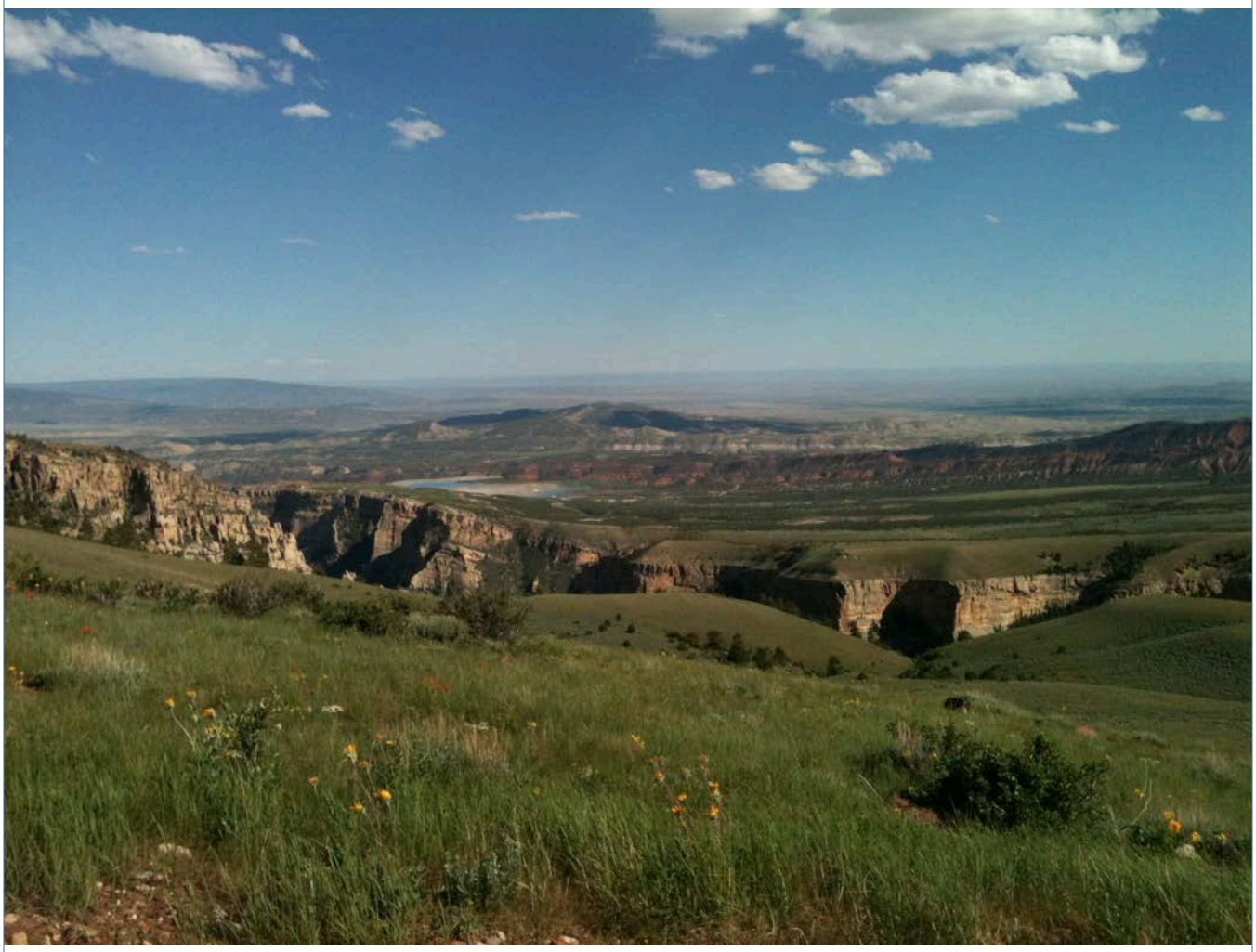
UINTAH COUNTY

RESOURCE MANAGEMENT PLAN 2017
APPENDIX



DEVELOPING ALL OUR RESOURCES

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1 STATE STATUTE

17-27a-401. General plan required -- Content -- Resource management plan -- Provisions related to radioactive waste facility.

(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-6-102, 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)

(a) The general plan shall include specific provisions related to any areas within, or partially within, the exterior boundaries of the county, or contiguous to the boundaries of a county, which are proposed for the siting of a storage facility or transfer facility for the placement of high-level nuclear waste or greater than class C radioactive nuclear waste, as these wastes are defined in Section 19-3-303. The provisions shall address the effects of the proposed site upon the health and general welfare of citizens of the state, and shall provide:
(i) the information identified in Section 19-3-305;
(ii) information supported by credible studies that demonstrates that the provisions of Subsection 19-3-307(2) have been satisfied; and
(iii) specific measures to mitigate the effects of high-level nuclear waste and greater than class C radioactive waste and guarantee the health and safety of the citizens of the state.

(b) A county may, in lieu of complying with Subsection (4)(a), adopt an ordinance indicating that all proposals for the siting of a storage facility or transfer facility for the placement of high-level nuclear waste or greater than class C radioactive waste wholly or partially within the county are rejected.

(c) A county may adopt the ordinance listed in Subsection (4)(b) at any time.

(d) The county shall send a certified copy of the ordinance described in Subsection (4)(b) to the executive director of the Department of Environmental Quality by certified mail within 30 days of enactment.

(e) If a county repeals an ordinance adopted under Subsection (4)(b) the county shall:
(i) comply with Subsection (4)(a) as soon as reasonably possible; and
(ii) send a certified copy of the repeal to the executive director of the Department of Environmental Quality by certified mail within 30 days after the repeal.

(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.

(7) If a county has designated a mountainous planning district, the general plan for the mountainous planning district is the controlling plan and takes precedence over a municipality's general plan for property located within the mountainous planning district.

(8) Nothing in this part may be construed to limit the authority of the state to manage and protect wildlife under Title 23, Wildlife Resources Code of Utah.

Amended by Chapter 265, 2016 General Session

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 AND BACKGROUND

3.1.1 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.

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

3.1.3 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).

3.1.4 "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).

3.1.5 "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).

3.1.6 "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).

3.1.7 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 AND CULTURE

3.2.1 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.

3.2.2 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."

3.2.3 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

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4 AIR QUALITY FINDINGS

4.1 OVERVIEW AND BACKGROUND

4.1.1 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.

4.1.2 "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).

4.1.3 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.

4.1.4 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.

4.1.5 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.

4.1.6 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.

4.1.7 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 (NO2; also known as nitrogen oxides, oxides of nitrogen, or NOx), ozone (O3), sulfur dioxide (SO2), and particulate matter (PM). Once

emitted into the atmosphere, NOx and volatile organic compounds (VOC) emissions react together to form O3. 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, NO2, O3, and PM less than 2.5 micrometers in diameter (PM2.5). Both stations indicate that Duchesne and Uintah Counties have been in compliance with the NAAQS, with the exception of occasional exceedances of the O3 standard.

4.1.8 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, O3 concentrations, and levels of O3 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.

4.1.9 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 O3 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. O_3 exceedances have also occurred in the summer in the Uintah Basin, especially at higher elevations (Lyman 2016).

4.1.10 In October 2015, EPA lowered the primary and secondary O_3 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.

4.1.11 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.

4.1.12 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, llll, 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.

4.1.13 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.

4.1.14 O3 is present in the atmosphere even in the absence of significant, local, human-caused emissions of NOx and VOC. This background O3 is a result of natural emissions and of human-caused emissions transported from outside the

Uintah Basin or outside the United States. Background O3 is O3 that is beyond the ability of local regulators to control (Lyman 2016). 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). Some research suggests that increased transport of O3 and precursors from outside the United States are counteracting domestic emissions reductions in the west (Cooper et al. 2012). O3 and precursors from outside the Uintah Basin, combined with wildfires and intrusions of O3-rich air from the stratosphere, have occasionally led to exceedances of the O3 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.

4.1.15 "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).

4.1.16 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).

4.1.17 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.

4.1.18 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.

4.1.19 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.

4.1.20 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 AND CULTURE

4.2.1 Uintah County has always valued clean air.

4.2.2 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

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5 CULTURAL, HISTORICAL, GEOLOGICAL, AND PALEONTOLOGICAL RESOURCE FINDINGS

5.1 OVERVIEW AND BACKGROUND

5.2 CULTURAL AND HISTORICAL

5.2.1 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.

5.2.2 "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).

5.2.3 "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).

5.2.4 "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.).

5.2.5 "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).

5.2.6 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.

5.2.7 The National Register of Historic Places has listed 19 properties and districts on the National Register in the county.

5.2.8 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

5.2.9 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.

5.2.10 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.

5.2.11 "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).

5.2.12 "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).

5.2.13 "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

5.2.14 "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).

5.2.15 Uintah County is not within the Intermountain Seismic Belt.

Paleontological and Archeological

5.2.16 "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.).

5.2.17 "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).

5.2.18 "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).

5.2.19 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).

5.2.20 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,

5.2.21 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.

5.2.22 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.

5.2.23 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.

5.2.24 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 11-011, 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 AND CULTURE

5.3.1 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.

5.3.2 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.

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6 DITCHES, CANALS, AND PIPELINE FINDINGS

6.1 OVERVIEW AND BACKGROUND

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

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

6.1.3 "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).

6.1.4 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).

6.1.5 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.

6.1.6 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 AND CULTURE

6.2.1 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.

6.2.2 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.

6.2.3 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

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7 ENERGY FINDINGS

7.1 OVERVIEW AND BACKGROUND

7.1.1 "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).

7.1.2 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.

7.1.3 "Federal land managers should maintain or increase mineral development." (Cheryl A Meier May 18, 2017).

7.1.4 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

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

7.1.6 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

7.1.7 The business environment for renewable energy and non-renewable energy is not on a level playing field because renewable energy is heavily subsidized.

7.1.8 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.

7.1.9 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.

7.1.10 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.

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

Table EM1. Number of Applications for Permit to Drill in Uintah County

Year	Uintah County
2016	150
2015	451
2014	798
2013	737
2012	1,213

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

- Table EM2.

Table EM2. Barrels of Oil Production in Uintah County

Year	Uintah County
2016 (as of October)	8,322,737
2015	12,735,440

2014	13,472,226
2013	10,511,575
2012	8,367,921

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

Note: 1 Barrel is 42 U.S. gallons.

Oil

7.1.12 Over the last five years, Uintah County has produced roughly 1/3 of all oil in the state (Utah Geological Survey, 2017).

7.1.13 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 +330million barrels.

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

Natural Gas

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

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

7.1.17 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 and Oil Sands

7.1.18 "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).

7.1.19 "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).

7.1.20 "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).

7.1.21 "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

7.1.22 "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).

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

Renewable

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

7.1.25 The Utah Geological Survey (2009) in a Phase 1 Report for Utah Renewable Energy Zone Task Force mapped renewable energy zones. The following table illustrates acres of geothermal, wind, and solar energy zones.

