

**Recommendation submitted to the Federalism Commission by the Public Lands Policy Coordinating Office (PLPCO) with respect to the State Resource Management Plan**

**Submitted: August 30, 2024**

As recorded in Utah Code § 63L-10-104

(2)

- (a) The office [meaning the Public Lands Policy Coordinating Office] shall, as funding allows, maintain a record of all state agency and political subdivision resource management plans and relevant documentation.
- (b) On an ongoing basis, state agencies and political subdivisions shall keep the office informed of any substantive modifications to their resource management plans.
- (c) On or before August 31 of each year, the office shall provide a report to the commission [meaning the Federalism Commission] that includes the following:
  - (i) any modifications to the state agency or political subdivision resource management plans that are inconsistent with the statewide resource management plan;
  - (ii) a recommendation as to how an inconsistency identified under Subsection (2)(c)(i), if any, should be addressed; and
  - (iii) a recommendation:
    - (A) as to whether the statewide resource management plan should be modified to address any inconsistency identified under Subsection (2)(c)(i); or
    - (B) on any other modification to the statewide resource management plan the office determines is necessary.

Text removed from the plan is shown in red, text added is blue, and text that is moved to a new location within the document is shown in green. The shades of red, blue, and green do vary slightly throughout the document, but they do not mean different things to the reader.

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## INTRODUCTION

1  
2  
3 Approximately 64 percent of the land within Utah’s borders is under the ~~ownership~~-control and  
4 administration of the federal government, and most of these “public lands” fall within the jurisdictions of  
5 the U.S. Bureau of Land Management (BLM) and ~~the U.S.~~ Forest Service (Forest Service). Since before  
6 statehood in 1896, this federal presence has greatly impacted the lives and livelihoods of Utah’s citizens  
7 and the local cultures that form the tapestry of rural Utah. On occasion, federal land management has  
8 failed to meet the needs and planning interests of local communities. State and county influence on the  
9 use and enjoyment of public lands has waxed and waned with political changes and an evolving federal  
10 land-management philosophy. With the advent of federal “preservation” policies and the corresponding  
11 environmental movement, tensions between federal land managers and state and local governments have  
12 mounted.

13  
14 This State of Utah Resource Management Plan (SRMP) [1] seeks to address and remedy these  
15 troublesome disconnects between local land use needs and desires and federal land-use planning, which  
16 have not been adequately addressed in the past.

17  
18 From the beginning of the settlement of Utah by European explorers and immigrants, the public lands  
19 have been the lifeblood of those hearty souls who sought new beginnings and, in most cases, sanctuary  
20 from persecution. The land was arid and forbidding, but it was also magnificent in its varied majesty and  
21 beauty. Through great hardship and an indomitable spirit and determination, these early settlers harnessed  
22 the scarce waters and cultivated the parched soil to create homesteads, farms, ranches, and the local  
23 communities that remain today. This community development was not by chance. Rather, it was planned  
24 and orchestrated by the territorial government; which, at that time, was dominated by the leadership of the  
25 Mormon church [The Church of Jesus Christ of Latter-day Saints]-~~church leadership~~. Land-use planning  
26 was prominent in the early settlement of rural Utah, and by the time of statehood in 1896, most of the  
27 rural communities that exist today were already established.

28  
29 Not only did the public lands provide the proving grounds for early homesteading, agriculture, and  
30 community development, but they also proved to contain vast mineral resources. While Mormon settlers  
31 were initially dissuaded from prospecting and mining for precious metals and metallic ores, it wasn’t long  
32 before non-Mormon soldiers and speculators began to extract those resources. Silver, gold, iron, and  
33 copper ores found on Utah’s public lands were soon being commercially developed. With the  
34 development of rail transportation, coal from central Utah replaced wood as the primary source of heat  
35 and steam combustion. The turn of the century saw the discovery of oil and gas in eastern Utah, uranium  
36 in southeastern Utah, and ~~g~~Gilsonite in central Utah. Timber also played an important role as a heat  
37 source and the primary constituent in construction. Once recreation and tourism ~~were thrown into the~~  
38 ~~mix~~emerged, public lands ~~virtually~~ dominated the settlement and growth of all of rural Utah.

39  
40 The combination of domestic industry, commercial use, and development of Utah’s public lands provided  
41 the economic stimulus that allowed rural Utah towns to mature into healthy, stable, and growing  
42 communities. This growth called for continual planning by federal, state, and local governments.

43  
44 Over the course of the decades following Utah’s statehood in 1896, federal land-use policy gradually  
45 shifted from one of disposal to one of preservation and conservation. Forests were preserved, national  
46 parks were created, and Utah’s range was placed under strict regulation. While ~~all~~ many of these changes  
47 served the public interest, each step in this process was accompanied by a corresponding diminishment in  
48 local authority over land-use determinations. State and county governments were typically required to  
49 adapt to federal land-use decisions over which they had no control and minimal input. Increasing  
50 limitations placed on access to and use of the public lands began to undermine the economies and stability  
51 of rural Utah as well as the cultural identities of communities. Frustration mounted, and tensions between

1 federal land-management agencies and rural communities worsened. This lack of cooperation and  
2 coordination wasn't felt only by state and local government; federal land-management agencies were also  
3 under a multitude of external and internal pressures.  
4

5 In 1964, the United States Congress recognized that federal land laws and regulations had developed  
6 somewhat haphazardly over the prior 100 years. There was no comprehensive cohesion and little  
7 coordination between land laws, land-management agencies, and the many existing regulations.  
8 Accordingly, Congress created the Public Land Law Review Commission (PLLRC) to review all federal  
9 land laws and regulations and make recommendations to Congress as to how they should be reformed.  
10 This report, appropriately entitled *One Third of the Nation's Land*, recommended "such modifications in  
11 existing laws, regulations, policies, and practices as will, in the judgment of the [PLLRC], best serve ...  
12 to provide the maximum benefit for the general public." Of particular emphasis in the PLLRC report was  
13 the need for future planning of land uses and the need to cooperate and coordinate with state and local  
14 governments in that planning process "because the effects of public land programs are felt most strongly  
15 there and it is at those levels..." Accordingly, the PLLRC recommended that state and local governments  
16 be given an "effective role" in the federal land use planning process. [2]  
17

18 It wasn't until 1976 that the recommendations of the PLLRC were enacted into law. In that year,  
19 Congress enacted the Federal Land Policy and Management Act (FLPMA) and the National Forest  
20 Management Act (NFMA), which remain the organic acts of the BLM and Forest Service. Both of these  
21 acts included the PLLRC's emphasis on planning and the requirement that state and local governments be  
22 meaningfully included in federal land-use planning processes. The FLPMA and, to a lesser degree,  
23 NFMA are supplemented by the National Environmental Policy Act (NEPA), which requires that federal  
24 land-use planning involve state and local governments, and that federal plans be "consistent" with state  
25 and local land-use plans (unless state and local plans violate federal law). This consistency requirement  
26 presupposes that such state and local land-use plans exist. Unfortunately, the State of Utah and most of its  
27 counties had not adopted comprehensive land-use plans prior to 2017. This update to the SRMP, and any  
28 changes to the 29 county resource management plans (CRMPs) that have been created since 2017, reflect  
29 ~~five~~ additional years of experience in writing state and local land-use plans in Utah and the  
30 corresponding attempts to improve coordination and cooperation with federal land-management  
31 agencies.  
32

33 State land-use planning in Utah has had a checkered history. In 1973, the Utah Legislature enacted a land-  
34 use planning statute that would have created a state commission to work with counties to craft local land-  
35 use plans pursuant to state guidelines. The law met strenuous opposition from real estate developers and  
36 property-rights activists, who successfully mobilized a referendum petition drive and, ultimately, struck  
37 down the law in a referendum election. Upon leaving office in 1977, Utah Governor Calvin L. Rampton  
38 declared that the failure of state land-use planning was his greatest regret. The issue was so contentious  
39 and resounding that the Utah Legislature did not revisit it until 2015, when it passed the law that led to the  
40 creation of this SRMP and the aforementioned 29 CRMPs. Utah House Bill 323, sponsored by Rep.  
41 Stratton and Sen. Okerlund, which was signed into law by Governor Gary Herbert on March 30,  
42 2015, (1) required each county in Utah to develop a resource management plan (RMP) as part of its  
43 general plan, (2) established content requirements for CRMPs, (3) required the State of Utah to provide  
44 information and technical assistance to counties, (4) required a county planning commission to coordinate  
45 with other counties, (5) established that a county's general plan serve as a basis for coordinating with the  
46 federal government, and (6) established administrative duties of the Governor's Public Lands  
47 Coordinating Office (PLPCO) to oversee and assist in the preparation of CRMPs.  
48

49 Utah House Bill 323 (amended in 2016 as HB0219) was passed during the 2016 general legislative  
50 session and required each county to produce a CRMP that contained ~~the following sections~~: agriculture;  
51 air quality; cultural, historical, geographical, and paleontological resources; ditches and canals; economic

1 considerations; energy resources; fire management; fisheries; flood plains and river terraces; forest  
 2 management; irrigation; land access; land use; law enforcement; livestock and grazing; mineral resources;  
 3 mining; noxious weeds; predator control; recreation and tourism; riparian areas; threatened, endangered,  
 4 and sensitive species; water quality and hydrology; water rights; wetlands; wild and scenic rivers;  
 5 wilderness; and wildlife.

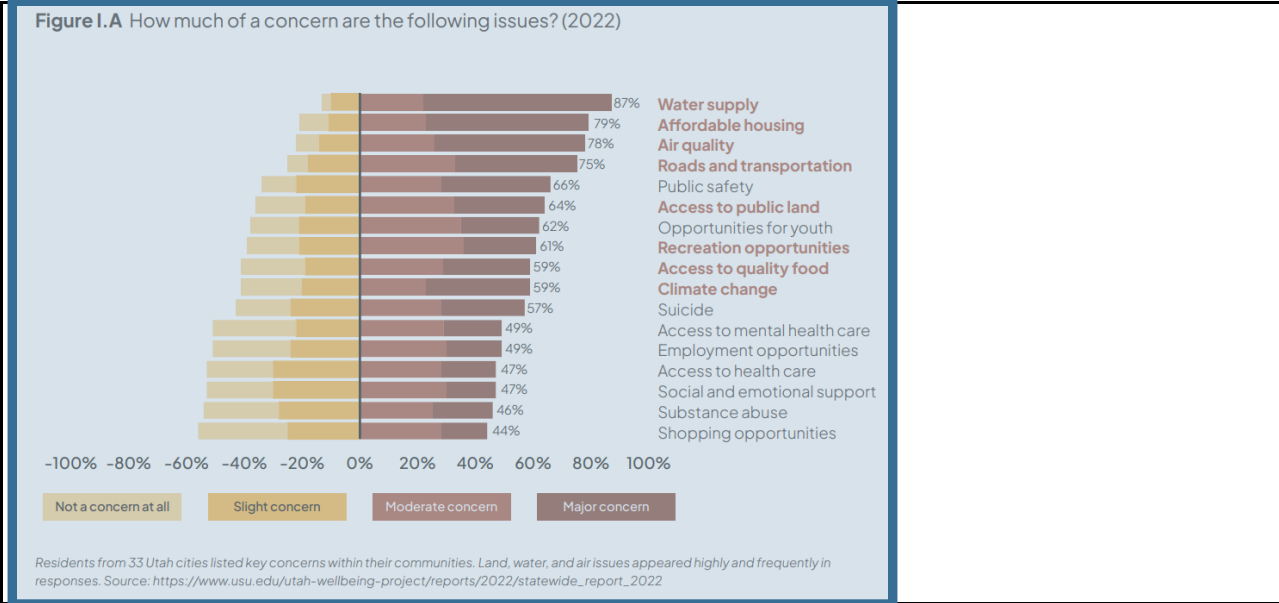
6  
 7 The original CRMPs were completed in 2017 and have undergone various amendments since they  
 8 officially became part of each county’s general plan.

9  
 10 Utah [Senate Bill 2 in 2021](#) appropriated funding to the PLPCO to be utilized to review the SRMP and the  
 11 CRMPs to address access to public lands, renewable energy resources, utility corridors, critical mineral  
 12 resources and rare earth elements, and pipeline and infrastructure [3]. Those amendments were  
 13 incorporated into the SRMP when Utah [House Bill 160](#) was signed by Governor Spencer Cox on March  
 14 21, 2022. The majority of the 29 CRMPs have also been updated to include this new information in 2022.  
 15 Additionally, [House Bill 39 in 2023](#) and [House Bill 76 in 2024](#) approved further amendments to the  
 16 SRMP ~~in 2023~~. So that federal agencies may access all of the RMPs at a single location, these plans are  
 17 available online at [rmp.utah.gov](http://rmp.utah.gov).

18  
 19 This SRMP is an aggregation of the land-use decisions and directives that are derived from the county  
 20 plans. It is PLPCO’s firm belief that this resource-planning initiative will give the State of Utah and its  
 21 counties greater and more meaningful input and direction with respect to federal land-use planning on  
 22 Utah’s public lands.

23  
 24 **Continually Gauging Public Perception and Concerns**

25  
 26 The Janet Quinney Lawson Institute for Land, Water, and Air at Utah State University, conducted a  
 27 survey to gauge public perception of key concerns for the residents of 33 Utah cities [4]. The majority of  
 28 the highest rated concerns are closely correlated to public lands access and active public land  
 29 management. The results of this study were addressed in the Annual Report to the Governor (2022  
 30 Report) as shown in Figure 1.A. below.



1 **Coordinating the Management of Utah’s Public Lands**

2  
3 The State of Utah supports the wise use, conservation, and protection of public lands and their resources,  
4 including well-planned management prescriptions. It is the state’s position that public lands must be  
5 managed for multiple\_uses, sustained yields, prevention of waste of natural resources, and to protect the  
6 health, safety, and welfare of the public.

7  
8 It is important to the state economy that public lands be properly managed for fish, wildlife, livestock  
9 production, timber harvest, recreation, energy production, mineral extraction, water resources, and the  
10 preservation of natural, scenic, scientific, and historical values.

11  
12 The cornerstone of this management is the coordination and cooperation between the State of Utah and  
13 federal land-management agencies. The state recognizes that federal agencies are mandated to manage  
14 public lands according to federal laws, policies, and regulations established within the framework of the  
15 U.-S. Constitution, including ~~the~~ FLPMA, NFMA, and NEPA.

16  
17 **State Sovereignty**

18  
19 Under the Tenth Amendment to the U.S. Constitution, the individual states retain their authority as  
20 sovereign except where specifically superseded by powers granted by the U.S. Constitution to the federal  
21 government (see U.S. Const. amend. X [“The powers not delegated to the United States by the  
22 Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.”]).  
23 “The Tenth Amendment confirms that the power of the Federal Government is subject to limits that may,  
24 in a given instance, reserve power to the States” (New York v. United States, 505 U.S. 144, 157 [1992]).  
25 In taking actions affecting states, the federal government must always consider whether an incident of  
26 state sovereignty is protected by a limitation on an Article I power (See, id.). The Tenth Amendment  
27 requires that the federal government treat the state as a sovereign entity—a separate government with  
28 unique and distinct powers to be consulted regarding matters pertaining to lands within its borders and  
29 affecting its citizens.

30  
31 **Federal Land Policy and Management Act (FLPMA)**

32  
33 The FLPMA (43 USC 1712(c)(9)) requires the BLM to coordinate plans with the land-use planning and  
34 management programs of the affected state and local governments. The act states the BLM’s land use  
35 plans “shall be consistent with State and local plans to the maximum extent [the ~~Agency~~Secretary] finds  
36 consistent with Federal law and the purposes of this Act.” [5]

37  
38 The BLM Land Use Planning Handbook clarifies that, “Section 202(c)(9) of FLPMA also requires, to the  
39 extent practical, that BLM keep itself informed of other Federal agency and state and local land use plans,  
40 assure that consideration is given to those plans that are germane to the development of BLM land use  
41 plan decisions, and assist in resolving inconsistencies between Federal and non-Federal plans. The key is  
42 ongoing, long-term relationships where information is continually shared and updated.”

43  
44 The BLM has the responsibility to ensure that consideration is given to those state, local, and ~~f~~Tribal  
45 plans that are germane in the development of land-use plans for public lands and to resolve, to the extent  
46 practical, inconsistencies between federal and non-federal governmental plans.

47  
48 **National Forest Management Act (NFMA)**

1 The NFMA (16 U.S.C. §1604(a)) requires that the Forest Service’s forest plans be “coordinated with the  
2 land and resource management planning processes of State and local governments and other Federal  
3 agencies.” [6]  
4

### 5 **National Environmental Policy Act (NEPA)**

6  
7 Under NEPA (42 U.S.C. § 4321), federal agencies are required to identify possible conflicts with state,  
8 local, and Tribal plans during the environmental-review process and determine the significance of the  
9 conflict. Where an inconsistency exists, the review should describe the extent to which the federal agency  
10 would reconcile its proposed action with the plan or law. [7]  
11

12 NEPA should analyze the potential benefits of a federal action, not just the negative impacts.  
13

### 14 **Cooperation**

15  
16 Under NEPA, all federal agencies must complete a NEPA analysis for proposed actions that are likely to  
17 cause impacts on the natural or human environment. Federal agencies can designate state and local  
18 governments to become formal partners in the NEPA process, as cooperating agencies. A state or local  
19 government can be a cooperating agency when it has special expertise with respect to any environmental  
20 impact involved in the project proposal. Cooperating-agency status gives the state or local government  
21 early input into NEPA analyses and some ability to shape the goals and framework of the federal  
22 proposal.  
23

24 Federal agencies should request participation of cooperating agencies in the NEPA process at the earliest  
25 possible time, using the environmental analysis and proposals of cooperating agencies with jurisdiction  
26 by law or special expertise, to the maximum extent possible when consistent with its responsibility as the  
27 lead agency.  
28

### 29 **Coordination**

30  
31 When creating land-use plans or ~~resource management plans~~RMPs, the BLM and Forest Service are  
32 required to coordinate their plans with state and local government plans. Coordination is a separate  
33 process from cooperation, and must occur regardless of whether state or local governments were  
34 designated cooperating agencies. Agencies must make efforts to draft federal plans that coordinate with  
35 state and local plans.  
36

37 The FLPMA provides a detailed baseline for the coordination process and identifies specific BLM  
38 actions, as follows:  
39

- 40 ● Remain informed of local land use plans;
- 41 ● Guarantee that local land use plans are given proper consideration;
- 42 ● Attempt to resolve inconsistencies between local and BLM land use plans; and
- 43 ● Provide meaningful involvement for local entities early and throughout the decision-making  
44 process.  
45

46 The NFMA requires the Forest Service to coordinate with local governments, but does not specify how  
47 the process of coordination is to be accomplished. Forest Service regulations require the following:  
48

- 49 ● Responsible officials must coordinate with local governments.
- 50 ● Responsible officials shall review local plans and policies that are relevant to the federal plan.  
51 The review will consider the objectives of local plans, the compatibility and interrelated impacts

1 between local and federal plans, opportunities to address impacts and contribute to joint  
2 objectives, and opportunities to resolve or reduce conflicts. This review must be included in  
3 NEPA documentation.

- 4 • The responsible official will not direct or control management of lands outside of the planning  
5 boundary.

## 6 **Consistency**

7  
8 Consistency between federal, state, local, and ~~tribal~~ Tribal plans is the desired outcome for the cooperation,  
9 coordination, and consultation processes required of federal agencies. The importance of cooperation,  
10 coordination, and consultation between state, local, and federal agencies during planning processes cannot  
11 be overstated. Early involvement and equal consideration in environmental reviews, as interdisciplinary  
12 team members, stakeholders, and cooperating agencies is the State of Utah’s main objective and  
13 motivation for creation of the ~~State Resource Management Plan~~ SRMP originally adopted on January 2,  
14 2018.

15  
16 It is the intent of the State of Utah that this SRMP and subsequent implementation plans shall be followed  
17 unless inconsistent with any statute or duly promulgated regulation. Should any part of this policy  
18 document or implementation plan be found inconsistent with such statute or regulation, or found by a  
19 court with competent jurisdiction to be void, unenforceable, or invalid, the remaining provision or parts  
20 shall nevertheless remain in full force and effect.

## 21 **Consistency Review**

22  
23 The ~~Federal Land Policy and Management Act (FLPMA) regulations~~ FLPMA requires that “resource  
24 management plans and amendments to management framework plans shall be consistent with officially  
25 approved or adopted resource related plans, and the policies and programs contained therein, of other  
26 Federal agencies, State and local governments, and Indian tribes...” and affords governors “60 days in  
27 which to identify inconsistencies and provide recommendations in writing to the State Director.” 43 CFR  
28 § 1610.3-2. [8]

29  
30 43 CFR § 1601.0-5 subsection (e) detailing the governor’s consistency review directly addresses  
31 “proposed resource management plans” and doesn’t mention guidance. Guidance means any type of  
32 written communication or instruction that transmits objectives, goals, constraints, or any other direction  
33 that helps the field managers and staff know how to prepare a specific resource management plan (43  
34 CFR § 1601.0-5). During a consistency review, the state reserves the opportunity to include guidance  
35 when challenging inconsistencies.  
36

## 37 **Consultation**

38  
39 ~~The requirements of~~ Coordination and consistency are required by **statutory law** as contained in FLPMA.  
40 On the other hand, cooperation and consultation are derived from **regulatory law** found at 40 CFR §1501.8  
41 [9]. The cooperating agency regulations were promulgated under authority of NEPA to aid in the  
42 implementation of NEPA analyses. The cooperating agency regulations allow for a “state, tribe or local  
43 agency” to become a **cooperating** agency if they have “special expertise with respect to any environmental  
44 issue.” These same regulations put very strict parameters on what input a cooperating agency may have in  
45 the planning process and in the development of environmental documents, including the right to:  
46

47 *“consult with the lead agency in developing the schedule...meet the schedule, and*  
48 *elevate, as soon as practicable, to the senior agency official of the lead agency any*



1 *issues relating to purpose and need, alternatives, or other issues that may affect*  
2 *any agencies' ability to meet the schedule."*

3 In addition to the NEPA consultation requirements, there are also specific consultation  
4 requirements imposed by the National Historic Preservation Act of 1966 ("NHPA") and  
5 its implementing regulations if an action constitutes a federal undertaking. Under Section  
6 106 of the NHPA, federal agencies must "take into account the effects of their undertakings  
7 on historic properties" and engage in meaningful consultation with the appropriate Tribal  
8 or state agency (~~here~~in this case, the Utah State Historic Preservation Office ~~or~~ "[SHPO"]).  
9 Overall, "[t]he goal of consultation is to identify historic properties potentially affected by  
10 the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse  
11 effects on historic properties." However, for purposes of NEPA planning, the CEQ  
12 regulations on consultation are most pertinent here, as the NHPA Section 106 consultation  
13 typically occurs outside of the NEPA planning process

#### 14 Environmental Justice Considerations

15  
16 Active management of our public lands can have positive impacts in relation to environmental  
17 justice and should be addressed during the planning process.

18  
19 In 2023, President Biden issued Executive Order 14096 which directed the Federal  
20 Government to build upon and strengthen its commitment to deliver environmental justice to  
21 all communities across America through an approach that is informed by scientific research,  
22 high-quality data, and meaningful Federal engagement with communities with environmental  
23 justice concerns.

24  
25 The Environmental Protection Agency (EPA) developed the Environmental Justice Screening  
26 and Mapping Tool (interactive) to help quantify and identify locations where environmental  
27 justice concerns may exist in the United States. The Utah Department of Workforce Service,  
28 the Utah Division of Multicultural Affairs, and others state and local entities can help to  
29 improve and confirm the accuracy of data in an effort to avoid, minimize, or mitigate  
30 environmental justice concerns.

#### 31 32 Environmental Justice Objectives:

- 33
- 34 • The State urges the federal government to carefully consider the magnitude and nature  
35 of a proposed action, as well as past planning, research, and studies when it defines  
36 environmental justice study areas.
    - 37 ○ These areas should encompass environmental justice populations potentially  
38 affected by a proposed action and they should avoid encompassing  
39 unnecessarily large or irrelevant areas where analyses will be meaningless or  
40 where it will produce uncertain results that may lead to the erroneous  
41 determinations of effect.
  - 42 • The state encourages the federal government to first analyze potential health, social,  
43 and economic effects – both positive and negative – on the study area's entire  
44 population, then assess whether environmental justice populations will be adversely,  
45 disproportionately, or positively affected by a proposed action.
    - 46 ○ The scientific approach should be implemented to promote and consider ideas  
47 that are testable (or repeatable), without regard to a particular perspective,  
48 cultural bias, or preferred outcome.

1 **State Code**

2  
3 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
4 *following are selected portions of the Utah State Code and do not represent every potential legal*  
5 *reference in the Code related to this section of the SRMP or the administration of public lands.*  
6

7  
8 **Public Lands Policy Coordinating Office**

9  
10 **§ 63L-11-201. Public Lands Policy Coordinating Office - - Executive Director - -**  
11 **Appointment - - Qualifications - - Compensation.**

12  
13 **§ 63L-11-202. Powers and duties of the office and executive director.**

14  
15 **§ 63L-11-203. Resource management plan administration.**

16  
17 **Office Duties Related to Federal Land**

18  
19 **§ 63L-11-301. Office duties related to plans for the management of public lands.**

20  
21 **§ 63L-11-302. Principles to be recognized and promoted.**

22  
23 **§ 63L-11-303. Findings to be recognized and promoted.**

24  
25 **§ 63L-11-304. Public lands transfer study and economic analysis - - Report.**

26  
27 **§ 63L-11-305. Facilitating the acquisition of federal lands.**

28  
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41 9. 40 CFR §1501.8  
42

## ECONOMIC CONSIDERATIONS

### Introduction

Utah is a state rich in land resources, most of which are owned and managed by federal agencies. Like many other western states, land ownership in Utah is characterized by large areas of federally controlled land intermingled with state-owned and privately-owned lands.

Of Utah's 52.7 million acres, federal agencies manage 33.2 million acres (63%). Most of this federally managed land is administered by two federal agencies: the U.S. Bureau of Land Management (BLM) and U.S. Forest Service (Forest Service). Other federal agencies, which manage much smaller areas of Utah, include the National Park Service (NPS), U.S. Department of Defense, U.S. Fish and Wildlife Service (USFWS), U.S. Department of Energy, and U.S. Bureau of Reclamation (BOR). Twenty-four percent of Utah's lands are in private ownership, which includes county and municipal lands. Tribal lands account for 4.5 percent of the total. Utah state government agencies own and manage the remaining 10 percent of the land in the state.

Almost any project, particularly in rural areas, is dependent on resources located on or derived from federal lands. Any change in management or policy can have far-reaching impacts on the area's local economy and must be evaluated to identify and mitigate potential impacts. The BLM's Socioeconomics Strategic Plan (2012–2022) [1] outlines the importance of analyzing socioeconomic impacts not only to meet the legal requirements of the National Environmental Protection Act (NEPA) and the Federal Land Policy and Management Act (FLPMA), but also to better plan, manage, and coordinate with states and local communities.

Natural resources contribute significantly to Utah's economy. Federal land-management policies have dramatic impacts on industries reliant on federal land. With 63 percent of the state under federal land management, the terms cooperation, coordination, consultation, and consistency as discussed in the preceding *Introduction* section of the State Resource Management Plan (SRMP) are imperative to Utah's continued economic success.

Federal agencies must consider the socioeconomic impacts of their actions and are required to evaluate these impacts through the NEPA-compliance and documentation process. Additionally, FLPMA requires federal agencies to "use a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences." [2]

The Socioeconomics Strategic Plan highlights the need to integrate the economic impacts into management decisions and the consider social values important to local communities, such as the traditional uses of timber and grazing, and how those industries remain essential parts of community identification. [3]

Because federal land is inextricably tied to the economy of Utah and to the livelihood of many rural communities, close coordination with federal land-management agencies with regard to socioeconomic impacts is a key objective tied to each of the resources covered in this document.

### Findings

Federal land and environmental policies provide broad land-management guidelines. The interpretation and implementation of these policies are subject to the interpretation and principles of U.S. cabinet secretaries and agency directors. The inconsistency in guidance as these positions change has a direct impact on how the resources in Utah are managed and, thus, on the economy of Utah.

1 Federal actions generally require NEPA compliance and documentation, such as environmental impact  
2 statements. Any delay in the NEPA process can have economic impacts. According to the U.S.  
3 Government Accountability Office (GAO), the average environmental impact statement takes over 4  
4 years to complete [4]. The loss of potential revenue due to inefficient NEPA analyses and completion can  
5 be significant, particularly to communities reliant on public lands.

## 6 7 **Congressional Review Act**

8  
9 The Congressional Review Act (CRA) is a tool that Congress may use to pass legislation overturning a  
10 rule issued by a federal agency [5]. When Congress passes a law, it often grants rulemaking authority to  
11 federal agencies to implement provisions of the law. That delegation of rulemaking authority, and the  
12 rules issued by federal agencies under this authority, is a crucial component of the policymaking process.  
13 Congress has an interest in ensuring that federal agencies, when issuing rules, are faithful to congressional  
14 intent. To conduct oversight of federal agency actions, Congress has a number of tools available,  
15 including the CRA.

16  
17 The CRA was enacted in 1996 as part of the Small Business Regulatory Enforcement Fairness Act. Under  
18 the CRA, before a rule can take effect, an agency must submit the rule to Congress and the ~~Government~~  
19 ~~Accountability Office (GAO)~~. Upon receipt of the rule by Congress, ~~M~~members of Congress have a  
20 specified time period during which to submit and act on a joint resolution of disapproval overturning the  
21 rule. If both houses pass the joint resolution, it is sent to the President for signature or veto. If the  
22 President were to veto the joint resolution, Congress could vote to override the veto. Enactment of the  
23 joint resolution would take the rule out of effect or prevent it from going into effect, and the agency  
24 would be prohibited from issuing a rule that is “substantially the same” without further authorization from  
25 Congress.

26  
27 The CRA defines a “major rule” as any rule that the Administrator of the Office of Information and  
28 Regulatory Affairs ~~{(OIRA)}~~ of the Office of Management and Budget ~~{(OMB)}~~ finds has resulted in or is  
29 likely to result in— ~~(A1)~~ an annual effect on the economy of \$100,000,000 or more; ~~(B2)~~ a major  
30 increase in costs or prices for consumers, individual industries, ~~F~~federal, ~~S~~state, or local government  
31 agencies, or geographic regions; or ~~(C3)~~ significant adverse effects on competition, employment,  
32 investment, productivity, innovation, or ~~on~~ the ability of United States-based enterprises to compete with  
33 foreign-based enterprises in domestic and export markets.

34  
35 The State of Utah supports not increasing the CRA above the \$100,000,000 threshold to ensure that the  
36 annual effect of any federal action does not significantly affect state and local consumers, industries,  
37 citizens, or governments. Furthermore, the ~~S~~state encourages OIRA to continue reviewing federal actions  
38 for an annual effect on the economy of \$100,000,000 per year (or more). This threshold should not be  
39 increased for any federal action pertaining to, or not pertaining to, the CRA. Impacts below this amount  
40 may still be significant at the state and local levels.

## 41 42 **Public Land Revenues**

43 Revenues produced on public lands in Utah are significant. In 2013, the *Analysis of a Transfer of Federal*  
44 *Lands to the State of Utah* report showed that a total of \$331.7 million was generated on lands managed  
45 by the BLM and Forest Service in Utah [6]. There is a need to periodically recalculate this economic  
46 impact for policy and planning purposes.

1 The BLM and Forest Service also collect land-based revenues and receipts. These include, among other  
2 things, recreation fees, rights-of-way rents, grazing fees, and receipts from timber sales. In 2013, these  
3 totaled almost \$24 million [7].

4 Of the \$331.7 million in revenue generated on public lands in 2013, Utah and its counties received \$149.8  
5 million, or 45.2 percent of the total. Historically, Utah received 50 percent of the mineral-lease royalties,  
6 less a small processing fee paid to the Office of Natural Resources Revenue, an office within the U.S.  
7 Department of the Interior that collects all mineral lease monies generated on federal lands. Royalty rates  
8 are periodically adjusted by Congress [8]. In addition to the payments noted above, Utah counties  
9 received a total of ~~\$46,208,003~~ \$49,485,303 in payments in lieu of taxes (PILTs) in 2023 [9]. ~~PILT~~  
10 ~~payments~~ Payments from PILTs help local governments carry out such vital services as firefighting and  
11 law enforcement, construction of public schools and roads, and search-and-rescue operations. Counties  
12 receive PILT payments annually for tax-exempt federal lands administered by the BLM, NPS, USFWS  
13 (all bureaus of the Interior Department), Forest Service (part of the U.S. Department of Agriculture), ~~and~~  
14 ~~for~~ federal water projects, and some military installations [10].

15  
16 The BLM makes other payments to states based on the share of the revenues generated on its lands in  
17 those states. In Utah these consist of revenues from oil and gas pipeline rights-of-way rentals, grazing  
18 district fees (per the Taylor Grazing Act), and sales of public lands and materials (e.g., timber and other  
19 forest products). Historically, Utah has received 50 percent of proceeds from oil and gas pipeline rights-  
20 of-way rentals, 12.5 percent from grazing, and 4 percent of proceeds from the sale of land and materials.  
21 The funds from oil and gas pipeline rights-of-way rentals are processed by the Department of Workforce  
22 Services and distributed in the same manner as mineral lease royalties. Receipts from the Taylor Grazing  
23 Act go to the Utah Department of Agriculture and Food (UDAF). The UDAF then pays \$22,500 to the  
24 Utah Cattlemen’s Association for the grazing regions’ Public Lands Council dues and distributes the  
25 remainder to the six regions to be used for range improvements.

26  
27 Proceeds from land and material sales (or leases) are deposited into the School Permanent Fund by the  
28 State of Utah School and Institutional Trust Lands Administration (SITLA) [11].

29  
30 In March ~~of~~ 2020, the Great American Outdoors Act (GAOA) was passed to provide funding to federal  
31 land-management agencies to offset the maintenance backlog on public lands. Please refer to the *Land*  
32 *Use and Outdoor Recreation, Tourism, and Film* sections of this document for more specific information  
33 on the GAOA.

### 34 35 **Economic Impacts of Activities on Public Lands**

36  
37 Public lands are used for many purposes in Utah and accessed by tens of millions of people each year. In  
38 addition to mineral and energy extraction, public lands are used for recreation (e.g., hunting, fishing, and  
39 wildlife watching), forage, grazing, and timber production. These activities contribute to Utah’s economic  
40 wellbeing by supporting jobs, generating earnings for Utah residents, and providing tax revenue for the  
41 state. The latest economic reports to the [Utah](#) Governor’s Office contain the most recent economic  
42 impacts statewide and are released on an annual basis by the Kem C. Gardner Policy Institute at the  
43 University of Utah [12]. ~~In 2013, activities on federal lands supported almost 29,000 jobs in Utah,~~  
44 ~~generated \$1.49 billion in earnings, and contributed \$7.1 billion to Utah’s gross state product.~~

### 45 46 **Economic Growth and Public Lands**

47  
48 While public lands are highly valued from a qualitative perspective, the degree to which they contribute  
49 to economic growth at the county level is not well understood. A study by Utah State University and  
50 Weber State University showed that modest amounts of land owned by the federal government and

1 managed for general use (also referred to as “multiple-use”) are associated with faster economic growth  
2 in counties, while large amounts of federal land managed for general use are associated with a “drag” on  
3 economic growth. The tipping point, at which the drag begins, is specific to each county but, generally  
4 speaking, it occurs when 40 to 45 percent of the county’s land is owned and managed for general use by  
5 federal agencies. This relationship is strongest for income growth and migration and weakest for  
6 employment growth. Twenty of Utah’s 29 counties exceed this threshold. [13]

7  
8 The amount of state-owned land managed for general use does not aid economic growth until that amount  
9 has reached a critical mass of about 15 percent of the county’s total area. After that point, state  
10 management is associated with faster economic growth. Four of Utah’s counties have state-owned land in  
11 amounts greater than 15 percent. [14]

12  
13 In the study, when all other factors were equal counties with well-developed mining sectors were shown  
14 to have faster income growth than counties without ~~a dominant mining sector, when all other factors were~~  
15 ~~equal~~. Counties with relatively well-developed recreation sectors were shown to have greater migration,  
16 employment, and income growth than counties without, all other factors being equal. However, it is  
17 important to note that these activities are not mutually exclusive. The dataset used in the model includes  
18 counties that have both large recreation and well-developed mining sectors, demonstrating that framing  
19 economic development choices as “resource use vs. recreation” is a false dichotomy. [15]

## 20 21 **Broadband Internet**

22  
23 As high-speed internet connections become increasingly important for economic development, education,  
24 healthcare, public safety, and general quality of life, it is essential that management plans address the  
25 development of broadband infrastructure throughout Utah. The need for reliable and redundant broadband  
26 is growing as rapidly as the tech industry itself, and governments must work with broadband providers  
27 collaboratively to prepare for the growing need. Broadband infrastructure must be deployed with the  
28 capacity to adapt to evolving technologies.

29  
30 The Utah Broadband Center [16] in the Utah Governor’s Office of Economic Opportunity **Development**  
31 is a state program focused on mapping available broadband services and promoting the development of  
32 additional infrastructure in Utah. Communities can work with the Uniform Business Organizations Code  
33 (UBOC) as a resource for planning assistance. The UBOC can provide supporting informational data and  
34 resources to implement favorable policies into practice and can assist with planning activities. The UBOC  
35 maintains two interactive broadband maps that show the current state of broadband availability in Utah.  
36 The UBOC also maintains an economic development map, which allows users to explore the state in  
37 detail. Businesses can use this map to scout for locations using interactive data on the following:

- 38
- 39 ● Broadband availability
- 40 ● Utility information (natural gas, electricity, culinary water)
- 41 ● Transportation (rail lines, airports, major roads)
- 42 ● Workforce (higher-education institutions)
- 43 ● Recreation (state and national parks, ski areas, golf courses)
- 44 ● Health care facilities
- 45

46 Federal land-management agencies also play a critical role in successful broadband deployment. It is  
47 important for these agencies to approach planning in a methodical and efficient way so that underserved  
48 county residents gain access to broadband, public lands are minimally disturbed, and service providers  
49 can engage in deploying services that benefit Utah’s counties. In considering future resource management  
50 planning, the priorities listed below are recommended to further the growth of broadband services in  
51 Utah.

1 Broadband Priorities

- 2
- 3 ● Make federal data relevant to broadband planning projects readily available to states, counties,
- 4 local governments, and broadband providers.
- 5 ○ Maintain an online inventory and map of federal assets that communities can utilize in
- 6 broadband planning efforts.
- 7 ○ Corridors that have undergone NEPA evaluation and have received approval for
- 8 proposed utility infrastructure projects are likely to be targeted for future broadband
- 9 deployment. These data would help providers target areas for development that are likely
- 10 to pass environmental review, and limit the burden on public lands.
- 11 ○ GIS shapefiles of areas that have undergone NEPA environmental review and previously
- 12 disturbed areas should be made available online to state, county, and local GIS
- 13 departments so they can use this information in planning efforts.
- 14 ○ In recreation areas that track visitation based on fees or permits, ~~we~~it's recommended that
- 15 visitation rates be used in conjunction with broadband coverage data to prioritize high-
- 16 use areas. Areas where visitors cannot be tracked but are known to have high usage
- 17 should also be included. These areas may include locations where activities such as
- 18 agriculture, grazing, fishing, hunting, hiking, rock climbing, cycling, ATV use, and
- 19 industry exploration, ~~and other activities~~ are known to occur.
- 20 ● Encourage utilization of and access to federally designated communications sites and work with
- 21 providers to designate new sites.
- 22 ● Streamline permitting to encourage broadband deployment.
- 23 ● Increase agency capacity ~~in order~~ to prioritize telecommunications and broadband permitting.
- 24

25 **Goals, Objectives, and Policies**

26 **Goal(s):**

27  
28  
29 Ensure the economic viability of the State of Utah and access to Utah’s public lands that play a significant  
30 role in the state and local economy.

