder Reservoir. Matt Warner Reservoir has a surface area of 297 acres, and average depth of 9.4 feet and an elevation of 7,540 feet above sea level. Calder Reservoir has a surface area of approximately 99 acres, an average depth of 17 feet and an elevation of 7,291 feet above sea level.

  Both reservoirs are listed as partially supporting their cold-water fishery beneficial use on the 2004 303(d) list for waters requiring the development of TMDLs. (DWQ 2007b)

**23.13 Hydrology**
The hydrologic cycle describes movement of water on earth. Some of the processes by which water moves include: precipitation, infiltration (soil moisture and groundwater), and streamflow. In order to account for the distribution of water within a specific area, it is necessary to consider these processes. The watershed is one measure used to quantify and analyze water and its effects at a specific location. A watershed, or drainage basin, is an area of land in which all water within drains to the same outlet. Watersheds are home to a variety of plant life including: bacteria, grasses, forbs, shrubs, and trees. Additionally, the watershed ecosystems in Utah support protozoa, invertebrates, amphibians, reptiles, fish, birds and mammals.

Uintah County is within the Colorado Plateau and receives about 11 inches of precipitation per year. Seasonal melting of mountain snowpack produces runoff flows that recharge groundwater aquifers and refill reservoirs. Water flows also support sediment transport, channel maintenance, and riparian vegetation. Spring rain contributes minimally to reservoir storage but does play a role in determining the timing of reservoir water use. Low flows or dry conditions generally occur in the late summer which can result in many water quality issues.

As water enters and flows through a watershed, a fraction of the water infiltrates into the ground and recharges underground aquifers. Groundwater from wells is also a critical resource for culinary and agricultural water supplies.

“The Uinta Basin, a structural depression paralleling the range on the south, is comprised of the lowland stream bottoms and badlands lying between the Uinta Range and the Tavaputs Plateau. The linear depression is dissected by several rivers. The Green River, largest tributary of the Colorado River and the most significant river in the basin, crosses Uintah County diagonally from northeast to southwest. Its headwaters flow out of the north-central portion of the Wind River Mountains in western Wyoming, and some of its tributaries drain the north, east, and south faces of the Uintas. Two major tributaries of the Green River are the Yampa River and the White River flowing from the east. The Yampa, flowing out of Colorado, joins the Green northeast of Vernal. The white River, with headwaters in Colorado, flows into the Green River below Ouray, Utah. This river enters the Green River near Ouray in the west central portion of the county. Other important water courses are the Uinta and Whiterocks rivers which flow into the Duchesne. Rock Creek, Yellowstone River, Lake Fork River, and Strawberry River also drain into the Duchesne River. The major drainages and tributaries have produced a highly diversified terrain including badlands dominated by colorful mesas, buttes, cliff-bench topography, and other geologic features.” A History of Uintah County, Utah Centennial County History Series (1996)

The Uintah Basin, receives an average of 15.5 inches of precipitation annually — only slightly more than the statewide average of 13 inches — and contains many of Utah’s largest water supply reservoirs. While much of the water stored in these reservoirs is used in the basin, a significant amount is transferred out of the basin to satisfy water needs along the Wasatch Front.
23.14 CUSTOM + CULTURE

- Water quality, hydrology, and watershed systems are essential to sustain life, and industry, as well as the built and natural environments in Uintah County. This precious resource has been, and always will be, the lifeblood of the County.
- During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. Water quality was viewed as an important and well-managed resource. There was consistent interest in protecting water quality.

23.15 PRIORITY DATA SOURCES

Franson Civil Engineers & CH2M Hill. 2007. Conceptual analysis of Uinta and Green River water development projects. 


Tetra Tech, Inc. 2006. Uinta River, Deep Creek and Dry Gulch Creek TMDLs for total dissolved solids. 

--- . 2007. TM DLs for Total dissolved solids in the Duchesne River watershed. 

U.S. Forest Service. 2016. 2016 National forest contributions to streamflow, Intermountain Region (Region 4). 


Utah Division of Water Quality (DWQ). 2003. Browne Lake, Utah total maximum daily loads for dissolved oxygen and total phosphorus. 

--- . 2007a. Strawberry Reservoir TMDL. 

--- . 2007b. Matt Warner Calder Reservoirs TMDL. 

24 WATER RIGHTS FINDINGS

24.1 OVERVIEW + BACKGROUND

- Water is a finite, but renewable resource, and because of varying annual supplies of water, its availability is subject to competition between stakeholders. The coordination of demand to supply water to Uintah County's various interests is expected to always be a complex issue for stakeholders. Water is a resource taken from a dynamic, natural system resulting from a fluctuating cycle. Networks of moving water, above and below ground, extend beyond obvious topographic or political boundaries. Therefore, management and use of water supplies requires coordination between the various jurisdictions of local, state, and federal entities.

- “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 by flow rate (cfs) and/or by volume (acre-feet);
  - A specified point of diversion and source of water;
  - A specified place of beneficial use.”

  Source: (Utah Division of Water Rights 2011)

- “Rights for water diversion and use established prior to 1903 for surface water or prior to 1935 for ground water 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” (Utah Division of Water Rights 2011).

- “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.”

  Source: (Utah Division of Water Rights 2011)
• “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” (Utah Division of Water Rights 2011).

• “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” (Utah Division of Water Rights 2011).

• “The State Engineer has adopted procedures for enforcing water rights violations. Under the new enforcement procedure, an action is initiated by the Division of Water Rights (DWR) after a violation has been observed by an official working in the DWR or another capacity for the state, or after a complaint is received from a water user, government agency, or other interested party. Private water users can report violations” (Donaldson 2007).

24.2 CUSTOM + CULTURE

• “The Utah pioneers, in 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 principle 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” (Utah Division of Water Rights 2011).

• “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” (Utah Division of Water Rights 2011).

• Immediately upon their arrival, pioneer settlers in Utah began diverting and damming water for agricultural cultivation. Brigham Young declared in 1848 that streams were not to be privately owned and that they belong to all people. Local church leaders, bishops, were responsible for diverting water equitably for the benefit of the community. Bishops often delegated water management to watermasters. Later, municipal and county governments assumed these responsibilities. “In 1852 the territorial legislature delegated control over streams to county governments” (Donaldson 2007).

• “In this early system, the role of the watermaster was very important. The watermaster delivered water by a system of rotation; water was delivered to a user for a certain length of time according to the user’s needs. The watermaster oversaw ditch repairs by requesting labor from water users in proportion to the amount of water supplied to them. The watermaster arbitrated water disputes, but his decision could be appealed to county or municipal authorities” (Donaldson 2007).

• It is the custom and culture of Uintah County to protect and preserve water rights.

• During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. Support was expressed for the state’s management of water rights.
24.3 PRIORITY DATA SOURCES


Utah Division of Water Rights [UDWRi]. 2011. Water right information. Utah Department of Natural Resources.  