Table EM3. Renewable Energy Zones in Uintah County

Energy	Acres
Geothermal	367,476
Solar	403,988
Wind	35,871

7.1.26 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

7.1.27 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

Table EM4. Wind power classes in Uintah County

Energy	Acres
Poor	2,673,222
Marginal	187,101
Fair	15,317
Good	4,359
Excellent	1,964

Outstanding	1,315
Superb	238
Unclassified	127
Total	2,883,675

Geothermal

7.1.28 "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 AND CULTURE

7.2.1 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.

7.2.2 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.

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8 FIRE MANAGEMENT FINDINGS

8.1 OVERVIEW AND BACKGROUND

8.1.1 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.

8.1.2 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).

8.1.3 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.

8.1.4 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.

8.1.5 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).

8.1.6 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).

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

8.1.8 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.

8.1.9 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).

8.1.10 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

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

* Data from U.S. Department of Agriculture (2016c).

† Data from U.S. Department of Agriculture (2016d).

‡ Data from: U.S. Department of Agriculture (2016e).

8.1.11 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).

8.1.12 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.

8.1.13 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.

8.1.14 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 pon*derosa*) 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).

8.2 CUSTOM AND CULTURE

8.2.1 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.

8.2.2 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.

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9 FISHERIES FINDINGS

9.1 OVERVIEW AND BACKGROUND

9.1.1 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).

9.1.2 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.

9.1.3 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.

9.1.4 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.

9.1.5 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.

9.1.6 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.

9.1.7 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.

9.1.8 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.

9.1.9 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.

9.1.10 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.

9.1.11 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.

9.1.12 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).

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

9.1.14 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.

9.1.15 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).

9.1.16 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

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

9.1.18 "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

9.1.19 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.

9.1.20 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.

9.1.21 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.

9.1.22 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

9.1.23 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.

9.1.24 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.

9.1.25 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.

9.1.26 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 AND CULTURE

9.2.1 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.

9.2.2 "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.

9.2.3 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.

9.2.4 "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).

9.2.5 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

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10 FLOODPLAINS AND RIVER TERRACE FINDINGS

10.1 OVERVIEW AND BACKGROUND

10.1.1 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.

10.1.2 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.

10.1.3 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 (Hylland 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.

10.1.4 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.

10.1.5 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.

10.1.6 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.

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

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

10.1.9 Annual flooding of the Green River for threatened and endangered species habitat enhancement can conflict with private property.

10.1.10 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

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

* 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 AND CULTURE

10.2.1 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.

10.2.2 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

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11 FOREST MANAGEMENT FINDINGS

11.1 OVERVIEW AND BACKGROUND

11.1.1 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).

11.1.2 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).

11.1.3 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.

11.1.4 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)

11.1.5 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.

11.1.6 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).

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

Forest Cover Type	Uintah County
Deciduous Forest	39,638
Evergreen Forest	676,571
Mixed Forest	5,176
Shrub/Scrub	1,806,941

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

Forest Cover Type	Uintah County
Woody Wetlands	54,434
Total	**2,582,760**

Source: U.S. Geological Survey (2010).

11.1.8 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).

11.1.9 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

	Uintah County
Hazard fuel treatments*	17,297
Burn areas†	97,567

* Data from U.S. Department of Agriculture (2016a)

† Data from U.S. Department of Agriculture (2016b).

11.1.10 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.

11.1.11 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).

11.1.12 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.

11.1.13 Table FF3 illustrates management actions on the Ashley Nation 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

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

* Data from U.S. Department of Agriculture (2016c).

† Data from U.S. Department of Agriculture (2016d).

‡ Data from: U.S. Department of Agriculture (2016e).

11.1.14 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

Land Management	Uintah County
National Forest	201,637
Other public	66,031
Non-industrial private	26,685
Total	**294,354**

Source: Brown and O'Brien (1993).

11.1.15 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).

11.1.16 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.

11.1.17 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.

11.1.18 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 AND CULTURE

11.2.1 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.

11.2.2 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.

11.2.3 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

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12 IRRIGATION FINDINGS

12.1 OVERVIEW AND BACKGROUND

12.1.1 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.

12.1.2 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.

12.1.3 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.

12.1.4 Irrigation in Uintah County is controlled by irrigation companies and shareholders. These companies and systems deliver water throughout the area.

12.2 CUSTOM AND CULTURE

12.2.1 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).

12.2.2 "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).

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

12.2.4 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

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13 LAND ACCESS FINDINGS

13.1 OVERVIEW AND BACKGROUND

13.1.1 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.

13.1.2 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

13.1.3 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".

13.1.4 Uintah County continues to assert their RS 2477 rights.

13.1.5 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)

13.1.6 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.

13.1.7 *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 FLMPA, 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.

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

13.1.9 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.

13.1.10 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).

13.1.11 *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.

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

13.1.13 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.

13.1.14 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 AND CULTURE

13.2.1 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.

13.2.2 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

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14 LAND USE POLICY FINDINGS

14.1 OVERVIEW AND BACKGROUND

14.1.1 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 LU1. Acres and Percentages of Landownership Types in Uintah County

	Uintah County
Private lands	437,190 (15.2%)
Conservation easement	1 (0%)
Federal lands	1,709,996 (59.4%)
USFS	268,809 (9.3%)
BLM	1,376,957 (47.8%)
NPS	54,124 (1.9%)
Other federal	10,106 (0.4%)
State lands	261,667 (9.1%)
State Trust lands	234,962 (8.2%)
Other State	26,705 (0.9%)
Tribal lands	472,014 (16.4%)
Total Area	2,880,868

Source: EPS (2016).

14.1.2 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 LU2. Acres of Federal Lands for Disposal or Potential Federal Acquisition

	Uintah County
Federal lands identified for potential disposal	28,822
Lands identified for potential Federal acquisition	36,824

Source: BLM (2008).

14.1.3 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

BLM Class (USFS objective)	BLM	USFS
VRM Class I (Preservation)	57,776	338,088
VRM Class II (Retention)	259,734	473,545
VRM Class III (Partial Retention)	759,977	240,485
VRM Class IV (Modification)	642,450	332,581

Sources: BLM (2008), U.S. Department of Agriculture (1986).

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

BLM Class	Uintah County
VRM Class I	48,363
VRM Class II	163,923
VRM Class III	654,989
VRM Class IV	503,290

Sources: BLM (2009).

14.1.4 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.

14.1.5 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.

14.1.6 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)

14.1.7 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.

14.1.8 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.

14.1.9 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.

14.1.10 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 AND INFLUENCE

14.2.1 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).

14.2.2 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."

14.2.3 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 extractives industries, transportation, recreation, and conservation. To complete an RMP, the BLM follows planning procedures outlined in the National Environmental Policy Act (NEPA).

14.2.4 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.

14.2.5 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).

14.2.6 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 AND CULTURE

14.3.1 "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).

14.3.2 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."

14.3.3 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.

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15 LAW ENFORCEMENT FINDINGS

15.1 OVERVIEW AND BACKGROUND

15.1.1 Law enforcement in Uintah County includes many jurisdictions.

15.1.2 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 AND CULTURE

15.2.1 Law enforcement has always been important to citizens in Uintah County for the safety, protection, and security it provides.

15.2.2 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 AND GRAZING FINDINGS

16.1 OVERVIEW AND BACKGROUND FINDINGS

16.1.1 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.

16.1.2 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."

16.1.3 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:

16.1.4 The number of animals owned by permittees is much larger than those owned by non-permittees.

16.1.5 Permittee operations are generally more dependent on livestock production than are non-permittees.

16.1.6 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.

16.1.7 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.

16.1.8 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.

16.1.9 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.

16.1.10 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.

16.1.11 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.

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

16.1.13 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.

16.1.14 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

16.1.15 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.

16.1.16 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).

16.1.17 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 LG1. Number of Livestock Farms from 2002 to 2012 in Uintah County

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

Source: U.S. Department of Agriculture (2012).

* 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 to an extensive disclosure review before publication. Any tabulated item that identifies data reported by a respondent or allows a respondent's data to be accurately estimated or derived, was suppressed and coded with a 'D'. However, the number of farms reporting an item is not considered confidential information and is provided even though other information is withheld.

16.1.18 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.

16.1.19 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.

16.1.20 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 AND CULTURE

16.2.1 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.

16.2.2 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."

16.2.3 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

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17 MINING AND MINERAL RESOURCES FINDINGS

17.1 OVERVIEW AND BACKGROUND

17.1.1 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.

17.1.2 "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 Laker who brought it into prominence for commercial uses such as in paints and varnishes, and in other building products" (Powell 1994).

Locatable Minerals

17.1.3 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

17.1.4 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

17.1.5 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.

17.1.6 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".

17.1.7 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).

17.1.8 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.

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

17.1.10 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.

17.1.11 "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 (P2 O5) 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).

17.1.12 "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).

17.1.13 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.

17.1.14 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).

17.1.15 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).

17.1.16 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.

17.1.17 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).

17.1.18 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.

17.1.19 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):

- Unavailable: 190,434 acres
- Open (subject to major constraints such as no surface occupancy [NSO]): 86,789 acres
- Open (subject to moderate constraints such as timing limitations/controlled surface use): 890,280 acres
- Open (subject to standard terms and conditions): 750,131 acres
- Total: 1,917,634 acres

17.1.20 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)).

17.1.21 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).

17.1.22 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

17.1.23 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.

17.1.24 Utah Code 53C-2-4 and Utah Administrative Code R850 define SITLA's responsibilities regarding mineral leases.

17.1.25 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.

17.1.26 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 AND CULTURE

17.2.1 "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).

17.2.2 "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 uintaite 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).

17.2.3 "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).

17.2.4 "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).

17.2.5 "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).

17.2.6 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).

17.2.7 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).

17.2.8 Significant, past mining operations in Uintah County included iron and coal mines as well as copper mine on Dyer Mountain.

17.2.9 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.

17.2.10 “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).

17.2.11 “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).

17.2.12 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).

17.2.13 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

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18 NOXIOUS WEEDS FINDINGS

18.1 OVERVIEW AND BACKGROUND

18.1.1 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."

18.1.2 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.

18.1.3 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).