31 **Objectives:**

32  
33  
34 The State of Utah has the following six objectives to enhance the quality of life by increasing Utah’s  
35 revenue base and improving employment opportunities:

- 36
- 37 1. Monitor, improve, and promote the economic health of both urban and rural communities
- 38 throughout Utah.
- 39 2. Attract new investors and companies while supporting the expansion of existing Utah businesses.
- 40 3. Assist entrepreneurs in Utah and engage under-represented populations in starting new companies
- 41 and growing them.
- 42 4. Expand tourism in Utah and the infrastructure to support it.
- 43 5. Encourage film production in the state.
- 44 6. Support and leverage both partner agencies and community leaders to create proactive, unique
- 45 economic development solutions statewide.
- 46

47 The State of Utah has identified the need for areas with large amounts of public lands and natural  
48 resources to diversify and thus balance out cyclical and seasonal commodity and industry cycles. The  
49 state’s priority goals for remote, rural-county economies include increasing the export capacity of existing  
50 companies, leveraging broadband resources for remote and/or freelance work, and grow the local-

1 business sector through increased support of entrepreneurship, and unprecedented collaboration between  
2 counties (urban and rural), regions, the State of Utah, the federal government, and private sector.

3  
4 **Policies:**

- 5  
6 • Support the use of a streamlined NEPA compliance and documentation process and, when  
7 possible, the utilization of more-timely environmental assessments (EAs) and categorical  
8 exclusions (CEs) instead of time-consuming environmental impact statements.  
9 • Support the continuation, full funding, and enhancement of the PILT program.  
10 • Support the full funding of the Secure Rural Schools program in Utah.  
11 • Support the increase of exports from rural Utah.  
12 • Encourages federal agencies to equally consider social and biological issues on lands they  
13 manage. Every federal management decision should ask:  
14 ○ What are the possible impacts on people?  
15 ○ How can we measure them?  
16 ○ What is the desired social and economic condition?  
17 • Encourage federal agencies to consider the economic impacts of their management decision to  
18 determine:  
19 ○ Effects on both traditional and new industries.  
20 ○ Effects on both the regional and local economy.  
21 ○ Effects on both local and non-local businesses.  
22 • Encourage federal agencies to consider:  
23 ○ Intertwined cultural and social effects linked to certain industries and businesses.  
24 ○ Long-term sustainability, certainty, and diversification of industries and businesses.  
25 • Support the coordination of economic development efforts between federal agencies and local  
26 communities.  
27 • Encourage federal agencies to hire and promote staff locally.  
28 ○ Retention of local resource knowledge and best-management practices are important for  
29 local relationships and resource management  
30 • Encourage federal agencies to collaborate with local universities to create internships and  
31 opportunities for students to gain a better understanding of local resources.  
32

33 **State Code**

34  
35 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
36 *following are selected portions of the Utah State Code and do not represent every potential legal*  
37 *reference in the Code related to this section of the State Resource Management Plan or the*  
38 *administration of public lands.*

39  
40 **Public Lands Planning**

41  
42 **§ 63L-11-302.** *Principles to be recognized and promoted.*

43  
44 **§ 63L-11-303.** *Findings to be recognized and promoted.*

45  
46 (3) transportation and access routes to and across federal lands, including all rights-  
47 of-way vested under R.S. 2477, are vital to the state's economy and to the quality of life  
48 in the state, and must provide, at a minimum, a network of roads throughout the resource  
49 planning area that provides for:

50 (a) movement of people, goods, and services across public lands;



- 1 (b) reasonable access to a broad range of resources and opportunities  
2 throughout the resource planning area, including:  
3 (i) livestock operations and improvements;  
4 (ii) solid, fluid, and gaseous mineral operations;  
5 (iii) recreational opportunities and operations, including motorized  
6 and non-motorized recreation;  
7 (iv) search and rescue needs;  
8 (v) public safety needs; and  
9 (vi) access for transportation of wood products to market;  
10 (c) access to federal lands for people with disabilities and the elderly;  
11 (d) and access to state lands and school and institutional trust lands to  
12 accomplish the purposes of those lands;  
13

#### 14 **State Land Use and Management Plan for Federal Lands**

15  
16 ~~§ 63L-8-104.~~ *State land use planning and management program.*  
17

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# AGRICULTURE

## Introduction

Agriculture is of prime importance to the state of Utah. A variety of agricultural operations can be found in all counties in the state. Indigenous American groups began agricultural activities in Utah at least 1,300 years ago, with focus on maize (corn), squash, and beans. These groups, known as the Ancestral Puebloan and Fremont peoples, created vibrant and diverse cultures that spread across the entire area that would become Utah.

A second wave of agriculturalists arrived with members of the Church of Jesus Christ of Latter-day Saints in 1847. Within two decades, dozens of agrarian communities formed along the Wasatch Front and expanded into most of the rest of Utah. The construction of irrigation ditches and canals helped agricultural operations expand and support major population increases.

More recently, as rapid urbanization occurs along the Wasatch Front, agricultural lands are being replaced by housing and other development. In 2021, the Utah Department of Agriculture and Food published the Centennial Strategic Plan as a means to promote, preserve, and protect agriculture in Utah.

## Findings

In Utah, ~~18,409~~17,386 farms encompass ~~10,811,604~~10,494,923 privately owned acres of land, for an average farm size of ~~587~~604 acres. Of that land, ~~1,062,894~~1,444,097 acres are cropland (~~9.8~~13.8 percent) and ~~8,722,224~~8,405,207 acres are permanent pasture and rangeland (80.71% ~~percent~~) [1]. A substantial variety of farms exist, ranging in size from approximately 11,000 small operations to 270 operations that are valued at more than \$1 million each [2].

Of Utah's 10.85 million acres of farmland, ~~1,097,219~~853,471 acres are irrigated. Of that irrigated portion, approximately ~~94~~78 percent is harvested cropland and ~~22~~6 percent is pasture [3]. Most of the non-irrigated farmland is rangeland, though some parts of the state are able to support dryland cultivation of small grains.

The US Bureau of Land Management (BLM) and the US Forest Service (Forest Service) are primarily responsible for administering rangelands in Utah. Currently, 45-million acres of grazing land is located in Utah—73 percent is federally owned, 9 percent is state owned, and 18 percent is privately owned [4]. Of the federal land that permits grazing, 67 percent is managed by the BLM [5].

An ~~A~~animal-~~u~~Unit ~~Months~~month (AUM) or HM (~~H~~head ~~M~~month)—treated as equivalent measures for fee purposes—is the use of public lands by one cow and her calf, one horse, or five sheep or goats for a month [6]. While most livestock grazing in Utah occurs on federal lands, grazing has declined by more than 66 percent on BLM lands and approximately 50 percent on US Forest Service lands. Most of the decline in public land grazing has occurred in the sheep industry, which has experienced dramatic reductions within Utah. In 1930, Utah's sheep and lamb population reached almost 3,000,000 animals, compared to 300,749 animals in 2017. The total amount of public lands grazing on BLM land during this same period decreased from 2,749,000 (AUMs) to less than 675,000 AUMs, including both cattle and sheep, while grazing on Forest Service land decreased HMs from 2,700,000 HMs to 614,000 HMs [7].

The grazing fees for 2023 were \$1.35 per AUM on BLM lands and \$1.35 per HM on Forest Service lands to be paid by a permittee or lessee. These fees do not account for additional surcharge rates (\$6.18/AUM

1 in Utah) for livestock grazing on an allotment owned by anyone other than the permittee or lessee. A fee  
2 of \$19.00 per AUM can also be charged for non-willful unauthorized grazing use [8].

3  
4 There are ~~8,026~~7,252 cattle and calf operations in Utah. Of the total cattle and calf operations, ~~6,508~~5,774  
5 are considered beef cow operations. There are an estimated ~~764,725~~726,000 head of cattle and calves in  
6 Utah, which is down ~~42,408~~37,725 from the 2012~~7~~ census. Beef cows make up ~~358,00~~331,000 head,  
7 while milk and dairy cows make up ~~97~~4,000 head [9].

8  
9 Utah’s sheep industry is ranked fifth largest in the nation with 1,248 sheep or lamb operations. All sheep  
10 and lambs within Utah are estimated to total ~~28~~25,000 head [10].

11  
12 Agriculture within the state of Utah is important for the natural, cultural, social, and economic benefits  
13 that it provides. Agriculture successfully balances multiple needs between different stakeholders while  
14 providing a valuable source of local jobs and income. Utah agriculture results in the following  
15 benefits: jobs, local tax bases, multiple environmental benefits, scenic beauty and open space, food and  
16 fiber for human consumption, and fuels-active land management.

17  
18 According to the Agriculture section of *Utah’s Vision for 2050*, “Utahns envision feeding their  
19 families with healthy, high-quality food grown in Utah. They see an abundance of locally grown  
20 products as part of a healthy lifestyle that will improve the quality of life for them and future  
21 generations. Utahns also envision being more self-reliant and less dependent on other states and  
22 countries to provide their food. They also want a future in which Utah’s food industry provides jobs  
23 across the state.” [11]

24  
25 Also, according to Utah’s Vision for 2050, “Many of the best soils and climates for growing fruits and  
26 vegetables are located along the Wasatch Front, where urban growth is pressuring the conversion of  
27 farmlands into housing, businesses, and communities. As a result, the acreage of fruit production was cut  
28 in half between 1987 and 2006, and the trend is continuing at a rate that will eliminate almost all of Utah’s  
29 orchards by 2050.” [12]

30  
31 To maintain Utah’s high-quality agricultural production, a variety of resources must be managed to  
32 strike a balance between development and agriculture. “Significant water resources have historically  
33 been devoted to agricultural production. However, in the face of competing demands for water from  
34 Utah’s current urbanization trends and land use transitions, the multiple social values supported by  
35 water allocated to agriculture are too often overlooked. These values include security of local food  
36 production, sustaining rural Utah economies and communities, preserving open space in increasingly  
37 urbanized areas, improved capacity for both drought management and flood control, and other  
38 ecosystem services such as providing wildlife habitat and buffering wetlands and other critical lands  
39 from impacts of urban development.” [13]

## 40 41 **Economic Considerations**

42  
43 In 2020~~1~~, Utah’s agricultural sector production had a value of ~~\$2,122,720,000~~2,257,122 [14]. ~~However,~~  
44 ~~2018 data shows that~~ net farm income ~~dropped to \$470.8 million, a decrease from \$541.3 million in~~  
45 ~~2013~~[15] in 2023 was \$330,889 million. [15].

46  
47 Utah’s animal industry is the largest within its agricultural sector, bringing in more than ~~\$1.4~~1.6 billion  
48 in cash receipts. The livestock and cattle industry are the largest contributor to the animal industry  
49 followed closely by the pork industry [16].

1 In 2015, crop production brought in over \$449.627 million in cash receipts. Feed crops and hay were the  
2 two largest contributors to the crop-production industry [17].

3  
4 A 2014 report published by Utah State University details the significant contributions of agriculture to  
5 the state economy. The combined agricultural processing and production sectors account for 15  
6 percent of the state's total economic output, or \$21.2 billion, after adjusting for multiplier effects. [18]

7  
8 The estimated \$2.3 billion value of agriculture is concentrated in Utah's rural counties due to the  
9 availability of affordable farmland and the high percentage of federally owned land used for grazing  
10 within these counties. The economic value that agriculture brings to Utah's rural counties is vital  
11 because residents in those areas have a much lower median household income in comparison with the  
12 more-populated areas of the state. [19]

13  
14 Utah's level of agricultural employment is at approximately the same level as 1970, showing a relatively  
15 stable number of jobs within the industry. Currently, farm jobs constitute approximately 1.0 percent of  
16 Utah's total employment, contributing 20,552,21,081 jobs to Utah's economy [20]. Of the total  
17 agricultural employment, 15,766,15,598 jobs (0.89 percent of total employment) are farm proprietors [21].  
18 The majority of individuals employed in agriculture are small business owners who create jobs and  
19 generate revenue within the more-rural and generally less-affluent areas of the state.

20  
21 In 2013, animal-production jobs averaged an annual salary of \$38,526,42,800 [National average:  
22 \$44,463,49,101] while crop-production jobs averaged \$32,762,36,027 [National average: \$40,116,43,536],  
23 for an overall average of \$35,933,39,413.50 [22]. From 1990 to 2020, wages increased by 32.8 percent in  
24 animal production and 51.7 percent in crop production [23].

## 25 26 **Goals, Objectives, and Policies**

### 27 28 **Goal(s):**

- 29  
30 • To support the development of Utah's agriculture industries by promoting, preserving, and  
31 protecting agricultural production to ensure an abundant supply of locally produced foods and  
32 fibers for all Utahns.

### 33 34 **Objectives:**

- 35  
36 1. Continue to allow and increase access to public lands for agricultural use in a manner that, (1)  
37 satisfies local needs and provides for economical and environmentally sound agricultural  
38 practices, and (2) is consistent with and complementary to Utah's lifestyle, character, culture,  
39 heritage, and economy.
- 40 2. Expand the potential use of federal lands for the production of all food and fiber products,  
41 including crop production, in cases where such uses are acceptable to the public and are feasible.
- 42 3. Ensure proper and active management of public-land watersheds; which, supply most of Utah's  
43 agricultural and residential water.
- 44 4. Improve vegetative health on public and private lands through active management of invasive  
45 plants and noxious weeds.
- 46 5. Ensure that Utah's water-use planning and management considers agriculture's role within the  
47 entire social, economic, and natural systems landscape.
- 48 6. Promote and retain agricultural land and water for local food production, self-sufficiency, and  
49 food security.
- 50 7. Support local efforts to protect agricultural land and water from development. Such efforts should  
51 focus on (1) making and keeping agriculture economically and socially viable, and (2)

- 1 encouraging development patterns and implementing measures that protect agricultural land and  
 2 water.
- 3 8. Oppose efforts by federal agencies, especially the Forest Service and BLM, to obtain  
 4 control or ownership of water rights used on, or originating on, public lands, where the  
 5 water has been put to beneficial use by farmers and ranchers.
  - 6 9. Call upon federal agencies to actively involve and participate with state agencies, local  
 7 government, and grazing permittees during resource management planning.
  - 8 10. Strongly recommend that all federal policies and management plans acknowledge and  
 9 consider the cultural, historical, economic, and environmental importance of  
 10 agriculture to the sState of Utah and its inhabitants.
  - 11 11. Maintain Aanimal–uUnit Mmonths (AUMs) for public lands administered by the  
 12 BLM and Hhead Mmonths (HMs) for lands managed by the Forest Service within  
 13 Utah at or above current levels.
  - 14 12. Manage grazing within the state of Utah according to best grazing practices and sound scientific  
 15 management of local environments.
    - 16 o Livestock operators should be afforded maximum flexibility concerning seasons of use,  
 17 stocking rates, and rangeland improvement decisions.
  - 18 13. Expedite grazing permit renewals on public lands.
  - 19 14. Support and promote crop production in the state of Utah that follows best–  
 20 management practices such as efficient irrigation systems, proper fertilization, and  
 21 proper use of pesticides and herbicides.
    - 22 o All best–management practices should be employed as economically feasible.

24 **Policies:**

- 25
- 26 • ~~Support the Recommended State Water Strategy’s recommendation to assess Utah’s agriculture~~  
 27 ~~industry. The purposes of the assessment would be to (page 39–40):¶~~
  - 28 ~~□ Understand changes in agriculture’s presence and location in Utah landscapes;¶~~
  - 29 ~~□ Identify connections and compatibilities between agriculture and adjoining land uses;¶~~
  - 30 ~~□ Assess the water allocation and distribution systems needed to ensure productive systems of land~~  
 31 ~~uses for agriculture in relation to neighboring lands;¶~~
  - 32 ~~□ Support an appropriate level and variety of local, sustainable, secure, water efficient food~~  
 33 ~~production for Utah, with a focus on “local farming” that helps ensure food security;¶~~
  - 34 ~~□ Evaluate water related incentives farmers need to ensure that food production remains part of~~  
 35 ~~Utah’s future;¶~~
  - 36 ~~□ Inventory agricultural areas that have the highest value for food production and the degree to~~  
 37 ~~which the state can work to protect both the lands and water that sustain them;¶~~
  - 38 ~~□ Balance the social and economic benefits of rural agricultural water use by facilitating industry~~  
 39 ~~clusters or other means of focusing on the comparative advantages of rural food production while~~  
 40 ~~leaving urban water supplies available to meet municipal and industrial demands;¶~~
  - 41 ~~□ Understand the best, most sustainable markets for agricultural production suited to Utah’s~~  
 42 ~~people, climate, conditions, and comparative advantages;¶~~
  - 43 ~~□ Recommend water related policies that support and retain a sustainable, economically viable~~  
 44 ~~agricultural industry.¶~~
  - 45 • Support the implementation of the action items contained in Utah’s Coordinated Action Plan for  
 46 Water [24], including, but not limited to, investing in infrastructure, vibrant communities,  
 47 productive agriculture, and healthy water and watersheds.
  - 48 • Management and resource-use decisions by federal land management and regulatory agencies  
 49 concerning Utah’s vegetative resources should reflect serious consideration of the proper  
 50 optimization of the yield of water within the state’s watersheds.
  - 51 • The state supports locally driven strategies to protect and preserve agricultural lands.

- 1 • Because approximately 63 percent of the state of Utah consists of federal lands, the state’s  
2 livelihood is substantially affected by the policies of federal land-management agencies. As such,  
3 it is vital that federal land-management agencies work closely and cooperatively with the state to  
4 ensure access to and the multiple-use of Utah’s public lands.  
5 ○ The State will actively pursue cooperating-agency status for projects on public lands to  
6 ensure that the voice of the State is fully represented.
- 7 • The State of Utah supports the concept of multiple-use and sustained-yields on public lands.  
8 Livestock grazing is an integral part of the multiple-use concept, but public lands should also be  
9 used for the production of food and fiber where feasible.
- 10 • The state of Utah supports and values the farming and ranching industries as integral parts of its  
11 history, culture, and heritage.  
12 ○ Agriculture is recognized as a cultural resource within the State of Utah.
- 13 • The State of Utah maintains a no-net-loss stance regarding grazing AUMs and HMs on federal  
14 lands.
- 15 • AUMs and HMs within the state should remain at or above current levels unless a scientific  
16 need for temporary reduction is demonstrated to the satisfaction of state officials.  
17 ○ In the event of a wildfire, natural disaster, or any other action that limit~~ing~~s grazing on  
18 permitted grazing allotments, the State requests that federal agencies immediately  
19 accommodate producers to provide them with grazing opportunities on available  
20 grazing allotments.
- 21 • ~~In the case where~~When AUMs or HMs are temporarily reduced, these reductions should be  
22 reinstated at the earliest possible moment once vegetative health has been restored to its previous  
23 levels.
- 24 • Livestock-trailing rights and easements should be protected to ensure the viability of ranching  
25 operations. Such trails are critical for moving livestock across rangelands and to markets.
- 26 • The State of Utah supports a viable and competitive aquaculture industry.
- 27 • The State of Utah opposes the voluntary retirement of any grazing allotments on  
28 public lands.
- 29 • The State of Utah supports programs including, but not limited to, the Grazing Improvement  
30 Program, Watershed Restoration Initiative, and Shared Stewardship Program to actively manage  
31 public lands and natural resources.

32  
33 The State of Utah supports active management of wildlife populations to appropriate levels that  
34 balance the interests of all public land users, including agriculture and grazing.

- 35
- 36 • Large ungulates should be managed to target population levels to improve vegetative health on  
37 public lands, maintain adequate forage, and ensure proper water quality.
- 38 • Managing predators to appropriate levels is vital to ensure that ranchers do not face losses  
39 through predation of livestock. Predators that repeatedly prey on livestock should be relocated or  
40 ~~be eliminated~~, and ranchers should be compensated for their losses (*refer to the Predator*  
41 *Management section*).
- 42

43 The State of Utah supports private ownership of water rights and opposes any attempt by federal  
44 agencies to obtain water rights within the state.

- 45
- 46 • The State of Utah recognizes and supports the use of public-lands grazing as a tool to manage  
47 wildfire risk. ~~Through Grazing~~ reduces fuel loads ~~are reduced~~, resulting in decreased risk for  
48 uncharacteristically severe and potentially catastrophic wildfires.
- 49 • The State of Utah supports the use of targeted grazing alongside other forms of treatment to  
50 suppress, manage, and eradicate noxious weeds. Invasive and noxious weeds reduce rangeland  
51 health and available forage for livestock and wildlife (*refer to the Noxious Weeds section*).

- Management and resource-use decisions by federal land management and regulatory agencies concerning Utah’s vegetative resources should reflect serious consideration of the proper optimization of the yield of water within the state’s watersheds.
- Adequate private water rights for livestock and agricultural uses are supported and protected by the State of Utah.
- Grazing permit renewals should not be withheld by federal agencies as a means to acquire water rights within the state of Utah.

## **State Code**

*State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The following are selected portions of the Utah State Code and do not represent every potential legal reference in the Code related to this section of the State Resource Management Plan or the administration of public lands.*

### **Department of Agriculture**

**§ 4-2-102.** *Department created.*

(1) There is created within the state government the Department of Agriculture and Food.

(2) The department created in Subsection (1) is responsible for the administration and enforcement of all laws, services, functions, and consumer programs related to agriculture in this state as assigned to the department by the Legislature.

### **Public Lands Planning**

**§ 63L-11-302.** *Principles to be recognized and promoted.*

**§ 63L-11-303.** *Findings to be recognized and promoted.*

### **State of Utah Resource Management Plan for Federal Lands**

**§ 63L-8-104.** *State land-use planning and management program.*

### **Uniform Agriculture Cooperative Association Act**

**§ 3-1-1.** *Declaration of policy.*

“It is the declared policy of this state, as one means of improving the economic position of agriculture, to encourage the organization of producers of agricultural products into effective associations under the control of such producers, and to that end this act shall be liberally construed.”

### **Livestock Dealers’ Act**

**§ 4-7-102.** *Purpose declaration.*

The Legislature finds that the public interest requires regulation of the sale of livestock between the producer and a person who purchases livestock for resale to protect the producer from unwarranted hazard and loss in the sale of livestock.

**§ 4-7-104.** *Unlawful to act as an agent or dealer without license—Exception.*

Except as exempted by Section 4-7-105, no person may act as an agent or dealer in this state without being licensed under this chapter.

1 **Agriculture Fair Trade Act**  
2

3 **§ 4-8-102. Purpose declaration.**

4 (1) The Legislature finds and declares that in order to preserve the agricultural industry  
5 of this state it is necessary to protect and improve the economic status of persons engaged in  
6 the production of products of agriculture.

7 (2) To carry out the policy described in Subsection (1), the Legislature determines it  
8 necessary to regulate the production and marketing of such products and to prohibit unfair  
9 and injurious trade practices.

10 (3) This chapter shall be liberally construed.  
11

12 **Conservation Commission Act**  
13

14 **§ 4-18-102. Findings and Declarations – Duties.**  
15

16 (1) In addition to the policy provided in Section 4-46-101, the Legislature finds and  
17 declares that:

18 (a) the soil and water resources of this state constitute one of the state's basic  
19 assets; and

20 (b) the preservation of soil and water resources requires planning and programs to  
21 ensure:

22 (i) the development and use of soil and water resources; and

23 (ii) soil and water resources' protection from the adverse effects of wind  
24 and water erosion, sediment, and sediment related pollutants.

25 (2) The Legislature finds that local production of food is essential for:

26 (a) the security of the state's food supply; and

27 (b) the self-sufficiency of the state's citizens.

28 (3) The Legislature finds that sustainable agriculture is critical to:

29 (a) the success of rural communities;

30 (b) the historical culture of the state;

31 (c) maintaining healthy farmland;

32 (d) maintaining high water quality;

33 (e) maintaining abundant wildlife;

34 (f) high-quality recreation for citizens of the state; and

35 (g) helping to stabilize the state economy.

36 (4) The Legislature finds that livestock grazing on public lands is important for the proper  
37 management, maintenance, and health of public lands in the state.

38 (5) The Legislature encourages each agricultural producer in the state to operate in a  
39 reasonable and responsible manner to maintain the integrity of soil, water, and air.

40 (6) The department shall administer the Utah Agriculture Certificate of Environmental  
41 Stewardship Program, created in Section 4-18-107, to encourage each agricultural producer in  
42 this state to operate in a reasonable and responsible manner to maintain the integrity of the  
43 state's resources.

44 (7) The Legislature finds that soil health is essential to protecting the state's soil and  
45 water resources, bolstering the state's food supply, and sustaining the state's agricultural  
46 industry.  
47

48 **Plant Pest Emergency Control Act**  
49

50 **Aquaculture Act**  
51



1 **§ 4-37-102. Purpose statement--Aquaculture considered a branch of agriculture.**

2 (1) The Legislature declares that it is in the interest of the people of the state to  
3 encourage the practice of aquaculture, while protecting the public fishery resource,  
4 in order to augment food production, expand employment, promote economic  
5 development, and protect and better utilize the land and water resources of the  
6 state.

7 (2) The Legislature further declares that aquaculture is considered a branch of the  
8 agricultural industry of the state for purposes of any laws that apply to or provide for the  
9 advancement, benefit, or protection of the agricultural industry within the state.

10  
11 **References:**

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# AIR QUALITY

## Introduction

Air quality in Utah is monitored by the Division of Air Quality (DAQ), within the Utah Department of Environmental Quality (DEQ). The mission of the DAQ is to protect public health and the environment from the harmful effects of air pollution. It is the responsibility of the DAQ to ensure that the air in Utah meets health and visibility standards established under the federal Clean Air Act of 1963 (42 U.S.C. Section 7401) (CAA). To fulfill this responsibility, the DAQ is required by the federal government to ensure statewide compliance with the US Environmental Protection Agency's (EPA) National Ambient Air Quality Standards (NAAQS) and visibility standards within national parks. The DAQ enacts rules pertaining to air-quality standards, develops plans to meet the federal standards when necessary, issues pre-construction and operating permits for stationary sources, and ensures compliance with state and federal air-quality rules. The DAQ allocates a large portion of its resources to implementing the CAA.

The Utah Air Conservation Act empowers the Utah Air Quality Board (UAQB) to adopt rules pertaining to air-quality issues. The DAQ staff supports the UAQB in its policy-making role. The UAQB comprises representatives from industry, local government, environmental groups, the public, and includes the Executive Director of the DEQ. The UAQB's members have diverse interests, are knowledgeable in air-quality matters, and are appointed by the governor of Utah with consent of the Senate. The director of the DAQ is the UAQB's executive secretary.

The Utah air-quality rules define the roles of the Utah air-quality program. Implementation of the rules requires the DAQ's interaction with industry, other government agencies, and the public. The state air-quality program is responsible for the implementation of the federal standards under the CAA, as well as state rules for pollution sources not regulated by the CAA.

The Utah air-quality rules define the roles of the Utah air-quality program. Implementation of the rules requires the DAQ's interaction with industry, other government agencies, and the public. The state air-quality program is responsible for the implementation of the federal standards under the CAA, as well as state rules for pollution sources not regulated by the CAA.

## Mission / Goals

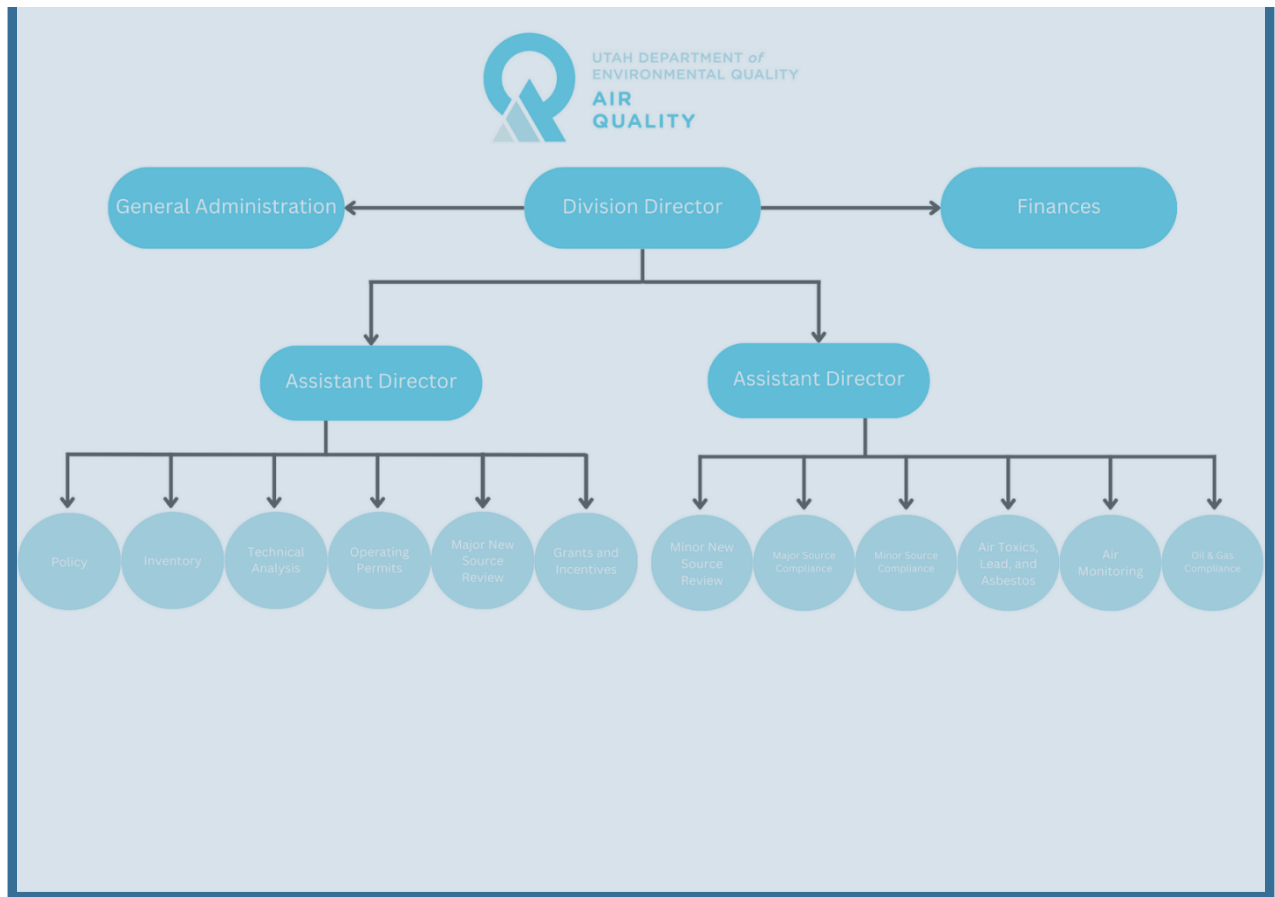
The mission of the DEQ is to safeguard and improve Utah's air, land, and water through balanced regulation.

## Vision / Objectives

The vision of DEQ is clean air, land, and water for a healthy and prosperous Utah.

## Structure

The DAQ is divided into the following programs.



1  
2 **Permitting Program**

3  
4 The DAQ Operating Permit Section, Major New Source Review Section, and Minor New Source Review  
5 Section, are responsible for implementing state and federal air permitting programs that are intended to  
6 control air emissions from new and modified stationary sources.

7  
8 Permits are legally enforceable documents that specify the size and number of allowable emission units,  
9 operational limits of permitted emission units, and emission limits for each permitted source. Permitted  
10 emission limits can be emission limitations (mass or concentration) or surrogate limits such as production  
11 rates, hours of operation, fuel consumption, or a combination thereof. Opacity, the measure of opaqueness  
12 or transparency of emission plumes, is also a common metric used to both limit and measure source  
13 emissions. Permits include testing and monitoring requirements. The results of the tests and the  
14 monitoring data are used to determine if a source of air pollution is operating in compliance with the  
15 permit and the rules.

16  
17 The division issues two types of permits. New Source Review (NSR) permits, also known as Approval  
18 Orders (AOs), are pre-construction-type permits for new and modified sources of air emissions. These are  
19 issued by the New Source Review Sections and have been required in Utah since 1969.

20  
21 The Operating Permits Section issues the Title V Operating Permits to the “major” stationary sources in  
22 the state, as required in Title V of the federal-CAA. There are currently 7566 of these sources. Operating  
23 permits consolidate all air-quality-related requirements from numerous state and federal air-quality  
24 programs into a single regulatory document. The purpose of an operating permit is to clarify for the

1 permit holder, as well as DAQ compliance inspectors, the wide range of requirements applicable to any  
2 regulated source by placing those requirements into one consolidated document.

3  
4 In addition, the DAQ permitting sections process a number of smaller actions such as de minimis  
5 determinations for NSR, name changes, ~~tax exemption certificates for pollution control equipment~~  
6 ~~purchases~~, and soil aeration approvals.

## 7 8 **Compliance Program**

9  
10 The Compliance Program comprises five sections: Major Source Compliance, Minor Source  
11 Compliance, Minor Source Oil and Gas and Air Toxics, Lead-Based Paint, and Asbestos  
12 (ATLAS). These sections are responsible for ensuring compliance with all air pollution orders,  
13 permits, rules, and standards. This is accomplished through inspections, audits of stack tests and  
14 continuous emission monitoring systems (~~CEMS~~), plan and report reviews, accreditation and  
15 certification programs, compliance assistance/outreach activities, and, when necessary,  
16 enforcement actions.

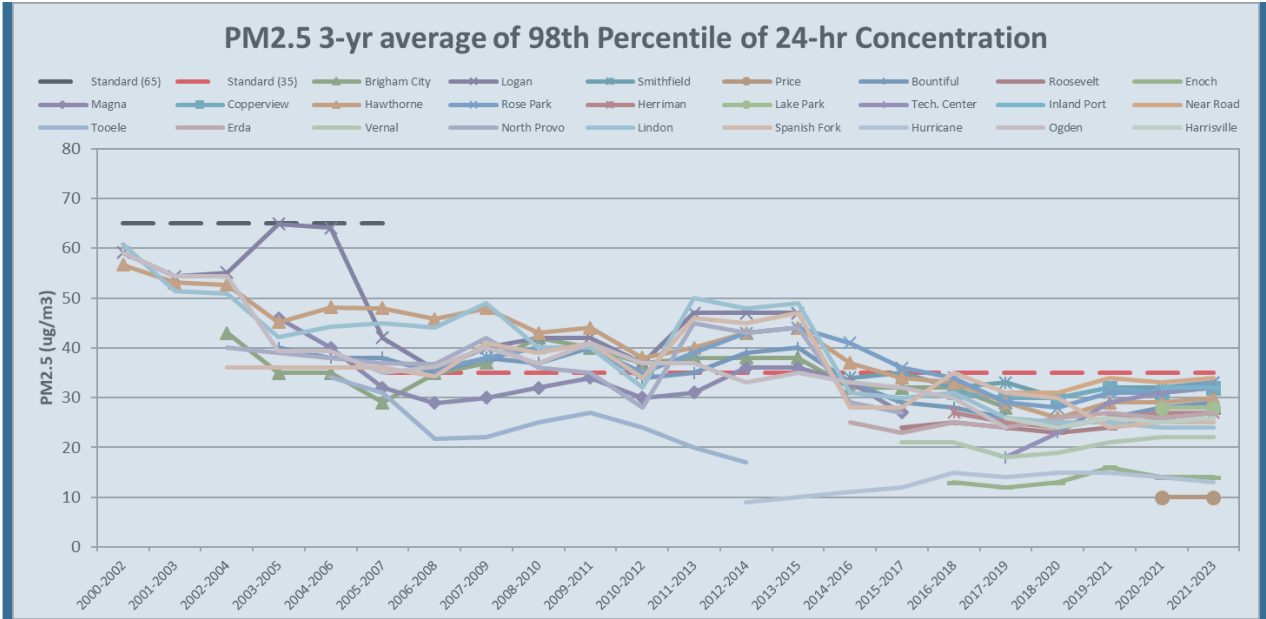
## 17 18 **Planning Program**

19  
20 The Planning ~~p~~Program is responsible for developing comprehensive plans (State Implementation Plans,  
21 or SIPs) to reduce air pollution in areas that are not in compliance with the NAAQS. Emissions  
22 inventories are routinely compiled in order to understand the origins of the various contaminants detected  
23 in the air. Computer models (technical analyses) are used to evaluate the impacts of new and existing  
24 sources of air pollution, and to understand the relationship between the emissions, meteorology, and  
25 pollutant concentrations measured in the air. The Planning ~~B~~Program ~~branch~~ is also involved in  
26 identifying the air-quality impacts of transportation issues (mobile sources), which include vehicle  
27 inspection and maintenance, clean fuels, and highway construction. This information must be considered  
28 in the development of SIPs in order to ensure that Utah's ambient air remains in compliance with the  
29 federal health standards, even as Utah's population and economy continue to grow. The Air Monitoring  
30 Center operates a network of air-quality monitors throughout the state.

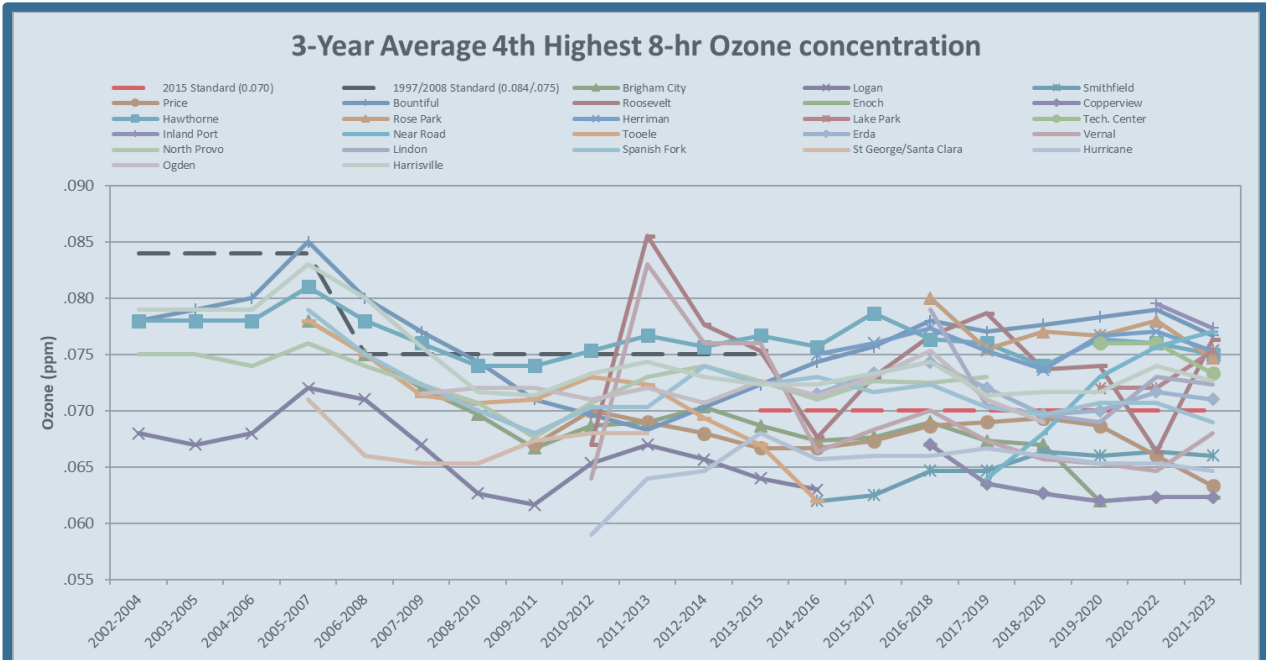
## 31 32 **Findings**

33  
34 The passage of the CAA in 1963, amended in 1970 and 1990, created a framework for reducing air  
35 pollution. The following graphs reflect the ongoing efforts and the success of DAQ in reducing air  
36 pollution.