WETLANDS FINDINGS

25.1 OVERVIEW + BACKGROUND

- In addition to providing wildlife habitat, wetlands provide numerous ecosystem services related to water provision and storage, water filtration, and water detention. These services are reflected in regional management goals such as optimal yield, maintenance and enhancement or water quality, and flood attenuation and private property protection, respectively.

- In addition to water-related services, wetlands provide recreation opportunities such as boating and hunting for a growing regional population.

- Wetlands come in many forms, including ponds, lake fringes, vegetated playas, wet meadows, marshes, bogs, shrub-scrub wetlands, and forested wetlands. Riparian areas are not always considered wetlands.

- Wetlands have been defined in different ways by numerous entities and agencies. However, the US Army Corps of Engineers (Corps) and the US Environmental Protection Agency (EPA) jointly define wetlands as: “Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that do under normal circumstances support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” This definition of wetlands is perhaps the most relevant to local land managers and planners because the Corps and the EPA are the agencies that have legal jurisdiction over wetlands, including those wetlands on private property. Wetlands provide numerous benefits including wildlife habitat, aquifer recharge, and water quality improvements (U.S. Environmental Protection Agency 2015).

- According to the Utah Wetland Information Center, 1% of Utah’s landscape is wetlands (Utah Geological Survey. n.d.). Wetlands are among the most productive ecosystems in the world, comparable to rainforests (U.S. Environmental Protection Agency 2015). The primary factor that distinguishes wetlands from other land forms or water bodies is the characteristic vegetation of aquatic plants, adapted to the unique hydric soil. Wetlands have the ability to improve water quality by acting as filters. In addition, wetlands can lessen the effects of flooding by containing stormwater and releasing it gradually. Because these critically productive systems are a scarcity in the region, special emphasis is necessary for their management.

- Uintah County has 58,360 acres of nationally identified wetlands. (US Fish and Wildlife Service 2015)

- Wetlands support many plant and animal species, including the Ute ladies'-tresses (Spiranthes diluvialis), which is on the threatened and endangered species list.

- Drawdown of groundwater levels can affect conditions of local wetlands.

- Wetlands are federally recognized as special aquatic sites and are regulated as waters of the U.S. under the Clean Water Act.

The National Wetland Inventory (NWI) program, administered by the U.S. Fish and Wildlife Service, consists of planning-level spatial data illustrating the extent and location of wetlands and other aquatic resources in the United States. Wetland and other aquatic resources are classified using the Cowardin (Cowardin et al. 1979) system. Table WET1 provides estimated acreages for different wetland classes at the county level. Palustrine emergent wetlands, which include marshes and wet meadows, have the largest area within each county. This class is also commonly affected by irrigation practices, which can reduce (hydrological modifications and construction of ditches) or increase (application of additional water to the landscape) wetland acreage.

### Table WET1. Acres of National Wetland Inventory Data in Uintah County

<table>
<thead>
<tr>
<th>Wetland Classification</th>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1: lacustrine limnetic</td>
<td>4,175</td>
</tr>
<tr>
<td>L2: Lacustrine littoral</td>
<td>4,184</td>
</tr>
<tr>
<td>PAB: palustrine aquatic bed</td>
<td>1,338</td>
</tr>
<tr>
<td>PEM: palustrine emergent</td>
<td>25,941</td>
</tr>
<tr>
<td>PFO: palustrine forested</td>
<td>836</td>
</tr>
<tr>
<td>PSS: palustrine scrub-shrub</td>
<td>6,246</td>
</tr>
<tr>
<td>PUB: palustrine unconsolidated bottom</td>
<td>101</td>
</tr>
<tr>
<td>PUS: palustrine unconsolidated shore</td>
<td>1,025</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>58,360</strong></td>
</tr>
</tbody>
</table>


Best management practices for wetlands include protection of existing wetlands through zoning and other land-use designations, restoration of historic wetlands, proper management of wetlands, creation of new wetlands in appropriate areas.

### 25.2 CUSTOM + CULTURE

- Wetlands are an integral part of Uintah County. The customs of the county include fishing, ice skating, and ice harvesting have been practiced for nearly one hundred years. Culturally wetlands are important beyond these traditions for the ecological and water quality value they add to the environment.
- During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. Support was expressed for the protection of wetlands by stricter zoning.

### 25.3 PRIORITY DATA SOURCES


26 WILD AND SCENIC RIVERS FINDINGS

26.1 OVERVIEW + BACKGROUND

- The National Wild and Scenic Rivers System was created by U.S. Congress in 1968 under the Wild and Scenic Rivers Act of 1968 (Public Law 90-542; 16 United States Code 1271 et seq.) to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The act is notable for safeguarding the special character of these rivers while also recognizing the potential for their appropriate use and development. It encourages river management that crosses political boundaries and promotes public participation in developing goals for river protection. The act purposefully strives to balance dam and other construction at appropriate sections of rivers with permanent protection for some of the country's most outstanding free-flowing rivers. To accomplish this, it prohibits federal support for actions such as the construction of dams or other instream activities that would harm the river's free-flowing condition, water quality, or outstanding resource values. However, designation does not affect existing water rights or the existing jurisdiction of states and the federal government over waters as determined by established principles of law.

- Under the Wild and Scenic Rivers Act, rivers may be designated by U.S. Congress or, if certain requirements are met, by the Secretary of the Interior. Each river is administered by either a federal or state agency. Designated segments need not include the entire river and may include tributaries. For federally administered rivers, the designated boundaries generally average 0.25 mile on either bank in the lower 48 states in order to protect river-related values.

- Under the Wild and Scenic Rivers Act, rivers are classified as wild, scenic, or recreational:
  - Wild River Areas: Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
  - Scenic River Areas: Those rivers or sections of rivers that are free of impoundments, have shorelines or watersheds still largely primitive and shorelines largely undeveloped, but are accessible in places by roads.
  - Recreational River Areas: Those rivers or sections of rivers that are readily accessible by road or railroad, may have some development along their shorelines, and may have undergone some impoundment or diversion in the past.
• Section 5(d)(1) of the Wild and Scenic Rivers Act directs federal agencies to identify potential additions to the National Wild and Scenic Rivers System through federal agency plans. Under these provisions, federal agencies study the suitability of river sections they manage for designation under the Wild and Scenic Rivers Act. Sections that are determined to be suitable can be managed to preserve their suitability by an agency land management plan while awaiting congressional designation.

• Wild and Scenic Rivers are designated by Congress or the US Secretary of the Interior. To be eligible for designation, a river must be free-flowing and contain at least one “outstandingly remarkable” value (scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar value). Designated rivers are typically managed by federal agencies, but can also be managed by partnerships of adjacent communities, state governments and the National Park Service allowing communities to protect their own outstanding rivers and river-related resources.

• USFS completed a statewide Wild and Scenic River Suitability Study for National Forest System Lands in Utah in 2008 (USFS 2008), and BLM completed the Bureau of Land Management Vernal Field Office Record of Decision and Approved Resource Management Plan (BLM Vernal ROD/RMP) in 2008. Both evaluate and recommend suitability of river segments on USFS and BLM-administered lands. A wild and scenic river study and environmental impact statement was published in 1980 for NPS-administered lands in Dinosaur National Monument. In Uintah County, BLM and USFS currently manage the following river sections to preserve their wild or scenic values while awaiting congressional action (Table WSR1).