18.1.4 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)

18.1.5 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

Common Name	Scientific Name	Utah Noxious Weed Class*	County Record†
African rue	*Peganum harmala*	1A	ND
Asian mustard	*Brassica tournefortii*	1B	ND
Bermudagrass	*Cynodon dactylon*	3	ND
Black henbane	*Hyoscyamus niger*	2	Daggett, Uintah
Camelthorn	*Alhagi maurorum*	1B	ND
Canada thistle	*Cirsium arvense*	3	Daggett, Duchesne, Uintah
Cogongrass	*Imperata cylindrica*	4	ND
Common crupina	*Crupina vulgaris*	1A	ND
Cutleaf vipergrass	*Scorzonera laciniata lacinata*	1B	ND
Dalmatian toadflax	*Linaria dalmatica*	2	Daggett, Duchesne
Dames rocket	*Hesperis matronalis*	4	ND
Diffuse knapweed	*Centaurea diffusa*	2	Uintah
Dyer's woad	*Isatis tinctoria*	2	Daggett, Duchesne, Uintah
Elongated mustard	*Brassica elongate*	1B	ND
Field bindweed	*Convolvulus arvensis*	3	Uintah
Garlic mustard	*Alliaria petiolata*	State or Utah Class 1B	ND
Giant reed	*Arundo donax*	1B	ND
Goatsrue	*Galega officinalis*	1B	ND
Hoary cress	*Cardaria draba* (*Cardaria* spp.)	3	Daggett, Duchesne, Uintah
Houndstongue	*Cynoglossum officinale*	3	Daggett, Duchesne, Uintah
Japanese knotweed	*Polygonum cuspidatum*	1B	ND
Jointed goatgrass	*Aegilops cylindrica*	4	Uintah
Leafy spurge	*Euphorbia esula*	2	Daggett, Duchesne, Uintah
Malta starthistle	*Centaurea melitensis*	1A	ND
Mediterranean sage	*Salvia aethiopis*	1A	ND
Medusahead	*Taeniatherum caput-medusae*	2	Duchesne,
Musk thistle	*Carduus nutans*	3	Daggett, Duchesne, Uintah
Myrtle spurge	*Euphorbia myrsinites*	4	ND
Oxeye daisy	*Leucanthemum vulgare* (syn. *Chrysanthemum leucanthemum*)	1B	Daggett
Perennial pepperweed	*Lepidium latifolium*	3	Daggett, Duchesne, Uintah
Perennial sorgum	*Sorghum halepense* (*S. almum*, *S.* spp.)	3	ND
Phragmites (common reed)	*Phragmites australis ssp.*	3	ND
Plumeless thistle	*Carduus acanthoides*	1A	ND

Table NX1. Utah State and Noxious Weed List and County Records for Daggett, Duchesne, and Uintah Counties

Common Name	Scientific Name	Utah Noxious Weed Class*	County Record†
Poison hemlock	*Conium maculatum*	3	ND
Puncturevine	*Tribulus terrestris*	3	ND
Purple loosestrife	*Lythrum salicaria*	2	Uintah
Purple starthistle	*Centaurea calcitrapa*	1B	ND
Quackgrass	*Elymus repens*	3	ND
Rush skeletonweed	*Chondrilla juncea*	2	ND
Russian knapweed	*Rhaponticum (Acroptilon) repens*	3	Daggett, Duchesne, Uintah
Russian olive	*Elaeagnus angustifolia*	4	Daggett, Duchesne, Uintah
Scotch broom	*Cytisus scoparius*	4	ND
Scotch thistle	*Onopordum acanthium*	3	Duchesne, Uintah
Small bugloss	*Anchusa arvensis*	1A	ND
Spotted knapweed	*Centaurea stoebe* ssp. *micranthos*	2	Daggett, Duchesne, Uintah
Spring millet	*Milium vernale*	1A	ND
Squarrose knapweed	*Centaurea virgata*	2	ND
St. Johnswort	*Hypericum perforatum*	1B	Daggett
Syrian beancaper	*Zygophyllum fabago*	1A	ND
Tamarisk	*Tamarix ramosissima*	3	Daggett, Duchesne, Uintah
Ventenata (North African grass)	*Ventenata dubia*	1A	ND
Vipers bugloss	*Echium vulgare*	1B	ND
Yellow starthistle	*Centaurea solstitialis*	2	ND
Yellow toadflax	*Linaria vulgaris*	2	Uintah

* 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.

18.1.6 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

Common Name	Scientific Name
Annual sowthistle	*Sonchus oleraceus*
Bull thistle	*Cirsium vulgare*
Bur buttercup	*Ceratocephala testiculata*
Burdock	*Arctium minus*

Cocklebur	*Xanthium* sp.
Common mullein	*Verbascum thapsus*
Crested wheatgrass	*Agropyron cristatum*
Halogeton	*Halogeton glomeratus*
Lesser burrdock	*Arctium minus*
Perennial sowthistle	*Sonchus arvensis*
Russian thistle	*Salsola tragus*
Yellow salsify	*Tragopogon dubius*
Western water hemlock*	*Cicuta douglasii*
Yellow sweetclover	*Melilotus officinalis*

Source: Automated Geographic Reference Center (2005), U.S. Department of Agriculture (2016).

*County-declared noxious in Duchesne County.

18.1.7 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).

18.1.8 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.

18.1.9 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).

18.1.10 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.

18.1.11 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 thcial State Noxious Weed list was updated to include 54 species and prioritization categories were modified.

18.1.12 "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).

18.1.13 "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).

18.1.14 "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).

18.1.15 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).

18.1.16 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).

18.1.17 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.

18.1.18 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 AND CULTURE

18.2.1 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.

18.2.2 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

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19 PREDATOR CONTROL FINDINGS

19.1 OVERVIEW AND BACKGROUND

19.1.1 Predators in Utah include raptors, mountain lions, bears, wolves, coyotes, foxes, weasels, and snakes (UDWR 2015).

19.1.2 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 and endangered species, rare habitats, and ecosystems" (APHIS 2009).

19.1.3 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 and safety" (USDA 2015).

19.1.4 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.

19.1.5 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).

19.1.6 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).

19.1.7 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.

19.1.8 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 AND CULTURE

19.2.1 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).

19.2.2 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.

19.2.3 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.

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20 RECREATION AND TOURISM FINDINGS

20.1 OVERVIEW AND BACKGROUND

20.1.1 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.

20.1.2 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.

20.1.3 "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).

20.1.4 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).

20.1.5 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).

20.1.6 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.

20.1.7 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).

20.1.8 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).

20.1.9 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.

20.1.10 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-Uintas National Scenic Byway, Fantasy Canyon, Green River, White River, Moonshine 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).

20.1.11 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).

20.1.12 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).

20.1.13 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.

20.1.14 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 AND CULTURE

20.2.1 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.

20.2.2 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

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21 RIPARIAN AND WETLAND AREAS FINDINGS

21.1 OVERVIEW AND BACKGROUND

21.1.1 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.

21.1.2 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).

21.1.3 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).

21.1.4 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).

21.1.5 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.

21.1.6 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.

21.1.7 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.

21.1.8 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.

21.1.9 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

Riparian Community	Uintah County
Invasive Southwest Riparian Woodland and Shrubland	10,811
Rocky Mountain Lower Montane Riparian Woodland and Shrubland	37,132
Rocky Mountain Subalpine-Montane Riparian Shrubland	5,440
Total	**53,383**

Source: USGS (2004).

21.1.10 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.

21.1.11 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.

21.1.12 The Utah Division of Water Rights processes stream alteration permits in conjunction with the US Army Corps of Engineers.

21.1.13 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

21.1.14 In addition to water-related services, wetlands provide recreation opportunities such as boating and hunting for a growing regional population.

21.1.15 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

21.1.16 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).

21.1.17 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.

21.1.18 Uintah County has 58,360 acres of nationally identified wetlands. (US Fish and Wildlife Service 2015)

21.1.19 Wetlands support many plant and animal species, including the Ute ladies'-tresses (Spiranthes diluvialis), which is on the threatened and endangered species list.

21.1.20 Drawdown of groundwater levels can affect conditions of local wetlands.

21.1.21 Wetlands are federally recognized as special aquatic sites and are regulated as waters of the U.S. under the Clean Water Act.

21.1.22 The Bureau of Land Management and the U.S. Forest Service provide guidance for grazing management in riparian-wetland areas in Grazing Management for Riparian-Wetland Areas (Leonard et al. 1997).

21.1.23 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

Wetland Classification	Uintah County
L1: lacustrine limnetic	4,175
L2: Lacustrine littoral	4,184
PAB: palustrine aquatic bed	1,338
PEM: palustrine emergent	25,941
PFO: palustrine forested	836
PSS: palustrine scrub-shrub	6,246
PUB: palustrine unconsolidated bottom	101
PUS: palustrine unconsolidated shore	1,025
Total	**58,360**

Source U.S. Fish and Wildlife Service (2015).

21.1.24 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.

21.2 CUSTOM AND CULTURE

21.2.1 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.

21.2.2 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.

21.2.3 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.

21.2.4 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.

21.3 PRIORITY DATA SOURCES

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22 THREATENED, ENDANGERED, AND SENSITIVE SPECIES FINDINGS

22.1 OVERVIEW AND BACKGROUND

22.1.1 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.

22.1.2 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.

22.1.3 ESA listings often impact management regardless of landownership, although plant listings may not impact private lands as stringently.

22.1.4 Threatened and endangered species and designated habitats in Uintah County as of July 2016 are presented below in Table TES1.

Table TES1. Threatened and Endangered Species for Uintah County

Common Name	Scientific Name
Birds	
Yellow-billed cuckoo (proposed)	*Coccyzus americanus*
Mexican spotted owl	*Strix occidentalis lucida*
Fish	
Humpback chub	*Gila cypha*
Bonytail chub	*Gila elegans*
Colorado pikeminnow	*Ptychocheilus lucius*
Razorback sucker	*Xyrauchen texanus*
Plants	
Clay reed-mustard	*Schoenocrambe argillacea*
Shrubby reed-mustard	*Schoenocrambe suffrutescens*
Pariette cactus	*Sclerocactus brevispinus*
Uinta basin hookless cactus	*Sclerocactus wetlandicus*
Ute ladies'-tresses	*Spiranthes diluvialis*
Mammals	
Canada lynx	*Lynx canadensis*
Black-footed ferret	*Mustela nigripes*

Table TES1. Threatened and Endangered Species for Uintah County

Common Name	Scientific Name

Source: USFWS (2016).

Table TES2. Designated Critical Habitats for Uintah County

Common Name	Scientific Name
Birds	
Yellow-billed cuckoo (proposed)	*Coccyzus americanus*
Mexican spotted owl	*Strix occidentalis lucida*
Fish	
Humpback chub	*Gila cypha*
Bonytail chub	*Gila elegans*
Colorado pikeminnow	*Ptychocheilus lucius*
Razorback sucker	*Xyrauchen texanus*

Source: USFWS (2016).

22.1.5 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.