37  
38 As Utah's population continues to increase, particularly along the Wasatch Front, the policies of DAQ  
39 will be critical in achieving air-quality standards. ~~Notably, winter inversion and wildfire events make it~~  
40 ~~challenging to comply with established standards.~~ Over the past 15 years, significant progress has been  
41 made to reduce emissions that contribute to wintertime fine-particulate concentrations and all former  
42 nonattainment areas are now meeting the NAAQS. Summertime ozone is now the main pollutant of  
43 concern, and is exacerbated by wildfires and longer, hotter summers.



1  
2



3  
4

5 **Air Pollutants**

6  
8 The CAA identifies six common air pollutants that are found throughout the United States and  
9 can injure health, harm the environment, and cause property damage. These pollutants are  
10 shown in Table 1. [1]

11  
12 **Air Quality Standards**

13  
14 The CAA requires the EPA to set NAAQS for pollutants considered harmful to public health  
15 and the environment. The CAA established two types of air-quality standards: primary and  
16 secondary. Primary standards are intended to protect public health, including the health of

sensitive populations such as children, the elderly, and those with respiratory ailments (e.g., asthma). Secondary standards are set to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

The standards consist of a numerical value and a form (see Table 2). The form may be a statistical value, such as the 98th percentile calculation, or a rolling average over a designated period of time, which is then compared to the numerical value.

The EPA has established health-based NAAQS for the following six criteria pollutants: (1) carbon monoxide, (2) nitrogen dioxide, (3) ozone, (4) particulate matter, (5) sulfur dioxide, and (6) lead. Each of these pollutants is addressed in greater detail later in this chapter. Table 1 provides a brief description of each criteria pollutant, and Table 2 provides a brief description of each pollutant’s primary and secondary NAAQS. The EPA establishes the primary health standards after considering both the concentration level and the duration of exposure that can cause adverse health effects. Pollutant concentrations that exceed the NAAQS are considered unhealthy for some portion of the population. At concentrations between 1.0 and 1.5 times the standard, while the general public is not expected to be affected by the pollutant, the most-sensitive portion of the population may be adversely affected. However, at levels above 1.5 times the standard, even healthy people will suffer adverse effects.

If the air quality in a geographic area meets the NAAQS, it is called an attainment area; areas that do not meet the NAAQS are called non-attainment areas and comprehensive state plans must be developed to reduce pollutant concentrations to safe levels.

The DAQ monitors each of these criteria pollutants, as well as several non-criteria pollutants for special studies at various monitoring sites throughout the state.

Table 1: EPA Designated Criteria Pollutants

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

<b>principal component of smog)</b>		reduced resistance to colds and other infections. It may also speed up aging of lung tissue.	cause reduced visibility.
<b>Particulate Matter (PM<sub>10</sub>, PM<sub>2.5</sub>) dust, smoke, soot.</b>	Burning of gasoline, natural gas, coal, oil, and other fuels; industrial plants; agriculture (plowing or burning fields); unpaved roads, mining, construction activities. Particles are also formed from the reaction of VOCs, NO <sub>x</sub> , SO <sub>x</sub> , and other pollutants in the air.	Can cause nose and throat irritation, lung damage, bronchitis, and early death.	Main source of haze that reduces visibility.
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>	Burning of coal and oil (including diesel and gasoline); industrial processes.	Can cause breathing problems and may cause permanent damage to lungs.	Ingredients of acid rain (acid aerosols), which can damage trees, lakes, flora and fauna. Acid aerosols can also reduce visibility.
<b>Lead (Pb)</b>	Paint (houses, cars), smelters (metal refineries); manufacture of lead storage batteries; note: burning leaded gasoline was the primary source of lead pollution in the <a href="#">U.S. United States</a> until the federal government mandated unleaded gasoline.	Damages the nervous systems, including the brain, and causes digestive system damage. Children are at special risk. Some lead-containing chemicals cause cancer in animals.	Can harm wildlife.

1  
2

Table 2: Ambient Air Quality Standards

Ambient Air Quality Standards				
Pollutant	Averaging Time	Primary / Secondary	Standard	Form
<b>Ozone (O<sub>3</sub>)</b>	8 Hour	Primary and Secondary	0.070 ppm	Annual Fourth-highest daily maximum 8-hr concentration, averaged over three years
<b>Respirable Particulate Matter (PM<sub>10</sub>)</b>	24 Hour	Primary and Secondary	150 µg/m <sup>3</sup>	Not to be exceeded more than once per year on average over three years
<b>Fine Particulate Matter (PM<sub>2.5</sub>)</b>	24 Hour	Primary and Secondary	35 µg/m <sup>3</sup>	98 <sup>th</sup> percentile, averaged over three years
	Annual	Primary	<del>12</del> <sup>9</sup> µg/m <sup>3</sup>	Annual mean, averaged over three years
Secondary		15 µg/m <sup>3</sup>	Annual mean, averaged over three years	
<b>Carbon Monoxide (CO)</b>	1 Hour	Primary	35 ppm	Not to be exceeded more than once per year
	8 Hour	Primary	9 ppm	Not to be exceeded more than once per year
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>	1 Hour	Primary and Secondary	100 ppb	98 <sup>th</sup> percentile of 1-hour daily maximum concentrations, averaged over three years
	Annual	Primary and Secondary	53 ppm	Annual mean

<b>Sulfur Dioxide (SO<sub>2</sub>)</b>	1 Hour	Primary	75 ppb	98 <sup>th</sup> percentile of 1-hour daily maximum concentrations, averaged over three years
	3 Hour	Secondary	0.5 ppm	Not to be exceeded more than once per year
<b>Lead (Pb)</b>	Rolling 3 month average	Primary and Secondary	0.15 µg/m <sup>3</sup>	Not to be exceeded

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## Utah's Air Monitoring Network

The Air Monitoring Program (AMP) operates a network of monitoring stations throughout Utah (see Table 3). The monitors are situated to measure air quality in both residential neighborhoods and industrial areas. The DAQ annual reports contain maps, tables, and other resources pertaining to the state's compliance with federal and state regulations.

Table 3: Utah Monitoring Network Stations

Utah Monitoring Network Stations									
Station	City	Address	CO	NO <sub>2</sub>	O <sub>3</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	Met.
<b>Air Monitoring Center</b>	SLC	240 N. 1950 W.	X	X	X	X	X	X	
<b>Antelope Island</b>	None	North end of island							X
<u><b>Badger Island</b></u>	<u>Tooele</u>	<u>Great Salt Lake</u>							
<b>Bountiful</b>	Bountiful	200 W. 1380 N.		X	X		X		X
<u><b>Brigham City</b></u>	<u>Box Elder County</u>	<u>W 1175 S. Brigham City</u>		<u>X</u>	<u>X</u>		<u>X</u>		
<b>Copperview</b>	Midvale	8449 S. Monroe St.	X	X	X		X	X	X
<b>Enoch</b>	Enoch	3840 N. 325 E. Minersville Hwy.		X	X		X		X
<b>Erda</b>	Tooele	2163 West Erda Way		X	X		X		X
<b>Harrisville</b>	Harrisville	425 W. 2250 N.	X	X	X		X		X
<b>Hawthorne</b>	SLC	1675 S. 600 E.	X	X	X	X	X	X	X
<b>Herriman</b>	Riverton	14058 Mirabella Dr.		X	X	X	X		X
<b>Hurricane</b>	Hurricane	150 N. 870 W.		X	X		X		X
<b>Prison Site</b>	SLC	1480 N. 8000 W.		X	X		X		X
<b>Lake Park</b>	West Valley	2782 S. Corporate Park Dr	X	X	X	X	X		X
<b>Lindon</b>	Lindon	30 N. Main St.	X	X	X	X	X		X
<b>Near Road</b>	Murray	4951 S. Galleria Dr.	X	X	X		X		X
<b>Price #2</b>	Price	351 S. Weasel Run Rd.		X	X				X



<u>Red Butte</u>	<u>SLC</u>	<u>Red Butte Canyon Rd. SLC</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
<b>Roosevelt</b>	Roosevelt	290 S. 1000 W.	X	X		X	X
<b>Rose Park</b>	SLC	1354 W. Goodwin Ave.	X	X	X	X	X
<b>Saltair</b>	None	6640 W. 1680 N.				X	X
<b>Smithfield</b>	Smithfield	675 W. 220 N.	X	X	X	X	X
<b>Spanish Fork</b>	Spanish Fork	312 W. 2050 N.			X	X	X
<b>Vernal</b>	Vernal	628 N. 1700 W.	X	X		X	X

## Background of Utah State Implementation Plans

To protect public health, the CAA requires that federal standards be set to limit the maximum levels of pollutants in the outdoor air. Each state is responsible for developing plans to demonstrate how those standards will be achieved, maintained, and enforced. These plans make up the ~~State Implementation Plan (SIP)~~. The plans and rules associated with them are enforced by the ~~s~~State of Utah and, after federal approval, are also federally enforceable. These plans are the framework for each state’s program to protect the air.

In areas where the air quality has improved to the point that the NAAQS are no longer exceeded, the implementation plan remains in effect, and a maintenance plan is prepared to demonstrate how the air will be kept clean for the following 20 years or longer. These maintenance plans also become part of the SIP.

In simple terms, a SIP is a framework that explains how the state is going to restore an area’s air quality to NAAQS attainment levels. Each SIP is designed to control a specific non-attainment problem. There is a separate SIP for PM<sub>2.5</sub>, SO<sub>2</sub>, CO, ozone, PM<sub>10</sub>, etc.

Technically, the ~~s~~State of Utah has written the majority of these SIPs as separate chapters of one larger “umbrella SIP,” but it is much easier to view them individually as separate documents. Thus, one could refer to the PM<sub>2.5</sub> SIP, the ozone SIP, or the CO SIP, etc., rather than stating “Section IX, Part H, Subsections 11-13 of the SIP” (*This would refer to the Emission Limits and Operating Practices requirements for PM<sub>2.5</sub> of the Utah SIP*).

~~Each specific SIP controls its~~ has required elements and addresses the specific non-attainment problem through ~~three general areas—each of those areas dealing with a different group of sources:~~ a number of different emission controls in the various source categories, including major point source controls, rules for residential and small business emissions, and transportation controls. Major point sources are stationary industrial or commercial sites, such as power plants, refineries, and manufacturing facilities. Controls could be applied directly to emission points within these facilities. Home heating, agricultural and prescribed burning, residential and commercial energy generation, aggregate mining, and other small business emissions are examples of area sources. Area source rules are incorporated in SIPs to control emissions from this diverse and disperse group. Lastly, the mobile sector consists of emissions from non-stationary sources such as cars, trains, aircraft, small engines such as those used in yard care equipment, and heavy construction equipment etc. Fuel formulations, emission inspection programs, and in-use limits are examples of mobile controls.

~~1. Transportation controls: This group includes things like broadly mandated fuel changes (oxygenated gasoline, Tier III fuels), I/M programs, implementation of dedicated HOV lanes,~~

1 ~~fleet turnovers, and other similar programs. These are the rules that apply to the first group of~~  
2 ~~sources — what are known as mobile sources (i.e., gas-powered vehicles).~~

3  
4 ~~2. Rule changes and other changes within what DAQ calls “area sources.” This group includes~~  
5 ~~most of the generally applicable rules, and most of the source category rules, such as no~~  
6 ~~wintertime solid fuel burning, changes in the VOC content of surface coatings, opacity~~  
7 ~~requirements on haul roads, rules for boilers and ovens (including bakery ovens), etc. For~~  
8 ~~purposes of the SIP, the definition of an area source is any non-mobile source that isn’t a “Major~~  
9 ~~Source” (see below).~~

10  
11 ~~3. Specific requirements on Major References: Major Sources, also known as SIP-listed sources,~~  
12 ~~are traditionally those that are large enough that their emissions can be individually distinguished~~  
13 ~~on the monitoring filters, or whose emissions impact could individually change the outcome of the~~  
14 ~~attainment demonstration. More recently, the definition of “Major Sources” became more~~  
15 ~~precisely defined by their emission level. Major sources are likely affected by the area source~~  
16 ~~requirements listed in item 2, above, but also have separate sets of individually targeted~~  
17 ~~requirements that apply specifically to each individual facility. Each facility is listed individually~~  
18 ~~in the SIP, along with each requirement. For example, while petroleum liquid storage tanks may~~  
19 ~~have generally applied requirements that affect all such tanks, each of the four major source~~  
20 ~~refineries is also listed by name, along with a host of specific requirements that apply only to that~~  
21 ~~individual refinery.~~

## 25 26 **Smoke Management Plan**

27  
28 The purpose of the Utah Smoke Management Plan (SMP) is to identify the responsibilities of DAQ and  
29 federal, and state land managers to coordinate procedures that mitigate the impacts of prescribed fire and  
30 wildland fire use on public health, visibility, and public safety, in terms of smoke or visibility impacts.

31  
32 *See the Fire Management section of the State Resource Management Plan for more*  
33 *information.*

## 34 35 **Regional Haze**

36  
37 The EPA’s Regional Haze Rule requires Utah to address regional haze in each mandatory  
38 Class I Area (CIA) located within Utah and in each mandatory CIA located outside Utah that  
39 may be affected by pollutants emitted from sources within Utah. The objectives of the  
40 Regional Haze Rule are to improve existing visibility in 156 national parks, wilderness areas,  
41 and monuments (termed Mandatory Class I Areas or CIAs), prevent future impairment of  
42 visibility by manmade sources, and meet the national goal of natural visibility conditions in all  
43 mandatory CIAs by 2064. Utah’s CIAs consist of: Arches National Park, Bryce Canyon  
44 National Park, Canyonlands National Park, Capitol Reef National Park, and Zion National  
45 Park.

46  
47 The majority of impact related to regional haze are caused by wildfire smoke and not from  
48 point source pollution near the ~~N~~national ~~P~~parks. Active management of our forest should be  
49 supported to address regional haze.

50 ~~The CAA established as a national goal the “prevention of any future, and the remedying of~~  
51 ~~any existing impairment of visibility in mandatory Class I Federal areas” (i.e., our national~~  
52 ~~parks and wilderness areas).~~ ¶

1 See the *Fire Management* section of the State Resource Management Plan for more  
2 information.

### 3 4 **Oil and Gas**

5  
6 The DAQ coordinates with the Utah Division of Oil, Gas and Mining to locate and identify  
7 sources that may require air-quality permits. Oil and gas emissions inventory reports contain  
8 updated information, and best-management practices are outlined to promote and ensure  
9 compliance. The DAQ enforces a suite of oil and gas rules to control emissions from the  
10 extraction of oil and natural gas because there is a wintertime ozone issue in the Uinta Basin.

### 11 12 Environmental Justice Considerations

13  
14 ~~Environmental justice considerations have been part of NEPA and federal policy since at least~~  
15 ~~1994 when President Clinton issued Executive Order 12898 which directed the federal~~  
16 ~~government to:~~

- 17  
18 ~~• Identify and address the disproportionately high and adverse human health or~~  
19 ~~environmental effects of their actions on minority and low-income populations, to the greatest~~  
20 ~~extent practicable and permitted by law.~~
- 21 ~~• Develop a strategy for implementing environmental justice.~~
- 22 ~~• Promote nondiscrimination in federal programs that affect human health and the~~  
23 ~~environment, as well as provide minority and low-income communities access to public~~  
24 ~~information and public participation.~~

25  
26 Active management of our public lands can have positive impacts in relation to environmental  
27 justice and should be addressed during the planning process.

28  
29 In 2023, President Biden issued Executive Order 14096 which directed the Federal  
30 Government to build upon and strengthen its commitment to deliver environmental justice to  
31 all communities across America through an approach that is informed by scientific research,  
32 high-quality data, and meaningful Federal engagement with communities with environmental  
33 justice concerns.

34  
35 The Environmental Protection Agency (EPA) developed the Environmental Justice Screening  
36 and Mapping Tool (interactive) to help quantify and identify locations where environmental  
37 justice concerns may exist in the United States. The Utah Department of Workforce Service,  
38 the Utah Division of Multicultural Affairs, and others state and local entities can help to  
39 improve and confirm the accuracy of data in an effort to avoid, minimize, or mitigate  
40 environmental justice concerns.

### 41 42 **Economic Considerations**

43  
44 The adverse health effects of both ozone and PM<sub>2.5</sub> are well documented, ~~and the H~~high levels  
45 of fine particulate matter measured during winter temperature inversions may affect  
46 populations in non-attainment areas. During summer, ~~when regional~~ ozone levels are ~~high,~~  
47 ~~large rural~~ elevated, which affects mainly urban areas ~~may also~~ be affected ~~the Wasatch~~  
48 Front. People with respiratory disease, the elderly, and children are most at-risk for impacts  
49 from both of these pollutants. The current monitoring and modeling efforts will improve the  
50 DAQ's understanding of the extent of these effects.

51

1 If a nonattainment area is not able to meet the NAAQS it's out of compliance for, it gets  
2 reclassified to a stricter designation with more stringent requirements.~~The State will be~~  
3 ~~required to establish~~ These requirements include an emission budget for vehicle emissions; ~~and~~  
4 ~~all in each SIP that~~ future transportation plans in non-attainment areas must conform to ~~that~~  
5 ~~budget. Other measures, such as vehicle inspection and maintenance programs may also~~  
6 ~~become required.~~ The permitting program in the nonattainment area ~~would~~is also be affected ~~in~~  
7 ~~non-attainment areas.~~with new major sources. ~~New sources in non-attainment areas are~~  
8 required to obtain an offset from existing sources to ensure that ~~overall~~emissions do not  
9 increase within the area. New sources in non-attainment areas must also meet the highest  
10 standard of control. These restrictions could affect economic development in these areas. [2]

## 12 **Goals, Objectives, and Policies**

### 14 **Goal(s):**

- 16 • Safeguarding and improving Utah's air, land, and water through balanced regulation.

### 18 **Objectives:**

- 20 1. Utilize the Utah SIP to limit the maximum level of pollutants in the outdoor air and  
21 protect public health.
- 22 2. Amend the Utah SIP as necessary in order to protect public health and comply with the  
23 ~~Clean Air Act (42 U.S.C. § 7401)~~CAA.
- 24 3. Develop and amend air-quality rules to implement and enforce the Utah SIP.
- 25 4. Coordinate with federal partners to achieve attainment of federal and state air-quality  
26 standards.
- 27 5. Work with local governments and private industries to attain federal and state air-  
28 quality standards while mitigating damage to Utah's economy.
- 29 6. Continue to refine the Utah SIP, Utah Aair-qQuality Rrules, and policies to achieve  
30 attainment of federal and state air-quality standards in existing non-attainment areas.
- 31 7. The State urges the federal government to carefully consider the magnitude and nature  
32 of a proposed action, as well as past planning, research, and studies when it defines  
33 environmental justice study areas.
  - 34 o These areas should encompass environmental justice populations potentially  
35 affected by a proposed action and they should avoid encompassing  
36 unnecessarily large or irrelevant areas where analyses will be meaningless or  
37 where it will produce uncertain results that may lead to the erroneous  
38 determinations of effect.
- 39 8. The state encourages the federal government to first analyze potential health, social,  
40 and economic effects – both positive and negative – on the study area's entire  
41 population, then assess whether environmental justice populations will be adversely,  
42 disproportionately, or positively affected by a proposed action.
  - 43 o The scientific approach should be implemented to promote and consider ideas  
44 that are testable (or repeatable), without regard to a particular perspective,  
45 cultural bias, or preferred outcome.

### 46 **Policies:**

- 48 • The ~~s~~State of Utah encourages the development and implementation of innovative  
49 technologies and policy to achieve attainment.
- 50 • It is the policy of the state that adverse effects should be mitigated through avoidance.

- However, if avoidance is not appropriate or practicable, the federal government should seek to minimize the effects, followed by mitigation.
- The state will ensure that all Utahns have fair and equitable opportunities to live safe and happy lives by enacting effective policy and a seamless system of services and programs (Vision Statement for the Utah Department of Health and Human Services).

## State Code

*State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The following are selected portions of the Utah State Code and do not represent every potential legal reference in the Code related to this section of the State Resource Management Plan or the administration of public lands.*

Title 19, Chapter 2 of the Utah Code empowers the ~~Utah Air Quality Board~~ [UAQB](#) to enact rules pertaining to air-quality activities.

## Air Quality Rules

The Utah ~~A~~air-~~q~~Quality ~~R~~rules implement the policies and regulations contained in the Utah SIP. Utah ~~A~~air-~~q~~Quality ~~R~~rules are enacted by the UAQB, and are organized by the Office of Administrative Rules. The official ~~A~~air-~~q~~Quality ~~R~~rules are contained in Utah Administrative Code.

## References:

1. <https://deq.utah.gov/air-quality/annual-reports-division-of-air-quality>
2. <https://deq.utah.gov/air-quality/annual-reports-division-of-air-quality>
3. <https://deq.utah.gov/air-quality/air-quality-laws-and-rules>

## CULTURAL AND HISTORICAL

### Introduction

The State of Utah is endowed with one of the richest, most-diverse collections of cultural and historical resources in North America, and they can be found within the towns, cities, and undeveloped areas of each county. Utah's cultural and historical resources include (1) historical districts, buildings, structures, historic roads, and historic mines; (2) archaeological sites ranging from simple artifact scatters to Ancestral Puebloan cliff dwellings and (3) geographic features or landscapes associated with the traditional cultural practices or beliefs of living communities. These resources enhance quality of life in Utah, and they strengthen Utahns' appreciation of those who came before.

People have lived in Utah for at least 13 millennia. Where they lived, what they ate, and the ways they interacted with each other were influenced largely by changing climates, environments, technological innovations, and fluctuating populations. According to oral traditions, many of Utah's tribes believe that Indigenous people have been here since the beginning of time. The archaeological record currently traces that beginning to the late Pleistocene and early Holocene, a time when warmer climatic conditions caused Lake Bonneville and valley glaciers to recede substantially. During the earliest millennia, a time known as the Paleoarchaic period (ca. 13,000 to 9,000 B.P.) [1], small groups of humans moved frequently over large areas, hunting a wide variety of animals, many of which include now-extinct species like mammoth and ancient bison. They also ate plants, used tobacco, and made distinctive lanceolate-shaped projectile points and stone crescents.

As the climate continued to warm, ancient peoples adapted by foraging across wider ranges and broadening their diets to include more plants, especially seeds. The tools needed to process these seeds, *manos* and *metates*, are the principal artifactual hallmarks of the Archaic period (9,000 to 2,000 B.P.). Initially, people lingered along the receding shorelines and marshes of valley lakes, but over time increasingly relied on food resources in upland settings. Pine nuts became particularly important by the middle of the Archaic period. Toward the end of the Archaic period, it appears that some people settled more permanently in larger groups, adopted bow-and-arrow technology, and dabbled in horticulture.

Depending upon where one looks in Utah, the cultivation of corn, beans, and squash became more important between 2,000 and 1,500 B.P. Farming figured prominently in the lifeways of many groups until several factors, chiefly drought, made it untenable by 700 to 650 B.P. This Formative period has two distinct archaeological complexes, the Fremont and Ancestral Puebloan (formerly Anasazi). The former is found throughout Utah north of the Colorado and Virgin Rivers, while the latter is dominant south of those same rivers. Archaeological features common to Fremont farming communities include distinctive rock art styles and relatively large villages consisting of pit houses and granaries. Ancestral Puebloan features include the iconic cliff dwellings, towers, and kivas sometimes highlighted in promotional materials for tourism and outdoor recreation. Telltale artifacts of both complexes include well-made ceramic vessels and small projectile points used with bow-and-arrow technology.

What happened to the people who abandoned farming seven centuries ago is still open to discussion. Many of them may have migrated toward the south and elsewhere. Others probably remained in Utah and returned to a more nomadic, hunter-gatherer existence. Those who stayed may have eventually assimilated or formed new cultures with Numic-speaking groups migrating from the west. Whatever the case, the archaeological record of the Protohistoric period (650 B.P. to contact) looks much different from the Fremont and Ancestral Puebloan complexes of the Formative period. Well-executed, thin-walled ceramics give way to expediently made, thick-walled brownwares, and regionally distinct projectile-point types are replaced by styles common throughout the Intermountain West.

1 Utah's Indigenous people were introduced to Europeans when the Dominguez-Escalante expedition  
2 arrived in 1776. During the next seven decades, the Old Spanish Trail was established as a trade route  
3 between Santa Fe and Los Angeles; trappers and explorers such as Jediah Smith, Jim Bridger, and John  
4 C. Fremont passed through the area; and Mormon pioneers settled permanently in the Salt Lake Valley  
5 and began establishing agrarian communities throughout the Intermountain West.

6  
7 Other events and people important to Utah's past followed, leaving tangible footprints still recognizable  
8 today. Johnston's Army, deployed to confront the Mormon Rebellion, established Camp Floyd in 1857,  
9 and Col. Patrick E. Connor founded Camp Douglas in 1862. The short-lived Pony Express established 27  
10 stations and a trail across Utah, much of which can be traveled today. A host of European and Asian  
11 immigrants built districts and communities dedicated to mining metals, coal, and minerals. They also  
12 completed North America's first transcontinental railroad at Promontory Summit in May 1869. A few  
13 African Americans, free and enslaved, were numbered among the early explorers and pioneers. Many  
14 more of them arrived in Utah with the railroad and army in the late 1800s. The districts, sites, buildings,  
15 structures, and objects resulting from these important events, and the important people associated with  
16 them, may also be significant because of their unique architectural or engineering characteristics, or their  
17 potential to yield information about the past.

18  
19 Today, many people recognize that certain geographical features and landscapes are important to living  
20 communities because of their association with cultural practices and beliefs. Known as Traditional  
21 Cultural Properties (TCPs), these places are rooted in a community's history and are important in  
22 maintaining the community's continuing cultural identity. Rainbow Bridge, which was the first TCP in  
23 Utah to be formally listed in the National Register of Historic Places, is recognized for its historic and  
24 ongoing cultural significance to at least six Native American tribes. Many other National Register-eligible  
25 TCPs are recognized by Native American tribes and communities whose ancestors migrated to Utah in  
26 the 19th century. These include public lands that have been used for grazing for more than 170 years, as  
27 well as other places used by local communities for traditional activities like hunting, camping, and wood  
28 gathering.

29  
30 As learned from experience, any great community (or county) is enhanced by looking to its future and  
31 new development, but also by keeping an eye on its past. History can become an enhancer for quality of  
32 life and a stimulator for economic development. Businesses often look for historic settings in historic  
33 buildings to provide character, a sense of stability, and a unique marketing angle for their products and  
34 services. History is not just a buzzword; it is a foundation for the current political and economic  
35 institutions in Utah, a fabric from which the state's communities are woven, and a two-way mirror of our  
36 own lives to where we have been and where we are going. Preservation of Utah's history is paramount to  
37 retaining a sense of place. For example, constructing a parking lot where there was once a woolen mill  
38 instills no true sense of history.

39  
40 Preservation and growth require balance and a careful planning approach. All too often, the old is torn  
41 down to make way for the new, and it is realized too late that the old could have been a better economic  
42 stimulus than the new. Conversely, a community may be so encumbered by the past that new  
43 development is not properly considered. A dialogue between old and new is needed, which takes  
44 advantage of the benefits of both. The new can be given broader character by referring to heritage and  
45 tradition, while the old can be reinvigorated by new development.

46  
47 Utah Code § 9-8-401 states, "*The Legislature determines and declares that the public has a vital*  
48 *interest in all antiquities, historic and prehistoric ruins, and historic sites, buildings, and objects which,*  
49 *when neglected, desecrated, destroyed or diminished in aesthetic value, result in an irreplaceable loss to*  
50 *the people of this state.*"

1 **Findings**

2  
3 A vast number of cultural resources in Utah have been researched and documented. The Utah State  
4 Historic Preservation Office (SHPO) holds the records of approximately 100,000 individual  
5 archaeological sites, most of which are the direct result of agency compliance with federal and state  
6 historic preservation laws. Additionally, many of these sites are revisited as part of an undertaking after  
7 the initial documentation, creating an additional 30,000 site addendums (all of these findings make up less  
8 than 9 percent of the state’s 54 million acres being surveyed for archaeological sites). Currently, the  
9 SHPO database contains individual records for more than 125,000 ~~65,000~~ historic buildings and  
10 structures spread across nearly 400 Utah communities. Some of these structures have multiple lines of  
11 entry for additional major properties at the same address, along with updates and additions, increasing the  
12 number of entries. The majority of the historic architectural surveys have been completed as a result of  
13 environmental compliance requirements or city and county-wide surveys for preservation planning-  
14 related projects. [2]

15  
16 **Economic Considerations**

17  
18 Population growth leads to many pressures on cultural resources, especially historic buildings in core  
19 neighborhoods, and archaeological sites that may be in the way of new development. Donovan  
20 Rypkema’s *2013 Economic Study in Utah* notes that historic preservation in Utah is not about building  
21 fences around monuments; Utah’s historic resources are part of the daily lives of its citizens. However,  
22 the historic resources of Utah also provide a broad, significant contribution to the economic health of this  
23 state.

24  
25 Rehabilitating historic structures in Utah reclaims those assets, and the labor required by the projects  
26 provides many jobs and high wages for workers. Heritage tourism provides Utah with visitation and  
27 direct expenditures and local businesses may be revitalized. Property values near historic structures and  
28 districts exhibit higher rates of appreciation.

29  
30 Because of the importance of historic resources, the Utah Legislature has established economic incentives  
31 for the preservation and re-use of historic places and structures. The State of Utah, through Utah Code §  
32 59-7-609, has implemented a tax credit for rehabilitation expenditures associated with qualifying  
33 residential historic buildings. Further, the United States Tax Code has provided a similar investment tax  
34 credit for the rehabilitation of historic commercial and residential rental properties.

35  
36 **Goals, Objectives, and Policies**

37  
38 **Goal(s):**

39  
40 As stated in Utah’s first Statewide Historic Preservation Plan in 1973, a purpose of historic preservation  
41 “is the acculturation of a citizenry so that the values of the past, the qualities of progenitors, and a  
42 reverence for a heritage become ingrained into the lives of people today.” More critical is that the goals  
43 for historic preservation not only engage and enliven current practitioners within Utah, but also  
44 democratize preservation efforts and engage as diverse a population as possible in collective goals. A  
45 diverse group of participants is the framework that Utah uses when formulating the overall goals for  
46 historic resources. This includes the public, agencies, preservation partners, legislatures and elected  
47 officials, students and educators, historic property owners, tourists, and under-represented communities.

48  
49 Over the next few years, Utah will engage in the following four goals:  
50



- 1 (1) increase awareness and appreciation for Utah’s diverse heritage;
- 2 (2) help shape understanding of historic preservation standards and techniques;
- 3 (3) improve collaboration and strengthen existing partnerships while building new ones; and
- 4 (4) advance historic preservation as economic development.

5  
6 To accomplish these goals, there are many potential actions that could be undertaken, including the  
7 following:

- 8
- 9 ● Establish preservation commissions and certified local government programs (CLG).
- 10 ● Create heritage areas and scenic byways to identify, protect, plan, and market.
- 11 ● Establish local zoning and policies to protect property owners’ interests while supporting
- 12 historic preservation efforts.
- 13 ● Initiate historic preservation education conferences and workshops.
- 14 ● Establish historic signage guidelines.
- 15 ● Provide tax assistance and grants to assist rehabilitation of historic resources.
- 16 ● Incorporate Main Street America Expansion.
- 17 ● Develop programmatic agreements with federal and state agencies to address federal and state
- 18 compliance needs.
- 19 ● Develop new historic contexts for various property types and themes.
- 20 ● Partner with federal agencies on programs for archaeological site protections.
- 21 ● Encourage further growth of the Utah Cultural Site Stewardship Program as a way to promote
- 22 volunteerism, civic engagement, and cooperation.
- 23 ● Forge partnerships with nonprofit organizations to establish voluntary protective easements.
- 24 ● Promote the retention of archaeological materials recovered in Utah within the state boundaries
- 25 and close to the point of discovery for display and interpretation.
- 26 ● Create a federally certified state repository for historic-period archaeological material,
- 27 which is growing closer with the construction of the Museum of Utah.
- 28 ● Recognize the significant role that historic industries and activities (such as agriculture, grazing,
- 29 mining, recreation, and timber) have played in the development of Utah and its cultural heritage.
- 30 ● Participate in interdisciplinary teams as part of the environmental review process.
- 31 ● Form and maintain stakeholder groups of federal and state agencies, nonprofits organizations,
- 32 and the general public who are not project-specific in focus, but instead focus on engaging in
- 33 proactive resource-based historic preservation efforts and collaboration.
- 34

### 35 **Objectives and Policies**

36  
37 It is a policy of the State of Utah to encourage the preservation of cultural and historic sites and  
38 landscapes as part of developing a vibrant quality of life and economically prosperous future for the state.  
39 The state will employ economic incentives, compliance consultation, tax credits, grants, and technical  
40 assistance to encourage preservation.

41  
42 In accordance with Utah Code § 9-8-502, “*The Legislature finds and declares that preservation and*  
43 *restoration of historically significant real property and structures as identified by the State Register of*  
44 *Historic Sites are in the public interest of the people of the State of Utah and should be promoted by the*  
45 *laws of this state.*”

46  
47 Where possible, the State of Utah will promote the curation and display of archaeological materials near  
48 their point of collection. Only a handful of federal archaeological repositories exist in Utah, and the  
49 majority are far from rural communities and their areas of collection. It is understood that archaeological  
50 collections and materials from federal lands, and their curation, is subject to 36 C.F.R. §79 *et seq.*,  
51 whereas the regulations were created to “*establish definitions, standards, procedures and guidelines to be*

1 followed by Federal agencies to preserve collections of prehistoric and historic material remains”. While  
2 the regulations require that a facility meet high standards for long-term curatorial storage as defined in 36  
3 C.F.R. § 79.9, the regulations require federal agencies to ensure collections are available for “scientific,  
4 educational and religious uses” per 36 C.F.R. § 79.10(a). Local communities, museums, and others may  
5 request a loan of federal archaeological materials per 36 C.F.R. § 79.10(e) following a template  
6 agreement included as Appendix B of those regulations. Federally accredited institutions in Utah include  
7 the Natural History Museum of Utah (Salt Lake City), Prehistoric Museum at Utah State University  
8 Eastern (Price), Edge of the Cedars State Park and Museum (Blanding), and the Fort Douglas Military  
9 Museum (Salt Lake City).

10  
11 The Utah State Legislature unanimously approved H.C.R. 4, *Concurrent Resolution Calling for the*  
12 *Protection of Archaeological Sites*, during the 2022 General Session. The resolution describes the  
13 significance of archaeological sites in Utah, names laws that protect these sites, and calls on federal and  
14 state agencies to responsibly fund and protect them.

15  
16 **The State of Utah will:**

- 17
- 18 ● Support local communities’ efforts to create displays and museums that meet federal standards  
19 for the display, and possible curation, of archaeological materials as close to their point of origin  
20 as possible.
- 21 ● Promote local efforts for traveling exhibits and display of state-owned archaeological materials  
22 for educational and local economic opportunities.
- 23 ● Coordinate with local federal offices to engage local communities and tourists with the rich  
24 archaeological heritage of Utah.
- 25 ● Call for the federal government to responsibly fund the protection of archaeologically significant  
26 sites on lands managed by the federal government.
- 27 ● Call for the Utah Department of Cultural and Community Engagement, working with other  
28 government agencies, to responsibly protect archaeological sites on state lands.
- 29 ● Call for efforts by the Utah Department of Cultural and Community Engagement, other  
30 government agencies, nonprofit organizations, and other interested parties to educate the public,  
31 especially the youth, about the importance of protecting cultural heritage and archaeological  
32 sites.
- 33

34 **State Code**

35  
36 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
37 *following are selected portions of the Utah State Code and do not represent every potential legal*  
38 *reference in the Code related to this section of the State Resource Management Plan or the*  
39 *administration of public lands.*

40  
41 **State of Utah Resource Management Plan for Federal Lands**

42  
43 ~~§ 63L-8-104-~~ *State land--use planning and management program.*

44  
45 **Department of Cultural and Community Engagement**

46  
47 ~~§ 9-1-201-~~ *Department of Cultural and Community Engagement--Creation-- Powers and duties*

48  
49 **Division of State History**

50  
51 ~~§ 9-8-201-~~ *Division of State History--Creation—Purpose.*

1 **Antiquities**

2  
3 **§ 9-8-301.** *Division duties.*

- 4  
5 (1) The division shall:
- 6 (a) stimulate research, study, and activity in the field of Utah history and related
  - 7 history;
  - 8 (b) maintain a specialized history library;
  - 9 (c) mark and preserve historic sites, areas, and remains;
  - 10 (d) collect, preserve, and administer historical records relating to the history of Utah;
  - 11 (e) administer, collect, preserve, document, interpret, develop, and exhibit historical
  - 12 artifacts, documentary materials, and other objects relating to the history of Utah for educational
  - 13 and cultural purposes;
  - 14 (f) edit and publish historical records;
  - 15 (g) cooperate with local, state, and federal agencies and schools and museums to
  - 16 provide coordinated and organized activities for the collection, documentation, preservation,
  - 17 interpretation, and exhibition of historical artifacts related to the state;
  - 18 (h) promote, coordinate, and administer:
  - 19 (i) Utah History Day at the Capitol designated under Section 63G-1-401; and
  - 20 (ii) the Utah History Day program affiliated with National History Day,
  - 21 which includes a series of regional, state, and national activities and competitions for
  - 22 students from grades 4 through 12;
  - 23 (i) provide grants and technical assistance as necessary and appropriate; and
  - 24 (j) comply with the procedures and requirements of Title 63G, Chapter 4,
  - 25 Administrative Procedures Act, in adjudicative proceedings.
- 26 (2) The division may acquire or produce reproductions of historical artifacts and
- 27 documentary materials for educational and cultural use.
- 28 (3) To promote an appreciation of Utah history and to increase heritage tourism in
- 29 the state, the division shall:
- 30 (a)
    - 31 (i) create and maintain an inventory of all historic markers and monuments
    - 32 that are accessible to the public throughout the state;
    - 33 (ii) enter into cooperative agreements with other groups and organizations to
    - 34 collect and maintain the information needed for the inventory;
    - 35 (iii) encourage the use of volunteers to help collect the information and to
    - 36 maintain the inventory;
    - 37 (iv) publicize the information in the inventory in a variety of forms and
    - 38 media, especially to encourage Utah citizens and tourists to visit the markers and
    - 39 monuments;
    - 40 (v) work with public and private landowners, heritage organizations, and
    - 41 volunteer groups to help maintain, repair, and landscape around the markers and
    - 42 monuments; and
    - 43 (vi) make the inventory available upon request to all other public and private
    - 44 history and heritage organizations, tourism organizations and businesses, and others;
  - 45 (b)
    - 46 (i) create and maintain an inventory of all active and inactive cemeteries
    - 47 throughout the state;
    - 48 (ii) enter into cooperative agreements with local governments and other
    - 49 groups and organizations to collect and maintain the information needed for the
    - 50 inventory;

- (iii) encourage the use of volunteers to help collect the information and to maintain the inventory;
  - (iv) encourage cemetery owners to create and maintain geographic information systems to record burial sites and encourage volunteers to do so for inactive and small historic cemeteries;
  - (v) publicize the information in the inventory in a variety of forms and media, especially to encourage Utah citizens to participate in the care and upkeep of historic cemeteries;
  - (vi) work with public and private cemeteries, heritage organizations, genealogical groups, and volunteer groups to help maintain, repair, and landscape cemeteries, grave sites, and tombstones; and
  - (vii) make the inventory available upon request to all other public and private history and heritage organizations, tourism organizations and businesses, and others; and
- (c)
- (i) create and maintain a computerized record of cemeteries and burial locations in a state-coordinated and publicly accessible information system;
  - (ii) gather information for the information system created and maintained under Subsection (3)(c)(i) and help maintain, repair, and landscape cemeteries, grave sites, and tombstones as described in Subsection (3)(b)(vi) by providing matching grants, upon approval by the board, to:
    - (A) municipal cemeteries;
    - (B) cemetery maintenance districts;
    - (C) endowment care cemeteries;
    - (D) private nonprofit cemeteries;
    - (E) genealogical associations; and
    - (F) other nonprofit groups with an interest in cemeteries; and
  - (iii) adopt rules, in accordance with Title 63G, Chapter 3, Utah Administrative Rulemaking Act, for granting matching funds under Subsection (3)(c)(ii) to ensure that:
    - (A) professional standards are met; and
    - (B) projects are cost effective.