Table WSR1. Recommended Wild and Scenic Rivers in Uintah County

<table>
<thead>
<tr>
<th>Agency</th>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLM</td>
<td>Lower Green River BLM boundary south of Ouray to the Carbon County line (27 miles) – Suitable, scenic</td>
</tr>
<tr>
<td>USFS</td>
<td>–</td>
</tr>
<tr>
<td>NPS</td>
<td>Green River from Colorado state line to NPS boundary – Suitable, wild</td>
</tr>
</tbody>
</table>

Sources: BLM (2008); USFS (2008).
Designating river segments as wild, scenic, or recreational would restrict many activities related to the stream and other uses within 0.25 mile of it, and in some cases, these designations could be detrimental to users’ ability to develop and manage water resources necessary to meet future growth needs. The ability to obtain approval for water right change applications on, or upstream of, designated streams by existing water users may also be limited. Similarly, federal permits cannot be issued for uses on a stream segment that would be in conflict with the wild and scenic designation.

Designation of wild and scenic rivers may result in non-use, restricted use, or environmental impacts on public and private lands. These restrictions may prohibit future uses that are necessary to continue to assure economic prosperity or may adversely affect the operation, management, and maintenance of existing facilities.

A December 2008 report prepared by Utah State University for the Governor’s Public Lands Policy Coordination Office, entitled Impacts of Wild and Scenic River Designation, finds no scientific evidence that wild and scenic river designation led to increased recreational use of such rivers and no scientific evidence that the economic benefits of designation would offset potential economic losses from decreased timber production, grazing, mining, and water development (Utah State University 2008a).

When asked whether public land managers should reduce or increase the extent to which designation of wild and scenic rivers occurs on Utah’s public lands, a December 2008 report published by Utah State University entitled Public Lands and Utah Communities: A Statewide Survey of Utah Residents, finds survey respondents in the Daggett, Duchesne, and Uintah County area believed that public land managers should take the following action (Utah State University 2008b):

- Major reduction (8.8%)
- Moderately reduce (12.2%)
- Stay about the same (48.2%)
- Moderately increase (15.4%)
- Major increase (5.1%)
26.2 CUSTOM + CULTURE

- Where citizens of Uintah County are not responsible for the designation or management of Wild and Scenic Rivers, and as there is only a short history (since 1968) of this designation in the US, no custom or culture can be associated with the federal designation “Wild and Scenic Rivers” at this time; however, county residents maintain that rivers in general are an integral element of sustaining and improving the health of the regional economy and ecology. Citizens of Uintah County have always prized rivers for their aesthetic, ecological, recreational, and hydropower value. Managing rivers for multiple uses has historically been, and continues to be, a tradition based on facilitating many users and values.

- During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. On the issue of Wild and Scenic Rivers there were positive comments about local waterways, but less support for a formal designation.

26.3 PRIORITY DATA SOURCES


27 WILDERNESS FINDINGS

27.1 OVERVIEW + BACKGROUND

- The Wilderness Act of 1964 created the National Wilderness Preservation System and recognized wilderness as “an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain.” (16 United States Code [USC] 1131). The act further defines wilderness as “an area of undeveloped federal land retaining its primeval character and influence without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions.” (16 USC 1131).

- Federal wilderness designation is a legislative action by Congress that typically follows a comprehensive National Environmental Policy Act (NEPA) planning process. In general terms, wilderness designation begins with the adoption of agency planning documents.

- Designated wilderness is the highest level of conservation protection for federal lands. Only U.S. Congress may designate wilderness or change the status of wilderness areas. Wilderness areas are designated within existing federal public land.

- The Wilderness Act requires management of human-caused impacts and protection of the area’s wilderness character to ensure that it is “unimpaired for the future use and enjoyment as wilderness” (16 USC 1131). To comply with this standard, wilderness areas generally do not allow motorized equipment, motor vehicles, mechanical transport, temporary roads, permanent structures, or installations. Motorized equipment and equipment used for mechanical transport may be allowed in certain circumstances such as search and rescue. This includes the use of motor vehicles, motorboats, motorized equipment, bicycles, hang gliders, wagons, carts, portage wheels, and the landing of aircraft including helicopters, unless provided for in specific legislation. The Wilderness Act also prohibits permanent roads and commercial enterprises, except commercial services that may provide for recreational or other purposes of the Wilderness Act. Livestock grazing is allowed in wilderness areas. Wilderness areas are to be primarily affected by the forces of nature, though the Wilderness Act does acknowledge the need to provide for human health and safety, protect private property, control insect infestations, and fight fires.

- U.S. Congress has directed four federal land management agencies—the U.S. Forest Service (USFS), the Bureau of Land Management (BLM), the U.S. Fish and Wildlife Service, and the National Park Service (NPS)—to manage wilderness areas so as to preserve and, where possible, restore their wilderness character.

- U.S. Congress has now designated more than 106 million acres of federal public lands as wilderness: 44 million of these acres are in 47 national parks and total 53% of National Park System lands.

- There are no federally designated wilderness areas in Uintah County.

- Designating an area as a wilderness area is often not an appropriate, effective, efficient, economic, or wise use of land. Lands can often be adequately protected with other management options.
In 1976, U.S. Congress directed BLM through Section 603(a) of Federal Land Policy and Management Act (FLPMA) to inventory and respond to U.S. Congress within 15 years “...those roadless areas of five thousand acres or more and roadless islands of the public lands, identified during the inventory required by section 201(a) of this Act as having wilderness characteristics described in the Wilderness Act of September 3, 1964 and shall from time to time report to the President his recommendation as the suitability or non-suitability of each such area or island for preservation as wilderness ...” (43 USC 35).

The wilderness characteristics that were used in the inventory as described in the 1964 Wilderness Act were as follows:

- Generally appears to have been affected primarily by the forces of nature, with the imprint of humankind's work substantially unnoticeable.
- Has at least 5,000 acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition.
- Has outstanding opportunities for solitude, or a primitive or unconfined type of recreation in at least part of the area.
- May also contain ecological, geological, other features of scientific, scenic, or historical value.

Section 603(c) of FLPMA provides direction to BLM on the management of wilderness study areas (WSAs) and states that with some exceptions “During the period of review of such areas and until U.S. Congress has determined otherwise, the Secretary shall continue to manage such lands according to his authority under this act and other applicable law in a manner so as not to impair the suitability of such areas for preservation as wilderness.” (43 USC 35). BLM manuals refer to this language as the “non-impairment” mandate. BLM developed a non-impairment standard to meet this mandate. In general, Section 603(c) of FLPMA requires BLM to maintain the wilderness characteristics of each WSA until U.S. Congress decides whether it should either be designated as a Wilderness or should be released for other purposes.