22.1.6 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

Common Name	Scientific Name
Birds	
Northern goshawk	*Accipiter gentilis*
Burrowing owl	*Athene cunicularia*
Short-eared owl	*Asio flammeus*
Ferruginous hawk	*Buteo regalis*
Greater sage-grouse	*Centrocercus urophasianus*
Mountain plover	*Charadrius montanus*
Yellow-billed cuckoo	*Coccyzus americanus*

Table TES3. State of Utah Sensitive Wildlife Species for Uintah County

Common Name	Scientific Name
Bobolink	*Dolichonyx oryzivorus*
Bald eagle	*Haliaeetus leucocephalus*
Lewis's woodpecker	*Melanerpes lewis*
Long-billed curlew	*Numenius americanus*
American white pelican	*Pelecanus erythrorhynchos*
American three-toed woodpecker	*Picoides dorsalis*
Fish	
Bluehead sucker	*Catostomus discobolus*
Flannelmouth sucker	*Catostomus latipinnis*
Humpback chub	*Gila cypha*
Bonytail	*Gila elegans*
Roundtail chub	*Gila robusta*
Colorado river cutthroat trout	*Oncorhynchus clarkii pleuriticus*
Colorado pikeminnow	*Ptychocheilus lucius*
Mammals	
Townsend's big-eared bat	*Corynorhinus townsendii*
White-tailed prairie-dog	*Cynomys leucurus*
Spotted bat	*Euderma maculatum*
Canada lynx	*Lynx canadensis*
Black-footed ferret	*Mustela nigripes*
Fringed myotis	*Myotis thysanodes*
Big free-tailed bat	*Nyctinomops macrotis*
Brown (grizzly) bear	*Ursus arctos*
Kit fox	*Vulpes macrotis*
Reptiles and Amphibians	
Cornsnake	*Elaphe emoryi*
Smooth greensnake	*Opheodrys vernalis*

Source: DWR (2015a).

22.1.7 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).

22.1.8 “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).

22.1.9 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.

22.1.10 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.

22.1.11 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

Common Name	Scientific Name
Birds	
Northern goshawk	*Accipiter gentilis*
Grasshopper sparrow	*Ammodramus savannarum*
Burrowing owl	*Athene cunicularia*
Ferruginous hawk	*Buteo regalis*
Greater sage-grouse	*Centrocercus urophasianus*
Yellow-billed cuckoo	*Coccyzus americanus*
Bobolink	*Dolichonyx oryzivorus*
Bald eagle	*Haliaeetus leucocephalus*
Lewis’s woodpecker	*Melanerpes lewis*
Long-billed curlew	*Numenius americanus*
American white pelican	*Pelecanus erythrorhynchos*
Three-toed woodpecker	*Picoides tridactylus*
Fish	
Bluehead sucker	*Catostomus discobolus*
Flannelmouth sucker	*Catostomus latipinnis*
Roundtail chub	*Gila robusta*

Table TES9. BLM Sensitive Wildlife and Plant Species in the Vernal Field Office

Common Name	Scientific Name
Colorado River cutthroat trout	*Oncorhynchus clarki pleuriticus*
Mammals	
Townsend's big-eared bat	*Corynorhinus townsendii*
White-tailed prairie dog	*Cynomys leucurus*
Reptiles	
Smooth greensnake	*Opheodrys vernalis*
Plants	
Park rockcress	*Arabis vivariensis*
Hamilton milkvetch	*Astragalus hamiltonii*
Owenby's thistle	*Cirsium owenbyiiownbeyi*
Goodrich stinkweed	*Cleomella palmeriana var. goodrichii*
Untermann daisy	*Erigeron untermannii untermanii*
Alcove bogorchard	*Habenaria zothecina*
Rock hymenoxys	*Hymenoxys lapidicola*
Huber's pepperweed	*Lepidium huberi*
Goodrich blazingstar	*Mentzelia goodrichii*
Stemless penstemon	*Penstemon acaulis*
Gibbens penstemon (Gibbens beardtongue)	*Penstemon gibbensii*
Goodrich penstemon (Goodrich beardtongue)	*Penstemon goodrichii*
Graham's beardtongue	*Penstemon grahamii*
White River beardtongue	*Penstemon scariosus albifluvis*
Uinta greenthread	*Thelesperma caespitosum*

22.1.12 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.

22.1.13 USFS defines policies and objectives for USFS sensitive species in Chapter 2670 of Forest Service Manual 2600 (USFS 2005).

22.1.14 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

Common Name	Scientific Name
Birds	
Northern goshawk	*Accipiter gentilis*
Boreal owl	*Aegolius funereus*
Greater sage-grouse	*Centrocercus urophasianus*
Peregrine falcon	*Falco peregrinus*
Bald eagle	*Haliaeetus leucocephalus*
American three-toed woodpecker	*Picoides dorsalis*
Flammulated owl	*Psiloscops flammeolus*
Great gray owl	*Strix nebulosa*
Fish	
Colorado river cutthroat trout	*Oncorhynchus clarkii pleuriticus*
Mammals	
Townsend's western big-eared bat	*Corynorhinus townsendii townsendii*
Spotted bat	*Euderma maculatum*
Bighorn sheep	*Ovis canadensis*
Amphibians	
Boreal toad	*Bufo boreas*
Columbia spotted frog	*Rana luteiventris*
Plants	
Graham columbine	*Aquilegia grahamii*
Petiolate wormwood	*Artemisia campestris* ssp. *borealis* var. *petiolata*
Dainty moonwort	*Botrychium crenulatum*
Slender moonwort	*Botrychium lineare*
Brownie ladyslipper	*Cypripedium fasciculatum*
Rockcress draba	*Draba globosa*
Untermann daisy	*Erigeron untermannii untermanii*
Goodrich stickleaf	*Mentzelia goodrichii*
Arctic poppy	*Papaver radicatum* var. *pygmaeum*
Stemless beardtongue	*Penstemon acaulis* var. *acaulis*
Caespitose greenthread	*Thelesperma caespitosum*

Source: USFS (2016).

22.1.15 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.

22.1.16 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

Common Name (habitat relationship)	**Scientific Name**
Birds	
Northern goshawk (forest)	*Accipiter gentilis*
Golden eagle (other)	*Aquila chrysaetos*
Greater sage-grouse (sagebrush)	*Centrocercus urophasianus*
White-tailed ptarmigan (other)	*Lagopus leucura*
Lincoln's sparrow (riparian)	*Melospiza lincolnii*
Song sparrow (riparian)	*Melospiza melodia*
Red-naped sapsucker (aspen)	*Sphyrapicus nuchalis*
Warbling vireo (aspen)	*Vireo gilvus*
Fish	
Cutthroat trout (aquatic)	*Oncorhynchus clarkii*
Mammals	
Rocky Mountain elk (other)	*Cervus canadensis nelsoni*
Mule deer (other)	*Odocoileus hemionus*
Other	
Macroinvertebrates (aquatic)	Various

Source: U.S. Department of Agriculture (1986).

22.2 CUSTOM AND CULTURE

22.2.1 Species extinctions in the late 19th century and early 20th century triggered national awareness and response in the form of active wildlife management.

22.2.2 For more than a century, local farmers, ranchers and hunters have managed the lands of Uintah county for long term biological diversity.

22.2.3 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).

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23 WATER QUALITY AND HYDROLOGY FINDINGS

23.1 BACKGROUND AND FINDINGS

23.1.1 Water resources are fundamental to future prosperity and quality of life in the Uintah Basin.

23.1.2 Clean water is essential to the health of county residents.

23.1.3 Nationalization or federal control of water resources is opposed.

23.1.4 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.

23.1.5 Waters of the State of Utah are generally delineated as "blue lines" on topographic maps, named features on maps, or support riparian vegetation.

23.1.6 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

23.2.1 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 UDWRe 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

23.3.1 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)

Demand Type	Total Existing Demand	Total Near Future Demand	Total Likely Future Demand
Agricultural	253,424	261,882	286,055
Municipal	4,228	14,782	14,782
Energy Industry	4,230	116,710	241,710
Total	**261,882**	**393,374**	**542,547**

Source: Franson Civil Engineers & CH2M Hill (2007).

23.4 WATER DEVELOPMENT SCENARIO SUMMARY

23.4.1 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

Project Features	1	2	3	4	5	6	7	8	9	10
Stabilize High Uinta High Mountain lakes (Transfer storage to downstream storage)		x	x	x	x	x	x			
Upper Uinta Reservoir (28,000 acre-feet storage)		x	x			x	x			
Brown's Draw Enlargement (1,900 acre-feet storage increase)				x	x	x	x			
Montes Creek Enlargement (950 acre-feet storage increase)				x	x	x	x			
Bennett Reservoir (5,000 acre-feet storage)				x	x	x	x			
Neola Reservoir (5,000 acre-feet storage)				x	x	x	x			
East Cottonwood Reservoir (5,200 acre-feet storage)				x	x	x	x			
Renn Smith Reservoir		x	x	x	x	x	x	x	x	x
Cliffs and Whiterocks High Mountain Lakes transfer to M & I demand		x								
Fill Cottonwood Reservoir with Exchange								x	x	x
Yellowstone Feeder Canal Extension to Area 16 (capacity = 19 cubic feet per second)				x	x	x	x			
Pump from Green River to Pelican Lake		x		x		x		x	x	x

Table WAT2. Water Development Scenario Summary

Project Features	1	2	3	4	5	6	7	8	9	10
Pump from Green River to Ouray Park, Cottonwood Service Area		x		x		x		x		
Pump from Pelican Lake to Cottonwood Area (3,500 acres in Cottonwood Service Area)										x

Source: Franson Civil Engineers & CH2M Hill (2007)

23.4.2 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

Scenario	Water Developed (acre-feet)	Total Capital Cost	Capital Cost per Acre-Feet of Developed Water	Score
2	22,300	$137,468,000	$6,200	593
4	17,900	$251,865,100	$14,100	593
6	26,200	$355,523,600	$13,600	593
8	9,800	$25,133,300	$2,600	464
10	8,400	$35,978,400	$4,300	427

Source: DWRe (2015).

23.5 WATER QUALITY

23.5.1 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.

23.5.2 Water quality characteristics include:

- Conductivity
- Dissolved oxygen
- Nutrients

pH

Suspended sediment

Water temperature

Turbidity

23.5.3 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).

23.5.4 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.

23.5.5 Some of the Uintah Basin's watersheds, reservoirs, and other waterbodies have required total maximum daily loads prepared for them. Summaries of these TMDLs are provided below.

23.6 DUCHESNE RIVER WATERSHED

23.6.1 The following summaries are excerpted from the 2007 TMDLs 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

23.7.1 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

23.8.1 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

23.9.1 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 UINTA RIVER WATERSHED

23.10.1 The following summaries are excerpted from the 2006 Uinta River, Deep Creek and Dry Gulch Creek TMDLs 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 2000 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

23.11.1 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

23.12.1 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

23.13.1 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.

23.13.2 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.

23.13.3 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.

23.13.4 "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)

23.13.5 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 AND CULTURE

23.14.1 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 hats been, and always will be, the lifeblood of the County.

23.14.2 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

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24 WATER RIGHTS FINDINGS

24.1 OVERVIEW AND BACKGROUND

24.1.1 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.

24.1.2 "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)

24.1.3 "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).

24.1.4 "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)

24.1.5 "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).

24.1.6 "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).

24.1.7 "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 AND CULTURE

24.2.1 "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).