(4) This chapter may not be construed to authorize the division to acquire by purchase any historical artifacts, documentary materials, or specimens that are restricted from sale by federal law or the laws of any state, territory, or foreign nation.

**Historic Sites**

**§ 9-8-401** *Purpose.*

The Legislature determines and declares that the public has a vital interest in all antiquities, historic and prehistoric ruins, and historic sites, buildings, and objects ~~which~~that, when neglected, desecrated, destroyed or diminished in aesthetic value, result in an irreplaceable loss to the people of this state.

**Historical Preservation Act**

**§ 9-8-502** *Legislative finding.*

The Legislature finds and declares that preservation and restoration of historically significant real property and structures as identified by the State Register of Historic Sites are in the public interest of the people of the ~~s~~State of Utah and should be promoted by the laws of this state.

1 **Utah Division of Indian Affairs Act**

2  
3 **§ 9-9-103.** *Purpose.*

4  
5 The division shall:

- 6  
7 (1) develop programs that will allow Indian citizens residing on or off reservations an  
8 opportunity to share in the progress of Utah;
- 9 (2) promote an atmosphere in which Indian citizens are provided alternatives so that  
10 individual citizens may choose for themselves the kinds of lives they will live, both socially and  
11 economically;
- 12 (3) promote programs to help the tribes and Indian communities find and implement  
13 solutions to their community problems; and
- 14 (4) promote government-to-government relations between the state and ~~tribal~~tribal governments.

15  
16 **§ 9-9-201.** *Assumption by state of criminal and civil jurisdiction over Indians and Indian*  
17 *territory*

18  
19 The state of Utah hereby obligates and binds itself to assume criminal and civil jurisdiction over  
20 Indians and Indian territory, country, and lands or any portion thereof within this state in  
21 accordance with the consent of the United States given by the Act of Congress of April 11, 1968,  
22 82 Stat. 78-80 (Public Law 284, 90th Congress), to the extent authorized by that act and this  
23 chapter.

24  
25 **§ 9-9-403.** *Ownership and disposition of Native American remains.*

26  
27 **References:**

- 28  
29 1. *Before Present*
- 30  
31 2. *The terms Cultural Resource(s) and Historic Property(ies) include archaeological sites, TCPs,*  
32 *and buildings. A historic property is defined as any prehistoric or historic district, site, building,*  
33 *structure, or object included in, or eligible for inclusion in, the National Register of Historic*  
34 *Places. This term includes archaeological artifacts, records, and remains that are related to and*  
35 *located within such properties. The term also includes properties of traditional religious and*  
36 *cultural importance (i.e., TCPs) to an Indian tribe, Native Hawaiian organization, or historical*  
37 *community that meet the National Register criteria.*

# DITCHES AND CANALS

## Introduction

Ditches are natural or constructed watercourses that can be open, covered, or tiled and are typically used for the irrigation or drainage of agricultural land. Canals are artificial waterways constructed to convey water for irrigation or drainage of agricultural land.

From about 400 to about 1400 A.D., crops from irrigated farms fed the early inhabitants of present-day Utah. Fremont people raised corn irrigated from Clear Creek and the Ancestral Puebloans (sometimes referred to as “Anasazi”) raised and stored corn and other irrigated crops. Later tribes also relied on water to sustain the plants and animals on which they depended, whether through hunting, gathering, fishing, or irrigating crops. [1]

The day after arriving in the Salt Lake Valley, Mormon pioneers “...immediately rigged three plows and went to plowing a little northeast of the camp; another party went with spades, etc., to make a dam on one of the creeks so as to throw the water at pleasure on the field, designing to irrigate the land in case rain should not come sufficiently [2].” To sustain the influx of pioneer settlers, canals and ditches were constructed throughout Utah, making agriculture possible despite the arid climate.

The Federal government recognized the importance of ditches and canals to Westward Expansion when it enacted “An Act Granting the Right of Way to Ditch and Canal Owners over Public Lands, and for Other Purposes” on July 26, 1866 [A<sup>1</sup>]. Formally codified as Revised Statute 2339 in 1874, the law acknowledged and confirmed the right of way for the construction of ditches and canals for mining, agricultural, manufacturing, or other purposes by rightful water users according to local customs, laws, and the decision of courts [B<sup>2</sup>]. The Federal government validated these existing rights-of-way more than a century later with a savings provision in the Federal Lands Policy Management Act (FLPMA) of 1976: “Nothing in this Act, or in any amendment made by this Act ..., shall be construed as terminating any valid ... right-of-way ... existing on the date of approval of this Act [Oct. 21, 1976] [C<sup>3</sup>].”

The term “conveyance” is used to describe the movement of water from a source to an application. Ditches and canals are used to convey diverted water from their source to a location where beneficial use is taken. More than 70 percent of Utah’s diverted water is carried in canals, which are managed and maintained by nonprofit, shareholder-owned irrigation companies. There are over 1,000 of these irrigation companies in Utah, most of which are over 100 years old and administered by volunteer directors [3]. Every irrigation company in existence today has largely adapted to the multitude of challenges imposed by urbanization. The longevity of these irrigation companies suggests that they have and can continue to adapt and serve the needs of their shareholders, whether the shareholders want to grow crops, water lawns and gardens, put the water to industrial use, or use the companies’ ditches to transport stormwater [4].

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A<sup>1</sup> U.S. Congress. (1865) *U.S. Statutes at Large, Volume 14 -1867, 39th Congress*. United States, - 1867. Available at <https://www.loc.gov/item/lsl-v14/>.

B<sup>2</sup> Government Printing Office. (1875) *Revised Statutes of the United States, 43rd Congress*. United States, 1873-1874. Available at <https://archive.org/details/revisedstatutes01statgoog/page/432/mode/2up>.

C<sup>3</sup> see the savings provision in the statutory notes of 43 U.S.C. §1701. Available at <https://uscode.house.gov/view.xhtml?path=/prelim@title43/chapter35&edition=prelim>. See also U.S. Department of the Interior, Bureau of Land Management (editor), 2016. *The Federal Land Policy and Management Act of 1976, as amended*. §701. U.S. Department of the Interior, Bureau of Land Management, Office of Public Affairs, Washington, DC. 106 pp. Available at [https://www.blm.gov/sites/default/files/AboutUs\\_LawsandRegs\\_FLPMA.pdf](https://www.blm.gov/sites/default/files/AboutUs_LawsandRegs_FLPMA.pdf).

1 Canals and ditches pass through land with various ownership statuses. Any given canal may cross land  
2 that is owned by the canal company outright, or else it may utilize an easement or right-of-way to cross  
3 lands owned by a municipality or other third parties. Other canals have “prescriptive easements,” which,  
4 though lacking formal consent or written agreement, allows water to cross another’s property for delivery  
5 purposes. These easements come with no entitlement except the ability to convey water through the site  
6 and to maintain that conveyance. These prescriptive easements are not designed or intended to accept  
7 more water than would naturally be received by runoff while in agricultural use. Often, prescriptive  
8 easements are found on the downstream-most sections of ditch systems, where the channels are the  
9 smallest. This means these ditches have been designed only for agricultural runoff and may thus suffer the  
10 greatest impacts from their use for stormwater conveyance. Upstream development that results in  
11 increased surface runoff may negatively affect downstream landowner property rights.

12  
13 Between 2014 and 2017, the Utah Division of Water Rights (UDWRi) inventoried all open canals in the  
14 state that had a minimum design capacity of 5 cubic feet per second. The UDWRi’s Canal Safety Program  
15 and Canal Inventory website provides a listing of Utah canal companies, a statewide map of canals, and a  
16 Conservation District directory, among other resources.

17  
18 Canals and ditches present important public safety concerns; the Utah ~~S~~state ~~E~~ngineer at UDWRi has  
19 authority to examine and inspect any ditch or other diverting works and may order additions or alterations  
20 to ensure public safety.

## 21 **Findings**

22  
23 Agriculture is important in Utah for the natural, cultural, social, and economic benefits that it provides.  
24 Agriculture successfully balances multiple needs between different stakeholders while providing a  
25 valuable source of local jobs and income. In Utah, agriculture provides and maintains jobs, local tax  
26 bases, multiple environmental benefits, scenic beauty, food and fiber for human consumption, and fuels-  
27 active land management.

28  
29 Approximately 75 percent of water diverted from natural sources in Utah went to agriculture over the 5-  
30 year period of 2013–2018, making the agricultural industry heavily reliant on the effective irrigation and  
31 transportation of water [5].

32  
33 There are more than 9,800 miles of ditches and canals in Utah that carry more than 5 cubic  
34 feet per second of water. There may be twice that number of smaller canals in the state. This  
35 figure does not include the thousands of miles of drainage ditches, which make land farmable  
36 and carry return flows back to streams.

37  
38 These thousands of miles of ditches and canals irrigate a majority of the 1.1 million acres of  
39 irrigated agricultural land in Utah, of which about three-quarters is harvested cropland. The  
40 remaining one-quarter is irrigated pasture used for livestock grazing. [6]

41  
42 Canals and ditches in urban settings serve municipal and industrial interests. They supply water  
43 for industrial processes; deliver secondary water to residential landscaping; convey stormwater  
44 away from homes, businesses, and other development; and support wetlands and other riparian  
45 environments that would otherwise be lost.

46  
47 The majority of ditches and canals in the state of Utah rely on prescriptive easements.

48  
49 Furthermore, in 2022, a special topic on “productive agriculture” was published as part of Utah’s  
50 Coordinated Action Plan for Water [7]. Previous water-planning efforts have identified more than 200  
51

1 unique recommendations to better secure Utah’s water future. The implementation of many of these  
2 recommendations will require changes to Utah water law, other legislative actions, and partnerships  
3 with non-state entities. The intent of Utah’s Coordinated Action Plan for Water is to identify specific  
4 actions that Utah’s executive branch can undertake immediately to help advance these  
5 recommendations.  
6

## 7 **Economic Considerations**

8

9 The thousands of miles of Utah’s ditches and canals irrigate a majority of the 1.1 million acres of irrigated  
10 agricultural land in Utah, of which about three-quarters is harvested cropland with a 2012 value of \$458  
11 million [8].  
12

13 A 2016 report published by Utah State University details the significant contributions of agriculture to the  
14 state economy. The combined agricultural processing and production sectors account for 15 percent of the  
15 state’s total economic output, or \$21.2 billion, after adjusting for multiplier effects. [9]  
16

17 From 1970 to 2015, annual direct cash receipts from livestock and products increased from \$1.28 billion to  
18 \$1.57 billion, a 17.5 percent increase [10]. Annual cash receipts from livestock and products constituted 73  
19 percent of all farm business cash receipts, making livestock the driver behind most of Utah’s agricultural  
20 economic growth [11]. These direct cash receipts do not reflect the full amount of economic growth  
21 provided by livestock and its products due to the multiplier effect that cash receipts have once they are  
22 spent within the community.  
23

24 As of 2019, Utah’s level of agricultural employment is approximately the same as it was in 1970, showing  
25 a relatively stable number of jobs within the industry. Currently, farm employment constitutes 1.0 percent  
26 of Utah’s total employment, contributing 20,654 jobs to Utah’s economy [12]. Of the total agricultural  
27 employers, 15,679 (0.8%) of the total are farm proprietors [13]. The majority of individuals employed in  
28 agriculture are small business owners who create jobs and generate revenue for the rural, and generally  
29 poorer areas, of Utah.  
30

31 Canals and ditches provide tremendous economic benefits to municipalities and industry by providing pre-  
32 existing, low-cost options for water delivery and stormwater removal. While no study has been conducted  
33 to quantify the value of these services, it would be tremendously expensive if each municipality or  
34 industry currently served by Utah’s existing network of canals and ditches had to devise their own,  
35 independent water delivery and removal systems.  
36

## 37 **Goals, Objectives, and Policies**

38

### 39 **Goal(s):**

40

- 41 ● Provide for the safe and reliable conveyance of water from one location to another for beneficial  
42 use and economic prosperity.  
43

### 44 **Objectives:**

45

- 46 1. Support county plans for ditches and canals as well as irrigation.
- 47 2. Preserve the integrity and functionality of Utah’s existing canals and ditches.
- 48 3. Preserve the integrity and functionality of Utah’s irrigation companies, which manage and  
49 maintain the vast majority of the canals and ditches.
- 50 4. Ensure adequate funding for canal infrastructure maintenance and replacement.



- 1 5. Continue and improve mapping of existing canals through the canal inventory, conducted by the
- 2 ~~U~~DWRi.
- 3 6. Continue to allow access and increase access to public lands for canals and ditches and agricultural
- 4 development in a manner that (1) satisfies local needs and provides for economical and
- 5 environmentally sound water conveyance practices, and (2) is consistent with and complementary
- 6 to Utah’s lifestyle, culture, and economy.
- 7 7. Support irrigation companies and special-service districts in obtaining and maintaining access
- 8 through public lands for water conveyance needs, including current easements, deeded easements,
- 9 prescriptive easements, ditch bill easements, and all other easements held.
- 10 8. [Ensure that historical canals and ditches eligible for inclusion in the National Register of](#)
- 11 [Historic Places are identified and assessed for effects when federal or state undertakings](#)
- 12 [have the potential to impact them. Avoid, minimize, or mitigate adverse effects.](#)
- 13

14 **Policies:**

- 15
- 16 ● Encourage indemnity agreements for irrigation companies where their canals are relied
- 17 upon for flood or stormwater management.
- 18 ○ Cities and counties must work closely with irrigation companies to ensure canals
- 19 used for such purposes are properly maintained and have adequate capacity.
- 20 ● Support cities and counties in preventing the externalization of land-development
- 21 costs to irrigation companies while still achieving the benefits of land development.
- 22 ● Encourage contractual agreements between irrigation companies, cities, and counties for
- 23 increased maintenance costs, liability, and other expenses when ditches and canals are used for
- 24 stormwater.
- 25 ● Encourage legislation protecting ditch and canal companies from encroachment and liability suits.
- 26 ● Encourage efficient water transport through the proper lining and piping of ditches and canals, as
- 27 appropriate.
- 28 ● Ensure the full funding of revolving loan funds managed by the Division of Water Resources and
- 29 maintain irrigation companies’ access to these funds for canal and ditch infrastructure
- 30 improvement and replacement.
- 31 ● Encourage canal companies to provide updated mapping and contact information to the Utah
- 32 canal inventory and support the ~~U~~DWRi in its mapping efforts.
- 33 ● Support reasonable maintenance of conveyance corridors that balances operational needs with
- 34 the concerns of property owners.
- 35 ● Support the [Recommended State Water Strategy’s](#) recommendation 3.2, which suggests the
- 36 creation of a task force that combines irrigation companies and state agency planning to ensure
- 37 ongoing agricultural water management. This task force should:
- 38 ○ identify the portion of Utah’s total water supply managed by irrigation companies;
- 39 ○ establish ongoing evaluation and reporting to the governor’s office, Utah Department of
- 40 Natural Resources, Utah Department of Agriculture and Food, and Water Development
- 41 Commission on the value of ditches and canals to the Utah economy, Utah culture, and
- 42 the natural environment sustained by irrigation companies;
- 43 ○ recommend future management of irrigation companies and their water assets in areas
- 44 where canal and ditch systems are or will be significantly affected by urban development;
- 45 ○ evaluate the best means to balance the equities, including costs, when urban development
- 46 creates additional costs to irrigation systems users; and
- 47 ○ educate the public and policymakers on the purposes, value, and integrity of these
- 48 companies.
- 49 ● Evaluate existing requirements when ditches and canals are abandoned, as required by the [State](#)
- 50 [Historic Preservation Office \(SHPO\)](#) to determine who is responsible for maintenance, liability,
- 51 and weed control.

- 1 • Protect the use, maintenance, and development of all water-diversion and conveyance systems, rights-of-ways, and easements that cross public lands.
- 2
- 3 • Support the findings and recommendations of Utah’s Coordinated Action Plan for Water.
- 4 • Oppose special designations on federal land that would restrict the tools available and increase the cost of maintaining and improving ditches, canals and other irrigation infrastructure.
- 5
- 6 • The state has jurisdiction over water and its conveyance systems, full coordination, cooperation, and consistency with state plans and laws should guide federal actions.
- 7
- 8

9 **State Code**

10

11 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The following are selected portions of the Utah State Code and do not represent every potential legal reference in the Code related to this section of the State Resource Management Plan or the administration of public lands.*

12

13

14

15

16 **Title 73 - Water and Irrigation**

17

18 **Additional References to State Code and Legislation:**

19

20 Funding is available to assist canal companies to develop and implement a safety management plan, as described in Utah Code § **73-10-33**.

21

22

23 The Division of Water Rights maintains an inventory of all canals in the state. In 2014 the Utah Legislature passed House Bill 370 directing the Division of Water Rights to create and maintain an inventory of all canals in the state by July 1, 2017. The following attributes of all open flow conveyances with a minimum design capacity of 5 CFS are to be captured:

24

25

26

- 27 ○ Canal alignment
- 28 ○ Contact information for the canal owner
- 29 ○ Maximum flow capacity
- 30 ○ Is the canal used for flood or stormwater management?
- 31 ○ Date of adoption of a safety management plan, if one has been completed

32 In 2017 the Utah Legislature passed House Bill 301 expanding the inventory to include all enclosed segments of each, open human-made water conveyance system in first or second class counties.

33

34

35 **References:**

36

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## ENERGY RESOURCES

### Introduction

Affordable, reliable, dispatchable, and diversified energy has been a key component that has contributed to Utah’s economic success. Recognizing the central role that energy plays, and to plan for the future of Utah’s energy needs, in 2022, Governor Spencer Cox and energy leaders launched the Utah Energy and Innovation Plan [1]. Under this plan, the State of Utah has worked to meet energy demands by means of the balanced use of Utah’s abundant energy resources. Since the launch of the plan, the state has implemented programs and policies that demonstrate a commitment to these resources.

Specifically, the State of Utah has established the following energy commitments [2]:

1. Utah is committed to an “any of the above” energy future, supporting efforts and policies that provide a variety of tools and resources that citizens, communities, businesses, and industries can choose from to deliver and obtain affordable, reliable, and dispatchable energy.
2. Utah is committed to American energy independence, pursuing policies and actions that will enable more domestic energy development and enhance global energy security.
3. Utah is committed to pragmatic, market-driven climate solutions that enable innovative energy production. This includes a focus on supporting Utah-based research and development, ensuring that we remain good stewards of our environment for future generations of Utahns.
4. Utah is committed to supporting rural communities through economic development and diversification efforts, infrastructure investment, and workforce training and development.
5. Utah is committed to supporting a clean energy future through a strong and responsible mining program for critical minerals; investment in emerging energy technology such as hydrogen, storage, and energy efficiency; and air-quality research and incentive programs.
6. Utah is committed to collaboration with its local, regional, and federal partners to pursue infrastructure and innovation projects such as electric-vehicle charging, transmission, emerging fuel hubs, and coal-community support and diversification.

Energy is a \$20.9 billion industry in Utah, generating \$656 million in state and local revenues (including \$77 million directly for education through the Utah School and Institutional Trust Lands Administration in 2013). There are more than 10,000 direct energy jobs in the state, a total that expands to almost 40,000 when indirect and induced employment is included. Employment directly related to energy has produced earnings at a rate almost twice that of other jobs in the state. According to a recent study conducted by Pricewaterhouse Coopers for the American Petroleum Institute, the oil and natural gas industry alone supported over 103,000 direct, indirect, and induced jobs, provided more than \$6.1 billion in wages and contributed more than \$12.4 billion to Utah’s economy in 2019 [3].

Producing crude oil, natural gas, coal, and renewable energy resources, the State of Utah is a net energy supplier to the nation. The state’s diversified energy portfolio also includes: geothermal, solar, oil shale, oil sands, wind resources, and hydropower [4].

Utah has the fourth-highest number of producing mineral leases on federal lands in the United States [5]. In 2020, coal fueled 61 percent of the state’s electricity, down from 75 percent just 5 years earlier. Renewable energy, primarily from solar, accounted for about 97 percent of the state’s new electrical generation since 2015 [6].

Utah’s general policy on energy production is that it supports all forms of energy. Utah is an “all-of-the-above” state and believes there is room in its energy portfolio for all forms of energy.

1 **State Agencies**

2  
3 Utah energy resources are managed by multiple agencies, each with specific roles and duties. The three  
4 primary state agencies responsible for energy resources are the Office of Energy Development (OED), the  
5 Division of Oil, Gas, and Mining (DOGM), and the Utah Geological Survey (UGS).

6  
7 **Office of Energy Development (OED)**

8  
9 The OED is dedicated to advancing all forms of responsible energy and minerals, including conventional,  
10 unconventional, and renewable [energy](#), as well as fostering innovation in the areas of efficiency,  
11 conservation, and alternative transportation. The OED is responsible for implementing Utah energy policy  
12 ([79-6-301](#)) by facilitating the development of Utah’s diverse energy and minerals sector. The OED  
13 provides industry assistance through the administration of state and federal tax incentives, fosters  
14 education and technological innovation, and collaborates with a variety of stakeholders in [the](#)  
15 government, nonprofit, and ~~the~~-private sectors. The office is also dedicated to promoting responsible  
16 energy policies, and regularly participates in resolving public lands and environmental issues.

17  
18 **Mission**

19  
20 The OED advances the governor’s energy vision, implements state energy policy, and enhances Utah’s  
21 energy infrastructure, technology, and workforce to provide more affordable, reliable, dispatchable, and  
22 diverse energy options for Utah households and businesses.

23  
24 The OED supports and encourages innovation and responsible development of all energy resources,  
25 including renewable, conventional, and unconventional [energy](#), as well as advancements in the areas of  
26 efficiency, conservation, and alternative transportation.

27  
28 **Division of Oil, Gas, and Mining (DOGM)**

29  
30 Originally established in 1955 as the Oil and Gas Conservation Commission, the DOGM was formed to  
31 regulate the exploration and development of coal, oil and gas, and other minerals in a manner that:

- 32  
33
- 34 ● encourages responsible reclamation and development;
  - 35 ● protects correlative rights;
  - 36 ● prevents waste; and
  - 37 ● protects human health and safety, the environment, and the interests of the state and its citizens.
- 38

39 While demand, technology, and pricing have changed dramatically over the past 60 years, DOGM’s focus  
40 remains on industry regulation to protect the public and Utah’s environment. The DOGM is committed to  
41 the future of oil, gas, and mining in Utah. As resource demands have increased, DOGM has continued its  
42 support of responsible resource development, public safety protection, and environmental preservation  
43 that supports the goal of ensuring access to affordable and reliable energy sources for future generations.

44  
45 The DOGM manages the four following programs:

46  
47 **1. Minerals Program**

48  
49 The minerals program regulates non-coal mining operations in Utah with a few exceptions, as noted in  
50 Utah Administrative Code R647.

1 The minerals program staff works to ensure reclamation standards can be achieved after mining has been  
2 completed. The staff oversees many large mining operations, including the Bingham Canyon copper  
3 mine, the unique Topaz beryllium mine, and many small mine and exploration operations.  
4

5 The staff verifies that mine operators follow their plans for mining and reclamation, including mining  
6 within permit boundaries and protecting public safety and the environment. The DOGM holds  
7 reclamation bonds to ensure the future reclamation of mine sites.  
8

9 More than 200 distinct minerals are mined in Utah, which includes the base and precious metals of  
10 copper, magnesium, gold, silver, and beryllium. Utah also produces many industrial minerals, such as  
11 potash, crushed stone, salt, lime, phosphate, ~~g~~Gilsonite, gypsum, and unconventional fuels including oil  
12 shale and oil sand. Currently, there are approximately 600 permitted mineral operations statewide [7].  
13

## 14 **2. Coal Program**

15  
16 The Coal Program is responsible for providing permits to coal companies, completing site inspections to  
17 confirm compliance, overseeing reclamation, and enforcing the bond release process. Ensuring provisions  
18 of the coal rules are followed allows for continued extraction of coal to occur in a way that reduces and/or  
19 eliminates long-term negative impacts to the environment.  
20

21 Coal extraction is important to Utah. In 2018, five Utah coal operators produced 13,753-million short tons  
22 of coal valued at \$499 million from six underground mines and one surface mine. Communities in  
23 Carbon, Garfield, Emery, Kane, Sanpete, and Sevier counties rely on the coal industry to provide jobs and  
24 stimulate their local economies [8 & 9].  
25

## 26 **3. Abandoned Mine Reclamation Program**

27  
28 Utah has a history rich in mining including the extraction of copper, silver, and uranium. Often, when  
29 mines were no longer producing, equipment, open shafts, tunnels, and tailings were abandoned. In 1975,  
30 the Utah Mined Reclamation Act was passed, which made it illegal for mines to be abandoned. Today  
31 there are an estimated 17,000 mine openings scattered across Utah.  
32

33 The Abandoned Mine Reclamation Program (AMRP) works to protect the public from dangers associated  
34 with old mines by sealing off access to openings and cleaning up waste. Old mining sites can be  
35 intriguing to unsuspecting explorers, but can contain dangerous gases, unstable structures, and explosives.  
36 Explorers are encouraged to “Stay out and Stay Alive”! [10].  
37

## 38 **4. Oil and Gas Program**

39  
40 The Oil and Gas Program of the DOGM was established in 1955 to prevent the waste of oil and natural  
41 gas, encourage conservation and protect correlative rights of oil and natural gas owners. The Oil and Gas  
42 Program mission is to [11]:  
43

- 44 ● Promote the exploration, development and conservation of oil and gas resources.
- 45 ● Foster a fair economic return to the general public for those resources.
- 46 ● Maintain sound, regulatory oversight to ensure environmentally acceptable activities.  
47

48 By legislative mandate [12], the Oil and Gas Program has oversight responsibility for the following:  
49  
50

- All operations for and related to the production of oil or natural gas including drilling, testing, equipping, completing, operating, producing, and the plugging of wells and the reclamation of sites.
- Spacing and location of wells.
- Operations to increase ultimate recovery, such as cycling of natural gas, maintenance of pressure, and introduction of natural gas, water, or other substances into a reservoir.
- The disposal of salt water and oil-field wastes.
- The underground and surface storage of oil, natural gas, or other products.
- The flaring of natural gas from an oil well.

### **Utah Geological Survey (UGS)**

The UGS provides timely scientific information about Utah’s geologic environment, resources, and hazards [13].

Relevant to this section of the Resource Management Plan, the UGS publishes Utah’s Energy Landscape report every few years to summarize energy resources. The most recent report, authored by Michael D. Vanden Berg, was published in 2020 (UGS Circular 127).

The UGS manages six programs, which are described below.

#### **Energy and Minerals Program**

The Energy and Minerals Program (1) provides geologic information to government, industry, and individuals to encourage and aid in the prudent development of Utah’s mineral and energy resources; (2) inventories, documents, and researches Utah’s abundant mineral and energy resources; and (3) maintains the Utah Core Research Center [14].

Notable recent publications from this program include, Critical Minerals of Utah (2020), Proven and Hypothetical Helium Resources in Utah (2020), and Utah’s Energy Landscape (2020).

#### **Geologic Hazards Program**

The Geologic Hazards Program is focused on reducing Utah’s life-safety, property, and economic risk from geologic hazards. The program’s threefold mission consists of the following:

- Respond to geologic hazard emergencies and provide unbiased, scientific advice to local governments and incident commanders.
- Investigate and map geologic hazards in urban areas and other areas (to publish and distribute maps and GIS spatial data).
- Provide geologic hazard-related technical and educational outreach and information to inform Utahns about hazards [15].

#### **Geologic Information and Outreach Program**

The Geologic Information and Outreach Program answers questions and provides information on Utah’s geology to the public, educators, industry, and decision makers; produces non-technical flyers and colorful brochures on a variety of geologic topics; provides geologic resources to teachers; and maintains the Natural Resources Map & Bookstore and the UGS Library.

## Geologic Mapping Program

The Geologic Mapping Program maps Utah's geology at scales of 1:24,000 (7.5-minute quadrangle maps) to 1:100,000 (regional maps). These maps and accompanying materials depict and interpret the following: (1) the composition, age, and depositional environment of exposed and subsurface rocks; (2) geologic structures such as faults and folds; (3) Quaternary (surficial) cover; (4) geologic hazards such as landslides and earthquake-producing faults; and (5) economic and groundwater resource features. The maps are used by geologists, government officials, industry representatives, university professors and students, and the public to better understand Utah's geology, delineate and interpret the economic value and potential of property, assess geologic hazards, and make land-management decisions. [16]

## Groundwater and Wetlands

The Groundwater and Wetlands Program evaluates the quantity and quality of Utah's groundwater resources, and performs wetland mapping and field assessments. The program coordinates with local, county, state, and federal agencies to perform a wide variety of groundwater and wetland studies and makes the data publicly available through web applications, publications, and external websites. These results help partners make scientifically sound decisions on important growth, natural resources, and environmental issues. [17]

## Paleontology Program

The Paleontology Section of the Mapping Program maintains and publishes records of Utah's fossil resources and provides paleontological and archaeological recovery services to state and local governments. The UGS's paleontology services are often requested by the U.S. Bureau of Land Management, ~~the~~ (BLM), National Park Service, ~~the~~ U.S. Bureau of Reclamation (BOR), and ~~the~~ U.S. Forest Service (Forest Service). [18]

## Energy Specifics

### Quick Facts

- Utah accounts for ~~15~~16 of every 100 barrels of crude oil produced in the Rocky Mountain region. The state's five oil refineries, all located in the Salt Lake City area, can process ~~about~~ nearly 2067,000 barrels of crude oil per calendar day.
- In 2023, ~~53~~46 percent of Utah's electricity net generation came from coal-fired power plants, down from 75 percent in 2015. Over the same period, natural gas-fired generation increased from 20 to ~~26~~34 percent and utility-scale solar power grew from 0.1% to ~~9~~11 percent of the state's generation.
- ~~Utah has the fourth highest number of producing oil and natural gas leases on federal lands, after Wyoming, New Mexico, and Colorado.~~
- Utah has the nation's only operating uranium ore mill, which processes uranium ore and radioactive wastes from other states, ~~but~~ there has been no ~~active~~ uranium mine production in Utah since 2012, but due to market conditions mining has recently resumed at two mines in eastern Utah.
- Almost 98 out of 10 Utah households use natural gas as their primary heating fuel, the highest share of natural gas home heating use for any state. ~~Utah accounts for 1 in every 10 barrels of crude oil produced in the Rocky Mountain region. Utah's five oil refineries, all located in the Salt Lake City area, can process 203,494 barrels of crude oil per calendar day.~~
- ~~In 2020, 61 percent of Utah's net~~ Utah is one of seven states with utility-scale electricity generation ~~came from coal-fired power plants, down from 75 percent 5 years earlier, while~~



1 ~~natural gas fired and solar power generation increased.~~ geothermal sources. In 2023, three  
2 geothermal facilities in southwestern Utah provided about 8 percent of the state's renewable  
3 electricity generation. [19]

4 ~~Utah's per capita energy consumption in the residential sector is the third lowest among the~~  
5 ~~United States, after Hawaii and California.~~

6 ~~Utah has the nation's only operating uranium ore mill, which processes uranium ore from mines~~  
7 ~~in other states, as there has been no active uranium mine production in Utah since late 2012.¶~~

8 ~~In 2019, Utah consumed more natural gas than it produced in dry natural gas for the first time~~  
9 ~~since 1991.~~

## 11 Petroleum

13 Utah's rich history as a major oil producer dates back to 1955 and the discovery of the Bluebell field in  
14 Duchesne County. More than six decades later, the state still ranks as a major oil producer in the United  
15 States. The majority of Utah's oil production is concentrated in Duchesne, Uintah, and San Juan counties.  
16 The oil is commonly referred to as "waxy crude" because of its relatively high paraffin content. Utah's  
17 two types of petroleum, black and yellow, flow like a liquid at high-temperature, but thicken at room  
18 temperature, creating long-distance transportation challenges. However, Utah waxy crude has low levels  
19 of acid, sulfur, and metals, which makes it desirable in the refining process. [20]

## 21 Findings

23 ~~Utah ranks 9th in the nation for~~ accounts for almost 1 in every 100 barrels of crude oil production  
24 in the United States and 16 of every 100 barrels produced in the Rocky Mountain region. Utah's crude oil and  
25 ~~petroleum resources are predominantly found~~ Oil drilling operations and producing wells are concentrated  
26 in the Uinta Basin (Duchesne and in northeastern Uintah counties) and the Paradox Basin (San Juan  
27 County) of southeastern Utah. ~~Utah's crude~~ Oil production from early 2003 to 2014 in Utah boomed,  
28 with an increase in exploration and development activity. ~~declined in 2020 following the drop in~~  
29 petroleum demand and oil prices during the COVID-19 pandemic, but the state's output recovered and in  
30 2023 reached a new high, surpassing the prior year's record output. ~~This activity was fueled by increases~~  
31 ~~in the demand for oil and advances in horizontal drilling technology, reducing the overall operating costs~~  
32 ~~and allowing operators to target isolated petroleum reserves. [21]~~

34 ~~Utah crude oil prices peaked near \$100 per barrel in summer 2022 before dropping back to about \$65~~ in  
35 2023 fluctuated between \$62 and \$76 per barrel in the fall, and, averaged ing \$81.66.50 per barrel for the  
36 ~~year—the highest price since 2013 and more than double the average price in 2020.~~ This rebound in  
37 price, coupled with record-high petroleum demand, resulted in a 26% increase in Although this price is  
38 about 18 percent lower than in 2022, Utah crude oil production ~~to 44.6~~ increased 22 percent to 55.5  
39 million barrels in 2023, the highest annual production on record. [22]

41 ~~In 2014, Utah crude oil production peaked at 40.9 million barrels. Prices have fallen from the 2014 high~~  
42 ~~of approximately \$106 per barrel, and production dropped to 30.5 million barrels (a decrease of 18%) in~~  
43 ~~2016. From 2017 to 2018, the industry experienced a resurgence in crude oil production, reaching 37.1~~  
44 ~~million barrels in 2018. However, in 2019, production fell again. It reached an all-time low in April of~~  
45 ~~2020 due to overproduction from OPEC nations and the COVID-19 pandemic. [22]~~

47 In 2018, Utah's petroleum industry accounted for 213 trillion British thermal units (Btus), or 24 percent  
48 of the total energy produced in Utah [23]. Located in the Salt Lake City area, Utah's five oil refineries can  
49 process ~~206,000~~ 207,000 barrels of crude oil per day. Oil reaches the refineries via pipelines and trucks  
50 from the Uinta Basin, Colorado, Wyoming, and Canada. Utah's refineries account for approximately ~~30~~  
51 40 percent of the refining capacity in the Rocky Mountain region (Utah, Colorado, Wyoming, Idaho, and

1 Montana) [24]. These refineries produce motor gasoline, diesel fuel, and jet fuel. Utah’s petroleum  
2 products are sold to markets in Utah, Idaho, Nevada, Wyoming, [eastern](#) Washington, and Oregon [25]. ~~In  
3 December 2011, a pipeline was opened between the Salt Lake City refineries and Las Vegas, providing  
4 Nevada with an alternative to California refineries for petroleum products [26].~~

5  
6 ~~Utah’s proven crude oil reserves account for less than 1 percent of the total in the United States.~~ The  
7 Uinta Basin of eastern Utah overlays part of the Green River oil shale, a kerogen-rich formation that  
8 represents one of the world’s largest oil resources. Kerogen is a fossilized organic material, found in  
9 sedimentary rock, which can be heated to extract crude oil. Pilot oil shale projects have been undertaken  
10 in the area. Eastern Utah also hosts the largest resources of bitumen in oil sands in the United States.  
11 [However, extraction technology is water-intensive and presently uneconomic. The last company with an  
12 oil shale lease on property managed by the Bureau of Land Management—Enefit American Oil’s South  
13 Project located in Utah’s Uinta Basin—relinquished its lease in 2023. \[27\]](#)

### 14 15 **Other Findings**

16  
17 Tier 3 fuels drastically reduce vehicle emissions - improving air quality. In 2017, the Environmental  
18 Protection Agency (EPA) established new emission standards for vehicles. Accordingly, oil refineries are  
19 required to produce cleaner fuel products, and car manufacturers are required to equip new vehicles with  
20 additional [equipment features](#) to reduce emissions. In vehicles produced after 2017, using tier 3 fuel can  
21 reduce emissions by up to 80 percent. Under the leadership of Gov. Herbert, the Utah Legislature worked  
22 with the Office of Energy Development and key petroleum stakeholders to create a path forward for  
23 smaller refineries in Utah. The result was the High Cost Infrastructure Tax Credit (~~HCITC~~), a non-  
24 refundable, post-performance tax incentive provided to refineries that committed to making the necessary  
25 upgrades to produce ~~T~~tier 3 fuels. [28]

### 26 27 **Economic Considerations**

28  
29 During 2020, Utah ranked 10th in the country in crude oil production and 13th in natural gas gross  
30 production [29]. Utah’s oil industry has played a significant role in the state’s economic prosperity. Utah  
31 School and Institutional Trust Lands Administration revenues come primarily from natural gas, coal, oil,  
32 real estate development, and other surface uses such as grazing.