BLM in Utah completed an initial inventory and identification of WSAs in Utah in 1980, identifying 3.2 million acres of WSAs statewide. On October 18, 1991, BLM submitted a report to U.S. Congress recommending which WSAs in Utah should be designated as Wilderness and which should be released for other purposes. This recommendation included 1.9 million acres of Wilderness from the 3.2 million acres of WSAs. Congress has received BLM’s Wilderness recommendation from the Secretary of the Interior and the President. However, the full 3.2 million acres continue to be managed so as not to impair wilderness character pending congressional action.
In 1996, then Secretary of Interior Babbitt initiated a “re-inventory” of public lands in Utah under Section 201 of FLPMA and identified 2.6 million acres of federal land as wilderness inventory areas (WIAs). This re-inventory process was not subject to public comment or environmental analysis under the National Environmental Policy Act (NEPA) and was challenged by the State of Utah and the Utah Association of Counties. The federal district court initially enjoined the re-inventory; however, this injunction was overturned by the Tenth Circuit, allowing the re-inventory to proceed. The re-inventory was completed in 1999. This controversial wilderness re-inventory was a key scoping issue in BLM’s land use plan revisions for the Vernal resource management plan, initiated in 2001. WIAs proposed for designation as “new” WSAs through the planning process were to be protected pending congressional review for possible wilderness designation pursuant to BLM’s H-8550-1 - Interim Management Policy for Lands Under Wilderness Review (BLM 2007). In March 2003, the State of Utah revived its lawsuit challenging the wilderness inventory. Department of the Interior and the State of Utah settled the case in April 2003, which nullified the re-inventory but retained 3.2 million acres as WSAs under BLM’s 1991 wilderness recommendations. BLM also rescinded, as inconsistent with the settlement, the wilderness handbook, adopted in January, 2001, entitled Wilderness Inventory and Study Procedures H-6310-1 (BLM 2001).

The 1999 BLM wilderness re-inventory project was legally and technically flawed.

BLM’s 1980 WSA inventory identified the following WSAs in Uintah County:

- Uintah County
  - Winter Ridge (42,462 acres, not recommended for wilderness designation by BLM in 1991)
  - Book Cliffs Mountain Browse (400 acres, not recommended for wilderness designation by BLM in 1991)
  - Daniels Canyon (2,496 acres, not recommended for wilderness designation by BLM in 1991)
  - Bull Canyon (12,297 [520 acres in Utah], 480 acres in Utah recommended for wilderness designation by BLM in 1991)
BLM’s management of WSAs is guided by BLM Manual 6330 – Management of Wilderness Study Areas, which was published on June 13, 2012 (BLM 2012a). This manual describes BLM’s non-impairment standard to meet the mandates for managing WSAs described in FLPMA. Valid existing rights are recognized, and grandfathered uses such as grazing and mineral uses are allowed but restricted to the same manner and degree as on the date FLPMA was approved. Although many activities are allowed within WSAs, some have specific restrictions.

The only legal designations of WSAs are those designated under the Wilderness Act of 1964 and under Section 603 of FLPMA, or WSAs subsequently designated by U.S. Congress. On BLM-administered lands, the opportunity to create additional wilderness ended in 1991 except as authorized by U.S. Congress.

Some or all of the area WSA designations pending before U.S. Congress are legally and/or technically flawed. The counties will pursue that position when the WSAs go before U.S. Congress for approval.

Similar to wilderness areas, use of WSAs is highly restricted and does not provide the desired wilderness experience for most citizens and groups.

Similar to Wilderness designation, BLM’s management of WSAs is inconsistent with the multiple-use mandate. Managing public lands for "wilderness characteristics" circumvents the statutory wilderness process and is inconsistent with the multiple-use and sustained-yield management standard that applies to all BLM and USFS lands that are not wilderness areas or WSAs and adversely affects the counties’ economy in terms of the grazing, tourism, oil and gas extraction, mining, timber industries, and water resource development.

The federal agencies that manage wilderness areas also inventory other lands under their jurisdiction to assess the presence of wilderness characteristics. The agencies may manage areas that have not been designated as wilderness by U.S. Congress in various fashions that preserve their wilderness values while awaiting congressional action.

BLM lands with wilderness characteristics and natural areas:

- Section 201 of FLPMA requires the BLM to maintain an inventory of all public lands and their resources and other values, including wilderness characteristics. It also provides that the preparation and maintenance of the inventory shall not, of itself, change or prevent change of the management or use of public lands. BLM Instruction Memorandum 2011-154, 2013-106, and Manuals 6310 and 6320 set out the BLM’s approach inventorying and managing wilderness characteristics on the public lands (BLM 2011, 2013, 2012b, 2012c).

- Each inventory is a snapshot of the existing character of the landscape at a particular time; therefore, BLM will continue to update the inventories as inventoried conditions on the ground change over time in response to both human activities and natural environmental changes.

- For an area to qualify as lands with wilderness characteristics, the area must possess sufficient size, naturalness, and outstanding opportunities for either solitude or primitive and unconfined recreation. In addition, it may also possess supplemental values.
  - Size: The area must be over 5,000 acres of roadless, contiguous BLM-managed lands. Areas smaller than 5,000 acres may qualify if it is practical to preserve and use them without damaging their current condition. In addition, roadless areas less than 5,000 acres that are contiguous with lands that have been formally determined to have wilderness or potential wilderness values, or any federal lands already managed for the protection of wilderness characteristics (e.g., wilderness areas or WSAs), may also qualify.
Naturalness: Must appear to have been affected primarily by the forces of nature, and any work of human beings in the area must be substantially unnoticeable. Minor human impacts such as a water trough or fences may often be considered substantially unnoticeable.

Outstanding Opportunities for Solitude or Primitive, Unconfined Recreation: The area must offer a visitor the chance to avoid evidence of other people or provide for outstanding opportunities for primitive and an unconfined type of recreation activity like hiking, fishing, etc. Solitude or outstanding primitive recreation opportunities do not have to be available in all portions of the area. An area may possess outstanding opportunities through either the diversity of possible recreation opportunities in the area or the outstanding quality of one opportunity.

Supplemental Values: If size, naturalness, and outstanding opportunities criteria are met, then ecological, geological, or other features of scientific, educational, scenic, or historical values may be noted, but are not required to qualify as lands with wilderness characteristics.

After an area is inventoried and found to possess wilderness characteristics, the BLM must then make a decision as to whether the area will be managed for those characteristics or for other priority multiple uses. This analysis and management decision is made through a public land use planning process.

The Bureau of Land Management Vernal Field Office Record of Decision and Approved Resource Management Plan prescribes management of 15 areas totaling 106,178 acres for protection of their wilderness characteristics (BLM 2008). Additional areas were found to contain wilderness characteristics, although they are not managed to maintain these characteristics. The 15 areas managed to maintain their wilderness characteristics are also referred to by BLM as “natural areas” and are located wholly or in part of Daggett or Uintah County (Table WLD1).