24.2.2 "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).

24.2.3 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).

24.2.4 "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).

24.2.5 It is the custom and culture of Uintah County to protect and preserve water rights.

24.2.6 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

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25 WILD AND SCENIC RIVERS FINDINGS

25.1 OVERVIEW AND BACKGROUND

25.1.1 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.

25.1.2 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.

25.1.3 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.

25.1.4 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.

25.1.5 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.

25.1.6 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

Agency	Uintah County
BLM	Lower Green River BLM boundary south of Ouray to the Carbon County line (27 miles) – Suitable, scenic
USFS	–
NPS	Green River from Colorado state line to NPS boundary – Suitable, wild

Sources: BLM (2008); USFS (2008).

25.1.7 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.

25.1.8 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.

25.1.9 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).

25.1.10 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%)

25.2 CUSTOM AND CULTURE

25.2.1 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.

25.2.2 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.

25.3 PRIORITY DATA SOURCES

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26 WILDERNESS FINDINGS

26.1 OVERVIEW AND BACKGROUND

26.1.1 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).

26.1.2 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.

26.1.3 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.

26.1.4 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.

26.1.5 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.

26.1.6 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.

26.1.7 There are no federally designated wilderness areas in Uintah County.

26.1.8 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.

26.1.9 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).

26.1.10 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.

26.1.11 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.

26.1.12 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.

26.1.13 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).

26.1.14 The 1999 BLM wilderness re-inventory project was legally and technically flawed.

26.1.15 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)

26.1.16 BLM's management of WSAs is guided by BLM Manual 6330 – Management of Wildness 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.

26.1.17 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.

26.1.18 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.

26.1.19 Similar to wilderness areas, use of WSAs is highly restricted and does not provide the desired wilderness experience for most citizens and groups.

26.1.20 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.

26.1.21 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.

26.1.22 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 WLD1. Name of and Acres of Lands with Wilderness Characteristic in Uintah County

Land Name	Uintah County
Beach Draw	898
Bourdette Draw	13,334
Bull Canyon	2,483
Cold Spring Mountain	–
Daniels Canyon	3,045
Dead Horse Pass	783
Diamond Breaks	–
Diamond Mountain	27,238
Lower Flaming Gorge	3,745
Moonshine Draw	4,513
Mountain Home	–

Stuntz Draw	1,992
Vivas Cake Hill	277
White River	6,716
Wild Mountain	527
Total	**65,551**

- 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.

26.2 USFS-INVENTORIED ROADLESS AREAS

26.2.1 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 WLD2. Acres of Inventoried Roadless Areas

National Forest	Uintah County
Ashley National Forest	199,577

Wasatch-Cache National Forest	–
Total	**199,577**

26.2.2 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.

26.2.3 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.

26.2.4 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.

26.2.5 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).

26.3 CUSTOM AND CULTURE

26.3.1 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.

26.3.2 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.

26.4 PRIORITY DATA SOURCES

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27 WILDLIFE FINDINGS

27.1 OVERVIEW AND BACKGROUND

27.1.1 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.

27.1.2 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).

27.2 BALANCING INTERESTS

27.2.1 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.

27.2.2 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.

27.2.3 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.

27.2.4 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.

27.3 THE UTAH WILDLIFE BOARD

27.3.1 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.

27.3.2 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.

27.4 AGRICULTURAL IMPACTS

27.4.1 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 depredation, 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.

27.4.2 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).

27.4.3 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.

27.4.4 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.

27.4.5 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.

27.4.6 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.

27.5 COMPENSATION FOR DAMAGE

27.5.1 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.

27.6 SPECIES MANAGEMENT PLANS

27.6.1 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.

27.6.2 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.

27.7 GREATER SAGE GROUSE

27.7.1 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 WLF1. Acres of Greater Sage-Grouse Habitat in Uintah County

Habitat	Uintah County
Winter	479,959

Table WLF1. Acres of Greater Sage-Grouse Habitat in Uintah County

Habitat	Uintah County
Brooding	1,003,996
Occupied	1,027,206

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

Habitat	Uintah County
Nesting and brood-rearing non-winter habitat	117,697
Nesting and brood-rearing winter habitat	147,330
Winter habitat	75,537
Non-winter habitat	92,870
Non-winter other	29,628
Non-winter opportunity	133,077

Source: DWR (2016b).

27.8 DEER AND ELK

27.8.1 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.

27.8.2 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 WLF3. Acres of Mule Deer Habitat in Uintah County

Habitat Type	Uintah County
Spring/fall, crucial	–
Summer, crucial	487,431
Summer, substantial	81,905
Winter, crucial	635,105
Winter, substantial	407,354
Year-long, crucial	246,605
Year-long, substantial	113,530
Total	**1,971,930**

Source: DWR (2015b).

Elk habitat in the county is described in Table WLF4

Table WLF4. Acres of Elk Habitat Uintah County

Habitat Type	Uintah County
Elk, summer, crucial	490,968
Elk, summer, substantial	22,474
Elk, winter, crucial	705,729
Elk, winter, substantial	408,092
Elk, year-long, crucial	111
Elk, year-long, substantial	4,541
Total	**1,631,915**

Source: DWR (2015b).

27.8.3 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."

27.8.4 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)

27.8.5 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)

27.8.6 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)

27.8.7 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.

27.9 FERAL OR WILD HORSES

27.9.1 At present there are three known wild horse and burro herd areas in Uintah County (Table WLF5). 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 WLF5. Acres of Wild Horse and Burro Herds in Uintah County

Herd Name	Uintah County
Bonanza	141,857
Hill creek	136,130
Winter ridge	44,216

Source: BLM (2009).

27.10 PRONGHORN ANTELOPE

27.10.1 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).

27.10.2 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 WLF6. Acres of Pronghorn Antelope Habitat in Uintah County

Habitat Type	Uintah County
Summer, crucial	–
Summer, substantial	8,930
Year-long, crucial	708,408
Year-long, substantial	250,573
Total	**967,912**

Source: DWR (2014b).

27.11 BISON

27.11.1 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 WLF7. Acres of Bison Habitat in Uintah County

Habitat Type	Uintah County
Winter, crucial	404,541
Winter, potential	316,317
Winter, substantial	36,870
Year-long, crucial	123,443
Year-long, potential	258,787
Year-long, substantial	25,628
Total	**1,165,586**

Source: DWR (2014c).

27.12 BIGHORN SHEEP

27.12.1 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.

27.12.2 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 WLF8. Acres of Bighorn Sheep Habitat in Uintah County

Habitat Type	Uintah County
Spring/fall, crucial	–
Year-long, crucial	586,277
Year-long, substantial	1,916
Total	**588,193**

Source: DWR (2006).

27.13 CUSTOM AND CULTURE

27.13.1 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.

27.13.2 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.

27.13.3 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.

27.13.4 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.

27.14 PRIORITY DATA SOURCES

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28 GLOSSARY OF ABBREVIATIONS

The following abbreviations are found in the current and/or future Uintah County General Plan and Resource Management Plan.

AAGR – Average Annual Growth Rate

ACEC – Areas of Critical Environmental Concern

AMP – Allotment Management Plan

AUM – Animal Unit Month

BEA – Bureau of Economic Analysis

BLM – Bureau of Land Management, a part of the US Department of Interior

BOR – Bureau of Reclamation

CA – Cooperating Agency

CE – Categorical Exclusion

CEQ – President's Council on Environmental Quality

CRMP – County Resource Management Plan

DM – Decision Memo

DN – Decision Notice

DNR or UDNR – Utah Department of Natural Resources

DWS – Utah Department of Workforce Services

EA – Environmental Assessment

EIS – Environmental Impact Statement

FACA – Federal Advisory Committee Act

FLPMA – Federal Land Planning and Management Act

FONSI - Finding of No Significant Impact

FSM – Forest Service Manual

FWS – U.S. Fish and Wildlife Service

GIP – Utah Grazing Improvement Program

GIS – Global Information System

Grazing Advisory Board – Board of the Utah Department of Agriculture and Food

NAICS – North American Industry Classification System

NEPA – National Environmental Policy Act

NFMA – National Forest Management Act

NPS – National Park Service

NSO – No Surface Occupancy

PRIA – Public Rangelands Improvement Act of 1978

RATM – Resource Access Travel Management

RBF – Range Betterment Funds

RMP – Resource Management Plan

ROD – Record of Decision

RPA – Forest and Rangeland Renewable Resources Planning Act of 1974

SITLA – State Institutional Trust Lands Administration

SRMA – Special Recreation Management Area

T&E – Threatened and Endangered Species

TES – Terrestrial Ecosystem Survey

USFS – United States Forest Service, part of the United States Department of Agriculture

VQO – Visual Quality Objective

VRM – Visual Resource Management

WCA – Wilderness Characteristics Area

WIA – Wilderness Inventory Area

29 PUBLIC SURVEY COMMENTS

AGRICULTURE

Please rate your level of understanding of this resource in the County.

4.75 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

4.00 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Uintah County has no control beyond taxing and zoning
Flexibility
Water is well managed

Weakness in current management

Uintah County interfers with proper public land management
Knowledge of resources in the County
Municipal and industrial uses are outcompeting agriculture. Development is destroying small farms

Opportunities associated with this resource

A slower and wiser long term economic view of oil, gas, and mining. that interfers with rural agriculture
utilizing existing resources and showing farmers and ranchers how to use those resources
Through zoning, protect small farms in both rural and town areas. Allow small farms to persist

Threats to this resource

Urban sprawl and public land interference by Uintah County
other types of development and focus on oil and gas
Development and loss of water to M&I demands

The County's influence and resources should _____ in the management of this resource.

3.50 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

2.75 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Not a County issue
Quit supporting oil and gas industry over rural folks and agriculture
Agriculture is something that should be focused upon to diversify our county's economy. Differing types of cr
THe County states that it supports agriculture, but I have seen the County sell out small farms to support deve

AIR QUALITY

Please rate your level of understanding of this resource in the County.

4.14 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

1.57 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Finally, some research is being conducted
Cooperation of Utah State University.
recognition of the problem and level of research
Finally recogizing we have a problem
none, the county does not care, or they ignore health risks
Utah DEQ and EPA have recognized there is a problem here

Weakness in current management

County leaders want to bury their heads in the sand and pretend it is not happening to avoid giving energy a b
We allow outside agencies to dictate our direction.
unwillingness to confront main sources (energy)
Continued resistence to dealing with the issue by Uintah County
county avoidance of curtailing energy development as contributer of poor air quality, evaporation pits, etc.
Don't know about strengths and weaknesses, just that the air is sickening at times.
Leaders do not want to admit there is a problem, and do not want to admit the most significant cause or take

Opportunities associated with this resource

Work with companies, State, and Federal agencies to improve air quality, rather than fight against it and prete
We have an opportunity to funnel State and Federal funds to Uintah county to address our problems.
generally, we have good air quality which is an asset
Improved technology for oil and gas recovery and other emissions
Good health! A good place to live 7 raise a family!
Require phased retrofitting of oil and gas equipment to reduce emissions of natural gas and other chemicals d

Threats to this resource

Continued lack of regulation and/or improvements
The oil and gas industry is the threat, but it can be managed.
increasing development
over dependance on energy development 7 extraction.