33  
34 From high-paying jobs to tax revenues to federal, state, and local governments, and royalty revenue to  
35 Utah citizens and its Permanent School Trust Fund, Utah’s petroleum industry has helped support the  
36 state’s continued financial stability. Utah petroleum fuels a wide-range of vehicles and provides the  
37 petrochemical building blocks that go into the production of clothes, cell phones, computers, recreational  
38 equipment, and thousands of other everyday items that society consumes. The economic and fiscal  
39 impacts of Utah’s petroleum industry (2020–2024) can be found in the Utah Petroleum Industry report  
40 for 2023. [30]

41  
42 ~~Utah’s crude oil and petroleum resources add tremendous value to Utah’s energy economy. In 2017,  
43 Utah’s petroleum industry provided over 19,000 refining jobs and 32,000 oil and natural gas production  
44 and development jobs; more than \$3 billion in earnings (refining and production/development combined);  
45 and an estimated \$7.2 billion in state GDP (refining and production/development combined). Average  
46 annual salaries in Utah’s crude oil and petroleum production industry are more than two times the  
47 statewide average. [30]~~

### 48 49 **Goals, Objectives, and Policies**

1 One of Utah’s goals is to ensure the state’s continued economic development through access to its own  
2 clean and low-cost energy resources. This will allow the state to meet projected energy growth demands  
3 by making balanced use of fossil fuels and renewable resources in market-driven, cost effective, and  
4 environmentally responsible ways.

5  
6 Support for continued traditional energy development from oil and gas is essential to the state’s energy  
7 plan, [which is summarized below](#).

- 8
- 9 ● Facilitate the expansion of responsible development of Utah’s energy resources, including  
10 traditional, alternative, and renewable sources.
- 11 ● Pursue opportunities for Utah to export fuels, electricity, and technologies to regional and global  
12 markets.

### 13 14 **Natural gas**

15  
16 Natural gas is used mostly for home heating (residential, 28%), but starting in mid-2004, more than 2,300  
17 megawatts (MW) of new natural gas-fired electric generating capacity ~~has come~~[came](#) online, greatly  
18 increasing the amount used by the electric utility sector (from 8% in 2005 to ~~25% in 2018~~ [25.1% in](#)  
19 [2022](#)) [\[31 & 32\]](#). Consumption of natural gas in Utah peaked in 2013 at 247 billion cubic feet and, after  
20 declining for a few years, increased again to 244 billion cubic feet in 2018- ~~and 275 billion cubic feet in~~  
21 [2022](#) ~~[33 & 34]~~ [\[33 & 34\]](#).

### 22 23 **Findings**

24  
25 Utah ranks 13th in the nation in natural gas production. Natural gas has become one of the primary  
26 sources for generating baseload utility-scale electricity [\[3235\]](#). Natural gas is one of the many vital  
27 resources in the energy mix, supporting Utah’s energy economy with nearly 8,000 direct jobs in oil and  
28 gas development and production in 2017. [\[3336\]](#)

29  
30 The majority of Utah’s natural gas comes from conventional reservoirs located in the Uinta Basin  
31 (Duchesne and Uintah ~~C~~[C](#)ounties) and the Paradox Basin (San Juan County) [\[3437\]](#). Natural gas  
32 production concentrated in the Uinta Basin accounted for about 1 percent of U.S. output in 2015. ~~Carbon~~  
33 ~~County produces about 14 percent of Utah’s natural gas in the form of Utah’s~~ coalbed methane—  
34 [production, which is natural gas produced from coal seams- peaked in 2007, when it accounted for almost](#)  
35 [one-fifth of the state’](#) ~~This form of production has provided as much as one third of Utah’s natural gas~~  
36 ~~output, but Coalbed methane production has been gradually declining from its 2002 peak since then and~~  
37 [in 2022 fell to about a third of its peak output and one-tenth of the state’s natural gas output.](#) [\[3538\]](#)

38 -  
39 It is estimated that about 2 percent of the United States’ proven natural gas reserves are located in Utah.  
40 Utah consumes only about one half of the natural gas it produces. The industrial sector is Utah’s largest  
41 consumer of natural gas, followed by the residential sector. Six in seven households in the state use  
42 natural gas for home heating. Natural gas is an essential raw material for many products, including paints,  
43 fertilizer, plastics, antifreeze, dyes, photographic film, medicines, and explosives.

44  
45 Initially used primarily for heating, natural gas resources have been adapted as a fuel source for vehicle  
46 fleets and have more recently been selected as one of the preferred fuel sources for baseload, utility-scale  
47 electricity generation. Due to low prices and a reduced emission profile compared to other conventional  
48 fuel sources, the number of natural gas-fired power plants has increased in recent years. Many natural  
49 gas-fired power plants maintain grid stability and account for over-generation from intermittent renewable  
50 resources, also known as managing the “California Duck Curve.” [\[39\]](#)

1 Utah is crossed by a major transportation corridor for shipping natural gas from the Opal Hub in  
2 Wyoming and the Piceance Basin in western Colorado to markets in Nevada, Wyoming, Idaho, and  
3 beyond. The Clay Basin facility, on the Utah-Wyoming border in Daggett County, is one of the region’s  
4 largest underground natural gas storage facilities. [40]

5  
6 Renewable natural gas (RNG) is a pipeline-quality gas derived from the decomposition of organic matter.  
7 RNG is interchangeable with conventional natural gas as a heating source, transportation fuel, and power  
8 generating resource, often as compressed natural gas (CNG) or liquefied natural gas (LNG). ~~Being~~  
9 ~~Derived~~ from a cellulosic or advanced feedstock (usually from pig or food waste), RNG qualifies as  
10 biofuel under the Renewable Fuel Standard. [41]

11  
12 In Utah, biogas facilities are currently producing RNG. A few active projects include the following:

- 13  
14 ● Smithfield’s hog farms are located in Central Utah (Beaver and Millard Counties) and provide  
15 RNG for the Kern River Gas Pipeline.
- 16 ● Houweling Tomatoes in Mona, Utah, which uses waste heat and carbon from a nearby natural gas  
17 power plant to grow tomatoes.
- 18 ● Wasatch Resource Recovery, located at the South Davis Sewer District, is an anaerobic digester  
19 dedicated to food waste diversion that provides RNG in a partnership with Dominion Energy.

## 20 21 **Economic Considerations**

22  
23 Despite the increase in the number of natural gas-fired power plants, an oversupply nationally drove  
24 average wellhead prices for natural gas in Utah down 39 percent between 2014 and fall 2020 (\$4.35 per  
25 thousand cubic feet [Mcf] to \$2.63 per Mcf). Unfortunately, natural gas prices in the \$2 per Mcf range do  
26 not provide economic justification for new natural gas exploration or development. The lower overall  
27 production of natural gas and natural gas liquids, coupled with the steady low prices, resulted in a 2019  
28 value of natural gas production of \$784 million, the lowest since 2002. [42]

## 29 30 **Goals, Objectives, and Policies**

31  
32 Energy development is of particular importance in Utah because of the associated capital investment, job  
33 creation, and revenue. A strong natural gas industry contributes to Utah’s historically low energy costs  
34 and provides a foundation for success across all industrial sectors statewide.

35  
36 Support for continued natural gas development in Utah is a major component of the state’s energy plan.  
37 The benefits of developing this abundant and clean resource will continue to play a key role in Utah’s  
38 economic future and the nation’s energy independence. Technologies continue to emerge that are  
39 allowing energy producers to access significant and growing supplies of domestic natural gas from shale  
40 formations and other unconventional reservoirs.

## 41 42 **Coal**

43  
44 Mined throughout Utah for more than 100 years, the majority of Utah coal is consumed in-state for  
45 electric power generation. ~~Once~~ valued at over \$800 million annually, ~~Utah’s coal economy is~~  
46 ~~especially important to rural Utah, providing roughly 2,000 high-paying jobs and a significant portion of~~  
47 ~~county tax bases.~~ the value of coal produced in Utah totaled only \$289 million in 2023, 44 percent lower  
48 than 2022, and well below the inflation-adjusted high of \$1.5 billion recorded in 1982. [43] Due largely to  
49 coal’s contribution, Utah has benefited from some of the most affordable electricity prices in the nation.

1 Utah’s coal-fired power plants have provided the electric energy that has historically powered homes,  
2 businesses, and industry throughout Utah. Utah ranks 12th in the nation for coal production, ~~with most of~~  
3 ~~its economic coal deposits located in three coalfields found in~~ Coal production in 2022 came from Emery,  
4 Sevier, Emery, Sanpete, and Carbon Kane eCounties. Utah’s coal is bituminous with a high Btu, low sulfur  
5 and ash contents, and high reactivity, making it ideal for power generation due to its high combustion  
6 efficiency. ~~After idling of the Dugout Canyon Mine in 2019, coal is no longer produced in Carbon County~~  
7 ~~[44].~~

## 9 Findings

11 ~~In 2019, Utah’s coal industry accounted for the production of 13,753,000 tons of coal. Four mines from~~  
12 ~~three counties (Emery, Sevier, and Carbon counties) accounted for nearly 90 percent of the total~~  
13 ~~production (Figure 1). In the same year, Utah consumed approximately 12,300 thousand tons of coal for~~  
14 ~~utility scale electricity generation, accounting for 305 trillion Btu (35%) of the total energy produced in~~  
15 ~~2018. [41]~~

17 Five Utah coal operators produced 10.7 Mt of coal valued at \$504 million from five underground mines  
18 and one surface mine in 2022, the lowest production total since 1978. After several years of decline,  
19 employment at active or recently active mines has stabilized in the 1300 employee range, averaging 1361  
20 employees in 2022—a 15% increase from a low of 1185 employees in 2016 [45]

22 ~~After a 17 percent decline in coal production between 2015 and 2016, the demand for coal in Utah has~~  
23 ~~remained steady, with the majority of the produced coal (64% in 2018) used in state. In the past, Utah has~~  
24 ~~been a significant net exporter of coal, exporting more than 27,000,000 tons in 2000 to local, domestic,~~  
25 ~~and foreign markets. However, in recent years the energy mix has shifted. Out of state domestic demand~~  
26 ~~has decreased to only 1.9 million tons in 2018. Utah’s foreign exports peaked in the mid 1990s at about 5~~  
27 ~~million tons, then dropped to near zero in the mid 2000s.~~ Demand at Utah coal-fired power plants was  
28 fairly stable from 2000 to 2015 at about 15.2 Mt a year but dropped to an average of 11.6 Mt between  
29 2016 and 2021, including a dip in 2020 to 10.5 Mt due to the COVID-19 pandemic. Then Utah power  
30 plant consumption dropped significantly again in 2022, to 10.2 Mt, as the Intermountain Power Plant  
31 started to ramp down operation and less coal was used at Hunter and Huntington as these plants flex  
32 power output based on availability of new solar energy resources. However, the Utah operators have taken  
33 advantage of a stronger foreign export market ~~has seen a resurgence in the past few years, increasing to~~  
34 ~~3.1 million tons in 2018., sending an estimated 1.9 Mt of coal overseas to Asia in 2022 [46-42].~~

## 36 Economic Considerations

38 Most of Utah’s economic coal deposits are located in three coalfields found in Sevier, Emery, and Carbon  
39 counties [47]. Prospective coal reserves, some of which are constrained by land-use restrictions, are also  
40 found in Uintah, Grand, Wayne, Garfield, Iron, and Kane counties. The Kaiparowits coalfield, located in  
41 Garfield and Kane counties, holds the most significant potential for recoverable coal—an estimated  
42 9,096,000,000 tons recoverable coal reserves [48 & 49]. However, that coalfield is located within the  
43 original boundaries of the Grand Staircase-Escalante National Monument, and may not be available for  
44 mining.

46 In 2017, Utah’s coal industry provided more than 5,000 jobs, \$343 million in earnings, and an estimated  
47 \$612 million in state GDP. Of the 5,000 jobs provided, the average annual salaries were double the  
48 statewide average, totaling approximately \$105,000 [50].

50 After Utah's coal production increased in 2019 because of higher demand from the overseas export  
51 market, coal production continued to decline. In 2023, coal production declined to the lowest level in 49

1 [years, partly due to the temporary closures and production problems at the Lila Canyon, Skyline, and](#)  
2 [Coal Hollow mines \[51\].](#)

3  
4 [In 2023, Utah mine operators reported strong demand for Utah coal, both domestically \(the closure of Lila](#)  
5 [Canyon created localized shortages\) and internationally but meeting this new surge in demand has been](#)  
6 [challenging. With demand outpacing supply, coal prices increased substantially, with western U.S. spot](#)  
7 [prices above \\$40 per ton in fall 2022 and international spot market prices exceeding \\$400 per ton in fall](#)  
8 [2022 \(prices from EIA and ICE Newcastle; spring 2023 spot prices are back to about \\$35 per ton in the](#)  
9 [western U.S. and \\$165 per ton internationally\). Labor shortages were cited as the number one issue](#)  
10 [holding back production; in fact, one operator indicated that there were currently over 200 open coal](#)  
11 [mining jobs in Utah. The defunding of the coal industry has also affected the ability for operators to](#)  
12 [finance new mine equipment and improvements and, coupled with continued difficult mining conditions](#)  
13 [and a burdensome regulatory environment, the Utah coal industry will continue to struggle to maintain](#)  
14 [current activities \[52\].](#)

## 15 16 **Goals, Objectives, and Policies**

17  
18 The State of Utah continues to support the development of its coal resources. The report, [Advancing Utah](#)  
19 [Coal: Technology, Policy, and a Path Forward \[53\]](#), provides a framework and recommendations for the  
20 advancement of strategic coal technologies and a sustainable coal economy in Utah. The Advanced Coal  
21 Resource Group (ACRG), which is a state-based working group of members from coal communities,  
22 local government, industry and academia, meets regularly. The ACRG focuses on the development and  
23 deployment of advanced coal technology and identification of opportunities for responsible coal  
24 development and coal industry growth.

25  
26 Utah, with its forward-thinking research universities and entrepreneurial spirit, is well positioned to  
27 provide world leadership in advanced coal technology. University groups and technology companies  
28 within the state continue to innovate through research and development. Since 2015, Utah research and  
29 development groups have received more than \$14 million in coal technology grants. The University of  
30 Utah’s Industrial Combustion and Gasification Research Facility, located in Salt Lake City, houses some  
31 of the most advanced combustion test equipment found in the United States. In 2021, the University of  
32 Utah received \$1.5 million for coal research.

33  
34 The Utah Legislature approved the [Sustainable Transportation and Energy Plan \(STEP\)](#) in 2016. This  
35 legislation established a 5-year pilot program, under which regulators authorized Rocky Mountain Power  
36 to spend an average of \$1 million per year on clean-coal technologies.

- 37  
38
- 39 ● The State is committed to an any-of-the-above energy portfolio that includes coal resources.
  - 40 ● Promote access to and the continuation of mining operations for coal in Utah.
  - 41 ● Oppose federally mandated coal moratoriums or other federal actions that impede access to coal
  - 42 resources—, particularly, on public lands.
  - 43 ● Remain cognizant of factors contributing to a potential energy crisis, including but not limited to,
  - 44 the early retirement of coal power plants.

## 45 **Renewable Energy Resources and Storage Solutions**

### 46 47 **Geothermal**

48  
49 Utah is one of seven states with utility-scale electricity generation from geothermal sources, ranking third  
50 in the nation in geothermal energy [54]. Utah has a vast number of untapped geothermal resources and the

1 ability to generate renewable baseload electricity, making geothermal energy one of the most valuable  
2 resources in Utah’s energy mix.

3  
4 Most of the potential for geothermal electric power generation in the United States lies in the western part  
5 of the country. Relying on Earth’s constant temperature, geothermal energy is a continuously available  
6 renewable resource. Since it is a continual resource, geothermal energy is the only renewable resource  
7 that offers baseload electricity generation in the absence of energy storage.

8  
9 Utah is located in an active geothermal zone. There are four known geothermal resource areas in Utah as  
10 classified by the UGS and ~~the U.S. BLM Bureau of Land Management~~. Geological studies and well data  
11 indicate that several other areas in the state have the potential for geothermal energy development. The  
12 areas with the greatest geothermal resource assets are located within the Basin and Range province of  
13 western Utah and the Transition Zone of central Utah.

14  
15 In northern Utah, geothermal resources are associated with the Wasatch fault zone, which defines the  
16 eastern edge of the Basin and Range province, separating it from the middle Rocky Mountains (Wasatch  
17 Range). These resources have geothermal characteristics similar to those in Nevada, which have similar  
18 geology and are also part of the Basin and Range province.

## 19 Findings

20  
21 ~~Geothermal energy represents the fourth largest share of~~ Utah is one of seven states with utility-scale  
22 ~~renewable energy~~ electricity generation in Utah from geothermal sources, ranking third behind California  
23 ~~and Nevada. In 2018, Utah’s three utility-scale geothermal power plants accounted for approximately 10~~  
24 ~~percent~~ In 2023, three geothermal facilities in southwestern Utah provided about 8% of the state’s total  
25 ~~utility-scale~~ renewable electricity generation, or 446 gigawatt hours [49]. Utah’s geothermal power  
26 ~~plants have the capacity to generate enough power for over 45,000 homes, most of which is purchased for~~  
27 ~~use in California.~~ The state has some of the best geothermal potential in the nation, and more geothermal  
28 projects are in development. In April 2022, the U.S. Interior Department offered 11 geothermal lease sale  
29 parcels totaling about 32,500 acres in the southeastern corner of Utah to encourage the development of  
30 geothermal electricity generation. In 2021, the U.S. Department of Energy provided \$220 million for a  
31 project in southwestern Utah to improve drilling technologies for developing underground geothermal  
32 reservoirs at the Utah FORGE [55]  
33

34  
35 The potential to develop more of Utah’s geothermal resources exists with an estimated 18 undeveloped  
36 geothermal systems, most located close to transmission lines in the Black Rock Desert (Map - Sevier  
37 Thermal Area). [56]

38  
39 Utah is one of only a few states that produces electricity from geothermal sources. Purchased by Enel in  
40 2007, the Cove Fort geothermal operation located in Millard County underwent a significant efficiency  
41 conversion. Enel reopened Cove Fort in 2013, and since then the 25-MW plant has powered  
42 approximately 13,000 homes.

43  
44 Blundell is a geothermal facility located near Milford, Utah. The plant was completed in 1984 and  
45 became the first geothermal electric plant to operate outside of California. PacifiCorp is the sole owner of  
46 the 38-MW geothermal plant, which consists of two generating units. The 26.1-MW Unit 1 uses “flash”  
47 technology and was commissioned in 1984. In 2007, they expanded the plant’s capacity by 12 MW by  
48 adding an innovative “binary” heat-recovery process to extract more energy from the hot geothermal  
49 brine left over from the steam separation cycle.

1 The Energy Act of 2020 specifically calls out geothermal in companionship to wind and solar in Subtitle  
2 B—Natural Resource Provisions (Sections 3101—3106). These provisions require the Secretary to  
3 improve interagency cooperation, provide flexibility, and establish national production goals, for wind,  
4 solar, and geothermal. Section 3105 allows for noncompetitive leasing for geothermal energy on ~~F~~federal  
5 lands if it will be coproduced from an existing oil or gas well.  
6

7 The addition of geothermal plants will require additional and new infrastructure to ensure that base load  
8 energy from geothermal operations can reach and maintain the electrical grid.  
9

## 10 **Economic Considerations**

11  
12 While new plant construction requires significant capital investment, geothermal power offers, over time,  
13 a lower-cost energy source that diversifies the fuel supply and supports the stability of the power grid. It  
14 does not require the purchase of fuel, and because it is a baseload resource, geothermal power is reliable,  
15 helping to stabilize prices. It is also dispatchable, meaning that it can be ramped up or down quickly to  
16 make up for intermittency caused by other renewable energy sources. The average cost of a geothermal  
17 plant over its lifetime is dramatically lower than that of many traditional sources of power.  
18

19 Because geothermal energy is locally produced, it can help to reduce foreign oil dependence and boost  
20 rural economies through royalties and tax payments. A geothermal power project development will  
21 involve hundreds of individuals, employing local workers full time and stimulating induced jobs.  
22

23 Since the enactment of the 2005 Geothermal Steam Act Amendments, 25 percent of federal geothermal  
24 revenues from leasing and production on federal lands have been allotted to state and local governments.  
25

26 Research and development in enhanced geothermal systems (EGS) offer Utah the opportunity to increase  
27 its geothermal resources. EGS utilizes advanced drilling techniques from the oil and gas industry to create  
28 a subsurface fracture system in which water can be added through injection wells, allowing energy from  
29 within the earth to be captured through an engineered geothermal system.  
30

31 In 2014, the U-S- Department of Energy (DOE) launched the Frontier Observatory for Research in  
32 Geothermal Energy (FORGE) initiative to establish a dedicated site for accelerating breakthroughs in  
33 EGS technologies and techniques. Through a series of competitive research grants, the DOE sought to  
34 identify the ideal location and research team for advancing EGS. In a multi-agency effort, including  
35 preliminary research from the UGS, and an education campaign and coordinated federal delegation letter  
36 of support provided by the Utah Office of Energy Development (~~OED~~), the University of Utah - Energy  
37 and Geoscience Institute's bid was selected by the DOE in 2018 as the recipient of the \$140 million  
38 FORGE research grant and as well as another \$80 million in 2022. One of the largest geothermal research  
39 grants of its time, the Utah FORGE team has received funding for 5 years to establish and conduct EGS  
40 research at a site near Milford. Funding after that 5-year period has yet to be determined.  
41

42 Also called engineered geothermal systems, this approach offers great potential to dramatically expand  
43 the use of geothermal energy. Present geothermal power generation relies on hydrothermal reservoirs, and  
44 is somewhat limited in geographic application to specific ideal places in the western United States. EGS  
45 offers the chance to extend the use of geothermal resources more broadly.  
46

47 Geothermal energy is a renewable source of electricity that offers important baseload qualities. To expand  
48 options for the development of this resource, federal and state policies are needed that address a range of  
49 near-, mid-, and longer-term challenges faced by the industry. These include the following:  
50

- 51 • incentive programs,



- lease opportunities on government-controlled lands, and
- expansion of access to transmission infrastructure.

Policymakers should prioritize efforts that address risks and obstacles to development, particularly reduction of resource risk. The development of strategic goals and support for long-term federal programs will help to characterize and identify the overall available geothermal resource base.

## Goals, Objectives, and Policies

### Goal(s):

Promote and encourage access opportunities and the development of the state's geothermal resources.

### Objectives:

- Increase access and the development of geothermal resources for energy, heating, and other economically feasible projects and applications.
- Add to the reliability and sustainability of the state's "all-of-the-above" energy portfolio.
- Work with federal land-management agencies to afford geothermal energy resources the same level of attention, access, and incentives as wind and solar renewable resources as outlined by the Energy Act of 2020.
- Supports additional transmission lines to connect geothermal resources to the grid.
- [Promote geothermal and other base load energy production and transmission over intermittent energy resources.](#)

### Policies:

- Support responsible geothermal resource utilization including enhanced geothermal resources like the FORGE project, for traditional, residential, and commercial uses.
- Encourage ongoing federal appropriations to develop geothermal resources in Utah and promote long-term research at the FORGE project.
- Support the ~~U.S. BLM and Bureau of Land Management and the U.S.~~ Forest Service in leasing and selling parcels of land for the development of geothermal industries.

## Solar

Solar power is the term most often used to describe the conversion of energy from natural sunlight into electricity, either directly using photovoltaics (PV), indirectly using concentrated solar power, or a combination of these. Concentrated solar power systems use lenses or mirrors and tracking systems to focus a large quantity of sunlight into a small beam. Photovoltaic systems use solar panels, either on rooftops or in ground-mounted solar farms, to convert sunlight directly into electric power.

## Findings

Utah boasts an above-average number of sunny days per year and has numerous cool, dry areas suitable for solar energy generation. ~~With a high ultraviolet (UV) index in the southwestern corner of the state, and investment in solar photovoltaic (PV) systems over the past 5 years, Utah is now ranked 11th in the nation in installed~~[In 2023, solar energy-generating capacity, with 1,758 MW, more electricity than any other](#) ~~(51)~~

1 ~~Utah's solar resources make up the largest share of utility-scale renewable energy generation resource in~~  
2 ~~the state. In 2018, Utah's~~ Electricity generation from all solar facilities, both small-scale (less than 1  
3 megawatt) customer-sited solar panel systems and utility-scale (1-megawatt or larger) photovoltaic and  
4 thermal solar arrays located in Millard, Sevier, Beaver, Iron, and Washington counties accounted for  
5 approximately 50 percent of Utah's total utility-scale ~~resources, accounted for about three-fourths of the~~  
6 ~~state's renewable generation, or 2,224 gigawatt hours, and was nearly 50 times greater than in 2015. At the~~  
7 beginning of 2024, Utah ranked 14th among the states in the amount of solar power generating capacity,  
8 with 2,440 megawatts. In 2019, solar energy was the largest contributor to ~~Another 457 megawatts of~~  
9 ~~utility-scale renewable solar capacity in the state, accounting for approximately 55% of Utah's total~~  
10 ~~capacity, or 914 megawatts, are scheduled to come online by 2025 [57-52].~~

11  
12 In addition to power generation, Utah's solar resources are harnessed for heating applications in solar  
13 thermal systems. These solar thermal systems heat water and provide a non-emission source for small and  
14 large-scale buildings.

15  
16 The Western Solar Programmatic Environmental Statement (PEIS) is being amended to include more  
17 states and will define BLM lands that are suitable for utility scale production, and establishes exclusion  
18 criteria and design features. The PEIS will include eleven western states with the BLM goal of building  
19 700,000 acres of utility-scale solar on BLM managed public lands over the next 20 years. The 2012  
20 Western Solar Plan designated three Solar Energy Zones in Utah totally 17,659 acres and 1,815,742 acres  
21 potentially available through a variance process that was only used once for the Star Range project south  
22 of Milford in 2024. The 2024 PEIS designated 4,782,795 general acres available for application for  
23 utility-scale solar and 227,461 additional acres as Designated Avoidance Lands for a total of 5,010,256  
24 acres potentially open for development in Utah. Across the 11-state planning area, the BLM provided  
25 31,726,373 acres available for application to satisfy the 700,000 acre federal goal (45 times the size  
26 required). Exclusion Areas encompass 17,749,587 acres in Utah that are not lands available for  
27 application due to resource-based exclusions of for not meeting the transmission proximity and disturbed  
28 lands criteria.

29  
30 The State of Utah, supported the Western Alliance Smart from the Start alternative that focused  
31 development on "disturbed lands" and "low conflict lands." The state's proposed alternative was not  
32 carried forward or evaluated by the BLM even though it was widely supported by multiple western states  
33 and counties. While the state is dissatisfied with the Western Solar PEIS, moving forward the state will  
34 put a higher priority on base load energy production and transmission over intermittent energy production  
35 and transmission.

36  
37 **Disturbed lands** were defined as either:

38  
39 1. Lands verified as having heavy anthropogenic disturbance (such as abandoned or reclaimed mining  
40 sites or lands that have been identified by a state or local land-use plan as brownfields for redevelopment)  
41 or;

42  
43 2. Lands verified as having greater than 40 percent invasive annuals and on which the ecological site  
44 description (ESD) and associated state and transition model (STM)/disturbance response group do not  
45 have a restoration pathway back to non-invasive vegetative communities.

46  
47 **Low conflict lands** are lands that:

48  
49 1. Are neither in "core" nor "growth" sagebrush areas (according to the US Fish and Wildlife Service  
50 Sagebrush Conservation Design), and;

51

1 2. Are set back by at least a mile-wide buffer zone from agricultural uses, homes, source water protection  
2 areas, important wildlife habitat (e.g., GRSG PHMA and GHMA), and cultural or historical resources,  
3 and;

4  
5 3. Do not include lands identified in an applicable resource management plan as suitable for disposal if  
6 disposal criteria include meeting local public purposes (including community expansion, recreation, and  
7 economic development), and;

8  
9 4. Do not include important habitat connectivity zones or migration corridors, and;

10  
11 5. Either do not have valid preexisting rights, permitted uses, or public access routes, or, if these are  
12 present, impacts to them are minimized and mitigated, and;

13  
14 6. Are identified through consultation and coordination with relevant local and state government agencies  
15 as being appropriate for utility scale renewable energy development.

## 16 17 **Economic Considerations**

18  
19 Net-metered installed PV solar capacity (rooftop solar) in Utah has grown over the past 10 years. The  
20 total capacity increased from 3.4 MW in 2010 to 273 MW in 2018. A combination of decreasing  
21 installation and equipment costs and federal and state government incentive programs have supported the  
22 growth of rooftop solar in Utah. As a result of the growth over the past 10 years, the solar industry now  
23 provides over 7,000 jobs for Utah’s electric power generation sector [58].

24  
25 Utility-scale, net-metered solar, and solar thermal have been supported by the State of Utah through tax  
26 incentives. This includes the Production Tax Credit (PTC) for utility-scale systems and the Renewable  
27 Energy Systems Tax Credit (RESTC) program for net-metered PV solar systems.

## 28 29 **Goals, Objectives, and Policies**

### 30 31 **Goal(s):**

32  
33 Promote and encourage the responsible development of Utah’s solar resources on public lands ~~in~~ on  
34 disturbed lands and low conflict lands ~~locations~~ that do not impede existing rights and access, or that take  
35 agricultural land out of production.

### 36 37 **Objectives:**

- 38  
39 ● Obtain 20 percent of the state’s 2025 adjusted retail electric sales from cost-effective renewable  
40 energy resources. In 2015, 4.3 percent of utility-scale net electricity generation came from  
41 renewable resources. As of 2020, approximately 14 percent of the state’s total electricity was  
42 generated by renewable resources.
- 43 ● ~~Encourage the retention or mitigation of the~~ The state of Utah is opposed to the loss or  
44 reduction of Aanimal–uUnit Mmonths (AUMs) for livestock grazing on public lands when  
45 solar farms are constructed.
- 46 ● Solar energy installations should not impede or limit access to publicly accessible roads or  
47 lands.
- 48 ● Encourage the retention of productive agricultural lands in lieu of converting them into solar  
49 farms.
- 50 ● Consider aesthetic values and environmental impacts during planning and site selection of  
51 newly constructed solar farms.

- Work with local representatives and federal agencies to discuss and resolve conflicts with pre-existing uses and the creation of solar power.
- Encourage the utilization of natural gas peaker plants to reduce intermittency and increase the reliability of solar energy generation and delivery.
- [Promote utility-scale solar development only on disturbed lands and low conflict lands on public lands controlled by the federal government.](#)
- [Promote geothermal and other base load energy production and transmission over intermittent energy production and transmission.](#)

## Policies:

- Develop adequate, reliable, dispatchable, affordable, sustainable, and clean energy resources. Under the state’s energy policy, development of renewable energy resources including solar, is supported. Utah allows net metering for residential systems and provides tax credit incentives.
- Support solar projects that benefit the citizens of Utah in areas with available transmission line capacity.
- Comply with federal rules and regulations to the maximum extent possible while avoiding unnecessary expenses for Utah consumers and protecting access to energy resources without infringing on private property rights.
- Support county-led policies related to the disposal of construction byproducts related to renewable energy production (pallets/cardboards).
- Federal agencies must coordinate with counties prior to approving any solar projects on public lands. Inconsistencies between counties and other levels of government must be resolved expeditiously.

## Wind

Wind, like water, has been used for centuries to power wells, mill grain, and for sailing. According to the DOE, wind generation could provide 20 percent of the nation’s electricity needs by 2030 [559]. Wind turbines are modeled after traditional windmills and use propeller-like blades to harness the wind’s energy. Usually three, evenly-weighted blades are mounted on towers more than 100 feet high. The turning blades are used to spin a low-speed shaft (30–60 rpm). This low-speed shaft is connected to a high-speed shaft in the gearbox to increase the rpm’s to about 1000–1,800 rpm, which is required for the generator to produce electricity. [60]

~~Depending on the year, wind energy can be the source of the second or third largest share of utility-scale renewable energy generation in Utah. In~~ [Wind energy produced about 10 percent of Utah's renewable electricity in 2023, surpassing in-state hydropower for the fourth time since 2018;6.- Utah's has five utility-scale wind farms accounted for approximately 18 percent of the total utility-scale renewable generation \(795 gigawatt hours\) \[57\].operating with nearly 400 megawatts of generating capacity. The state's two largest wind farms send power to southern California. Utah's wind farms have the capacity to generate enough power for approximately 85,000 homes, most of which is purchased for use in other states](#) [There is commercial wind power potential in the Wasatch and Uinta mountain ranges in Utah's north-central region and on the mesas in western Utah \[61\].](#)

## Findings

Nationally, Utah ranks 27th in wind electricity generation capacity. Utah’s distinctive topography limits wind generation capacity compared to other states’ wind-profile potential, such as Iowa, Texas, and Wyoming. However, through the DOE’s State Energy Program, the Utah Department of Natural Resources analyzed the state’s wind energy potential in the early 2000s using data collected from 109

1 anemometer towers stationed throughout the state. The research identified 51 potential wind development  
2 zones, covering approximately 1,838 square miles, or 2 percent of the state’s surface area, with a potential  
3 of 9,145 MW. Eleven of the sites have an estimated prospective capacity of at least 250 MW each,  
4 totaling 2,750 MW [62].

5  
6 In 2019, wind energy was the second-largest contributor to utility-scale renewable capacity in Utah,  
7 accounting for approximately 24 percent of the total capacity (387 megawatts MW) [63]. The Milford  
8 Wind Project (306 MW, Beaver and Millard Counties), Latigo Wind Park (62 MW, San Juan County),  
9 and Spanish Fork Wind Farm (19 MW, Utah County) account for nearly 98 percent of Utah’s wind  
10 electricity-generating capacity.

## 11 **Economic Considerations**

12  
13  
14 The price of American wind power has declined more than 90 percent since 1980. The cost of energy  
15 from the wind is mostly a function of the wind resource—its speed, frequency, and when it occurs.  
16 Higher-speed winds are more easily and inexpensively captured. The more the wind blows, the more  
17 power that will be produced by wind turbines. The term used to describe this is “average capacity,” which  
18 is the percentage of power a turbine produces compared to what it could produce if it were always  
19 spinning. Overall, wind turbines capture between 20 percent and 40 percent of the energy in the wind. For  
20 example, at a site with average wind speeds of 7 meters per second, a typical turbine will produce about  
21 1,100 kWh per square meter of area per year. If the turbine’s blades are 35 meters long, for a total swept  
22 area of 1,000 square meters, the power output will be about 1.1 million kWh for the year. [64]

23  
24 Wind energy projects are eligible for support through the Utah’s Renewable Energy Systems Tax Credit  
25 (RESTC) program and Production Tax Credit (PTC), which are managed by the Utah Office of Energy  
26 Development (OED). However, for the PTC, the State of Utah does require that renewable energy  
27 projects be cost-effective, resulting in utilities investing in stateside wind projects (Energy Initiatives and  
28 Imperatives: Utah’s 10-Year Strategic Energy Plan 2.0).

29  
30 In addition to strengthening Utah’s energy mix with added utility-scale renewable capacity, the state’s  
31 wind-energy industry provides more than 400 wind-energy jobs and drives the state’s energy economy  
32 through private investment and property tax revenues (NASEO, US Energy & Employment Report 2020).  
33 The Latigo Wind Park in San Juan County included \$125 million in private investment and Beaver and  
34 Millard counties have benefited from increased property tax revenue from the \$360 million Milford Wind  
35 Project [65].

36  
37 ~~In order to~~ To realize the potential of Utah’s wind resources, the following actions should be undertaken:

- 38
- 39 ● Explore the potential pathways for wind power to contribute to the future electricity needs of the  
40 nation, including objectives such as reduced carbon emissions, improved air quality, and reduced  
41 water use.
- 42 ● Quantify costs, benefits, and other impacts associated with continued wind-energy deployment.
- 43 ● Identify actions and future achievements that could support continued growth in the use of wind  
44 energy.

45  
46 Wind energy is recognized by the State of Utah energy policy, which supports its development. While  
47 studies have identified commercial wind-power potential in the Wasatch and Uinta Mountain ranges in  
48 Utah’s north-central region and on the mesas of the western region, most wind investment approved for  
49 Utah utilities to date has involved Wyoming projects.

1 **Goals, Objectives, and Policies**

2  
3 **Goal(s):**

4  
5 Promote and encourage access opportunities and the development of Utah's wind-energy resources in  
6 locations that do not impede existing rights and access, or take agricultural land out of production.

7  
8 **Objectives**

- 9  
10 • Support viable wind energy projects when they are cost effective and compatible for land-  
11 management practices, including multiple-use activities, and when impacts to viewsheds are  
12 taken into consideration.  
13 • Encourage the utilization of natural gas peaker plants to reduce intermittency and increase  
14 reliability of wind energy generation and delivery.  
15 • Wind energy installations should not impede or limit access to publicly accessible roads or lands.  
16 • Encourage the retention of productive agricultural lands in lieu of converting them into wind  
17 farms.

18  
19 **Policies:**

- 20  
21 • Support the responsible development of wind-energy infrastructure in areas proven by scientific  
22 research to provide consistent wind-energy production along with the additional consideration of  
23 transmission infrastructure and capacity.  
24 • Federal agencies must coordinate with counties prior to approving any solar projects on public  
25 lands. Inconsistencies between counties and other levels of government should be resolved  
26 expeditiously.

27  
28 **Hydropower**

29  
30 Water has been a resource used for centuries, from the water wheel used to grind wheat into flour to  
31 today's sophisticated power plants. Utah is home to more than 800 dams. Less than 8 percent of them  
32 have associated hydroelectric power generation [66]. The ~~U.S. BOR Bureau of Reclamation~~ operates two  
33 hydro plants in Utah. These include a small facility at Deer Creek Reservoir and the larger, 152-MW  
34 plant at the Flaming Gorge Reservoir.

35  
36 ~~In Utah, depending on the year, hydroelectricity typically contributes the second or third largest share of~~  
37 ~~utility-scale renewable energy generation. Hydropower made up 8 percent of the state's renewable~~  
38 ~~generation in 2023. The annual amount of hydropower generation depends on water availability from~~  
39 ~~seasonal rains and melting snow and the drought in some of the western states has impacted generation~~  
40 ~~levels. In 2018, Utah's 30 The state has 29 utility-scale hydroelectric plants, accounted for approximately~~  
41 ~~21 percent of the total utility-scale renewable generation (927 gigawatt-hours) and half of those plants'~~  
42 ~~generating units are more than 60 years old. The 927 1.2-megawatt-hours generated equates to an~~  
43 ~~estimated 92,700 homes being powered by hydroelectricity in 2018. Granite hydroelectric power station~~  
44 ~~located southwest of Salt Lake City is the oldest, built in 1896 to provide electricity to the city's streetcar~~  
45 ~~system. [67]~~

46  
47 **Findings**

48  
49 The annual hydroelectric utility-scale capacity fluctuates based on water availability from seasonal rains  
50 and melting snow. In 2019, hydroelectricity was the third-largest contributor to utility-scale renewable

1 capacity, accounting for 18 percent of the total capacity (289 megawattsMW) (Vanden Berg, 2020, p.16)  
2 (EIA, 2020).