<table>
<thead>
<tr>
<th>Land Name</th>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beach Draw</td>
<td>898</td>
</tr>
<tr>
<td>Bourdette Draw</td>
<td>13,334</td>
</tr>
<tr>
<td>Bull Canyon</td>
<td>2,483</td>
</tr>
<tr>
<td>Cold Spring Mountain</td>
<td>–</td>
</tr>
<tr>
<td>Daniels Canyon</td>
<td>3,045</td>
</tr>
<tr>
<td>Dead Horse Pass</td>
<td>783</td>
</tr>
<tr>
<td>Diamond Breaks</td>
<td>–</td>
</tr>
<tr>
<td>Diamond Mountain</td>
<td>27,238</td>
</tr>
<tr>
<td>Lower Flaming Gorge</td>
<td>3,745</td>
</tr>
<tr>
<td>Moonshine Draw</td>
<td>4,513</td>
</tr>
<tr>
<td>Mountain Home</td>
<td>–</td>
</tr>
<tr>
<td>Stuntz Draw</td>
<td>1,992</td>
</tr>
<tr>
<td>Vivas Cake Hill</td>
<td>277</td>
</tr>
<tr>
<td>White River</td>
<td>6,716</td>
</tr>
<tr>
<td>Wild Mountain</td>
<td>527</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>65,551</strong></td>
</tr>
</tbody>
</table>
NPS-recommended and potential wilderness:

The policies of NPS, guided by the Organic Act of 1916 and the Wilderness Act of 1964, clearly direct staff not only to manage wilderness areas for the preservation of the physical wilderness resources, but also to ensure the preservation of the wilderness character during planning.

In accordance with these policies, NPS surveys its roadless areas for lands eligible for wilderness designation. NPS lands eligible for wilderness designation are managed as “recommended” or “proposed” wilderness until U.S. Congress acts on their status.

Initial surveys for lands eligible for wilderness designation in Dinosaur National Monument were completed in 1968. In 1978, legislation was formally recommended to U.S. Congress by Presidential Proclamation for designation of wilderness in Dinosaur National Monument, as follows:

- The wilderness proposal recommended two units totaling 205,672 acres of designated wilderness and 5,055 acres of potential wilderness (representing roads associated with grazing units that would eventually be phased out of use) inside the monument. This recommendation was never approved nor rejected by U.S. Congress. It is NPS policy to continue to fully protect the wilderness values and resources of any area deemed suitable for further wilderness study until it is formally eliminated from eligibility.

Some of the proposed and recommended wilderness within the Dinosaur National Monument is located in Uintah County. The remainder is located in Moffatt County, Colorado.

27.2 USFS-INVENTORIED ROADLESS AREAS

The 2001 Roadless Area Conservation Rule generally prohibits road building and commercial logging in 58.5 million acres of national forest roadless areas across the United States. The 2001 Roadless Area Conservation Rule, unlike the establishment of wilderness areas, permits a wide range of activities in roadless areas. Permitted activities include timber harvesting for limited purposes, livestock grazing, off-highway vehicle use, and oil and gas development that do not require new roads in roadless areas. Timber harvest in inventoried roadless areas is limited to clearly defined, limited purposes; when incidental to the implementation of an activity not otherwise prohibited by this rule; for personal and administrative uses; or where roadless characteristics have been substantially altered in a portion of an inventoried roadless area due to the construction of a classified road and subsequent timber harvest.

The 2001 Roadless Area Conservation Rule established extensive roadless areas on USFS-administered lands in Uintah Counties (Table WLD2).

<table>
<thead>
<tr>
<th>Table WLD2. Acres of Inventoried Roadless Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Forest</td>
</tr>
<tr>
<td>---------------------------------------</td>
</tr>
<tr>
<td>Ashley National Forest</td>
</tr>
<tr>
<td>Wasatch-Cache National Forest</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
• A December 2008 report published by Utah State University entitled Public Lands and Utah Communities: A Statewide Survey of Utah Residents finds that most Utah residents prefer that public lands managers maintain the same amount of wilderness or decrease the amount (Utah State University 2008). Only residents of the Summit, Morgan, and Wasatch County area supported increases in wilderness acreage. In the Daggett, Duchesne, and Uintah County area, 11.5% of the residents surveyed supported major reductions in wilderness, 18.5% supported moderate reductions in wilderness, and 40.5% supported the acreage to stay about the same. In the Daggett, Duchesne, and Uintah County area, 16.2% of residents supported moderate and 3.2% supported major increases in wilderness. Data for each individual county is not available in this report.

• Although the counties acknowledge the values of wilderness areas, use in these areas is highly restricted and does not provide the desired wilderness experience for most citizens and groups.

• Wilderness designation is inconsistent with the multiple-use mandate. Managing public lands for wilderness characteristics circumvents the statutory wilderness process and is inconsistent with the multiple-use and sustained-yield management standard that applies to all BLM and USFS lands that are not wilderness areas or WSAs and adversely affects the counties’ economy in terms of the grazing, tourism, oil and gas extraction, mining, timber industries, and water resource development. Management for wilderness characteristics also negatively affects forest health, water quality, watershed health, and increases catastrophic fire risk.

• BLM lacks congressional authority to manage lands, other than WSAs, as if they are or may become wilderness, as follows:

  • BLM lacks authority to designate geographic areas as lands with wilderness characteristics or designate management prescriptions for such areas other than to use specific geographic-based tools and prescriptions expressly identified in FLPMA.

  • BLM lacks authority to manage the lands in any manner other than to prevent unnecessary or undue degradation, unless BLM uses geographic tools expressly identified in FLPMA and does so pursuant to a duly adopted provision of a resource management plan adopted under FLPMA, 43 USC 1712.

  • BLM’s Conducting Wilderness Characteristics Inventory of BLM Lands Manual (MS-6310) is legally and technically flawed (BLM 2012b).

27.3 CUSTOM + CULTURE

• Part of Uintah County’s culture is outdoor oriented with residents recreating in a variety of ways, this includes the use of motorized all-terrain vehicles where appropriate. Managing lands and providing adequate access for multiple uses has historically been, and continues to be, a tradition based on accommodating persons with disabilities and facilitating a diverse range of local values.

• During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. The issue of wilderness generated strong feelings of support and opposition.
27.4 **PRIORITY DATA SOURCES**


Leaming, G. F. 1990. The adverse economic impacts of wilderness land withdrawals on Utah. Western Economic Analysis Center, Marana, AZ, USA.


28 WILDLIFE FINDINGS

28.1 OVERVIEW + BACKGROUND

- Wildlife has always been an important part of America’s cultural lifestyle and is an important part of northeastern Utah’s tourism and recreation economy.

- In Utah, wildlife includes brine shrimp and crayfish; mollusks; and vertebrate animals (fish, amphibians, reptiles, birds, and mammals) living in nature, except for feral animals. Wildlife are protected, except for coyotes, field mice, gophers, ground squirrels, jack rabbits, muskrats, and raccoons. Rare species and those subject to federal listing under the Endangered Species Act are referenced more fully in the Threatened, Endangered, and Sensitive Species section. Although fish are legally considered wildlife, fisheries and angling-related benefits for local economies are addressed in the Fisheries section. Limited amounts of geographic information system (GIS) data on a number of common vertebrate wildlife species in Utah can be accessed online at the DWR’s Index of Available GIS Data (DWR 2016a).