The County's influence and resources should _____ in the management of this resource.

3.71 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

3.43 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Not a County issue. Stop pretending there isnt a problem

The State contiually grants money to address issues in the Basin, but that money is given to Air Quality to hire

There is a lot of focus on ozone, but particulate pollution is increasing and should be addressed for areas like v

Many people of this county have respiratory problems induced or aggravated by this issue. Quit dragging you

The county's influence should decrease because they don't have the balls to identify the cause, risk and do any

I would like to but I am not given enough room to really comment.

CULTURAL RESOURCES

Please rate your level of understanding of this resource in the County.

4.50 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

3.33 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Some really neat areas are maintained and identified
Great opportunities in the basin
Identified and public recognition of their intrinsic values
The county has minor interest in management of cultural resources

Weakness in current management

Too much emphasis on this issue and not enough on more important issues
Damage from people not educated on how to protect these places
vandalism
The county has minor interest in management of cultural resources

Opportunities associated with this resource

very small amounts of revenue
Tourism
Another opportunity for tourism and recreation based business and economics
The McConkie Ranch could be purchased by the County and opened as a County archaeolgical park. It receives

Threats to this resource

the public
People causing damage
At present, the county does not consider how actions could affect cultural resources.

The County's influence and resources should _____ in the management of this resource.

3.00 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

3.00 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Do as little as possible, so that funds can be used on more significant areas.
Heritage tourism can be a huge asset to the county because of the quantity of archaeological sites and rock ar

DITCHES and CANALS

Please rate your level of understanding of this resource in the County.

3.75 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

2.25 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Federal funding to improve and pipe canals and ditches.
County Commissioners do not control water rights
I'm glad they a piping sections of the canals.
Federal programs have allowed for improvement to infastructure

Weakness in current management

Lack of maintenance and efficiency in many canals
County Commissioners are trying to expand control
The irrigation canals create an unnaturally high water table, for example we pump 2000 gallons per day from
Lack of upgrades on some of the major delivery systems

Opportunities associated with this resource

Improve canals to limit loss
Beautification of waterways for public recreation paths, etc.
The canals could be turned into a city trail pedestrians and bikes.
Continued upgrades to systems

Threats to this resource

Lack of maintenance
County take over and piping for flood control

none really

The County's influence and resources should _____ in the management of this resource.

2.75 (average score: 1=decrease significantly, 5=increase significantly)

The County should reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained.

2.75 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

The use of CIB funds should be utilized to improve parkways and recreation close to town rather than building

ENERGY

Please rate your level of understanding of this resource in the County.

4.06 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

2.38 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Large companies operate here
Most extraction is down on public land, provides oversight.
Overall oil/gas development has been able to move forward and be the bread and butter for our economy.
Provides employment and resources to the community
A free market
Lacking
too much emphasis is given to energy and extraction
The county recieves employment and revinues from energy development
Development of well sites
Opportunities for public comment
good
Separate church from oil
Every opportunity is given to an energy company to succeed in Uintah County, often at the cost of something
Possible use of public lands for exploration and extraction

Weakness in current management

Lack of air quality standards
Based on external factors; oil prices, supply and demand, competition and flooding the market driving down c
Wells on public lands should be processed more quickly. New and existing wells should have more strict air qu
It is a boom and bust cycle that people get reliant on for income, no planning for the down times.
County's total representation and pimping for this industry at the expense of all other resources and the rural
No vision for other business sources
the over emphasis on energy intrudes on other stabil contributers to the county's economy like agriculture, ou
The County focuses too much time and energy trying to promote energy development. Energy is an unreliable
Reclamation of well sites
Short sighted economic approach
none
Religion
Chasing unproven resources such as oil shale and tar sands. Support existing companies and traditional gas an
The difficulty and expense of the use of public lands for exploration and extractione.

Opportunities associated with this resource

Work with the proven companies on proven resources. Oil and gas.
Additional tar sand extraction
Proper planning could provide a small scale stable economy.
The potential for a stable economic base not a golden egg for the Commissioners to pimp and promote over a

Local refining
a continual cycle of boom and bust, over development and excess
Energy development will always be a large part of Uintah county employement. Appreciate that fa
Money
Opportunity to promote a progressive view of multiple us and environmental protections while de
many
Community growth
Strengthen our relationships with proven companies and players in existing development areas.
Permitting, Oil Shale extrction and Directional drilling is allowed.

Threats to this resource

Waste and exploitation.
No control on prices.
Over regulation at the Federal Level and activist interference
The boom and bust cycles of over producting
exporting eveything
The major threat is the continual boom/bust cycle on overdependance
None
Economic growth, boom-bust
Overdevelopment and environmental degradation
outside influence
Liberals, ignorance, regulations
The only real threat is the oil and gas market. If product can be produced elsewhere for a lower cos
Low barrell prices and expensive permitting processes

The County's influence and resources should _____ in the management of this resource.

3.06 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

2.63 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Back off oil shale and tar sand
Basing an economy primarily on natural resource extraction doesn't end well. Resource's are limite
The County should consider an impact fee for every well, and buffer regulations when near to resid
needs to be better plannning and mangagement of funds for the down turns. They will and always
Start looking at the big picture for all citizens and resource uses - including non motorized outdoor
Stop depending on just one thing1
Energy boom/bust cycle is outside of county control. We should not be exclusively reliant on ener
We need to manage what we have not grow # of wells. We already have abandoned well sites, poo
"We do not inherit this world from our parents, we borrow it from our children"
Devote most of your attention to preserving and expanding
Drain the swamp. Your next
You dont have much control. Its market driven. PERIOD. Nobody has ever denied a well.

FIRE MANAGEMENT

Please rate your level of understanding of this resource in the County.

3.00 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

2.50 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

No comment -IH

Weakness in current management

No comment -IH

Opportunities associated with this resource

No comment -IH

Threats to this resource

No comment -IH

The County's influence and resources should _____ in the management of this resource.

3.50 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

3.00 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Nope

FISHERIES

Please rate your level of understanding of this resource in the County.

4.67 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

4.67 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Diversity of opportunity (species)

Weakness in current management

Slow to respond to needs at lower priority waters.

Opportunities associated with this resource

Best deal in town-$32 for a license-and you can harvest a lot of fish throughout the year!

Threats to this resource

Loss of water

Water quality and water quantity.

The County's influence and resources should _____ in the management of this resource.

3.33 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

3.33 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

I don't think the County needs to monitor fisheries but it does need to get involved if we're ever going to have

FLOODPLAINS

Please rate your level of understanding of this resource in the County.

4.67 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

2.00 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

County recognition of some zoning responsibilities in these zones

Weakness in current management

Zoning to allow building development in these hazard zones

Opportunities associated with this resource

Recognizing other values for these areas to include recreation that will help support appropriate zoning

Threats to this resource

Development in these areas

Continued building within these hazard areas

The County's influence and resources should _____ in the management of this resource.

3.33 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

3.33 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

FOREST RESOURCES

Please rate your level of understanding of this resource in the County.

4.20 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

3.20 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Allowance of forest use.
The County has no control of this resource or it would be gone
No comment -IH
I am not sure there is a strength

Weakness in current management

Not enough access to the logging industry
Poor economics and retiring small local timber operators
No comment -IH
Lack of fire use and mechanical treatment

Opportunities associated with this resource

Large revenues are available through timber sales.
Until local timber markets improve, it is difficult
No comment -IH
Allow more fires to naturally burn, increase prescribed burning, mechanical thinning, commercial use

Threats to this resource

forest fires
disease and bugs
Lack of management and suppression of natural forces such as fire.

The County's influence and resources should _____ in the management of this resource.

2.60 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

2.20 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Not a County issue, Federal and State issue
More logging on forest lands
Nope
Often people think timber harvest is the solution, but I am not convinced anyone really wants to buy it.

IRRIGATION

Please rate your level of understanding of this resource in the County.

4.33 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

2.67 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Federal funding to improve systems

County does not have control of water rights

Weakness in current management

Poorly maintained canals

County trying to take over everything from water to canals

This is a desert, emphasis should be made on agriculture that does not depend on irrigation

Opportunities associated with this resource

Continue to work with federal government.

Better support of rural life and agriculture by Uintah County

short term producing hay!

Threats to this resource

Drought

Urbanization and county greed for more industry

There is limited water and as it's value increases agriculture will lose its influence along with its irrigation wate

The County's influence and resources should _____ in the management of this resource.

1.00 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

1.33 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Not a county issue

Quit trying to build Uintah County into Salt Lake County. Support a rural county atmosphere

LAND ACCESS

Please rate your level of understanding of this resource in the County.

4.75 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

3.50 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Federal management
Management is active in paying attention to the condition of the access
lots of access and it is not fee-based like elsewhere
Lots of good places to go and use trails and roads
state and federal lands are open to approprioate access, hunting, etc.
A good balanced approach to multiple types of access

Weakness in current management

Maintenance of areas are deteriorating or areas get closed off.
county does not seem willing to limit some types of access or recognize the need to
None
The county favors motorized access over non-motorized and fails to aknowledge the inappropriate effect mot
fighting for those accesses in a coordinated effort

Opportunities associated with this resource

recreational economy growth
None
The county has room for all, but not every place is appropriate for every access
coordination and maintaining access

Threats to this resource

Illegal access and activity
Erosion and deterioration
overuse and unmanaged, unauthorized use
Over growth and to many new roads
Federal agencies lack of communication

The County's influence and resources should _____ in the management of this resource.

2.25 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

2.13 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Please see if there is some way that we can adjust the budget to improve the maintenance of roadways within
revisit PLI recommendations and keep federal lands federal
The county is too narrow focused on motorized use as the only access of value, many residents of Uintah Cour
The inequality of the County Commissioners attitudes on land management was exposed in the Bishop Land G
If you claim the roads, then you better maintain them. Period.

LAND USE

Please rate your level of understanding of this resource in the County.

4.50 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

3.25 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Federal land ownership and management
No answer
The County does not control public lands
none

Weakness in current management

Lawsuits to federal agencies by special interests
To much emphasis on energy and land development
The County sees only economic land use and does not support other types as much
Uintah County expends millions of dollars to promote development in California, attempt to take over federal

Opportunities associated with this resource

Form partnerships with land managers
Improve camping fishing hunting
Maintaining a rural lifestyle through recoginizing these values
The funds from land use could be applied to education rather than roads in the oil field

Threats to this resource

Loss of federal lands
Over use and development
County continued opposition to proper public land use and promotion of single industry uses
spending SITLA and royalties foolishly

The County's influence and resources should _____ in the management of this resource.