3  
4 Hydroelectric generators typically supply between one-third and two-thirds of Utah’s net renewable  
5 electricity generation, with the annual amount depending on water availability. The state’s hydroelectric  
6 facilities are more than 60 years old on average; the oldest one dates from 1896 [68]. In Utah, hydropower  
7 generation is somewhat less significant than that of other states as a percentage of net electricity  
8 generation. Hydroelectric power accounts for just under 2 percent of the state’s generation.

9  
10 The U.S. Bureau of ReclamationBOR operates two hydroelectric plants in Utah, including the small  
11 facility at Deer Creek Reservoir, and the much larger, 150-MW plant at the Flaming Gorge Reservoir.  
12 PacifiCorp operates 10 hydroelectric plants in the State of Utah, 9 of which range in size from 0.16 to  
13 10.3 MWs in nameplate capacity, and one of which (the Cutler Plant in Box Elder County) generates an  
14 appreciably larger 30 MWs. Most of the plants were constructed between the very early 1900s and 1930.  
15 However, the oldest are the Granite facility on Big Cottonwood Creek and the Pioneer facility on the  
16 Ogden River, which went into operation in 1896 and 1897, respectively. Local municipal utilities and  
17 irrigation companies operate a few dozen additional smaller facilities throughout the state, the majority of  
18 which are 0.5–3 MWs in size [69].

19  
20 In June 2023, the Moon Lake Electric Association (a rural electric cooperative serving much of the  
21 Uintah Basin) issued a Declaration of the Impending U.S. Energy Crisis. Factors contributing to that  
22 impending crisis (as listed in their declaration) are:

- 23
- 24 • Premature retirements of conventional generation;
- 25 • Substantial increase in electricity demand;
- 26 • Increases in widespread summer heat events;
- 27 • Recent Environmental Protection Agency rules that may force generators to meet
- 28 “emissions restrictions primarily by limiting hours of operation;”
- 29 • Supply chain issues;
- 30 • Fuel delivery risks related to the availability of natural gas and coal.

### 31 32 **Economic Considerations**

33  
34 Hydroelectric power offers clean and efficient energy production due to low greenhouse gas emissions  
35 and some of the lowest electricity prices in the United States. However, other environmental concerns that  
36 exist for this energy source exist and have limited its development. These include the costs associated  
37 with heavy construction of dams and potential disruptions of plant and animal life.

38  
39 Hydroelectricity is one of Utah’s oldest energy resources, with the first hydroelectric generating units  
40 constructed in 1896, and provides more than 350 jobs to Utah’s energy economy [70].

41  
42 Although most energy in the United States is produced by fossil-fuel and nuclear power plants,  
43 hydroelectricity still plays an important national role. Utah’s all-of-the-above energy policy supports  
44 continued utilization of the state’s hydro-power facilities.

45  
46 The future of hydroelectric power in the United States is expected to involve increased capacity at current  
47 dams and new run-of-the-river projects rather than construction of new, large hydroelectric projects.

### 48 49 **Goals, Objectives, and Policies**

50  
51 **Goal(s):**

1 Promote and encourage access opportunities and the development and maintenance of Utah's  
2 hydroelectric energy resources.

3  
4 **Objectives:**

- 5
- 6 • Maintain existing hydroelectric power infrastructure and seek federal appropriations to avoid,  
7 delay, or defer decommissioning when feasible, and as determined by utility companies and local  
8 governments.
- 9 • Support a feasibility study for pump-storage projects (e.g., the Bear River Project).
- 10 • Encourage the addition of in-pipe hydroelectric systems in existing and new pipelines.
- 11 • Remain cognizant and proactively mitigate any factors contributing to a potential energy crisis.
- 12

13 **Policies:**

- 14
- 15 • Continue to support access to and opportunities for hydroelectric power generation ~~opportunities~~  
16 through maintaining existing infrastructure, considering the development of new infrastructure,  
17 and encouraging the adoption of innovative technologies.
- 18 • Promote and develop energy resources and infrastructure that protect the state from factors  
19 contributing to a potential energy crisis.
- 20

21 **Hydrogen**

22  
23 Hydrogen is not an energy source. It is an energy carrier capable of storing and delivering usable energy.  
24 Using a fuel cell, hydrogen generates power using a chemical reaction instead of combustion, producing  
25 only water and heat as byproducts. This nearly emission-free technology can be used in automobiles,  
26 houses, portable power, and much more [71].

27  
28 Recognizing the potential for hydrogen fuel cells to successfully integrate renewable and conventional  
29 energy resources into the grid through energy storage, the DOE has established The Hydrogen and Fuel  
30 Cell Technologies Office Multi-Year Research, Development, and Demonstration (MYRD&D) Plan [72].  
31 First published in 2003, the MYRD&D is a living document responsible for tracking research and  
32 development in hydrogen fuel-cell technology.

33  
34 The DOE's goal is to develop technologies that can produce hydrogen at a target of less than \$4 per  
35 kilogram. The Hydrogen Production Pathways' goal [73] is to create mid- and long-term technologies that  
36 will allow hydrogen to be produced economically from resources such as biomass, coal gasification, and  
37 solar energy. Currently, natural gas reforming [74] is the favored process for achieving large-scale  
38 hydrogen production. This process takes natural gas containing methane and produces hydrogen through a  
39 series of thermal processes. This approach allows producers to use existing natural gas reserves and  
40 natural gas pipeline infrastructure to produce and transport hydrogen. [75]

41  
42 **Findings**

43  
44 ~~Hydrogen production and energy storage are quickly advancing in Utah [73]. In June 2022, the Advanced~~  
45 ~~Clean Energy Storage project in Utah received a \$504 million loan guarantee from the U.S. Department~~  
46 ~~of Energy. The Intermountain Power Agency (IPA), owner of the 1,800-MW coal-fired power plant in~~  
47 ~~Delta, Utah, is moving forward with a new, state-of-the-art generation facility designed to run initially on~~  
48 ~~a mix of natural gas and hydrogen but will ultimately operate on hydrogen alone [74]. The loan guarantee~~  
49 ~~will help finance the construction of the world's largest clean hydrogen storage facility, which would be~~  
50 ~~capable of providing long-term low-cost, seasonal energy storage. The project partners plan to use~~  
51 ~~excess will use~~ renewable energy ~~from across the western United States to generate "green hydrogen" by~~



~~2025 sources to produce hydrogen. The hydrogen will be produced via electrolysis and stored in an existing underground salt dome in Millard County. Hydrogen would then be continuously available for utility-scale electricity generation at the Delta site. The hydrogen will then power an 840-megawatt power plant, which is expected to be operational in 2025. [76]~~

~~The Los Angeles Department of Water and Power, which is the largest buyer of the plant's power, intends to use the new plant to help meet California's 2045 decarbonization target. A mix of 30 percent hydrogen and 70 percent natural gas fuel at start-up in 2025 is expected to reduce carbon emissions by more than 75 percent. Between 2025 and 2045, IPA plans to increase the hydrogen capability to 100 percent renewable hydrogen utilization, enabling baseload carbon-free utility-scale power generation.~~

## Economic Considerations

In 2019, the Utah State Legislature passed H.B. 109, allowing hydrogen fuel production to be eligible for support by the High Cost Infrastructure Development Tax Credit Act [77].

The DOE's goal is to develop technologies that can produce hydrogen at a target of less than \$4 per kilogram. The Hydrogen Production Pathways' goal is to create mid and long-term technologies that will allow hydrogen to be produced economically from resources such as biomass, coal gasification, and solar energy.

## Goals, Objectives, and Policies

### Goal(s):

Strategically plan for and facilitate potential opportunities for hydrogen production and distribution along the primary transportation arteries in Utah.

### Objectives:

- Determine the feasibility and potential future distribution needs for hydrogen in Utah.
- The State of Utah should pursue federal funding opportunities to establish a hydrogen hub, conduct research, and develop policies related to hydrogen.

### Policies:

- Support the research and development of hydrogen production and capture infrastructure.
- Preferentially accomplish hydrogen production through processes that do not require the excessive consumption of water resources.

## Biomass

Biomass is organic material that comes from plants or animals. Biomass generates energy from once-living organisms, is a renewable energy resource, and can be used as an alternative fuel. [7678]

Biomass contains stored energy from the sun. Plants absorb the sun's energy in a process called photosynthesis. When biomass is burned, the chemical energy in biomass is released as heat. Biomass can be burned directly or converted to liquid biofuels or biogas that can in turn be burned as fuels. [7779]

Examples of biomass and its uses for energy include:

- Wood and wood-processing wastes [80] These can be burned to heat buildings, to produce processed heat in industry, and to generate electricity.
- Agricultural crops and waste materials. These can be burned as fuel or converted to liquid biofuels.
- Food, yard, wood, and other municipal solid waste [81] These can be burned to generate electricity in power plants or converted to biogas in landfills.
- Animal manure and human sewage. This can be converted to biogas.

## Findings

~~In Utah, biomass accounts for the last 1.8 percent of utility-scale renewable generation, accounting for 79 gigawatt hours in 2018.~~ Biomass, primarily in the form of landfill gas at facilities in the metropolitan region population centers on the Wasatch Front in ~~the~~ north-central ~~part of~~ Utah, provided ~~the remaining nearly 2%~~ 1 percent of the state's renewable electricity generation in ~~2018-2023~~. A 3-megawatt biogas generating plant in Beaver County, Utah uses methane gas from pig manure to produce electricity. ~~†80~~ Utah's wood biomass resources also provide feedstock for the state's one small wood pellet manufacturing plant, which has an annual production capacity of 9,000 tons [82].

Renewable natural gas (RNG) is a pipeline-quality gas derived from the decomposition of organic matter (biomass). RNG is interchangeable with conventional natural gas as a heating source, transportation fuel, and power generating resource, often as compressed natural gas (CNG) or liquefied natural gas (LNG). Being derived from a cellulosic or advanced feedstock (usually from pig or food waste), RNG qualifies as biofuel under the Renewable Fuel Standard.

In Utah, biogas facilities are currently producing RNG. A few active projects include:

- Smithfield's hog farms are located in Central Utah (Beaver and Millard Counties) and provide RNG for the Kern River Gas Pipeline.
- Houweling Tomatoes in Mona, UT which uses waste heat and CO2 from a nearby natural gas power plant to grow tomatoes.
- Wasatch Resource Recovery, located at the South Davis Sewer District, is an anaerobic digester dedicated to food waste diversion that provides RNG in a partnership with Dominion Energy.

## Goals, Objectives, and Policies

### Goal(s):

Explore and implement a variety of biomass energy-production opportunities statewide.

### Objectives:

- Convert excess pinyon-junipers and conifers into electricity.
- Explore the feasibility and application of biochar and biofuel opportunities.

### Policies:

- Support the advancement of technology to capitalize on biomass energy resources to support Utah's all-of-the-above energy portfolio and further the efforts of associated land-management policies and projects.
- Encourage the capture of methane to be digested into energy, and support federal appropriations to accomplish this process.

1 **Nuclear**  
2

3 Uranium has been mined in Utah for more than 100 years. Uranium was originally a byproduct of radium  
4 and vanadium in the early 19th century. It wasn't until the mid-1940s that demand for uranium began to  
5 increase because of nuclear weapon manufacturing. From the 1970s through the 1990s, uranium was used  
6 as fuel for nuclear power electricity generation. More than 500 uranium mines have operated during this  
7 time, but due to declining prices, ~~Utah stopped uranium mining altogether in 2014. There are, however, a~~  
8 ~~number of mines that remain on "stand by" to reopen if prices rise to a sustainable level.~~  
9

10 White Mesa Uranium Mill ~~is located~~ in southeastern Utah ~~and~~ is currently the only fully licensed and  
11 operating Uranium Mill in the United States. With 150 employees, the mill has a capped capacity of more  
12 than 8 million pounds of uranium each year. The White Mesa Uranium Mill is also a major contributor to  
13 producing high-quality vanadium. There had been no uranium mine production in Utah since  
14 2012. However, with the rise in uranium prices and favorable government policies due to the import ban  
15 for uranium from Russia, uranium mining at the Pandora and La Sal mines in eastern Utah began in  
16 December 2023. This uranium is being processed at the White Mesa Mill [83].  
17

18 The [UAMPS] Carbon Free Power Project is a nuclear plant to be located at the Idaho National  
19 Laboratory near Idaho Falls Idaho. It will comprise of up to six 77-~~megawatt-MW~~ NuScale Power  
20 Modules. The NuScale Power Modules provides flexibility to ramp up and down as needed to follow load  
21 and complement intermittent renewable resources like wind, and solar. The first module is anticipated to  
22 be on-line in 2029 with the remaining modules being installed in 2030.  
23

24 While Utah does not generate any electricity from nuclear energy, plans for several nuclear power plants  
25 have been proposed since 2007. PacifiCorp has announced that it is looking to replace two coal-fired  
26 power plants Emery County, Utah, with a nuclear power station [84]. In the April 2024 Integrated  
27 Resource Plan (IRP), Hunter and Huntington coal unit retirements have returned to the schedule indicated  
28 by PacifiCorp's 2021 IRP. These plants are now scheduled for retirement in 2042 and 2036.  
29

30 According to the Strategic Vision for the Office of Nuclear Energy at the Department of Energy, "Nuclear  
31 is one of the most resilient, environmentally sustainable, and reliable energy sources on the grid today.  
32 Globally, nuclear energy produces about 10 percent of the world's electricity and nearly 30 percent of its  
33 emissions-free electricity. Here in the United States, those numbers are even higher: Nuclear provides  
34 approximately 20 percent of our electricity, more than 55 percent of our clean energy, and supports about  
35 half a million American jobs."  
36

37 **Goals, Objectives, and Policies**  
38

39 **Goal(s):**  
40

41 Recognizing that Utah has ample uranium reserves, the goal must be to preserve access to those fuel  
42 mineral resources and continue to explore opportunities for nuclear power generation that will make the  
43 state's all-of-the-above energy portfolio more reliable, sustainable, and resilient.  
44

45 **Objectives:**  
46

- 47 ● Maintain access to uranium resources statewide.
- 48 ● Explore opportunities for nuclear energy production in Utah.
- 49 ● Promote base load and emission free energy production from nuclear sources.
- 50 ● Promote the planning and installation of new transmission lines to support nuclear energy  
51 production and connect to the grid.

1 **Policies:**  
2

- 3 • Encourage the federal government to support the operation of the White Mesa Mill to remain in  
4 operation because it is the only mill processing uranium in the United States.
- 5 • Promote the development of nuclear power generation technologies certified for use by the  
6 United States Nuclear Regulatory Commission, including molten salt reactors producing medical  
7 isotopes.
- 8 • Protect the fuel sources requires for nuclear energy from landscape-scale designation or policies  
9 that impede, restrict, or limit access to uranium and other associated mineral resources.

10  
11 **Broad Energy Resource Considerations: Policies, Guidelines, Economics**  
12

13 **Policies and Guidelines**  
14

15 Title 79 Chapter 3 defines Utah’s energy policy. This policy was passed into law in 2007 and is updated  
16 as necessary to support the state’s energy objectives. The energy policy is succinct and comprehensive,  
17 and asserts the State of Utah’s responsibility to promote energy resource development, including  
18 conventional, unconventional, and renewable energy, as well as energy efficiency, in support of a diverse  
19 energy portfolio. To ensure the State of Utah has the ability to responsibly develop its energy resources,  
20 the policy defines a proactive role for the state in maintaining pressure on federal land-management and  
21 regulatory agencies to ensure development proceeds at a pace that is reasonable and that does not stifle  
22 investment and expansion.  
23

24 Specific to energy use, the policy addresses the state’s role in maintaining reliable energy supplies for  
25 Utah homes and businesses, while keeping the cost of power stable and affordable. It further articulates  
26 the state’s role in promoting the associated infrastructure required to deliver resources to points in the  
27 market for refinement or consumption. Finally, the policy provides a clear position on the need for energy  
28 initiatives to advance in concert with environmental and energy conservation objectives. As such, the  
29 policy recognizes that balanced, diverse energy development can be achieved to retain and enhance the  
30 quality of life enjoyed by Utah’s residents.  
31

32 **Other Applicable Rules**  
33

34 The Utah Oil and Gas Conservation General Rules can be found here:

35 <https://oilgas.ogm.utah.gov/Rules/Rules.htm>  
36

37 The Utah Oil and Gas Conservation Act can be found here:

38 [https://oilgas.ogm.utah.gov/Rules/Conservation\\_act.htm](https://oilgas.ogm.utah.gov/Rules/Conservation_act.htm)  
39

40 *“It is declared to be in the public interest to foster, encourage, and promote the development, production,*  
41 *and utilization of natural resources of oil and gas in the state of Utah in such a manner as will prevent*  
42 *waste; to authorize and to provide for the operation and development of oil and gas properties in such a*  
43 *manner that a greater ultimate recovery of oil and gas may be obtained and that the correlative rights of*  
44 *all owners may be fully protected; to*  
45 *provide exclusive state authority over oil and gas exploration and development as regulated under the*  
46 *provisions of this chapter; to encourage, authorize, and provide for voluntary agreements for cycling,*  
47 *recycling, pressure maintenance, and secondary recovery operations in order that the greatest possible*  
48 *economic recovery of oil and gas may be obtained within the state to the end that the landowners, the*  
49 *royalty owners, the producers, and the general public may realize and enjoy the greatest possible good*  
50 *from these vital natural resources.” [85]*  
51

1 **General Energy Policies and Guidelines**

- 2
- 3 • The Utah Energy Act (amended 2024) clarifies that Utah will develop its energy resources and
- 4 plan its energy future with a focus on human wellbeing and quality of life, recognizing that
- 5 reliable access to energy is vital for human health, adaptation, economic growth, and prosperity.
- 6 Utah shall have energy resources that have the following attributes, listed in order of priority: (A)
- 7 adequate; (B) reliable; (C) dispatchable; (D) affordable; (E) sustainable; (F) secure; and (G)
- 8 clean. And, Utah shall encourage the construction and use of energy systems that balance the
- 9 criteria described while giving priority to the criteria in the order they are listed.
- 10 • Support the responsible development of renewable and nonrenewable energy resources on public
- 11 lands managed by the ~~U.S. BLM Bureau of Land Management~~ and ~~the U.S.~~ Forest Service.
- 12 • Engage with federal land-management agencies on all federal projects related to the development
- 13 of renewable and nonrenewable energy resources on federal lands in order to promote the
- 14 responsible development of these resources.
- 15 • Oppose the withdrawal of public federal lands from energy development unless the withdrawal of
- 16 such lands has been fully coordinated with the State of Utah and the counties within which the
- 17 lands are located.
- 18 • Support the development of renewable and nonrenewable energy resources located on public
- 19 lands inside the state’s duly adopted “energy zones,” described in Utah State Code Title 63J-8-
- 20 105.2, the San Juan County Energy Zone; 63J-8-105.5, the Uintah Basin Energy Zone; and 63J-8-
- 21 105.7, the Green River Energy Zone.
- 22 • Support the six commitments outlined in the Utah Energy and Innovation Plan and the expansion
- 23 of the energy plan to contain measurable goals and objectives.
- 24 • The ~~S~~state must remain cognizant and establish proactive goals, objectives, and policies that
- 25 promote energy resiliency in Utah while avoiding the potential of an energy crisis.
- 26

27 **State Code**

28  
29 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*

30 *following are selected portions of the Utah State Code and do not represent every potential legal*

31 *reference in the Code related to this section of the State Resource Management Plan or the*

32 *administration of public lands.*

33

34 **Utah Energy Act**

35

36 **§ 79-6-301.** *State Energy Policy.*

37

38 **Public Lands Planning**

39

40 **§ 63L-11-302.** *Principles to be recognized and promoted.*

41

42 **§ 63L-11-303.** *Findings to be recognized and promoted.*

43

44 **State of Utah Resource Management Plan for Federal Lands**

45

46 **§ 63L-8-104.** *State land-use planning and management program*

47

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# FIRE MANAGEMENT

## Introduction

Wildfire has always existed and is nature’s way of cleaning landscapes and recycling resources. Wildfire has improved vegetative species abundance and diversity from the sage-steppe of the western deserts to the high alpine peaks of the Rocky Mountains. Utah’s landscapes ~~have become~~are dependent ~~upon~~on wildfire to maintain the health and vigor of the many ecosystems within the state.

After the increase in the 1900s of fire suppression efforts and fire management objectives to keep all wildfires small, many ecosystems departed from their historic conditions. Fire has not been allowed to perform its natural role and, consequently, the natural fuel of ecosystems (dead and excess vegetation) is no longer consumed during natural cycles of vegetative growth and wildfire. As a result, fuel loads in natural and undeveloped areas accumulate to unnaturally high levels and, when wildfires occur, they are often abnormally extensive and damaging, with catastrophic consequences to ecosystems and with greater negative impacts on communities. [1]

Every year, hundreds of wildfires burn on private, state, and federal land in Utah. Fires occurring on federal and ~~f~~Tribal lands are managed by the US Forest Service (USFS Forest Service), US Bureau of Land Management (BLM), National Park Service (NPS), US Fish and Wildlife Service (USFWS) and ~~the~~US Bureau of Indian Affairs (BIA).

The Utah Division of Forestry, Fire and State Lands (FFSL) is the lead wildland fire agency for the state of Utah and has primary wildland firefighting responsibilities on state and unincorporated private lands. In 2017, Utah legislators passed legislation that led to the Cooperative Wildfire System (CWS). The system is based on the principle of risk reduction, wherein the state will become the lead agency through delegation, including financial obligation, for large and extended-attack wildland fire (catastrophic fires) in exchange for local government taking proactive measures including initial attack for wildfires within their jurisdictional boundary and implementing prevention, preparedness, and mitigation actions that are proven to reduce the risk and costs of wildland fire in the long run.

Multi agency coordination is routine in wildland fire management in Utah. Rarely does wildfire burn on only one jurisdiction, mandating the need to coordinate cost and effort across property lines. The Utah Wildfire Oversight Committee (UOC) and its subcommittees work year-round to ensure Utah is well served by its dedicated wildland fire workforce.

With these agreements, operating plans, and committees in place, all lands in Utah receive wildland fire protection from the closest forces, regardless of agency jurisdiction, with seamless response and strong financial agreements. [2]

Wildfires that occur on state and unincorporated private lands are managed by the ~~Utah Division of Forestry, Fire and State Lands (FFSL)~~ and are coordinated through county fire wardens. County fire wardens work with federal agencies and local fire departments to coordinate suppression efforts. Approximately 96 94 percent of all Utah wildfires in 2023 2022 were extinguished before they exceeded 10 acres. [3]

The FFSL’s Lone Peak Fire Center employs hotshot crews, initial attack crews, fuel crews, ~~and~~ engine crews, and a helitack crew. These crews are dispatched throughout Utah and, when conditions allow, all over the United States to extinguish fires in difficult terrain. When Utah needs additional help, the same



1 types of resources are requested ~~from outside the~~ and support will come from within Utah and from other  
2 states. This national resource sharing allows national fire managers to allocate firefighting resources  
3 where they are needed the most.

4  
5 The first priority for firefighters is protecting human life, then preserving property and valuable natural  
6 resources. In ~~2023~~ 2022, about ~~42~~ 49 percent of fires in the state were preventable, human-caused events  
7 that burned ~~3,277~~ 24,447 acres. Naturally caused fires ~~only~~ burned ~~14,784~~ 1,104 acres. [4]  
8

## 9 **Catastrophic Wildfire Reduction Strategy**

10  
11 Catastrophic wildfires significantly impact Utah’s natural environment, economy, air quality, and  
12 infrastructure, and they are considered the state’s most preventable natural disaster. Reducing large  
13 wildfires in Utah will protect life, property, communities, economies, and the environment.  
14

15 In 2013, the State of Utah developed the ~~Catastrophic Wildfire Reduction Strategy~~ Catastrophic Wildfire  
16 Reduction Strategy (CatFire) in response to the severe wildfires of the 2012 fire season. Reducing the  
17 catastrophic wildfire requires attention to the following three interdependent goals, which were set forth  
18 in the National Cohesive Wildland Fire Management Strategy: (1) restore and maintain resilient  
19 landscapes, (2) fire-adapted communities, and (3) strong and effective local wildfire response. These  
20 goals have been embraced throughout the development of the state’s CatFire strategy.  
21

22 Mitigation of hazardous fuels can change fire behavior and make wildfires easier to suppress. The effects  
23 of the mitigation, however, are not limited to life and property safety but will also affect forest health,  
24 water quality, vegetative species abundance, etc. As the State of Utah continues to implement projects  
25 across the state’s natural landscapes, the only way to be successful is to integrate existing programs,  
26 utilize local and federal partners, and continue to educate the public to create the desired shift toward  
27 more resilient communities and ecosystems.  
28

29 The goals of Utah’s CatFire strategy are:

- 30
- 31 1. Restore and maintain resilient landscapes
- 32
- 33 2. Fire-adapted communities
- 34
- 35 3. Strong and effective local wildfire response
- 36

37 The objectives and strategies of Utah’s CatFire are:

- 38
- 39
- 40 ● Reassess the existing education program to meet current and future needs.
- 41 ● Ensure literature is updated as necessary to incorporate current research information.
- 42 ● Identify gaps in research and pursue funding to address research needs.
- 43 ● Distribute materials to community members, individual landowners, public officials, interagency  
44 partners, and the media for further dissemination and outreach.
- 45 ● Maintain collaborative efforts with interagency partners to deliver and update information.
- 46 ● Increase participation in state and national programs, including Utah Living With Fire; Ready,  
47 Set, Go!; Firewise USA; and Fire-Adaptive Communities.
- 48

1 Resources required for successful implementation of these strategies, goals, and objectives include, but  
2 are not limited to, state and area wildlife-urban interface (WUI) coordinators (~~AWUI~~) and a CatFire  
3 prevention and education coordinator.

## 4 5 **Findings**

6  
7 Utah's varied vegetation is a function of precipitation and elevation. The landscapes of Utah can be  
8 categorized into three general types: forest, shrub, and grass. Each of these types can be further broken  
9 down into several sub-categories. [4]

### 10 11 **Forests**

12  
13 For purposes of fuel typing, forests can be subdivided into the following: sub-alpine, aspen, ponderosa,  
14 pinyon-juniper, and hardwoods.

15  
16 Sub-alpine forests are presently expanding in Utah, especially into once-undisturbed stands of aspen. The  
17 sub-alpine forest type is prone to high-severity and high-intensity wildfires, which are also known as  
18 stand-replacing wildfires. Because of their elevation, wildfire return interval in this forest type can range  
19 from 300 to 700 years. These stands ~~will~~are more likely to succumb to insect and disease infestations than  
20 to wildfire.

21  
22 Aspen forests are in steady decline statewide for a variety of reasons, including the wildfire exclusion  
23 paradigm. Low-intensity wildfires are common in this forest type and act primarily to thin and regenerate  
24 stands.

25  
26 The ponderosa forest type is typically characterized by open growth with wide spaces between the trees  
27 and an understory of shrub patches and continuous mixed grasses. Because of the wildfire exclusion  
28 paradigm, most of the ponderosa forest type is overstocked with multiple layers of understory. The  
29 natural wildfire return interval in ponderosa forest is 5 to 10 years, and the wildfire events are generally of  
30 low severity and intensity. However, many ponderosa forest stands are as much as six times removed  
31 from this interval, and so when wildfire does occur in these stands, they are of high intensity and severity.

32  
33 Pinyon-juniper forests in Utah are constantly fluctuating in extent because of their natural tendency to  
34 encroach on sage-steppe and their resilience to drought. The pinyon-juniper forests have increased across  
35 the state primarily because of fire suppression. Pinyon-juniper forests are now found in areas that they  
36 have not historically occupied. Because of this expansion, sage-steppe has decreased significantly across  
37 much of Utah, which has resulted in negative impacts to plants, wildlife, and watersheds. The natural  
38 wildfire return interval in sage-steppe ranges from 5 to 35 years, ~~and in~~In truly homogenous stands of  
39 pinyon-juniper, the interval can be 50 to 100 years. The severity and intensity of these wildfires is  
40 considered to be high in both cases. Most sage-steppe has been encroached by pinyon-juniper and is  
41 becoming decadent, with little recruitment.

42  
43 Hardwood forests in Utah are very rare and occur primarily in riparian zones composed of species that are  
44 fast growing and tend to decay before there are any appreciable effects from wildfire.

### 45 46 **Shrubs**

47  
48 Shrub forests are predominantly composed of Gambel oak. Gambel oak is clonal, though if it is  
49 undisturbed, will expand as even-aged stands that can cover large expanses. The wildfire return interval is  
50 disrupted from its standard of 5 to 20 years and tends to produce wildfire that is of high intensity and  
51 severity.

1 **Grasses**

2  
3 Grass fuel types are found throughout Utah and are primarily perennial. Of great concern is the nonnative  
4 cheatgrass (*Bromus tectorum*). Cheatgrass is an annual plant that invades newly burned areas, especially  
5 among the pinyon-juniper and shrub fuel types. The ability of cheatgrass to adapt to varying soil and  
6 moisture conditions has created a vast monoculture across many low-elevation, wildfire-scarred  
7 landscapes. Because cheatgrass cures earlier in the year than other grasses, it is capable of burning earlier  
8 in the wildfire season. In many areas, this can alter a 35–35 wildfire return interval to an annual interval.  
9 The proliferation of cheatgrass has triggered a significant decrease in the abundance of native grasses  
10 across Utah.

11  
12 **Air Quality Considerations**

13  
14 Summer air quality can be impacted by levels of particulate matter generated by wildfires. Wildfire  
15 smoke is composed of a complex mixture of gases, fine particles, and water vapor that form when organic  
16 matter burns.

17  
18 Particulates from smoke are a mixture of solid particles—pieces of wood and other burning solids—and  
19 liquid droplets. They tend to be quite small, generally less than 2.5 micrometers in diameter, or  
20 approximately 1/70th the size of a human hair.

21  
22 The most serious health threat from smoke comes from fine particles. Because they may lodge more  
23 deeply in the lungs, these fine particles are a greater health concern than larger ones. Fine particulates get  
24 into the eyes and respiratory system, where they may cause health problems such as burning eyes, runny  
25 nose, and illnesses such as bronchitis. They may also aggravate chronic heart and lung diseases.

26  
27 Finally, the incomplete burning of wood or other organic materials produces carbon monoxide, the gas in  
28 smoke. Its levels are highest during the smoldering stages of a fire. [6]

29 ~~The State recognizes that smoke from wildfires may have an adverse impact on environmental justice~~  
30 ~~communities and the State is committed to reducing these risks through active forest management.~~¶

31  
32 **Other Considerations**

33  
34 ~~In recent years [6], Utah has seen a new kind of flood risk emerge, one that~~Hazardous risks includes  
35 flooding and debris flows related to watersheds damaged by wildfire[6]. This type of flooding is distinctly  
36 different from historically normal floods. Post-fire-related flooding results from enhanced runoff from  
37 fire-damaged ~~watersheds~~landscapes, which ~~may have~~ has had significant impacts on water quality. As  
38 fires burn, they destroy vegetation and often leave soils in a hydrophobic (water-repelling) state, altering  
39 the hydrology of the ~~watershed~~landscape and producing greater peak flows [7].~~It takes a human-built~~  
40 ~~environment to turn a natural event into a natural disaster.~~ This serious problem of debris flows and the  
41 elevated risk of debris flow following a wildfire is discussed further in the landslide section of the Utah  
42 Hazard Mitigation Plan [8].

43  
44 Contiguous patches of weeds also pose significant fire risks, and native plant seeding after wildfires is  
45 necessary to recruit native species rather than weeds (*refer to the noxious weeds section*).

46  
47 **Economic Considerations**

48  
49 Many wildland fires are multi-jurisdictional and may involve state, private, and federal land. In many  
50 cases, each entity pays a proportionate amount for suppression based upon an agreement that is  
51 established at the time of the fire. In most cases, the costs are apportioned based upon ownership of acres

1 burned. The state, local government, and federal agencies all participate in coordinated wildfire  
2 suppression programs.

3  
4 Counties and municipalities may participate ~~by~~ in a Cooperative fire protection agreement with FFSL ~~to~~  
5 ~~provide wildland fire protection on all unincorporated and non-federal lands.~~ This requires the entity to  
6 take certain fire-prevention, preparedness and-fuel mitigation efforts based on the calculated risk and  
7 historic fire cost within that entity. ~~Counties may establish budgets with the FFSL to participate in state~~  
8 ~~assistance for wildland fire protection~~ This agreement allows FFSL to be delegated fires that exceed local  
9 capacity, establish unified command and assume the eligible entities' suppression costs.

10  
11 Counties and municipalities in a cooperative agreement pay for their own initial attack-suppression costs  
12 out of their fire-department budgets, and if a fire goes beyond initial attack, they have the option to  
13 delegate financial and management responsibility to FFSL.

14  
15 The legislature provides a ~~firefighting~~ fire-suppression budget to FFSL each year, which is used to ~~create~~  
16 ~~the necessary~~ develop firefighting capacity and ~~some~~ cover the state's share of suppression costs. If costs  
17 for any particular year exceed this appropriation, ~~the~~ FFSL requests a supplemental appropriation to cover  
18 the additional costs. The fires must be paid for as the bills ~~come in~~ are received, so each supplemental  
19 appropriation covers the costs of the previous fire season ~~costs~~.

20  
21 On occasion, the FFSL receives financial relief through the Federal Emergency Management Agency for  
22 state and private costs on fires that ~~threaten structures~~ have the potential to cause significant economic  
23 impacts. These are called Fire Management Assistance Grants [9]. These grants pay up to 75 percent of  
24 suppression costs. The FFSL received four such grants in 2020. [10].

25  
26 ~~Within Utah,~~ The total cost of 2021 wildfire suppression in Utah was around \$88 million. Utah's portion  
27 of those costs will be approximately \$23 million (*estimated*).

28  
29 The millions of dollars spent to extinguish large wildfires are widely reported and used to underscore the  
30 severity of these events. Extinguishing a large wildfire, however, accounts for only a fraction of the total  
31 costs associated with the event. Residents in the ~~wildland-urban interface (WUI)~~ are generally seen as the  
32 most vulnerable to wildfire, but a fuller accounting of the associated costs also reveals the impacts to all  
33 Utah residents and gives a better picture of the losses incurred when Utah lands burn.

34  
35 A full accounting considers long-term and complex costs, including impacts to watersheds, ecosystems,  
36 wildlife habitat, infrastructure, businesses, individuals, and the local and state economy. Specifically,  
37 these costs include property losses (insured and uninsured), post-fire impacts (such as flooding and  
38 erosion), air- and water-quality damages, healthcare costs, injuries and fatalities, lost revenues,  
39 infrastructure shutdowns (e.g., highways, airports, and railroads), post-fire rehabilitation, and a host of  
40 ecosystem service costs that may extend into the distant future. The Dollar Ridge Fire in 2018 is an  
41 example of how a wildfire has direct and indirect impacts. After that wildfire, the Duchesne Valley Water  
42 Treatment Plant spent over \$32 million to build a treatment plant capable of treating the post-fire water  
43 supply.

44  
45 A study completed in 2017, "The Physical and Economic Consequences of Wildfire" as required by H.B  
46 464, assesses the economic impacts of wildfire and provides a quantifiable analysis of the impact of  
47 wildfire on livestock and grazing, water quality, recreation and tourism, and air quality. [11]

48  
49 Since 2022, the U.S. Forest Service has been working with states and other stakeholders to address the  
50 "Wildfire Crisis." In Utah, there are two identified wildfire crisis areas on the Wasatch and the Pine  
51 Valley mountains. Funding for this program was contained within the Bipartisan Infrastructure Law.

1 **Goals, Objectives, and Policies**

2  
3 **Goal(s)** (by project/program):

4  
5 **Wildland Fire Suppression**

6  
7 Because of land ownership patterns in Utah, large wildland fires seldom involve a single jurisdiction. The  
8 vast majority of large incidents involve multiple ownerships and agencies. The FFSL works with federal  
9 land-management agencies [and local partners](#) to suppress wildfires, aggressively providing for safety  
10 first. However, in certain areas, federal agencies put more emphasis on wildfire’s natural role in  
11 ecosystem health. In those instances, the State of Utah and federal fire managers should work together to  
12 ensure that to the extent possible, both resource benefit and protection of private land are accomplished.

13  
14 The State of Utah should also work with private landowners and state agencies to identify areas where  
15 allowing fire activity may reduce overall risk of future catastrophic wildfire and promote forest health.  
16 The decision to follow a less-aggressive fire-suppression strategy should be made with an emphasis on  
17 safety of human life and in areas where escape and spread to homes and infrastructure are negligible.

18  
19 The FFSL maintains cooperative agreements with all federal land-management agencies, all 29 Utah  
20 counties, and more than 100 municipalities across the state. Through cooperative agreements, Utah  
21 counties and municipalities can have catastrophic wildfire costs covered by the state as long as these local  
22 governments (1) perform their own initial attack, (2) adopt a WUI ordinance, (3) meet minimum wildland  
23 firefighting qualifications, and (4) perform prevention, preparedness, and fuel mitigation work at their  
24 expense.

25  
26 ~~The~~ FFSL’s fire-management program is responsible for protecting life and property by preventing the  
27 origin and spread of wildfire on 15 million acres of state and private [unincorporated](#) lands in Utah. The  
28 FFSL has limited resources to carry out this very large task. Through cooperative agreements, FFSL  
29 provides a fire warden in each county. Wardens coordinate with local fire departments to support their  
30 individual wildland firefighting programs. There is heavy reliance on local fire departments, especially  
31 for initial attacks. This successful arrangement results in the overwhelming majority (95 percent) of  
32 wildfires being fully suppressed before reaching 10 acres in size. In rare instances, when wildfires grow  
33 beyond initial attack, fire managers supplement efforts by calling upon hand crews and aerial firefighting  
34 resources through state programs and federal agencies.

35  
36 ~~The~~ FFSL fire-management program assists local fire departments by providing training and coordination  
37 through entities like the [Utah Fire and Rescue Academy](#). The State of Utah oversees the national wildfire  
38 coordination group (~~NWCG~~) certification (red card) for more than [3,500](#) ~~1,500~~ fire department members  
39 every year who are trained to control wildland fire. The FFSL also administers several federal and one  
40 non-federal source of funding for fire departments to assist with the purchase of personal protective  
41 equipment, suppression equipment, communications gear, and apparatus. Additional equipment is made  
42 available to fire departments through the [Federal Excess Personal Property](#) program, which is  
43 administered by the fire-management program. This program has placed more than 1,200 pieces of  
44 wildfire-fighting equipment with departments statewide.

45  
46 **Wildland Fire Prevention**

47  
48 Wildland fire prevention includes activities intended to reduce human-caused ignitions. The FFSL’s  
49 prevention efforts are guided by the National Cohesive Wildland Fire Strategy and CatFire Strategy.

1 The State of Utah promotes wildfire prevention through the Fire Sense Campaign. This effort is carried  
2 out through a multi-agency committee involving fire-prevention staff from the USFS Forest Service,  
3 BLM, NPS, and BIA. The FFSL’s wildfire communications, prevention, and education coordinators lead  
4 prevention projects.

5  
6 Wildland Community Preparedness has identified more than 650 communities at risk (CARS) from  
7 wildfire. CatFire is the guiding document that directs the State of Utah’s efforts in reducing that risk.  
8 Homeowners and property managers receive education and technical guidance from FFSL and their local  
9 leaders in reducing their individual risk. Local governments that provide this outreach and technical  
10 assistance are given incentives to do so through their cooperative agreements.