28.2 BALANCING INTERESTS

- Wildlife and their habitat contribute to a productive natural environment. They improve our quality of life, and provide a rich source of aesthetic enjoyment, inspiration, and outdoor recreation for many people.

- At the same time, it must be recognized that wildlife can have an impact on the economic activities of humankind, influencing how people experience the benefits of their private property. Wildlife can affect local economies in both positive and negative ways.

- Most people support efforts to find a balance between the habitat requirements of wildlife populations and the economic activities of humankind. Wildlife are capable of yielding important social and economic values, including hunting, photography, and wildlife observation.

- The process for determining the balance among competing uses and establishing the best wildlife management policies is described in state law. This process is founded on an open, public dialogue concerning wildlife issues. Five regional advisory councils (RACs) are active across Utah, each consisting of a dozen or more individuals nominated by various interest groups and selected by the leadership of the Utah Department of Natural Resources. Council members can include citizens, local elected officials, sportsmen, agriculturists, federal land managers, and members of the public at large. The duty of each RAC is to hear input and recommendations, to gather data and evaluate expert testimony, and then to make informed policy recommendations to the Utah Wildlife Board. To fulfill this duty, the RACs hold monthly meetings.

28.3 THE UTAH WILDLIFE BOARD

- The Utah Wildlife Board is composed of individuals nominated by a committee selected by the governor. The board is represented by diverse groups including non-consumptive wildlife interests, the agriculture industry, sportsmen groups, federal land management agencies, the Utah Association of Counties, and range management specialists. From this list of nominees the governor then appoints seven Utah Wildlife Board members with the consent of the Utah Senate.
The Utah Wildlife Board is responsible for considering RAC input and recommendations to the extent that the board must provide a written explanation if they reject recommendations or positions submitted by a RAC. The Utah Wildlife Board uses public input, the recommendations of the RACs, and the assembled facts to make determinations and establish policies best designed to accomplish the purposes and fulfill the intent of the wildlife laws. The Utah Wildlife Board generates wildlife management policy, and exercises its powers by promulgating administrative rules and issuing proclamations and orders under Utah Code.

28.4 Agricultural Impacts

Thriving populations of big-game animals will, at times, cause some level of damage to farming and ranching operations by competing with domestic livestock for available forage, or by damaging crops, fences, or irrigation equipment. A number of methods can be applied to mitigate the damage, including various forms of wildlife harvest and removal, issuance of landowner permits, development of a conservation lease that involves remuneration or other forms of compensation for predation, and, finally, direct monetary compensation for agricultural damages. Although depredation mitigation review and appeal procedures apply, and are used as needed, the total amount of compensation that can be provided to landowners to prevent or compensate for damages may not exceed the funding amounts appropriated by the legislature for fencing material and compensation for damaged crops, fences, and irrigation equipment.

Cranes and prairie dogs also present a challenge to agriculture. “Cranes eat planted seeds, especially corn. In spring, damage can be intense, as cranes often gather in germinating cornfields. Cranes do not feed on seedlings, but rather the planted seeds, which are vulnerable until the endosperm” (Barzen and Ballinger 2017). Prairie dogs are considered a pest species in Utah. The Utah Division of Wildlife Resources has set up a compensation program for agricultural properties with significant expected damage (UDWR 2016).

The Utah Grazing Improvement Program (UGIP) is a program under the Utah Department of Agriculture and Food designed to improve the productivity, health, and sustainability of rangelands and watersheds throughout the state. UGIP devotes considerable time and resources to improve rangelands, which results in a better environment, a healthier livestock industry, and more abundant wildlife. The program has established a State Grazing Advisory Board and six Regional Grazing Advisory Boards to improve the grassroots voice of both private and public grazing land managers.

Utah’s Watershed Restoration Initiative (WRI) provides a balancing influence that promotes wildlife values and supports agricultural needs. The WRI is a diverse partnership of state and federal agencies working together with private organizations, industry, local elected officials, and stakeholders, and is coordinated by the Utah Department of Natural Resources.

Significant investments have been made through the WRI to improve rangeland health and watershed conditions. In fiscal year 2014, the Utah Legislature contributed $3.95 million to the WRI. Ninety-one participating partners completed restoration of 112,987 acres of uplands and 55 miles of stream and riparian areas, leveraging the legislative funds by a factor of 7-to-1. Sportsman-generated funding plays an important role in the WRI.

Uintah County appreciate the benefits that are enabled through WRI habitat restoration projects. The long-term results of the WRI will be measured in reduced wildfire acreage and suppression costs, reduced soil loss from erosion, reduced sedimentation and storage loss in reservoirs, improved water quality and yield, improved wildlife populations, reduced risk of additional federal listing of species under the Endangered Species Act, improved agricultural production, and resistance to invasive plant species.
28.5 Compensation for Damage

Although predator management is dealt with under a separate chapter entitled “Predator Management,” the Wildlife Damage Compensation Act (see Utah Code 23-24-1) should be mentioned because it provides a mechanism by which livestock owners may obtain compensation if livestock are damaged by a bear, mountain lion, wolf, or eagle. In this case, “livestock” means cattle, sheep, goats, and turkeys.

28.6 Species Management Plans

Management plans provide guidance and direction for a number of species in Utah. These plans are taken through a public process to gather input from interested constituents and then presented to the Utah Wildlife Board for approval. Species covered by statewide plans include wild turkey, chukar, greater sage-grouse, mule deer, elk, moose, pronghorn, mountain goat, bighorn sheep, Utah prairie dog, beaver, northern river otter, black bear, cougar, bobcat, and wolf.

With regard to wolves, Senate Bill 36 (Wolf Management Act) from the 2010 Utah General Legislative Session directed DWR to prevent any wolf packs from establishing in the portion of the state where wolves are removed from the protection of the Endangered Species Act. The law also directs the DWR to request that the U.S. Fish and Wildlife Service immediately remove any wolves discovered in areas of Utah where they are still protected under the Endangered Species Act. This area includes Uintah County. This law suspends the portion of the Utah Wolf Management Plan (DWR and The Utah Wolf Working Group 2013) that allows two packs to become established in Utah, although the remaining strategies of the plan are still in effect. If wolves are delisted across all of Utah, the management plan then will be fully implemented.

28.7 Greater Sage Grouse

For the greater sage-grouse (Centrocercus urophasianus), the Conservation Plan for Greater Sage-grouse in Utah (DWR 2013a) was developed to help eliminate threats facing the greater sage-grouse while balancing the economic and social needs of Utahans through a coordinated program that provides for

- voluntary programs for private, local government, and School and Institutional Trust Lands Administration lands; and
- cooperative regulatory programs on other state and federally managed lands.

These voluntary and cooperative regulatory programs include WRI, Utah Partners for Conservation and Development, National Resources Conservation Service’s Sage-grouse Initiative, and UGIP.