1.25 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

2.00 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Leave it to the federal government and instead of fighting against them, put effort into forming partnerships
Need to protect the resources for future use, development, ranching recreation
Proper land use for future generations and a stable economy should guide; citizens deserve more than a boom

LAW ENFORCEMENT

Please rate your level of understanding of this resource in the County.

4.00 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

3.80 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Uintah county has great law enforcement personnell
Good coordination between agencies.
Mostly professional and good officers and philosophy
Good
No comment -IH

Weakness in current management

Not enough officers employed
Lack of community support efforts.
Pay and budgets
No comment -IH

Opportunities associated with this resource

reduced crime
The county can publicly show support for law enforcement.
Continued proper officer and agency attitudes and public support
No comment -IH

Threats to this resource

Insufficient funding
Lack of funding to be prepared for emergencies.
Poor citizens and some of the residents that have come to the area with the oil and gas industry
Budgeting
Foreigners

The County's influence and resources should _____ in the management of this resource.

4.20 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

4.20 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Law enforcement should be a top priority because without it everything else fails
The county expects experts when things go wrong, but doesn't support a gun range for training. Just an examp
The County should work with the law enforcement folks to promote good citizenship and recognize it publicall
Nope

LIVESTOCK and GRAZING

Please rate your level of understanding of this resource in the County.

4.83 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

3.17 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Federal oversight
A strong stable income in the basin.
Proper grazing monitoring on public lands
agriculture is a stabilizing economic influence
BLM & FS grazing management plans
From a producer standpoint, you have plenty of support, even if you are wrong..

Weakness in current management

Poor grazing practices, lack of flexibility by industry
No answer
Uintah County's poor public land attitude and performance
The county commissioners are too easily influenced by the farm Bureau
Need more monitoring of allotment rangeland health
Unwillingness to adapt and change where needed.

Opportunities associated with this resource

Work with land management agencies to make grazing sustainable and improve its image.
A local economy that with planning and proper land management could always provide some employment an
The conservation work being completed on public and private lands

Economic, money, lifestyle, maintain rural community feel, industry
Partner with wildlife, rather than fight against. Improve grazing practices, improve image

Threats to this resource

Continued mismanagement and over use will continue to damage the environment and increase concern abou
Reduction in open space and available grazing. Bishops PLI could really hurt ranchers with land turned to energ
Expanding impacts from urbanization and oil and gas boom expansions
With the oil boom family farms are used less to produce products and are mainly a tax deduction
Energy development, subdivisions, sale of SITLA land in county, parceled lands, state controlled land WMAs
Biggest threat is being stubborn and unwilling to change and adapt. Must improve image.

The County's influence and resources should _____ in the management of this resource.

2.17 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

2.67 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

The grazer is not always right.

No

Uintah County should be more concerned about the condition of public range lands and abuses rather than a

How will the county afford to monitor and manage grazing? This is a HUGE resource within the county.

The objectives are biased in this section. It has a anti-wildlife tone. That must be changed. Be proactive for liv

MINERALS

Please rate your level of understanding of this resource in the County.

4.67 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

3.00 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Good companies working here

I guess that if there is a strength it is that the Commissioners approve everything related

good

Weakness in current management

None

there are too many gravel pits, for example, intruding on residential areas

none

Opportunities associated with this resource

None

many

Threats to this resource

None

plenty

The County's influence and resources should _____ in the management of this resource.

3.00 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

2.67 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Not really a County issue

Minerals extraction is the highest wage paying and tax paying component of the local economy. It is essential t

MINING

Please rate your level of understanding of this resource in the County.

5.00 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

3.00 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

be more proactive

Weakness in current management

dont cater to outside influence

Opportunities associated with this resource

should be expanded

Threats to this resource

Creating a black eye to the mining industry by supporting tar sands and oil shale industry that fail.
federal overreach

The County's influence and resources should _____ in the management of this resource.

3.00 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

3.00 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

PREDATOR MANAGEMENT

Please rate your level of understanding of this resource in the County.

4.75 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

2.50 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

State and federal predator management programs
The State DWR spends some effort on controlling predators
I see none
The Utah Division of Wildlife Resources
none!
No comment -IH
None
Utah's coyote bounty program and wildlife services programs

Weakness in current management

Lack of understanding
Not enough funding to reduce predator numbers significantly
unscientific and unnecessary
Uintah County attempts to interfer and dictate management
over emphasis on poredator control and no emphasis on maintaining a complete ecosystem that i
No comment -IH
No data to back up use of money and resources for predator control. No proven effect
not sure

Opportunities associated with this resource

Support State and Federal programs
As predators decrease, desirable wildlife, such as pheasants will increase
reduce spending
Continued public input for management through UDWR public meetings
A complete, robust ecosystem is a healthy ecosystem upon which life - including ours - depends.
No comment -IH

Threats to this resource

Loss of funding to State and Federal agencies.
Lack of funding
old ways of thinking
County interference in state wildlife agency work
over emphasis on predator control
No comment -IH
Skewed wildlife populations, misinformed decisions
Lack of funding and involvement from the State or Federal governments.

The County's influence and resources should _____ in the management of this resource.

2.00 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

2.00 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Not a County issue

As the number of predators, skunks, raccoons and raptors are reduced, game bird numbers will increase. Plea this is a huge waste of time and money--a subsidy for livestock industry

County should quit trying to take over government agency management that has been successful for decades

Nope

Is it really making a difference and do you have the data to support it?

Consider options with the spotlighting ordinance that will allow for predator hunting

RECREATION and TOURISM

Please rate your level of understanding of this resource in the County.

4.36 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

2.79 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

We have federal lands to recreate on
Existing fantastic natural resources (mtns, rivers, reservoirs, forests, geology, etc). Everything seen
Lots of momentum right now so there is hope for more opportunities
people that are involved
Have awesome tourism in the area
Public lands provide a great recreation bas
That the federal government has control over much of the land, because the county lacks foresight
Outreach and focus on this area as a need
Dinosaurland website contains decent information.
Recreation sites available through Federal lands for low income families.
NA
In the current economic situation Uintah is actually trying to support this often neglected resource
good
I enjoy that recreation is primitive in this County. I do not need or desire recreation development

Weakness in current management

none
Vernal downtown does not match the level of the natural resources. Real destinations have gatew
BLM is slow in responding to needs for new trails
pulling in more tourists
Focus has been taken away from tourism and it is a consistent strength in the basin
Uintah County interference with public use of public lands
over emphasis on energay and extraction
limited resources and lack of help from private enterprise
County does not partner well with neighbors, such as the Flaming Gorge area in Daggett County, to
No balance of recreation development with energy development. Need to increase recreation oppo
Efforts to focus singularly on energy development
Tourism is neglected during the boom cycles.
none
Recreation and tourism takes a back seat to energy development, until the boom is over. Then is it

Opportunities associated with this resource

Partner with federal land managers, rather than fight against them
Lots of public land and areas for new recreation
sightseeing
More economic growth

family based recreation, hunting, fishing, non-motorized areas, pulbic lands
a steady economic influence in the county, few environmental concerns, improve quality of life
Partnering efforts to have coordinated efforts to bring more tourism to the county
The Uinta Mountains, camping, Red Canyon, Flaming Gorge, heritage tourism
Growth, money, tourism, healthy lifestyle, happy residents, youth programs, businesses, more mo
Multiple environmental services related to the management of desirable recreation and tourism o
Vernal could attract visitors that are frustrated with the crowds in places like Moab, Fruita, and Zic
limited
There are great areas that the County has targeted for strip mining, but the true value may be in re

Threats to this resource

Loss of federal lands
Lack of attention. People here care about oil/gas. Rec and tourism is a side hobby.
loss of federal land to the state
being used for other then recreational activities
Uintah County's opposition to everything on public lands that preserves it and maintains its beaut
the biggest threat is that the county commissioners are owned by the oil and gas companies
Oil and Gas coming back and taking focus off of tourism
The oil and gas boom almost killed our tourism industry. We need to keep tourism alive even duri
Expansive energy development (need balance of multiple use lands), narrow mindset
County management
Oil and gas infrastructure in recreational corridors.
none
Frankly, nobody wants to recreate in an oil field or a strip mine.

The County's influence and resources should _____ in the management of this resource.

4.00 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

3.79 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Do not support the federal land takeover nonsense!
Real destinations have gateway towns that enhance the overall tourist experience. Vernal, the tow
Tourism should be an important part of our future economy. The BLM needs more rec planners to
no
Bring tourism to the forefront again.
Tourism is a great economic option for the area with dinosaurs, river rafting, recreation, flaming g
Uintah County needs to stay out of the way of proper resource management
The county commissioners are woefully lacking in their support of outdoor recreation and tourism
Tourism and recreation can be a constant resource if we manage it as a priority in the county.
We need to think outside the box and expand recreation and tourism in order to avoid boom-bust
Value your environment and promote it to tourism and recreation interests
This is a resource that we can sustain for generations.

RIPARIAN AREAS

Please rate your level of understanding of this resource in the County.

4.67 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

2.67 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

State and Federal agency management activities that improve riparian areas
Areas owned by Feds have active Russian olive and tamarisk removal.
The county has not control over public and private land riparian areas
State & federal agencies have done some riparian rehabilitation and land set aside
No comment -IH
State and federal agencies have identified these areas as a priority and work towards maintaining t

Weakness in current management

Improper grazing and failure to control noxious weeds
Private lands have no vegetation management, nor is there any guideline for buffering streams her
Uintah County criticism of riparian area conservation and management on public lands
Uintah county overrides riparian concerns with energy development
No comment -IH
There is reluctance by many to implement the necessary changes in grazing to protect this resourc

Opportunities associated with this resource

Work cooperatively with land management agencies to improve riparian areas, rather than against
Work with private landowners to improve buffering and help improve water quality
Conservation agency attention to these areas for enhancement projects such as the State WRI prog
outdoor recreation & tourism, a healthy environment and complete ecosystem
No comment -IH
More proactive management changes that still allow uses (grazing) but tailored to riparian areas.

Threats to this resource

Mismanagement of grazing, weeds, recreation, and other activities
Development
Uintah County's incessant criticism and interference with public land management
energy development, oil spills, filling in, etc.
No comment -IH
Poor grazing management and loss of water. Increase in non native plants (tamarisk)

The County's influence and resources should _____ in the management of this resource.

2.83 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

2.67 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Not a County issue, but maybe control the weeds on your noxious weed list in these areas.

The County has a unique opportunity to assist private landowners in better managing this resourc

Quit interfering with proper public land management that has been successful since settlement

noope

These systems just need water and protection from poor grazing management. County weed prog

THREATENED AND ENDANGERED

Please rate your level of understanding of this resource in the County.