11  
12 Federal land-management agencies receive direction from the National Cohesive Wildland Fire  
13 Management Strategy (NCWS). Both the national and CatFire strategies contain the following three  
14 pillars:

- 15
- 16 ● Fire-adapted communities
- 17 ● Resilient landscapes
- 18 ● Safe, effective initial attack
- 19

20 The FFSL and local leaders assist CARs through community engagement, planning, and hazardous-fuels  
21 management. Area WUI coordinators deliver educational programs and work with community leaders  
22 and planners to develop Community Wildfire Preparedness Plans (CWPP). These plans identify hazards  
23 and outline the mitigation strategies to address them. More than 190 CWPPs have been completed in  
24 Utah.

25  
26 The FFSL also supports national preparedness initiatives like Firewise USA Communities, Ready. Set.  
27 Go!, and Fire Adapted Communities.

## 28 **Wildland Fire Fuel Management**

29  
30  
31 Fuel management refers to the practice of modifying vegetation through mechanical, chemical, biological,  
32 or manual treatments, or by using fire. The FFSL employs area WUI and fuels coordinators that assist  
33 communities with the development of CWPPs and in implementing mitigation strategies. Local  
34 governments are given incentives to carry out fuel-reduction work through their cooperative agreements.  
35 The State of Utah promotes fuel breaks, thinning, chaining, prescribed fire, and the selection of fire-  
36 resistant vegetation in green-stripping and burned areas.

37  
38 The FFSL administers federal and state grants for fuel mitigation. These funds can be requested by local  
39 governments and private parties.

## 40 **Expand Planning Opportunities**

- 41
- 42
- 43 ● Utilize existing tools to effectively and efficiently expand planning opportunities to the 650 625  
44 identified CARs in Utah.
- 45 ● Train urban and volunteer fire departments to deliver the National Cohesive Wildland Fire  
46 Management Strategy NCWS objectives and strategies to more efficiently reach those in the WUI.
- 47 ● Update and modify as needed the planning documents to meet the needs of the State of Utah and  
48 intent of the Healthy Forest Restoration Act.
- 49

## 50 **Organizational Development**

- Standardize program delivery to improve consistency across Utah.
- Provide cross-discipline training to meet [the](#) needs of individuals and other programs.
- Expand cross-ownership contract sharing to reduce wildfire mitigation costs.

Resources required: CatFire program coordinator and the regional planning process.

### Wildland Fire Legislation

- Update statutes and codes to align more closely with current wildfire-suppression management-decision tools.
- Establish a reward system through tax relief for preparing for wildland fire.
- Provide increased funding to help communities prepare for wildfire.
- [Adopt the 2021 International Wildland Urban Interface code](#)

Resources required: Salt Lake City staff and area office fire staff.

### Program Integration

- Increase communication and cooperation among programs within the Department of Natural Resources and other state and federal agencies.
- Utilize when appropriate other programs to meet the intent of CatFire and the [National Cohesive Wildfire Fire Strategy NCWS](#).
- Help to identify areas of potential integration through the Landscape Scale Restoration program.
- Increase participation from municipalities entering into cooperative agreements with FFSL.

Resources required: ~~CatFire program coordinator, CatFire communications and prevention coordinator, and the CatFire~~ Fire Risk Assessment.

### Project Identification and Implementation

- Identify both federal and non-federal mitigation projects identified in the priority areas of the [Forest Action Plan](#), through the interagency fuels committees and/or through the CatFire strategy process.
- Plan and complete projects that meet the needs of entire communities that focus on resilient landscapes and fire adapted communities.
- Incorporate a maintenance schedule for communities that are achievable and effective.

Resources required: ~~CatFire program coordinator, CatFire Fire Risk Assessment, CatFire funding,~~ [Ongoing funding for hazardous fuels projects](#) and [for](#) state and area WUI coordinators.

### Utah's Watershed Restoration Initiative (WRI)

Utah's Watershed Restoration Initiative (WRI) [11] focuses on improving three ecosystem values: (1) watershed health and biological diversity, (2) water quality and yield, and (3) opportunities for sustainable uses of natural resources. Significant investments have been made through WRI to improve rangeland health and watershed conditions. Since the program's creation in 2006, WRI has improved ~~nearly 22.5~~ million acres in Utah. In fiscal year 2020~~3~~, the Utah Legislature contributed \$6.2 million to WRI. Eighty-six participating partners completed restoration of ~~110,041~~[148,883](#) acres of uplands and ~~166~~[262](#) miles of stream and riparian areas, leveraging the legislative funds by a factor of ~~142~~-to-1. Sportsman-generated funding plays an important role in the WRI. Counties appreciate the benefits realized through WRI habitat restoration projects. The long-term results of the WRI will be

1 measured in reduced wildfire acreage and suppression costs, reduced soil loss from erosion, reduced  
2 sedimentation and storage loss in reservoirs, improved water quality and yield, improved wildlife  
3 populations, reduced risk of additional federal listing of species under the Endangered Species Act,  
4 improved agricultural production, and resistance to invasive plant species.

5  
6 To participate effectively, counties must send their staff to attend meetings and field tours of the WRI  
7 regional teams, expressing their views and advocating the kinds of watershed restoration efforts they feel  
8 are most important. More information on the WRI program, including dates and times of upcoming  
9 regional team events is available at the WRI website at watershed.utah.gov.

## 10 **Utah’s Shared Stewardship Program**

11  
12  
13 The Shared Stewardship Program is an agreement between the State of Utah and the Forest Service that  
14 provides a framework for ~~the State of Utah and the Forest Service to working~~ together to identify forest-  
15 health priorities that focus on restoration projects. The primary goals of the projects are protecting  
16 communities and watersheds from the threat of large unwanted wildfires.

17  
18 The Agreement commits to:

- 19 ● Existing partnerships, programs, and initiatives that have been successful in Utah.
- 20 ● Working together to identify and map shared priorities for protecting at-risk communities and  
21 watersheds across all lands.
- 22 ● Making joint decisions and sharing resources for immediate and ongoing work in priority areas.
- 23 ● Engaging local communities in dialogue and learning about active management and desired  
24 landscape-scale outcomes, including capacity building and economic development opportunities.
- 25 ● Shared planning efforts, including the integration of Utah’s Forest Action Plan and the Forest  
26 Services’ Five-Year Vegetation Management Plans.
- 27 ● Co-managing wildfire risks and supporting each other in decisions that we have made together.

## 28 **Burn Permits**

29  
30  
31 Utah State Law and Utah Department of Environmental Quality (DEQ) rules specify the times, places,  
32 and conditions in which the public may carry out burning operations on private land. The closed fire  
33 season from June to November has one set of rules, while the rest of the year has another set of rules.  
34 Depending on the type of burning and where it takes place, a permit is not always needed. Several types  
35 of fire are exempt from some laws and rules; however, notification to the local fire department is always  
36 required.

## 37 **Wildland-Urban Interface Code**

38  
39  
40 The FFSL uses the International Wildland-Urban Interface Code as a basis for establishing the minimum  
41 standards discussed in the 2006 Utah Wildland-Urban Interface Code. A county ordinance that at least  
42 meets the minimum standards was required to be in place by September 2006. The FFSL incorporates by  
43 reference the 2003 International Code Council Wildland-Urban Interface Code as the minimum standard  
44 for wildland fire ordinance in conjunction with Utah requirements. [12]

## 45 **Utah Wildfire Risk Assessment Portal (UWRAP)**

46  
47  
48 The Utah Wildfire Risk Assessment Portal (UWR-AP) is the primary mechanism for the FFSL to convey  
49 wildfire risk information. It consists of a suite of applications tailored to reflect wildfire risk. The  
50 application is available for the public, local community groups, private landowners, government officials,  
51 hazard-mitigation planners, and wildland fire managers. It provides the data needed to support mitigation



1 and prevention efforts across the state. The UWR-AP provides access to wildland fire risk assessments  
2 completed as part of the West Wide Wildfire Risk Assessment (WAA), which includes three primary  
3 outputs: the Fire Risk Index, Fire Threat Index and Fire Effects Index. Risk is defined as “*the possibility*  
4 *of suffering, harm, or loss.*” Within the WWA, the data layer that defines wildland fire risk is the Fire  
5 Risk Index (FRI), while the “*possibility of suffering, harm, or loss*” is represented by the Fire Threat  
6 Index (possibility) and the Fire Effects Index (harm or loss). The Fire Risk Index is calculated from the  
7 Fire Threat Index (FTI) and the Fire Effects Index (FEI).

## 9 **General Objectives and Policies**

- 11 1. The primary goal of all fire management decisions will be firefighter and public safety. At no  
12 time will the preservation of property or natural resources take higher priority than human life  
13 safety.
- 14 2. Provide ~~initial attack assistance to all lands where cooperative agreements are in place.~~ a strong  
15 incentive for local government to put local resources to work in wildfire prevention,  
16 preparedness, response, and fuel mitigation.
- 17 3. ~~Manage and pay for wildfires delegated to it by local jurisdictions that have cooperative~~  
18 ~~agreements~~ As part of the CWS with local governments that have agreements, FFSL assumes  
19 responsibility for suppression costs of large and extended-attack wildland fires in exchange for  
20 the provision of effective wildfire initial attack by local fire departments and the implementation  
21 of measurable prevention, preparedness, and mitigation actions to reduce fire risk locally.
- 22 4. Provide firefighting resources, including hand crews and fire engines for assignment to initial and  
23 extended-attack wildfires.
- 24 5. Pursue outreach and education efforts aimed at preventing wildfires and preparing  
25 homeowners/landowners in the eventuality of wildfire.
- 26 6. Advocate that local jurisdictions uphold the ~~wildland-urban interface~~ WUI code.
- 27 7. Support the ~~Catastrophic Wildfire Reduction Strategy and the National Cohesive Wildfire Fire~~  
28 ~~Strategy~~ CatFire and NCWS.
- 29 8. Pursue opportunities to conduct and assist other partners with fuel reduction work, including  
30 mechanical treatments and prescribed fire.
- 31 9. Support the efforts of the Utah Watershed Restoration Initiative, Shared Stewardship Program,  
32 and other rehabilitative efforts throughout Utah.
- 33 10. Advocate for forest-management practices that promote species diversity and overall ecosystem  
34 health.
- 35 11. Encourage local jurisdictions to prevent wildfires, prepare their residents for wildfire, and reduce  
36 their fuel load by entering into cooperative agreements that give incentive for those actions.
- 37 12. Participate with federal wildfire agencies to leverage and combine resources and strengths  
38 wherever possible.
- 39 13. Support the Watershed Restoration Initiative and Shared Stewardship Program to encourage  
40 reduced wildfire acreage and suppression costs, reduced soil loss from erosion, reduced  
41 sedimentation and storage loss in reservoirs, improved water quality and yield, improved wildlife  
42 populations, increased forage, reduced risk of additional federal listing of species under the  
43 Endangered Species Act, improved agricultural production, and resistance to invasive plant  
44 species.
- 45 14. Support, and when funding and opportunities allow, partner with the ~~U.S.~~ Forest Service and  
46 other partners to expedite active forest, private land, and public land management.
- 47 15. Leverage state tax dollars with federal funding through cost-sharing and grant opportunities.
- 48 16. Increase cooperation between state agencies to prioritize and fund high-priority projects through  
49 comprehensive watershed-restoration efforts at landscape scales.

1 **State Code**

2  
3 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
4 *following are selected portions of the Utah State Code and do not represent every potential legal*  
5 *reference in the Code related to this section of the State Resource Management Plan or the*  
6 *administration of public lands.*

7  
8 **Utah Fire Prevention and Safety Act**

9  
10 **§ 53-7-104.** *Enforcement of state fire code and rules--Division of authority and responsibility.*

11 (1) The authority and responsibility for enforcing the state fire code and rules made under  
12 this chapter is divided as provided in this section.

13 (2) The fire officers of any city or county shall enforce the state fire code and rules of the  
14 state fire marshal in their respective areas.

15 (3) The state fire marshal may enforce the state fire code and rules in:

16 (a) areas outside of corporate cities, fire protection districts, and other local districts  
17 or special service districts organized for fire protection purposes;

18 (b) state-owned property, school district owned property, and privately-owned  
19 property used for schools located within corporate cities and county fire protection districts,  
20 asylums, mental hospitals, hospitals, sanitariums, homes for the aged, residential health-care  
21 facilities, children's homes or institutions, or similar institutional type occupancy of any  
22 capacity; and

23 (c) corporate cities, counties, fire protection districts, and special service districts  
24 organized for fire protection purposes upon receiving a request from the chief fire official or the  
25 local governing body.

26  
27 **§ 53-7-203.** *Utah Fire Prevention Board--Creation--Members--Terms--Selection of chair and*  
28 *officers--Quorum-- Meetings--Compensation--Division's duty to implement board rules.*

29  
30  
31 **§ 53-7-204.** *Duties of Utah Fire Prevention Board--Unified Code Analysis Council--Local*  
32 *administrative duties.*

33  
34 **Forestry Fire and State Lands**

35  
36 **§ 65A-8.** *Management of Forest Lands and Fire Control.*

37  
38 **Catastrophic Public Nuisance Act**

39  
40 **§ 11-51a-101.** *Title.*

41  
42 **§ 11-51a-102.** *Definitions.*

43  
44 **§ 11-51a-103.** *Declaration of catastrophic public nuisance - - Authority to declare and demand*  
45 *abatement.*

46  
47 **§ 11-51a-104.** *Emergency abatement of a catastrophic public nuisance - - Indemnify, defend, hold*  
48 *harmless.*

49  
50 **Public Lands Planning**

1            § 63L-11-302. *Principles to be recognized and promoted.*

2  
3            § 63L-11-303. *Findings to be recognized and promoted.*

4  
5            **State of Utah Resource Management Plan for Federal Lands**

6  
7            § 63L-8-104. *State land-use planning and management program.*

8  
9            **References:**

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- 12            2. [https://drive.google.com/file/d/1z\\_COJfmMMAITimKIC0RTMb0BSBj4Dwr/view?usp=sharing](https://drive.google.com/file/d/1z_COJfmMMAITimKIC0RTMb0BSBj4Dwr/view?usp=sharing)
- 13            3. <https://ffsl.utah.gov/uncategorized/20223-utah-annual-wildfire-summary/>
- 14            4. <https://ffsl.utah.gov/uncategorized/20223-utah-annual-wildfire-summary/>
- 15            5. <https://ffsl.utah.gov/forestry/about-forestry/forest-action-plan/>
- 16            6. <https://deq.utah.gov/air-quality/health-impacts-of-wildfire-smoke>
- 17            7. <https://hazards.utah.gov/>
- 18            8. <https://hazards.utah.gov/>
- 19            9. <https://www.fema.gov/assistance/public/fire-management-assistance>
- 20            10. OMB Circular A - 87, Title 44, Code of Federal Regulations (CFR ), Part 206, Subpart L, Fire
- 21            Suppression Assistance, Title 44, CFR Parts 2, 9, 10, 204 and 206 Disaster Assistance; Fire
- 22            Management Assistance Grant Program
- 23            11. <https://le.utah.gov/interim/2017/pdf/00005325.pdf>
- 24            12. WRI is a diverse partnership of state and federal agencies working together with private
- 25            organizations, industry, local elected officials and stakeholders, coordinated by the Utah
- 26            Department of Natural Resources. Watershed.utah.gov
- 27            13. [https://ffsl.utah.gov/wp-content/uploads/06\\_Utah\\_Wildland\\_5thdnd.pdf](https://ffsl.utah.gov/wp-content/uploads/06_Utah_Wildland_5thdnd.pdf)

# FISHERIES

## Introduction

The term “fisheries” generally applies to waterbodies and the fish that inhabit them, and the relevant resource-use and management actions, such as fishing regulations, management prescriptions, and other policies intended to meet specific objectives for each waterbody.

Fisheries are an important resource and contribute significantly to Utah’s economy. [The most recent economic study, conducted in 2024, estimated the total direct expenditures for fishing in Utah to be \\$1.1 billion. \[1\]](#) Around 1.1 million pounds of fish are stocked in Utah waterbodies annually, and there are approximately 70890,000 anglers within the state. There are 43 waters in Utah that are classified as [Blue Ribbon fisheries \(BRFs\)](#), which are designated as among the best fisheries in the state in terms of sport fishing. It has been estimated that these fisheries alone contribute \$328 million annually to Utah’s economy and generate 3,976 jobs within the state. [2]

Sportfish species are supported in a variety of recreational fisheries, which are usually grouped into (1) coldwater species, which typically include whitefish, grayling, trout, char, and salmon, and (2) warmwater or cool-water species, which include bass, walleye, perch, catfish, bluegill, crappie, and a number of others. [Cutthroat trout, mountain whitefish, the native Bear Lake fish assemblage, and roundtail chub are the only native fish species that are classified as sportfish in Utah.](#) ~~Great Salt Lake is a brine shrimp focused fishery~~

[The majority of Utah’s native fishes are nongame and do not currently provide license revenue \(i.e., these fishes are generally not targeted by anglers and do not require a license for harvest when permitted\). However, Utah Division of Wildlife Resources \(DWR\) recognizes that maintaining Utah’s the natural diversity in native fish species is also still economically important. Their management allows for safe resource development and native species provide critical components that support sport-fish populations is costly. Fisheries management decisions in Utah are therefore made by considering both the needs of anglers and native, non-game fish species. Populations of many of Utah’s native fish species have declined over the past 50–125 years. There are currently seven fish species in Utah that are listed under the federal Endangered Species Act of 1973 \(U.S.C. Title 16\). There are an additional 15 species that have been designated as species of greatest conservation need \(SGCN\) in the Utah Wildlife Action Plan \(UWAP\). These species are not federally listed but are at risk of becoming listed. The DWR manages these species under conservation agreements. These agreements are collaborative and many federal, state, local, and non-governmental partners strategically work together to conserve these species. Rare fish species and those subject to federal listing under the Endangered Species Act are referenced more fully in the chapter entitled “Threatened, Endangered, and Species in Need of Conservation.”](#) ~~For the most part, there are no fisheries in Utah for imperiled species. Utah also supports a diverse assemblage of native, non-game fish, such as suckers, chubs, and minnows. These fishes are generally not targeted by anglers but represent important aspects of Utah’s natural resources and heritage. Colorado River Cutthroat trout and roundtail chub are the only native fish species that are classified as sportfish in Utah. Maintaining Utah’s natural diversity in fish species is also economically advantageous, because recovery of critically imperiled populations is costly. Fisheries management decisions in Utah are made by considering both the needs of anglers and native, non-game fish species.~~

Fisheries in Utah are managed by the ~~Utah Division of Wildlife Resources (UDWR).~~ [DWR, whose jurisdiction is](#) ~~The UDWR divides~~ the state into five geographic management regions, each of which is led by an aquatic manager. Typically, at least two fisheries biologists support each of these regional managers.

1 ~~The state~~ It should be noted that each management region also promotes fishing through the creation of  
2 community fisheries and various outreach activities; basing the management of these community fishing  
3 opportunities on the prescriptions described in the statewide plan. It should also be noted that DWR  
4 manages a single commercial fishery, the brine shrimp fishery of Great Salt Lake

## 6 Findings

7  
8 The ~~UDWR~~ Wildlife Board establishes seasons, harvest limits, and other wildlife regulations. The process  
9 for determining the balance among competing uses and establishing the best fishery and wildlife  
10 management policies is described in state law. This process is founded on an open, public dialogue  
11 concerning these issues. Five regional advisory councils (RACs) are active across the state, each  
12 consisting of a dozen or more individuals nominated by various interest groups. ~~Council~~ Members of  
13 the RACs can include citizens, local elected officials, sportsmen, agriculturists, federal land managers,  
14 and members of the public at large. The duty of each RAC is to hear input and recommendations, to  
15 gather data and evaluate expert testimony, and then to make informed policy recommendations to the  
16 Wildlife Board.

17  
18 The Wildlife Board uses public input, the recommendations of the RACs, and the assembled facts to  
19 make determinations and establish policies best designed to accomplish the purposes and fulfill the intent  
20 of the wildlife laws. The Wildlife Board generates wildlife ~~management~~ policy, and exercises its powers  
21 by promulgating administrative rules and issuing proclamations and orders under Utah Code.

22 ~~Blue-Ribbon~~ fisheries [23] are waters that provide highly satisfying fishing and outdoor experiences for  
23 diverse groups of anglers and enthusiasts. ~~Blue-Ribbon~~ status ~~indicates~~ is granted to fisheries that, af  
24 water has been reviewed by ~~UDWR~~ biologists and the Blue Ribbon Fisheries Advisory Council ~~and has,~~  
25 have been determined to have:

- 26 • High-quality sport fishing
- 27 • High-quality outdoor experience
- 28 • Excellent accessibility and user amenities
- 29 • High-quality fish habitat
- 30 • Economic benefits for the state

31  
32  
33 Criteria used for the designation as a BRF include items related to water quality, water quantity, angler  
34 access, sustainability, management intensity, level of use, unique setting, unique regulation, and unique  
35 species or fish assemblage. Specifically:

- 36 • Water quality and quantity: A body of water, warm or cold, flowing or flat, will be considered for  
37 ~~B~~blue ~~-R~~Ribbon status if it has sufficient water quality and quantity to sustain a viable fishery.
- 38 • Water accessibility: The water must be accessible to the public.
- 39 • Natural reproduction capacity: The body of water should possess a natural capacity to produce  
40 and maintain a sustainable recreational fishery. There must be management strategies that will  
41 consistently produce fish of significant size and/or numbers to provide a quality angling  
42 experience.
- 43 • Angling pressure: The water must be able to withstand angling pressure.
- 44 • Specific species: Selection may be based on a specific species.
- 45 • Fish numbers and size: The water must provide anglers the opportunity to catch desired numbers  
46 and size of fish.

47  
48  
49 The mission of the Blue Ribbon Fisheries Advisory Council is to identify Utah waters that provide ~~B~~blue  
50 ~~-R~~Ribbon angling experiences—or have the potential to provide ~~B~~blue ~~-R~~Ribbon experiences—in order to  
51 enhance and protect these economically valuable natural resources and their watersheds.

1 Blue-~~r~~Ribbon ~~F~~fishery status is a designation that local communities can work toward by improving  
2 accessibility to local waterbodies as well as taking steps to improve habitat for fish. Both of these steps  
3 can be accomplished through land-use ordinance and by working with state and federal partners to  
4 improve habitat and water quality. There are 43 waterbodies in Utah designated as BRFs.

## 6 **Aquatic Invasive Species**

8 Aquatic ~~I~~invasive ~~S~~species (AIS), also termed ~~A~~aquatic ~~N~~uisance ~~S~~species, are defined by the ~~U~~DWR as  
9 nonnative species of aquatic plants and animals that cause harm to natural systems and/or human  
10 infrastructure. Not all nonnative species are considered AIS, as many nonnative fish species are desirable  
11 for sport fishing. These may include nonnative rainbow trout, largemouth bass, and catfish.

13 Quagga and zebra mussels (ZQM) represent the most significant AIS threat to Utah waters. Once  
14 established, these invasive mussels reproduce and spread quickly, clogging water and power  
15 infrastructure, damaging water-based recreational equipment and watercraft, and negatively impacting  
16 food webs in aquatic ecosystems. There is currently no effective method of eradicating or controlling  
17 ZQM once they are established in a waterbody. Quagga and zebra mussels are mostly spread through the  
18 transport of recreational watercraft from infested waterbodies to non-infested waters. Preventing their  
19 spread is the most effective management strategy.

21 Lake Powell in southern Utah became infested with quagga mussels in 2013 and remains the only infested  
22 waterbody in Utah. The ~~U~~DWR AIS program was established in 2007 and focuses largely on watercraft  
23 inspection and decontamination. Boats leaving Lake Powell are inspected for attached mussels and  
24 standing water upon exit. Boats arriving to launch at other Utah waterbodies are inspected before launch,  
25 with hot water decontamination performed on boats that have recently been used in a ZQM-infested  
26 waterbody. The ~~U~~DWR manages one of the largest AIS programs in the West, having performed nearly  
27 460,000 watercraft inspections and 11,200 decontaminations in 2020. The ~~U~~DWR also works with  
28 surrounding states to address watercraft being transported across state lines from ZQM-infested regions.

30 Other AIS of concern in Utah include the New Zealand mudsnail, [Asian clam](#), and Eurasian watermilfoil.  
31 Several parasites and diseases are also considered invasive due to their effects on local fisheries. Each  
32 malady has a unique lifecycle and management implications, including transmission from hatcheries,  
33 anglers, and natural sources. These include whirling disease and spawning syndrome, which affect trout  
34 species found in Utah.

## 36 **Fish Stocking**

38 Fish stocking takes place in many waters in Utah. A regularly updated list of stocking waters with dates  
39 and details of fish species stocked can be accessed online. Utah residents are fortunate to have an  
40 extensive and well-managed system of state fish hatcheries; ~~which makes it possible to~~ Considering the  
41 capacity of Utah waters to produce fish, and considering Utah's growing human population, fishing  
42 stocking furnishes Utah anglers with high-quality fishing experiences. ~~that involve~~ ing higher catch rates  
43 and larger fish specimens than would be otherwise possible ~~given the capacity of Utah waters to produce~~  
44 ~~fish, and considering Utah's growing human population.~~

## 46 **Utah's Community Fisheries Program**

48 The ~~U~~DWR is committed to developing more community fisheries—places one can walk, bike, or bus to,  
49 and catch a fish or two. Community fisheries provide a fun, easy way to spend quality time with family  
50 and friends outdoors, near home. They offer a setting for parents and kids to socialize, enhance family

1 interaction, and keep busy Utahns in touch with the natural world surrounding them. Fishing provides  
2 families with opportunities to get away from their day-to-day problems and share time together.

### 4 **Youth Fishing Clubs**

6 Kids benefit immensely from fishing. It's a sport that builds self-esteem and confidence while enhancing  
7 problem-solving and decision-making skills. The UDW's Community Fishing Program includes an  
8 educational component for urban children (ages 6–13) who have never fished, or haven't fished as much  
9 as they'd like. Youth fishing clubs form each spring in various communities to introduce young people to  
10 the joys of responsible sport fishing. The clubs are led by adult mentors who teach interested youth about  
11 fish, the places they live, and how to catch them. Those interested in volunteering or enrolling children in  
12 a youth fishing club can visit [DWR's website](#) to view a list of these clubs.

### 14 **Sportfish Management**

16 ~~Within~~During the ~~l~~past decade, the UDW has ~~begun~~focusinged its sportfish-management direction on:  
17 (1) protection and enhancement of conservation sportfish species (e.g., cutthroat trout), (2) quality and  
18 trophy fishing opportunities, (3) recruiting and retaining new anglers through development of community  
19 fisheries, and (4) biological control of undesirable species through the stocking of hybrid predators such  
20 as wipers and tiger muskie, and (5) management of “multi-story” fisheries. [3]

22 The increased emphasis on the above-mentioned concepts provides the UDW new opportunities for  
23 fisheries management. It also increases the challenges of selecting appropriate stocking plans for Utah  
24 waterbodies. Compounding the biological challenges, there has been increased diversity in the fishing  
25 public and their expectations regarding ~~constitutes~~what is considered a successful fishery. In 1984,  
26 anglers in Utah preferred catching rainbow trout, and angler satisfaction was tied to the ability to harvest  
27 their limits of 10–12-inch fish. Consequently, virtually all hatchery production was devoted to the culture  
28 of rainbow trout. Over the last 35 years, however, angler interest in warmwater and cool-water fisheries  
29 has grown. The UDW is working to meet this increased demand for warmwater and cool-water angling  
30 opportunities ~~into~~in the future.

32 The UDW manages the following warmwater and cool-water species: bluegill, channel catfish, black  
33 crappie, largemouth bass, smallmouth bass, tiger muskie, walleye, hybrid striped bass, and yellow perch.  
34 There are a number of other species of warmwater and cool-water game fish that exist in Utah waters and  
35 provide angling opportunities such as: Sacramento perch, green sunfish, white bass, black bullhead, and  
36 northern pike. For the most part, these other species are not actively managed.

38 Trout are still dominant in ~~smaller~~-coldwater systems throughout Utah, such as the waters along the  
39 Mirror Lake Highway and elsewhere in the Uinta Mountains, ~~the~~-Boulder Mountains, ~~the~~-Wasatch  
40 Mountains, ~~the~~-Manti Mountains, and ~~the~~-La Sal Mountains.

42 Regardless of the management concept or species, the protection of native aquatic species is a principal  
43 concern for fisheries managers. Stocking and management practices that would be detrimental or cause  
44 the decline of native species are typically avoided. The UDW is developing sterile variants of certain  
45 species (e.g., walleye) to provide angling opportunities while minimizing impact to native species  
46 downstream of stocking locations.

### 48 **Species stocked in lakes and ponds**

1 The following species are typically stocked in flatwater environments: rainbow trout, tiger trout, brown  
2 trout, cutthroat trout, kokanee salmon, splake, lake trout, brook trout, largemouth bass, bluegill, channel  
3 catfish, tiger muskie, wiper, yellow perch, walleye, and black crappie. Future development of sterile  
4 variants of certain species may increase demand for them.

## 6 **Stream Fisheries**

9 Managing self-sustaining fisheries in Utah streams should be a priority. The species ~~which~~that are  
10 typically stocked in streams are (sterile) brook trout, brown trout, cutthroat trout, and tiger trout. Tiger  
11 trout can be used in stream and river systems primarily in conjunction with cutthroat trout restoration  
12 projects. Tiger trout also have advantages in waters that present significant water quality challenges,  
13 ~~making that make~~ the use of rainbow trout impractical.

## 15 **Planning**

18 The challenging combination of forecasted resident population growth, a stable per-capita rate of fishing  
19 participation among Utahns, and the forecasted persistence of drought make strategic and adaptive-  
20 management planning a critical component of future fisheries management efforts in Utah. Many  
21 management plans continue to be developed for certain high-profile waters with cooperation with the  
22 public through internet-based surveys, as well as committee-based approaches involving interested  
23 members of the public. However, more-recent planning efforts have focused on development of statewide  
24 strategic-management practices. Community fisheries, tiger-muskie stocking, and drought-response  
25 plans are examples of UDWR's proactive efforts to strategically and proactively address the challenges  
26 ahead.

## 28 **Economic Considerations**

30 From high-mountain streams and lakes to larger reservoirs and small community ponds, Utah offers many  
31 places to fish. Recreational fishing provides a significant economic benefit to the Utah economy ~~and~~  
32 ~~particularly benefits anglers~~ [5]. Economic benefits have been estimated based on angler expenditures  
33 associated with the fishing trips. Estimates by the Department of Applied Economics at Utah State  
34 University indicate that in ~~2011~~2023 a typical angler spent \$~~217~~ 90 per fishing trip to ~~Blue Ribbon~~  
35 ~~waters~~BRFs in Utah. This resulted in \$~~184~~1.1 billion in direct expenditures made by anglers for Utah  
36 goods and services, which generated an additional \$~~143~~1.09 billion in economic output, resulting in a  
37 total economic output of nearly \$~~327~~2.19 billion. ~~Approximately 3,976~~Over 18,000 jobs were  
38 associated with these expenditures related to BRFs. Tax revenue generated by this increased level of  
39 output, labor income, and added value was estimated to be \$~~301~~ 35 million for state and local  
40 governments. The variety of angling experiences available to Utahns is important, and it helps to sustain  
41 recreational activity in a number of state parks associated with waterbodies.

## 43 **Brine Shrimp Commercial Fishery**

45 Brine shrimp are a prolific aquatic species that inhabit the hyper-saline waters of Great Salt Lake. The  
46 brine shrimp play an important role in the region's fisheries for several reasons. First, abundant supplies  
47 of brine shrimp and cysts (eggs) support millions of migrating and breeding shorebirds, waterfowl, and  
48 other avian species [5]. Second, brine shrimp cysts are harvested commercially by more than a dozen  
49 local companies, the economic impact of which is discussed below. Over the past 10 years, an average of  
50 14,070,000 kilograms of raw harvest (cysts, empty shells, brine shrimp, algae, and other material) are  
51 harvested annually from Great Salt Lake. The dried and processed cysts supply more than 40 percent of



1 the worldwide demand of brine shrimp used in the aquaculture industry. Management of harvest quotas is  
2 completed by the UDWR to prevent overexploitation.

3  
4 Great Salt Lake supports over \$1.3 billion in total economic output and many different industries. The  
5 Great Salt Lake also provides over 7,700 jobs in all sectors. [6]

6  
7 The Utah Brine Shrimp Royalty Act requires harvesters pay a tax for brine shrimp eggs collected from  
8 Great Salt Lake. A portion of the monies generated in this way are added to a special state fund, (the  
9 Species Protection Account), which is used for conservation projects, which and to help plants and  
10 animals species from being added to listed under the Endangered Species Act and the recovery of those  
11 that are already listed.

12  
13 Continued reductions in Great Salt Lake water elevation beyond the new record low set in 2021 could  
14 threaten the brine shrimp harvest. Low lake levels require dredging to maintain the use of harbors by  
15 harvest boats, and increases in lake salinity as lake levels drop has a negative impact on brine shrimp  
16 productivity.

## 17 18 **Goals, Objectives, and Policies**

### 19 20 **Goal(s):**

21  
22 The UDWR's mission is to serve the people of Utah as trustee and guardian of the state's protected  
23 wildlife. Fish are considered protected wildlife and fall under the authority of the UDWR. The UDWR  
24 manages fisheries in Utah with the two following primary goals: (1) provide high-quality recreational  
25 fishing opportunities and (2) conserve native aquatic species, including fish, amphibians, and mollusks.

26  
27 Assisting the UDWR in decision making and establishing management priorities is the Wildlife Board,  
28 which receives local input from the five RACs. ~~The RACs consist of 12-15 members who are nominated  
29 by various interest groups and selected by the Utah Department of Natural Resources' leadership.  
30 Members represent agriculture, sportsmen, non-consumptive wildlife, locally elected public officials,  
31 federal land agencies, and the public at large. The duty of each RAC is to hear input and  
32 recommendations, gather data, and evaluate expert testimony, and then to make informed policy  
33 recommendations to the Wildlife Board.~~

### 34 35 **Objectives and Policies:**

- 36  
37 1. Protect, conserve, and improve Utah's fish and aquatic wildlife and the habitats upon which they  
38 depend.  
39 2. Provide for the varied demands of fish and aquatic wildlife recreationists.  
40 3. Seek constituent support and participation in fish and aquatic wildlife management programs.  
41 4. Ensure the persistence of the diversity of native fish and aquatic wildlife in Utah, while also  
42 providing excellent opportunities for anglers and other recreationists.

### 43 44 **State Code**

45  
46 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The  
47 following are selected portions of the Utah State Code and do not represent every potential legal  
48 reference in the Code related to this section of the State Resource Management Plan or the  
49 administration of public lands.*

### 50 51 **Wildlife Resources Code of Utah**

1        **§ Utah Code Title 23A.** *Wildlife Resources Code of Utah.*

2  
3        **§ 23A-5-303.** *Release of wildlife unlawful - - penalty.*

4  
5        **§ 23A-2-206.** *Jurisdiction of division over public or private land and waters.*

6  
7        **§ 23A-9-301.** *Diversion of water prohibited--Exception for flood control.*

8  
9        **§ 23A-9-201.** *Screens or other devices required--Failure to install after notice a misdemeanor.*

10  
11       **§ 23A-9-202.** *Notice of intention to drain or divert waterway.*

12  
13       **§ 23A-9-303.** *Taking protected aquatic wildlife or eggs [is] unlawful except as authorized.*

14  
15       **§ 23A-9-305** *Possession or transportation of live aquatic wildlife unlawful except as authorized*

16  
17       **§ 23A-5-309.** *Taking, transporting, selling, or purchasing protected wildlife illegal except as*  
18 *authorized - - penalty.*

19  
20       **§ 23A-3-211.** *Aquatic Invasive species Interdiction Act.*

21  
22       **Public Lands Planning**

23  
24       **§ 63L-11-303.** *Findings to be recognized and promoted.*

25  
26       **State of Utah Resource Management Plan for Federal Lands**

27  
28       **§ 63L-8-104.** *State land-use planning and management program.*

29  
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- 39       4. *Two-Story Reservoirs: a class of reservoirs characterized by distinct strata of warm and cold*  
40 *water caused by temperature-induced density differences. The warm stratum and corresponding*  
41 *littoral zone are dominated by black bass, yellow perch, black crappie, and sunfishes. The cold*  
42 *stratum is generally dominated by trout, such as stocked rainbow trout. Fish of the warm stratum*  
43 *naturally reproduce while the trout are dependent upon stocking. Some naturally reproducing*  
44 *populations of brown trout and cutthroat trout exist in these reservoirs, but they never make up*  
45 *much of the observed angler harvest.*
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# FLOODPLAINS AND RIVER TERRACES

## Introduction

A floodplain is land that is susceptible to become inundated by water of any natural source [1]. A floodway is the stream channel and that portion of the adjacent floodplain that must remain open to permit the passage of the base flood. A 100-year flood is the flood elevation that has a ~~one~~ 1-percent chance of being equaled or exceeded in any given year, also known as the “base flood.”

Flooding typically refers to a temporary overflow of water onto lands that are not normally inundated, which produces measurable property damage or forces the evacuation of people and vital resources. The Federal Emergency Management Agency (FEMA) further defines a flood as [2]:

A general and temporary condition of partial or complete inundation of 2 or more acres of normally dry land area or of 2 or more properties (at least 1 of which is the policyholder’s property) from: overflow of inland or tidal waters; unusual and rapid accumulation or runoff of surface waters from any source; or, Mudflow. Or, a collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood as defined above.

Floods frequently cause loss of life and may also damage, destroy, or disrupt property, communications, transportation systems, electricity service, community services, crop and livestock production, and commerce. Floods increase the likelihood of hazards such as transportation accidents, water-supply contamination, and other health risks.

Several factors determine the severity of floods. These include rainfall intensity, rainfall duration, rapid snowmelt, and wildfires. A large amount of rainfall over a short time span can result in flash-flood conditions. Small amounts of rain can also result in flooding at locations where the soil has been previously saturated, or if rain concentrates in areas where impermeable surfaces are predominante. Impervious surfaces include parking lots, paved roadways, or burned areas with hydrophobic soils. Topography and ground cover are also contributing factors ~~for floods~~. Water runoff is greater in areas with steep slopes and little or no vegetative ground cover.

The frequency of inundation depends on the climate, soil, and channel slope. In regions where substantial precipitation occurs during a particular season, or in regions where annual flooding occurs due to spring melting of winter snowpack, areas at risk may be inundated nearly every year.

## Findings

As settlements and communities formed in Utah, little regard was given to the purposes and functions of floodplains. Homes, businesses, and even entire communities have been built within floodplains and in high-~~risk~~ ~~flooding areas~~ floodplains. The development of these floodplains has resulted in continual and oftentimes severe social and economic loss.

Traditionally, planning for flood control in Utah has focused on protecting existing development(~~s~~) through structural works such as dams, diversions, and levees, and providing emergency relief and recovery assistance to flood victims following a disaster.

These approaches are expensive and have not been very effective in reducing flood damages. Despite considerable expenditure on flood-control works, annual damages due to flooding continue to rise. It is

1 apparent that a better understanding of flood risks and alternative flood-control measures are needed,  
2 those that address the root problem: humans' insistence to use and occupy flood-hazard areas.