Mapped within each county are winter, brooding, and occupied greater sage-grouse habitat as illustrated in Table WLF1 and WLF2

<table>
<thead>
<tr>
<th>Table WLF1. Acres of Greater Sage-Grouse Habitat in Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habitat</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>Winter</td>
</tr>
</tbody>
</table>
### Table WLF1. Acres of Greater Sage-Grouse Habitat in Uintah County

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brooding</td>
<td>1,003,996</td>
</tr>
<tr>
<td>Occupied</td>
<td>1,027,206</td>
</tr>
</tbody>
</table>

Source: DWR (2015a).

Notes: Acres by county cannot be totaled because these areas overlap.

### Table WLF2. Acres of State Greater Sage-Grouse Management Areas in Uintah County

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nesting and brood-rearing non-winter habitat</td>
<td>117,697</td>
</tr>
<tr>
<td>Nesting and brood-rearing winter habitat</td>
<td>147,330</td>
</tr>
<tr>
<td>Winter habitat</td>
<td>75,537</td>
</tr>
<tr>
<td>Non-winter habitat</td>
<td>92,870</td>
</tr>
<tr>
<td>Non-winter other</td>
<td>29,628</td>
</tr>
<tr>
<td>Non-winter opportunity</td>
<td>133,077</td>
</tr>
</tbody>
</table>

Source: DWR (2016b).
28.8 Deer and Elk

- In the case of mule deer (Odocoileus hemionus) and elk (Cervus canadensis nelsoni), in addition to the statewide plans required by state law, herd unit plans also have been developed for each mule deer and elk herd unit across the state. Each of these unit plans have been reviewed and approved by the Utah Wildlife Board. In many cases, herd unit plans have been revised multiple times since their initial development in the mid-1990s. The plans establish target herd-size objectives for each herd unit, which DWR and the Utah Wildlife Board then strive to meet through harvest adjustment and other mechanisms. Habitat needs and other local management considerations are also addressed in these unit plans.

- Portions of Uintah County are within the South Slope Deer Herd Unit #9 Management Plan (which also includes lands in Summit and Wasatch Counties). The target winter herd size is 26,000. Most of the summer range for deer (85%) is located on U.S. Forest Service and Bureau of Land Management (BLM) lands. Winter range is more evenly distributed, with 31% on BLM land, 28% on tribal land, and 24% on private lands. Factors that drive deer population include forage conditions, predation (especially by coyotes) highway collisions, disease, poaching, and the severity of winters. Mule deer habitat by county is described in Table WLF3.

<table>
<thead>
<tr>
<th>Table WLF3. Acres of Mule Deer Habitat in Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habitat Type</td>
</tr>
<tr>
<td>Spring/fall, crucial</td>
</tr>
<tr>
<td>Summer, crucial</td>
</tr>
<tr>
<td>Summer, substantial</td>
</tr>
<tr>
<td>Winter, crucial</td>
</tr>
<tr>
<td>Winter, substantial</td>
</tr>
<tr>
<td>Year-long, crucial</td>
</tr>
<tr>
<td>Year-long, substantial</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>


Elk habitat in the county is described in Table WLF4.

<table>
<thead>
<tr>
<th>Table WLF4. Acres of Elk Habitat Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habitat Type</td>
</tr>
<tr>
<td>Elk, spring/fall, crucial</td>
</tr>
<tr>
<td>Elk, summer, crucial</td>
</tr>
<tr>
<td>Elk, summer, substantial</td>
</tr>
<tr>
<td>Elk, winter, crucial</td>
</tr>
<tr>
<td>Elk, winter, substantial</td>
</tr>
<tr>
<td>Elk, year-long, crucial</td>
</tr>
<tr>
<td>Elk, year-long, substantial</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
On a seasonal basis, big-game animals migrate among public, private, and tribal lands. These movements create game management issues as a result of damage to private property and consumption of livestock feed by wildlife. To address these issues, the DWR plan seeks to enhance forage production through prescribed fire, pinion-juniper chaining, and conifer thinning and to protect habitat using tools such as conservation easements, conservation agreements, and cooperative wildlife management units. Utah Code 23-21-2.5 (2) states that “When changing any existing right to use the land, the division shall seek to make uses of division-owned land compatible with local government general plans and zoning and land use ordinances.”

The Western Association of Fish and Wildlife Agencies (WAFWA) Mule Deer Working Group has produced an informative fact sheet titled “Understanding Mule Deer Migration” (WAFWA 2015a). This fact sheet was developed after wildlife researchers tracked deer migration using global positioning system technology. Several potential risks to migrating deer and their corridors were mentioned, including energy development, vehicle collisions, fences, and increasing residential and urban development. The fact sheet presents the following conclusions regarding the preservation of deer migration corridors:

Efforts to conserve migration corridors are an important component of overall conservation of mule deer in the West because the largest and most productive mule deer herds are migratory. As awareness of the importance of migration corridors grows, conservation efforts to maintain these corridors and incorporate them into land-use planning processes are imperative. Similar to critical winter ranges, migration corridors need to be considered in local, state, and federal land-use planning in order to sustain current mule deer populations. Common sources of risk to migrating mule deer and their corridors include fences, road crossings, energy development, and residential development. With specific maps of migration routes now available, we can identify and prioritize where conservation efforts should be focused to reduce risks to migrating mule deer and migration corridors. Effective conservation measures may include road crossing structures, fence alterations or removal, modifications to proposed industrial developments, conservation easements, leasing stipulations, and state, provincial, or federal protections available through land-use planning. Mule deer migration corridors are essential to the long-term conservation of this iconic species. Many corridors are more than 100 miles in length and cross through many different land ownerships and agency jurisdictions. This situation complicates conservation efforts and requires people work together to develop site-specific measures to ensure migrations continue into the future. (WAFWA 2015a)

Another WAFWA fact sheet titled “Understanding Mule Deer and Winter Feeding” deals with the issue of winter feeding of mule deer (WAFWA 2015b). After looking at the biological, behavioral, disease, predation, competition, and sociological issues associated with winter feeding, WAFWA reached this conclusion that:

At best, feeding has a limited nutritional benefit, often negated by undesirable, even catastrophic, behavioral and biological effects. Of course, we all have the best interest of wildlife in mind. However, we must ensure we understand the biology of the animals we’re concerned about so our actions are truly beneficial. This is often the point of debate as society considers winter feeding mule deer. Our conventional wisdom, experience, and professional consensus is clear - feeding mule deer violates the most basic principle of population regulation within natural systems. At best, winter feeding for mule deer is only successful in making people who are compassionate about wildlife feel better and seldom are any benefits of winter feeding realized. (WAFWA 2015b)
Wildlife management agencies generally agree that although winter mule deer feeding is based on good intentions, it can result in a variety of issues ranging from disease, malnutrition, predation, behavior changes, and rangeland damage. For these reasons and others, it is discouraged. Information about winter feeding is available from DWR and the Mule Deer Working Group (2015b).