5.00 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

3.75 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

State and federal plans are in place to manage the species.
Current management understands that we have had to fight to keep the federal overreach out of c
Agencies and public move quickly to try and prevent listings and keep regulations minimal

Weakness in current management

Politics and special interests
Too political about this issue
County interference instead of actually working to resolve issues

Opportunities associated with this resource

Be a part of the solution rather than just oppose
We could spend the resources better elsewhere
Conservation plans that are developed to prevent listings and regulations that the county should s

Threats to this resource

Lack of oversight
The federal government
County continuing to promote activities that destroy habitat and create the conditions in the first

The County's influence and resources should _____ in the management of this resource.

1.50 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

1.50 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Not a County issue. State and Federal authority
Don't do anything more than you have to.
Uintah County should not pimp and promote land management that completely disregards proper
State sensitive species list should be the SGCN list in Utah Wildlife Action Plan

WATER QUALITY

Please rate your level of understanding of this resource in the County.

4.00 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

4.25 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Federal and State management
We have some of the best water in the state due to good management
The county has access to people that understand water resource management.
Uintah County opposing mining and development around municipal watersheds

Weakness in current management

Individual districts are deeply in debt to the community impact board
The county does not support efforts to prevent pollution such as remediation of spills.
County opposition to public land conservation management of riparian areas and water protective

Opportunities associated with this resource

Revenue to the county through citizens purchasing of water
Public education about water quality and proper management from source to sewer

Threats to this resource

Impacts to the watersheds
neglect of deteriorating systems due to lack of funding
Thousands of barrels of chemicals are spilled each year with little effort to ensure they are cleaned
Continued promotion of actions without proper consideration of impacts

The County's influence and resources should _____ in the management of this resource.

3.75 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

3.50 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Not a County issue
I think that a large portion of the tax base should be allocated to the individual water districts with
For little effort and small amount of money the county could ensure that spills are cleaned up. The
Keep supporting Ashley Springs and other County municipal watersheds protection and expand to

WATER RIGHTS

Please rate your level of understanding of this resource in the County.

3.50 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

4.00 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

The County does not control water rights

Weakness in current management

Complex water law for average people to understand

Opportunities associated with this resource

Continued State management

Threats to this resource

Not sure

County promoting industry, etc., that threaten water rights and water quality

The County's influence and resources should _____ in the management of this resource.

2.50 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

2.50 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

The State is doing fine thank you

WETLANDS

Please rate your level of understanding of this resource in the County.

4.50 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

4.50 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

Public recognition of the role of wetlands in water and soil management

Weakness in current management

Poor zoning that ignores the value of these resources to water quality and production

Opportunities associated with this resource

Education and providing support for proper management

Threats to this resource

Development

Urbanization and sprawl

The County's influence and resources should _____ in the management of this resource.

2.50 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

2.50 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Not a County issue

Wetlands and riparian areas go hand in hand with water quality, availability and management

WILD & SCENIC RIVERS

Please rate your level of understanding of this resource in the County.

4.33 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

2.67 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

There are many scenic rivers and streams in Uintah County
Dinosaur National Monument does an excellent job of managing the resource state agency's need
There is no strength in current county management

Weakness in current management

restricted access to these areas
Development to close to the river corridor
Failure to understand the W&SR Act and to dispell false information about the act.

Opportunities associated with this resource

Revenue from outdoor enthusiasts
Tourism, local recreation
Increase recreation & tourism, contributes to stable economy

Threats to this resource

Restricted access
Energy development encroaching on the river
Overemphasis on oil and gas, and development

The County's influence and resources should _____ in the management of this resource.

2.00 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

3.00 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Increase access so that more people can enjoy the wild and scenic rivers
Needs stronger protection

WILDERNESS

Please rate your level of understanding of this resource in the County.

4.71 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

2.86 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

There are areas within the county that have been recommended as potential wilderness, but no official design
none
Great hiking, horse packing fishing
Tourism and recreation
There is no strength, the county opposes viable Wilderness over energy extraction
The county encourages not adding more unnecessary wilderness designations
BLM, NPS, and FS have great management plans to manage this resource and ensure its longevity

Weakness in current management

County administration has been outright hostile to the idea of wilderness designation within the county.
there is no wilderness or willingness to designate it
None
Interpretation of wilderness act
The county fails to recognize the long term value of Wilderness and its contribution to our way of life, health a
Local input is often ignored by federal agencies
The State wasting taxpayer dollars in lawsuits over this economic resource

Opportunities associated with this resource

There are numerous areas on Forest Service, BLM or NPS lands where wilderness designation is appropriate ar
plenty of areas worthy
Camping fishing hunting
Recreation and tourism draw for the basin
contributes to stable economy, land in Wilderness, if needed can be changed in the future.
Being more involved in federal agency planning efforts
Tourism, money, economic growth

Threats to this resource

ATVs and UTVs have grown in popularity and make it easier to access and impact areas that were previously p
local attitudes
Bishops PLI
Bill Stringer, Mike McKee, Mark Raymong: The 3 Stooges
Only looking at the resource from one perspective, or a non-balanced approach

The County's influence and resources should _____ in the management of this resource.

2.86 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

3.14 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

Wilderness is important to protect these resources for the future. People still have access to them so it is not
increasing county influence and resources only applies if the county is willing to increase wilderness, not oppo
It is good to have wilderness provides people with God places to hunt fish camp
Work with the state tourism to remind everyone of what is in their backyard as Utah residents
The Bishop Land Initiative and your support of it is a joke

WILDLIFE

Please rate your level of understanding of this resource in the County.

5.00 (average score: 1=no understanding, 5=expert understanding)

Please rate your level of satisfaction with the current management of this resource in the County.

4.00 (average score: 1=very unsatisfied, 5=very satisfied)

Strength in current management

State management oversight
Opportunities to access the properties where wildlife live
Great tradition and performance of state management of these resources and public support
UDWR does a pretty good job in managing wildlife

Weakness in current management

Policies impact proper management
Maintenance of access areas needs to be improved
Uintah County views on anything other than oil and gas uses on public lands
The deck appears to be stacked against wildlife in many cases

Opportunities associated with this resource

Support wildlife managers rather than oppose them all of the time.
Revenue to the county through helping people who love wildlife experiences spending time in the county.
Non-motorized recreation and tourism based upon these resources
The document has a little anti-wildlife tone. Its clear livestock is prefered by the County. Be neutral.

Threats to this resource

Unregulated and poorly planned development
Closing off access to prime wildlife areas.
Urbanization, oil and gas boom style expansion, County preoccupation with opposing Conservation
Wild horses are a threat and unregulated development.

The County's influence and resources should _____ in the management of this resource.

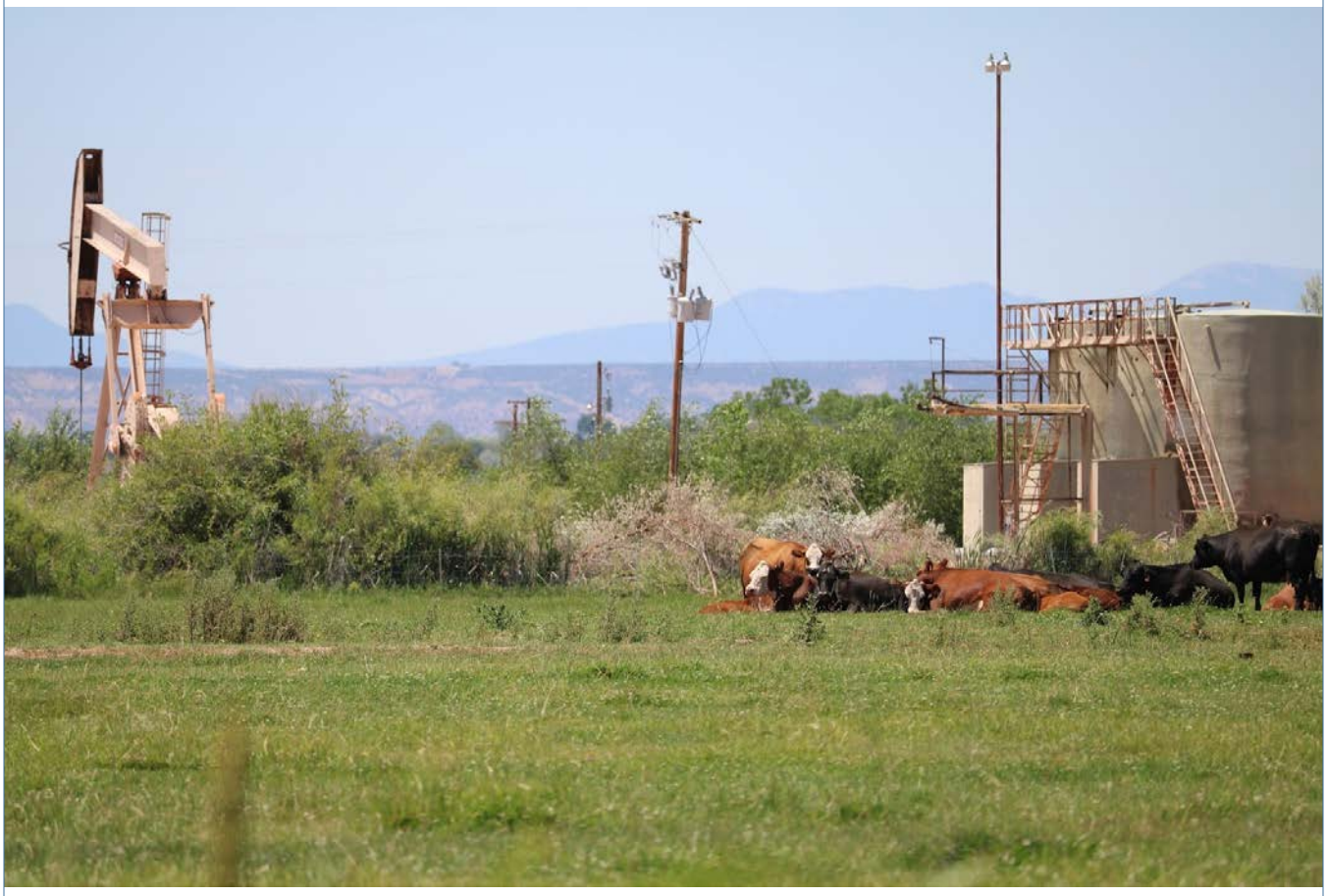
2.25 (average score: 1=decrease significantly, 5=increase significantly)

How should the County reallocate expenses in order to monitor this resource over time to ensure that selected management objectives are being reached and maintained?

2.25 (average score: 1=county should spend less, 5=should spend more)

Is there anything else you would like to tell the County about management of this resource?

State issue, NOT a County issue
Do all that you can to ensure that good access is provided to wildlife areas.
Uintah County has interferred with wildlife management for years - bison in Book Cliffs a great example. Supp
Wild horses are not wildlife. they should be addressed in their own section.



UINTAH COUNTY

RESOURCE MANAGEMENT PLAN, 2017

APPENDIX