As the population grows in the future, the likelihood of conflicts between mule deer and rural or urban fringe homeowners will increase. WAFWA has published a fact sheet to address that issue as well, titled “Urban Mule Deer Issues” (WAFWA 2015c). Mule deer populations can increase rapidly in rural residential or urban fringe areas as deer take advantage of the abundant forage and water sources provided by humans as well as protection from hunting and other types of predation. Mule deer are browsers, preferring leaves, stems, and buds of woody plants, as well as forbs (e.g., weeds). Like many other wildlife species, mule deer are opportunistic and in some cases will eat and damage ornamental plants, hedges, vegetables, flowers, and lawns. Bucks can damage shrubs and saplings by rubbing the bark with their antlers. This damage to personal and commercially grown vegetation is not well tolerated and can make people view mule deer as a nuisance. WAFWA recommends several strategies to deal with these conflicts, including prohibiting supplemental feeding of deer, chemical repellents and scare devices, construction of fencing, using deer resistant plantings, regulated hunting, and relocation of deer to more remote areas.

28.9 FERAL OR WILD HORSES

At present there are three known wild horse and burro herd areas in Uintah County (Table WLFS). Free-roaming horses on public lands adversely impact soil, water, wildlife, and vegetative resources and increase the possibility of equine disease among domestic horses. Wild and free-roaming horses rapidly increase in population, cause overgrazing, negatively impact wildlife and livestock, and burden the land managing agency with unnecessary costs. The introduction of wild horses would adversely affect the counties’ environment and economy.

<table>
<thead>
<tr>
<th>Herd Name</th>
<th>Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonanza</td>
<td>141,857</td>
</tr>
<tr>
<td>Hill creek</td>
<td>136,130</td>
</tr>
<tr>
<td>Winter ridge</td>
<td>44,216</td>
</tr>
</tbody>
</table>

Source: BLM (2009).
28.10 Pronghorn Antelope

- DWR administers a Pronghorn Herd Management Plan for non-tribal lands in the area generally bounded by Nine Mile Canyon on the south, Utah Route 191 on the west, U.S. Highway 40 on the north, and the Green River to the east. It is the purpose of this plan to “Manage for a population of healthy animals capable of providing a broad range of recreational opportunities, to include hunting and viewing. Balance the pronghorn population with human needs, such as authorized livestock grazing rights, private land development rights, and local economies. Maintain the population at a level that is within the long term habitat capability” (DWR 2009).

- DWR has a goal of maintaining a population of 1,125 pronghorn in this area, with a buck-to-doe ratio of 25:100. Counts in 2008 estimated a population of approximately 340, with a buck-to-doe ratio of 41:100. DWR plans to transplant approximately 50 pronghorn in the herd management area per year until the population reaches the goal. Table WLF6 describes the type of pronghorn antelope habitat present within the county.

<table>
<thead>
<tr>
<th>Table WLF6. Acres of Pronghorn Antelope Habitat in Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habitat Type</td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td>Summer, crucial</td>
</tr>
<tr>
<td>Summer, substantial</td>
</tr>
<tr>
<td>Year-long, crucial</td>
</tr>
<tr>
<td>Year-long, substantial</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Source: DWR (2014b).</td>
</tr>
</tbody>
</table>

28.11 Bison

- There are six bison management areas in Uintah County, one of which extends into Duchesne County. A bison herd does also exist on tribal lands east of the Green River in Uintah County. DWR has considered reintroduction of bison in the Book Cliffs area of Uintah and Grand Counties. Table WLF7 describes the type of habitat present within the county.

<table>
<thead>
<tr>
<th>Table WLF7. Acres of Bison Habitat in Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habitat Type</td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td>Winter, crucial</td>
</tr>
<tr>
<td>Winter, potential</td>
</tr>
<tr>
<td>Winter, substantial</td>
</tr>
<tr>
<td>Year-long, crucial</td>
</tr>
<tr>
<td>Year-long, potential</td>
</tr>
<tr>
<td>Year-long, substantial</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
28.12 **Bighorn Sheep**

- DWR through its Utah Wildlife Board adopted a Utah Bighorn Sheep Statewide Management Plan on June 4, 2013 (DWR 2013b). This plan is effective for 5 years. The plan notes that bighorn sheep are one of the most sought-after and highly prized big-game animals in North America. Demand for hunting opportunities far exceeds the supply of hunting permits. There is also great demand for bighorn sheep viewing opportunities. Bighorn sheep are an important part of fragile ecosystems in Uintah County. Rocky Mountain bighorn sheep habitat exists in the High Uintas Wilderness. In 2009, 30 bighorn sheep were transplanted from Montana into the Lake Canyon area and an additional 30 were transplanted into the Indian Canyon area. The state management plan calls for augmentation of existing populations to meet management objectives in the Avintaquin Management Unit (DWR 2013b). A summary of bighorn sheep habitat is provided in Table WLF8.

- One of the key management issues associated with bighorn sheep is the prevention of disease that can result from contact with domestic sheep. There is also the potential for bighorn sheep to compete with domestic sheep for resources.

<table>
<thead>
<tr>
<th>Table WLF8. Acres of Bighorn Sheep Habitat in Uintah County</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Habitat Type</strong></td>
</tr>
<tr>
<td>Spring/fall, crucial</td>
</tr>
<tr>
<td>Year-long, crucial</td>
</tr>
<tr>
<td>Year-long, substantial</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

28.13 CUSTOM + CULTURE

- In the 1820s and 30s American and French trappers found many beaver and other wildlife in the Basin. Historic overgrazing depleted rangelands and watersheds, and of course wildlife habitat.

- The process for determining the balance among competing uses and establishing the best wildlife management policies is described in state law. This process is founded on an open, public dialogue concerning wildlife issues. Five regional advisory councils (RACs) are active across Utah, each consisting of a dozen or more individuals nominated by various interest groups and selected by the leadership of the Utah Department of Natural Resources. Council members can include citizens, local elected officials, sportsmen, agriculturists, federal land managers, and members of the public at large. The duty of each RAC is to hear input and recommendations, to gather data and evaluate expert testimony, and then to make informed policy recommendations to the Utah Wildlife Board. To fulfill this duty, the RACs hold monthly meetings.

- Wildlife watching has grown in popularity in recent years. Additionally, hunting has always been a popular pastime in the area. Uintah is known for excellent hunting grounds for many species.

- During the County’s general plan update process, public comments were solicited and subject matter experts were interviewed. There was common understanding about the State’s jurisdiction over wildlife issues, and some appreciation for how it is executed.

28.14 PRIORITY DATA SOURCES


— — — . 2014c. Bison habitat geographic information systems data.

— — — . 2015a. Greater sage-grouse habitat geographic information systems data.

— — — . 2015b. Mule deer habitat geographic information systems data.

— — — . 2016a. Utah Division of Wildlife Resources index of available GIS data.

— — — . 2016b. State sage-grouse management areas geographic information systems data.


— — — . 2015b. Understanding mule deer and winter feeding. Fact Sheet #2. 