3  
4 The Utah Division of Emergency Management (DEM) provides expertise in the National Flood Insurance  
5 Program, Floodplain Management, Risk MAP (Risk Mapping Assessment and Planning), and mitigation  
6 planning.

7  
8 The National Flood Insurance Program (NFIP) provides that alternative. This law addresses the need to  
9 control development in floodplains and to protect human health by relocating people and not floodwaters.  
10 It does not prohibit floodplain development but guides development in floodplain areas, balancing  
11 nature's needs to convey floodwaters with land-use needs. ~~The U.S.~~ Congress created NFIP in 1968,  
12 offering nonstructural approaches to reduce flood damage. The program makes flood insurance available  
13 to property owners in flood-prone communities. In return, each community agrees to guide future  
14 floodplain development. It requires local governments to adopt and enforce floodplain regulations that  
15 meet federal requirements before flood insurance can be obtained in their community.

16  
17 Floodplain management [3] is a community-based effort to prevent or reduce the risk of flooding,  
18 resulting in a more resilient community. These measures take a variety of forms and generally include  
19 zoning requirements, subdivision ~~and~~ requirements, building requirements, and special-purpose  
20 floodplain ordinances.

21  
22 Prior to the creation of the NFIP, floodplain management as a practice was not well established, and only  
23 a few states and several hundred communities actually regulated floodplain development. For many  
24 communities, the NFIP was their initial exposure to land-use planning and community regulations.

25  
26 A community's agreement to adopt and enforce floodplain-management ordinances to prevent or  
27 regulate the construction in special flood-hazard areas (which may increase flood hazards, particularly  
28 with respect to development and new construction) is another ~~is an~~ important element in making  
29 federally backed flood insurance available to home and business owners in participating communities.  
30 Currently, more than 229 communities ~~2296 communities~~ in Utah voluntarily adopt and enforce local  
31 floodplain-management ordinances that provide flood-loss reduction building standards for new and  
32 existing development. There are 790 digital printed panels and 146 paper panels with mapped flood risk.  
33 On those panels, there are a total of just over 7,400 mapped stream miles and more than 48,000 unmapped  
34 stream miles in Utah.

35  
36 To better understand and communicate the areas where the risk of flooding is increased, FEMA's Risk  
37 MAP Program (which stands for Risk Mapping Assessment and Planning) provides communities with  
38 flood information, data, and tools they can use to enhance their mitigation planning efforts and act to  
39 better prepare their citizens. The State of Utah (i.e., DEM) signed a Cooperating Technical **Partner**  
40 Partnership Agreement with FEMA on December 1, 2004. This agreement establishes the partnership  
41 with FEMA to create and maintain accurate, up-to-date flood-risk data for the ~~s~~State of Utah. Through  
42 more-precise flood-mapping products, risk-assessment tools, and planning and outreach support, Risk  
43 MAP strengthens local ability to make informed decisions about reducing flood risk.

44  
45 The 2019 State Hazard Mitigation Plan (SHMP) is the result of a collaborative effort between state,  
46 federal, and local groups and individuals, including FEMA, DEM, and the State Hazard Mitigation Team  
47 (~~SHMT~~), which continues to meet quarterly to discuss and incorporate new information and ongoing  
48 mitigation efforts.

49  
50 The SHMP is designed to evaluate the risks that currently pose the greatest threats to Utah, and includes  
51 an assessment of natural hazards such as earthquakes, wildfires, floods, and naturally occurring

1 phenomena such as radon gas and problem soils. The plan then goes one step further in prioritizing how  
2 and when the threats will be addressed, suggesting mitigation activities that will have the greatest chance  
3 of success.

4  
5 The Utah Division of Water Rights administers the Dam Safety Program, which assesses existing dam  
6 condition to prevent dam failure and uncontrolled release of water. The Dam Safety Program was  
7 established to protect the public against the possibilities and consequences of dam failures. There are  
8 nearly 300 “high hazard” dams statewide, with almost 100 along the Wasatch Front.

9  
10 The FEMA has mapped flood hazards in portions of Utah. The flood mapping program (Risk MAP)  
11 identifies flood hazards, assesses flood risks, and partners with states and communities to provide  
12 accurate flood-hazard and risk data to guide them to mitigation actions. Not all flood risk is mapped, and  
13 flood risks changes over time due to climate and changing weather patterns, development, flood events,  
14 and the technology used to develop the data ~~available data~~, so these maps are periodically updated for  
15 accuracy.

16  
17 The FEMA also leads the Nation Dam Safety Program. According to the FEMA National Dam Safety  
18 Program Fact Sheet, the area downstream of a dam that would be impacted in the event of a failure or  
19 uncontrolled release of water is called the “dam failure inundation zone.” Before buying a home or  
20 business, it is the buyer’s responsibility to determine whether it is in an inundation zone.

21  
22 High-hazard dams are not always large reservoirs. Some detention ponds or debris basins are also  
23 classified as high hazard because their failure would put downstream homeowner property and lives at  
24 risk.

## 25 26 **Economic Considerations**

27  
28 Anywhere it can rain, it can flood and cause damage to property and infrastructure. County and statewide  
29 flood losses can be analyzed using the Spatial Hazard Events and Losses Database for the United States  
30 (also known as SHELDUS) ~~database~~. Washington, Salt Lake, Weber, and Utah counties, some of the  
31 most populated ~~counties~~ in Utah, also have the highest total losses from flooding.

## 32 33 **Goals, Objectives, and Findings**

### 34 35 **Goal(s):**

- 36  
37 • Ensure the safety of Utahns, property, and infrastructure impacted, or potentially impacted, by  
38 floodplains and river terraces.

### 39 40 **Objectives and Policies:**

- 41  
42 1. Continue to coordinate the ~~National Flood Insurance Program~~ NFIP and have flood risks mapped  
43 so that property owners can be more aware of flood hazards and be eligible to obtain flood  
44 insurance at reasonable rates.
- 45 2. Restore floodplain connectivity for threatened and endangered species that rely on these locations  
46 in areas outside human habitation while preserving the health and safety of residents.
- 47 3. Educate citizens and developers to review flood-risk information on their property and identify  
48 measures they may implement to help protect their property from flood damage.
- 49 4. Encourage the use of bio-engineering practices or flood structures, dams, catch basins, gully  
50 plugs, and reseeded of grass ways to help reduce erosion during and after storm events.

- 1 5. Support analysis and approval processes for floodplain restoration as categorical exclusions under  
2 the National Environmental Protection Act (NEPA).
- 3 6. Support active management and restoration projects on federal lands to restore sinuosity,  
4 vegetation, and floodplain function that mimic the natural hydrologic system in suitable areas
- 5 7. Prioritize long-term hydrologic function over short-term ground disturbance, however allowing  
6 disturbance for assisting natural function or for natural-disturbance modeling.
- 7 8. Encourage federal agencies to re-seed or revegetate burned areas as soon as possible after  
8 wildfires to mitigate sedimentation in streams and riparian areas.
- 9 9. Support proper management of forest health to decrease the risk of catastrophic wildfire and  
10 subsequent flooding damage.

11

## 12 **State Code**

13

14 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
15 *following are selected portions of the Utah State Code and do not represent every potential legal*  
16 *reference in the Code related to this section of the State Resource Management Plan or the*  
17 *administration of public lands.*

18

19 **Utah Code-§ 53-2a-106.** Coordination for state development in a flood plain.

20

21 Any state agency that plans to develop or construct a building within a flood plain shall consult  
22 and coordinate with the Division of Emergency Management ~~division~~ to ensure compliance with  
23 minimum standards of the National Flood Insurance Program, 42 U.S.C. Chapter 50, Subchapter  
24 I.

25

## 26 **References:**

27

- 28 1. Utah Code §10-9-103
- 29 2. [https://www.fema.gov/pdf/nfip/manual201205/content/22\\_definitions.pdf](https://www.fema.gov/pdf/nfip/manual201205/content/22_definitions.pdf)
- 30 3. [https://www.fema.gov/pdf/nfip/manual201205/content/22\\_definitions.pdf](https://www.fema.gov/pdf/nfip/manual201205/content/22_definitions.pdf)

## FOREST MANAGEMENT-

### Introduction

Utah's forests provide numerous social and economic benefits, including recreation, wildlife habitat, livestock grazing, open space, forest products, and carbon sequestration. Most of the forested lands in the state are either held by private landowners or managed by the U.S. Forest Service (Forest Service).

Forests in Utah cover 18.2 million acres, about one-third of Utah's land area. Most of this is managed by federal agencies [1]. The US Bureau of Land Management (BLM) oversees 7.2 million acres of Utah's forest, but only 115,000 acres are classified as productive forest. The Forest Service manages 6.3 million acres of forest, of which 2.8 million acres are classified as productive forests. About one-quarter of Utah's forests are on non-federal lands. Private landowners and Tribes manage 2.9 million acres, of which 594,000 acres are productive forest. The State of Utah oversees 1.4 million acres of forest, more than half of which are managed by the School and Institutional Trust Lands Administration (SITLA). In addition to these forests, Utah has 1.8 million acres of urban and community land with 16.6 percent tree cover, or 300,000 acres of urban and community forests [2]. Urban and community forests are expanding with urban and community development, and they provide significant ecosystem services to the people of Utah.

Many of these private forests were originally acquired for cattle grazing, agriculture, or mining development and are typically located near large tracts of public forest where critical watershed areas exist. Although relatively small in acreage, these private forestlands overlay many of the state's most valuable watershed, wildlife, and recreation areas and form critical fringe and connectivity zones throughout larger tracts of public forests (Utah Forest Legacy Program, Assessment of Need). Because of their locations, these lands are capable of providing benefits as well as posing risks for nearby communities if not properly managed. Utah's private forest landowners are a diverse group, consisting of corporate owners and private individuals, owners of large and small acreages, multi-generation owners and those who have only recently acquired forestland. Utah's non-industrial private forest (NIPF) landowners are distributed throughout all ~~twenty-nine~~<sup>29</sup> counties and own land for a variety of reasons and uses.

An estimated 3,500 landowners control the management and land-use activities on private forestlands greater than 10 acres in size. A national survey suggests there are about 11,000 forest landowners in Utah who own parcels smaller than 10 acres. Surveys conducted by the FFSL and Utah State University (USU) identified wood products, livestock, and recreation as the three primary reasons for forestland ownership in Utah. Utah owners of commercial high-elevation forestlands own an average of 6,300 acres.

The average forest landowner holds 600 acres of forestland, ranging between 40 and 15,000 acres.

Utah has more than 13,000 farms and ranches throughout the state. Rural forest landowners, ranchers and farmers may, through use of conservation plantings and other management practices, improve forest health and productivity, reduce soil erosion, improve riparian areas, improve crop and livestock productivity and improve wildlife habitat.

In addition to these forests, Utah has 1.8 million acres of urban and community land with 16.6 percent tree cover, or 300,000 acres of urban and community forests. Urban and community forests are expanding with urban and community development, and they provide significant ecosystem services to the people of Utah. [3]

1 Utah's Division of Forestry, Fire, and State Lands (FFSL) is responsible for maintaining forest health,  
2 responding to wildfires, and managing sovereign lands in Utah. Each of FFSL's six area offices employs  
3 a forester who works with landowners and lessees to aid those wishing to utilize, improve, or conserve  
4 their forested lands.

5  
6 The state also promotes urban and community forestry through programs like Tree City USA and the  
7 Arbor Day poster contest.

## 8 9 **Findings**

10  
11 Approximately 25 percent of Utah's forests are in non-federal ownership. The vegetation communities  
12 that characterize Utah's forests and woodlands vary widely according to soil, climate, and topography.  
13 The availability of water is the primary determining factor. Utah woodlands generally begin at elevations  
14 of 4,500 feet, where pinyon-juniper combinations join mountain mahogany, Gambel oak, and sagebrush.  
15 As elevation and precipitation increase, the highly valued timber species of lodgepole and ponderosa  
16 pines begin to appear along the Uinta Mountains and in select areas of southern Utah, respectively.

17  
18 Utah's greatest variety of traditional forest species flourishes in the Montane Zzone, which includes all  
19 landscapes from 7,500 to 9,500 feet in elevation and receives annual precipitation of 18 to 40 inches.  
20 Nearly monotypic stands of Douglas-fir dominate the cool, north-facing slopes and canyon walls of this  
21 forest type, with Engelmann spruce, blue spruce, and subalpine fir coming in at elevations generally  
22 above 9,000 feet. Other coniferous species found in Utah's subalpine zone include modest stands of  
23 limber and bristlecone pine and a concentrated band of white fir that runs south through the central  
24 portion of the state. Clustered stands of quaking aspen, second only to Douglas-fir in state-wide  
25 distribution, add deciduous texture and golden fall color to Utah's forest lands between 6,000 and 10,000  
26 feet in elevation.

27  
28 Private landowners in Utah maintain stewardship over approximately 2.9 million acres of forest and  
29 account for 17 percent of the timber harvested in the state [4]. Although relatively small in acreage, these  
30 private forest lands overlay many of the state's most valuable watershed, wildlife, and recreation areas,  
31 and they form critical fringe and connectivity zones throughout larger tracts of public forest.

## 32 33 **Forest Health**

34  
35 A healthy forest is one that provides a multitude of benefits, including but not limited to increased oxygen  
36 production and cleaner air, watershed protection, wildlife habitat, timber and other forest products,  
37 livestock grazing, recreation opportunities, and scenic beauty. When too many trees and plants are  
38 competing for space, sunlight, water, and minerals in the soil, the trees can become stressed. Stressed  
39 trees are more susceptible to insect and disease outbreaks. Much like plants in a garden, some trees must  
40 occasionally be removed (thinned) to provide for the health of those that remain. Fire is nature's way of  
41 thinning the forest. With an ever-increasing number of people building homes in the forest, as well as an  
42 emphasis on wildfire suppression, natural wildfire regimes have been largely removed from the system.

43  
44 Some forests have too few trees or too few species of trees to provide the full range of ecological and  
45 economic benefits. This may be a result of fire, insect or disease outbreak, or human activities such as  
46 excessive visitation, motorized vehicle use, excessive logging, or overgrazing.

47  
48 Accumulation of large amounts of woody debris and increased fuel loads, coupled with mortality-causing  
49 disturbance regimes (e.g., fire, insects, and pathogens) exacerbate the potential for catastrophic wildfire.  
50 Research shows these conditions are often inconsistent with historical patterns of forest development.



1 Some far-reaching impacts include changes in hydrologic function, nutrient cycling, and introduction of  
2 noxious and invasive species.

3  
4 According to data from 2014, the average net annual growth of trees in Utah is -4,556,000 cubic feet per  
5 year. This shows that trees are dying faster than they are growing.

6  
7 Significant issues impacting the timber resources in Utah include declining forest health, productive  
8 capacity of forest ecosystems, **fragmentation**, and socio-economic concerns. Due to a lack of active  
9 vegetation management, forests in Utah have become more susceptible to intense wildfire, insect damage,  
10 and diseases. By ensuring that forests are managed and kept healthy, they will continue to provide  
11 benefits to the public.

12  
13 Utah's landscape has many forest types, each with unique concerns. They are discussed below.

14  
15 **Mixed-conifer** forests consist primarily of Engelmann spruce, sub-alpine fir, white fir, and some blue  
16 spruce. These high-elevation forests are found throughout Utah and are critical for watershed values. The  
17 major threat to mixed-conifer forests is the spruce bark beetle (*Dendroctonus rufipennis*), which has, in  
18 many cases, run its course. In stands with remaining spruce, it is critical to monitor for the presence of  
19 these beetles and remove infested trees before the adults take flight and colonize new trees in the area.

20  
21 **Douglas-fir** is a relatively high-value timber tree. It often occurs in monotypic stands or mixed with  
22 white and subalpine fir. Overcrowded stands with large trees are susceptible to Douglas-fir bark beetle  
23 (*Dendroctonus pseudotsugae*). This species is somewhat less aggressive than the spruce beetle but can  
24 cause considerable damage if left unchecked. Maintaining appropriate stocking levels of all age classes is  
25 important to reduce damage, and the application of anti-aggregation pheromones in high-value areas can  
26 be very effective at preventing attacks.

27  
28 **Aspen** stands are some of the most ecologically diverse forest types in the state. **Aspen** such they are  
29 critical wildlife habitat. Aspen depends upon disturbance such as fire or cutting to stimulate new trees  
30 growing from the roots. In the absence of disturbances, many stands are in decline across the state. When  
31 young trees spring up they are often eaten and destroyed by wildlife and livestock before they can grow  
32 tall enough to be out of reach. In order to preserve these ecological treasures, active management is  
33 required to create and protect new young stands.

34  
35 **Ponderosa pine** is a valuable timber species that is more common in central and southern Utah. Healthy  
36 ponderosa forests are typically open and park-like, with a few large trees and mixed shrubs and grasses in  
37 the understory. These large trees have thick bark that is resistant to fire damage under natural conditions,  
38 which include frequent, small fires that help keep the understory open. Without these frequent, small fires  
39 or forest management, the stands become overgrown and these majestic and valuable trees are at risk  
40 from the dual threats of mountain pine beetle (*Dendroctonus ponderosae*) and catastrophic wildfires.

41  
42 **Lodgepole pine** is a valuable timber species that is seen at higher elevations in northern Utah. Some  
43 lodgepole forests consist purely of lodgepole pine, established following wildfires. Others can be mixed.  
44 At higher elevations, they are mixed with species such as subalpine fir, Engelmann spruce, and aspen. At  
45 lower elevations the mix includes aspen, Douglas-fir, and ponderosa pine. The ecology of each type of  
46 lodgepole forest is unique. All types of lodgepole are susceptible to mountain pine beetles.

47  
48 **Pinyon-juniper** forests are very drought resistant, so much so that they often encroach on other  
49 vegetation types. Due to the dense shade created when these stands grow densely, little vegetation can  
50 grow beneath. This creates vegetation problems for wildlife and invites severe wildfires that can cause

1 long-term damage. Many opportunities are being researched to utilize the relatively small-diameter wood  
2 products that come from these abundant forests.

3  
4 **Gambel oak** is classified as a key terrestrial habitat in the Utah State Wildlife Action Plan. Oak supplies  
5 “mast” (edible seeds, nuts, and fruit) to a variety of wildlife species. Oak readily resprouts after  
6 disturbances such as wildfire, so other types of vegetation generally do not replace it following a burn.  
7 Currently, there is a surplus of young saplings in Utah and a deficit of older, more mature trees. This is  
8 due largely to the inappropriate fire frequency and intensity. Other threats to this forest type include  
9 invasive plant species such as cheatgrass, and urban development/cabin communities.

10  
11 **Riparian forests** consist of the widest variety of trees and shrubs. This includes but is not limited to  
12 mountain maple, bigtooth maple, Fremont cottonwood, narrowleaf cottonwood, boxelder, peachleaf  
13 willow, coyote willow, hawthorn, chokecherry, and river birch. These forests act to filter sediment and  
14 pollutants from rivers and streams, reduce erosion, and provide immense value to domestic livestock and  
15 wildlife species. One of the main threats to this forest type is invasive tree species, particularly Russian  
16 olive and tamarisk. Continued education of loggers in Utah’s Water Quality Guidelines is necessary to  
17 protect and preserve these riparian areas.

18  
19 **Urban forests** provide economic and environmental benefits. When properly planted, they reduce heating  
20 and cooling costs and increase property values for individual homes. In larger cities, trees reduce the  
21 “heat island” effect, reduce pollutants, and help reduce stormwater.

## 22 23 **Forest Action Plan (FAP)**

24  
25 The goals and strategies developed by the 2020 Utah Forest Action Plan (FAP) align with Utah’s Shared  
26 Stewardship [Agreement Program](#), a 2019 partnership initiative between the Forest Service Intermountain  
27 Region and the State of Utah. Shared [Stewardship](#) is a fitting framework for the Utah FAP because it  
28 builds on a shared vision and strategies that seek to engage partners, stakeholders and communities in  
29 identifying and developing priority projects through collaboration. Like [Shared Stewardship](#), the Utah  
30 FAP takes an “all lands” approach, recognizing the need to address wildland fire threats and other forest-  
31 management objectives at a landscape scale and across ownership boundaries. The Utah FAP’s four  
32 goals, and strategies to achieve them, are consistent for FFSL, all of its partners, and all forests statewide.  
33 The strategies are guided by the core elements and mutual commitments in Utah’s Shared Stewardship  
34 [Agreement Program](#), as well as [Key Performance Indicators \(also known as KPIs\)](#) developed by the  
35 State of Utah and Forest Service to monitor progress toward desired outcomes. The four goals are as  
36 follows:

- 37  
38 1. Restore healthy and resilient trees and forests across Utah.  
39 2. Reduce wildfire risk to communities, water resources, and other natural resource values.  
40 3. Increase collaborative landscape-scale forest restoration activities across the state.  
41 4. Build capacity among partners, stakeholders and communities to engage in forest restoration activities  
42 across Utah.

43  
44 A priority landscapes map is presented for all forests in Utah based on the Shared Stewardship [Program’s](#)  
45 risk- and outcome-based approach. The map is a tool to help FFSL, Forest Service, and all their partners  
46 to identify high-priority landscapes for forest restoration and wildfire risk-reduction projects through  
47 collaborative approaches. [5]

1 **Utah’s Shared Stewardship Program**

2  
3 The Shared Stewardship Program is an agreement between the State of Utah (i.e., FFSL and PLPCO) and  
4 the Forest Service that provides a framework for the State of Utah and the Forest Service to work together  
5 to identify forest-health priorities that focus on restoration projects. The primary goals of the projects are  
6 protecting communities and watersheds from the threat of large, unwanted wildfires.

7  
8 The agreement commits to:

- 9
- 10 • Existing partnerships, programs, and initiatives that have been successful in Utah.
  - 11 • Working together to identify and map shared priorities for protecting at-risk communities and  
12 watersheds across all lands.
  - 13 • Making joint decisions and sharing resources for immediate and ongoing work in priority areas.
  - 14 • Engaging local communities in dialogue and learning about active management and desired  
15 landscape-scale outcomes, including capacity-building and economic-development opportunities.
  - 16 • Shared planning efforts, including the integration of the Utah FAP and the Forest Services’ Five-  
17 Year Vegetation Management Plans.
  - 18 • Co-managing wildfire risks and supporting each other in decisions that have been made together.
- 19

20 **Cooperative Forestry Programs in Utah include the Following:**

21  
22 The FFSL provides assistance to private landowners with forested acreage or land that is capable of  
23 growing trees. There are several programs designed to inform and assist forest landowners.

24  
25 **The Forest Stewardship Program** encourages the long-term stewardship of important state-owned and  
26 private forest landscapes by assisting landowners to more-actively manage their forests and related  
27 resources. The program provides assistance to owners of forest land in the form of technical assistance,  
28 forest-management plans, and education. In addition, FFSL’s foresters monitor forestry activities on  
29 private forests to encourage the use of best-management practices for water-quality concerns.

30  
31 Funding for forest management practices by NIPF landowners may be provided through various U.S.  
32 Department of Agriculture Natural Resource Conservation Service programs, such as the Environmental  
33 Quality Incentives Program (EQIP), Conservation Reserve Program (CRP), Conservation Stewardship  
34 Program (CSP), Healthy Forest Reserve Program (HFRP), and other relevant conservation technical and  
35 financial assistance programs authorized by the Farm Bill. In addition, several Federal and State grant  
36 programs provide project funding that might assist NIPF landowners, including the Landscape Scale  
37 Restoration Program (LSR), Wildland Urban Interface Program (WUI), and Watershed Restoration  
38 Initiative (WRI).

39  
40 In many cases, statutory, administrative, and physical constraints limit the ability to implement restoration  
41 treatments within the context of historical functions and conditions. There are legal authorities to provide  
42 legal justification for these types of activities. These mechanisms include the National Forest  
43 Management Act, ~~the~~ Multiple Use Sustained Yield Act, ~~the~~ Federal Land Policy and Management Act,  
44 ~~the~~ National Fire Plan, ~~the~~ Healthy Forests Restoration Act, ~~the~~ Organic Administration Act, and ~~the~~  
45 Clean Water Act.

46  
47 Managing forests encompasses a high degree of conflict ~~and management needs to~~. To address today’s  
48 forest-health and wildfire challenges, the individuals and groups who manage Utah’s forests must  
49 transition to the emerging ~~direction~~ forest-management approach of collaborative, cross-boundary,  
50 landscape-scale, ~~cross-boundary~~ forest-restoration policies and initiatives, ~~which are necessary to address~~

1 ~~today's forest health and wildfire challenges~~. The goals and strategies of the Forestry Strategic Plan (FSP)  
2 and the 2020 Forest Action Plan (FAP) [6 & 7] reflect this ~~direction~~emerging approach.

3 It is important to reach a balanced and agreeable approach to conservation and sustainably managed  
4 forests. The National Forest Management Act requires that the Forest Service coordinate their land-  
5 management planning with the related planning efforts of state, local and ~~T~~Tribal governments. The Forest  
6 Service publication *Understanding Your Opportunities for Participating in the Forest Service Planning*  
7 *Process* details how coordination helps ensure that landscape management has consistency across  
8 ecosystems and political boundaries so that mutual goals can be achieved where possible. The 2012  
9 Forest Planning Rule requires that the Forest Service review and consider state, local and ~~T~~Tribal land-  
10 use plans and policies during the forest-plan-development process and assess the interrelated impacts of these  
11 local plans when developing forest plans.

12  
13 **The Forest Health Program** provides information to federal and state land managers, as well as private  
14 forest landowners, on current and past insect and disease conditions in the state through annual detection  
15 and monitoring. It also provides training, education, and assistance related to forest-health issues,  
16 potential effects, and opportunities for prevention and mitigation.

17  
18 **The Forest Legacy Program** conserves and retains private forestlands of regional or national  
19 significance that are threatened with conversion to non-forest uses. The program uses conservation  
20 easements or fee acquisition to prevent forest fragmentation and conversion, maintain traditional land  
21 uses, and protect significant environmental values on private lands for future generations. Conservation  
22 easements are used to achieve this goal with priority given to lands which:

- 23
- 24 ● are threatened by future conversion to non-forest uses,
- 25 ● maintain forest sustainability,
- 26 ● protect and enhance water quality and water supplies,
- 27 ● protect wildlife habitat and maintain habitat connectivity for biodiversity,
- 28 ● maintain and restore riparian areas, and
- 29 ● assist in maintaining the cultural and economic vitality of rural communities.
- 30

31 **The Conservation Education Program** complements existing local, state, and federal natural resource  
32 education programs and encourages education partnerships by increasing awareness, knowledge, and  
33 appreciation of natural resources and ecosystems, connecting children to nature, and helping people to  
34 better understand natural resource issues.

35  
36 **The Urban and Community Forestry Program** provides financial and technical assistance to Utah  
37 communities to conduct inventories and manage trees and forests to maximize social, environmental, and  
38 economic benefits. The program provides competitive grants and engages volunteers in a wide range of  
39 projects, such as tree planting, education, and training; encourages communities to participate in Tree  
40 City USA, a national program of the Arbor Day Foundation; and works with many local agencies,  
41 nonprofit groups and private businesses.

42  
43 Urban ~~F~~Forestry means the planning, establishment, protection, and management of trees and associated  
44 plants, individually, in small groups, or under forest conditions within cities, their suburbs, and towns as  
45 defined by the Cooperative Forestry Act of 1978.

46  
47 Because this definition of ~~U~~Urban ~~F~~Forestry stretches beyond large metropolitan, “urban” areas, a more  
48 descriptive title is “Urban and Community Forestry-” (U&CF).  
49

1 Another term that is often used when talking about U&CF is “Arboriculture.” ~~Arboriculture~~ which is the  
2 science of tree planting and maintenance and is a major component of U&CF. Professional tree trimmers  
3 are labeled “arborists” ” and can become certified through the International Society of Arboriculture.  
4

## 5 **Arbor Day Grants**

6

7 The FFSL, Forest Service, and Utah Community Forestry Council provide annual Arbor Day celebration  
8 grant assistance. The range for this grant is \$200 to \$600 and provides funds for communities to meet one  
9 of the four criteria for Tree City USA, which is to proclaim and observe Arbor Day. Utah cities, towns,  
10 and communities interested in developing or improving a sustainable community forestry program and  
11 are not currently a Tree City USA may apply.

## 12 **Community Forestry Partnership Grants**

13

14 The FFSL, in partnership with the Forest Service, provides the opportunity for any Tree City USA  
15 community to apply for this grant. The range is \$1,000 to \$8,000, and the grant is intended to encourage  
16 the planting and maintenance of trees within communities and meet the following objectives:

- 17
- 18 ● Promote urban forestry planning and tree management plans.
- 19 ● Connect urban forestry benefits to diverse environmental issues.
- 20 ● Cultivate an appreciation and understanding for the social, economic, environmental and aesthetic  
21 values of trees, forests and related resources in cities and towns.
- 22 ● Develop and encourage the profession of urban forestry through technology transfer, education,  
23 and training.
- 24 ● Seek support from all levels of government and citizens for Urban and Community Forestry  
25 Programs.
- 26

27 A major priority of the State Urban and Community Forestry Program is to assist communities in moving  
28 from a “developing” stage of their urban forestry program to the “managing” stage. The Forest Service  
29 defines a “managing” forestry community as having all four of the following benchmarks (“developing”  
30 communities have at least one component):

- 31
- 32 ● Tree ordinance
- 33 ● Professional forestry/arboriculture staff
- 34 ● Tree board/commission
- 35 ● Tree-management plan based on inventory data
- 36

## 37 **Economic Considerations**

38

39 In 2016, Utah comprised approximately 3.7 million acres of non-reserved timberland, with national  
40 forests accounting for 75 percent, private and ~~tribal~~ Tribal owners accounting for 16 percent, and other public  
41 agencies accounting for the remaining 9 percent. All private timberland was at that time classified as  
42 NIPF timberland, and Utah had no large tracts of timberland owned by entities operating primary wood-  
43 processing facilities. Sawtimber volume on non-reserved timberlands in Utah was estimated at 4.2 billion  
44 cubic feet, or approximately 21 ~~b~~ million board-~~feet~~ MMBF, Scribner (MMBF), in 2016.

45  
46 Utah’s 2016 commercial timber harvest was 24.9 ~~million board feet (MMBF)~~ Scribner MMBF, 29 percent  
47 higher than the 2012 harvest of approximately 19.4 MMBF. Although harvest was higher in 2016, this  
48 volume is 18 percent less than the 2007 harvest of around 30 MMBF ~~Scribner~~, and more than 60 percent  
49 less than the 1992 harvest of 64 MMBF. Of the timber harvested in Utah during 2016, 48 percent was live  
50 and 52 percent was salvage or standing dead when harvested. While Utah’s harvest has increased overall  
51 since 2012, all of this increase has occurred on national forest land, which has increased by 96 percent.

1 Harvest levels from private and ~~tribal~~ Tribal timberlands, and other public lands, declined during this same  
2 period by 43 percent and 50 percent, respectively.

3  
4 As in most of the western states, decreasing federal timber harvests during the 1990s led to greater shares  
5 of annual timber harvest coming from other ownerships. National forests still provided the majority of  
6 Utah's harvest (80 percent) in 2016, but the volume and share supplied by private and ~~tribal~~ Tribal owners  
7 continues to be an important component. During 2016, private and ~~tribal~~ Tribal landowners accounted for 14  
8 percent (3.6 MMBF) of Utah's timber harvest. The share of harvest from BLM and state lands in Utah  
9 was 6 percent of the total in 2016.

10  
11 National forests provided the majority of sawlogs and house logs harvested in Utah, with 80 percent and  
12 82 percent, respectively, in 2016. National forests also provided the majority of other products (e.g.,  
13 furniture logs, post and poles, fiber logs) at over 76 percent. Sawlogs accounted for about 72 percent  
14 (17.9 MMBF) of the total volume harvested in 2016; house logs were 12 percent; and other products  
15 accounted for about 16 percent.

16  
17 In 2016, Summit County led Utah's timber harvest with 29 percent (7.3 MMBF) of total volume,  
18 followed by Kane and Sanpete counties, with 13 and 7.5 percent, respectively. In 2012, Summit County  
19 led Utah's timber harvest, with 33 percent (6.4 MMBF ~~Scribner~~) of total volume; Uintah followed with  
20 12 percent (2.3 MMBF); and Emery, Rich, and Sanpete counties followed, each providing 7.7 percent  
21 (1.5 MMBF).

22  
23 In 2016, there were 18 primary forest products manufacturers. This included eight sawmills, seven house-  
24 log and log-home manufacturers, and three other forest-products facilities. Only 58 percent of the wood  
25 was processed in-state. The remainder was processed in Colorado, Wyoming, and Idaho.

26  
27 The number of Utah sawmills has declined since 1966, but the average output per mill has risen from 1.4  
28 ~~million board feet~~ [MMBF] to 1.9 MMBF. In 1992, sawmills alone produced 63.6 MMBF of lumber and  
29 other sawn products. House log, log home, and other roundwood product manufacturers processed an  
30 additional 7.6 MMBF of Utah timber. In addition to these traditional wood products, Utah's timber  
31 industry utilizes 82 percent of the mill residue it produces during processing. Because Utah's sawmills are  
32 not near pulp mills or particle board plants, most of the residue is used locally for firewood, fencing  
33 materials, windbreaks, hogfuel, landscaping materials, and animal bedding. [8]

34  
35 Research is needed to find new markets for wood utilization. Biochar is showing some potential as a soil  
36 amendment. Essential oils have also become a small but somewhat viable market for juniper trees.  
37 Though the landowners are not paid for juniper removal, many want it removed for management  
38 purposes. This allows essential oil producers to make money and contribute to Utah's economy, while  
39 private landowners receive the benefit of healthier, wildfire-resistant properties at little ~~to~~ no cost.

40  
41 A consistent supply of project work, and the associated timber or woody biomass, is key to fostering a  
42 workforce of skilled and capable forest- and wood-workers. And this skilled workforce is the critical  
43 element. These forest- and wood-workers are the individuals and companies who have the knowledge,  
44 skills, abilities, and equipment to help private landowners as well as federal, state, and local agencies  
45 complete the necessary management work. Land-management agencies do not have the necessary  
46 capacity for forest health and wildfire risk reduction. The private sector—both people power and  
47 capital—is required to get the work accomplished.

48  
49 In addition to timber management, domestic livestock grazing is a vital management tool in Utah's forests  
50 to manage fuel loads, reduce wildfire risk, and provide economic benefits to local communities. Grazing  
51 in Utah's national forests has declined by roughly 50 percent since the early 1900s. Currently, there are an

1 estimated 614,000 active animal-unit months (AUMs) on Utah’s national forests, which contributes more  
2 than \$61.4 million to local economies. In addition to the economic benefits, domestic livestock grazing  
3 reduces the cost of vegetation management.

#### 4 **Goals, Objectives and Policies**

##### 6 **Goal(s) [9]:**

- 8 • Promote healthy and resilient trees and forests.
- 9 • Advance partnerships for cross-boundary, landscape-scale initiatives on federal, state and private  
10 lands.
- 11 • Integrate forestry programs with other FFSL and Utah Department of Natural Resources  
12 programs for increased effectiveness.
- 13 • Heighten the visibility of forestry programs and services for greater public awareness, knowledge,  
14 and involvement in active stewardship of trees and forests.
- 15 • Build a respected, responsive, capable, and enduring forestry organization [and industry] where  
16 people want to work.

##### 18 **Objectives:**

- 19
- 20 1. Assist private landowners with forested acreage.
- 21 2. Ensure a healthy forest that displays resilience to disturbance by maintaining a diverse set of  
22 structures, compositions, and functions across the landscape.
- 23 3. Encourage maximum sustainable logging and grazing to reduce wildfire risk, stimulate new  
24 growth, and to provide economic benefits and jobs to Utah’s rural counties.
- 25 4. Foster urban forestry through the planning, establishment, protection, and management of trees  
26 and associated plants, individually, in small groups, or under forest conditions within cities, their  
27 suburbs, and towns.
- 28 5. Assist the forest product industry to achieve viable and sustainable operations.
- 29 6. Utilize the Utah ~~Forestry Action Plan (FAP)~~ as a guidance document.
- 30 7. Support and enhance the goals of the ~~Forestry Action Plan (FAP)~~:
  - 31 ○ Restore healthy and resilient trees and forests across Utah.
  - 32 ○ Reduce wildfire risk to communities, water resources, and other natural resource values.
  - 33 ○ Increase collaborative landscape-scale forest-restoration activities across the state.
  - 34 ○ Build capacity among partners, stakeholders and communities to engage in forest-  
35 restoration activities across Utah.
- 36 8. Mature and old-growth forests should be managed for tree characteristics in lieu of designating  
37 specific areas or boundaries for mature and old-growth forests.
  - 38 ○ Mature and old-growth forest characteristics should be considered when actively  
39 managing forest ecosystems, but should not impede the ability to actively manage and  
40 restore forest ecosystems. Ecosystem resiliency is in part dependent on having a range of  
41 various tree-age classifications within a forested ecosystem.
- 42 9. Oppose designations, policies, or other actions that limit, restrict, or impede the State of Utah’s  
43 ability to actively manage forest resources in Utah.
- 44 10. Support the Western Governor Associations Forestry Resolutions, ~~that was~~which were  
45 coordinated by the governors of multiple western states and local subject matter experts.
  - 46 ○ Encourage federal land-management agencies to adopt the Western Governor  
47 Associations recommendations.
- 48
- 49
- 50
- 51

1 **Policies:**

- 2
- 3 • Support the sustainable removal of conifers to promote the establishment of aspen and attendant
- 4 grass, forbs, and shrubs where appropriate.
- 5 • Encourage timber harvesting to prevent fuel load and biomass buildup.
- 6 • The State of Utah encourages state and federal agencies to adopt policies that promote and
- 7 facilitate early detection and control of insect and disease outbreaks using biological, cultural, and
- 8 chemical methods.
- 9 • Encourage prompt removal and salvage of drought-, fire-, and beetle-insect-killed timber and
- 10 reseed or replant as appropriate to maintain healthy forests and watersheds.
- 11 • Support the use of all appropriate silvicultural methods to reduce the risk of damage due to
- 12 insects, disease, and fire.
- 13 • Use trees of the best genetic quality when replanting a site.
- 14 • Monitor and control invasive species, particularly in riparian corridors.
- 15 • Encourage agencies to adopt and maintain scientifically sound forest management policies based
- 16 on current, high-quality data to pursue multiple-use of public forest resources to provide
- 17 sustainable yield of timber, forage, firewood, wildlife, fisheries, recreation, and water.
- 18 • Identify and target private forest landowners located in important forest resource areas for
- 19 assistance with planning.
- 20 • Develop Forest Stewardship Plans (FSPs) in accordance to FFSL standards for private forest
- 21 landowners who demonstrate their commitment to proactive management.
- 22 • Encourage and promote cooperation by other land-management agencies (state, private, and
- 23 federal,) employing ecosystem management, forest health, and stewardship principles.
- 24 • Develop partnerships and cooperative relationships with organizations that share goals of forest
- 25 management.
- 26 • Develop and present workshops for private landowners.
- 27 • Design and implement demonstration areas.
- 28 • Promote job-related training and educational opportunities.
- 29 • Educate loggers and other contractors on the Forest Water Quality Guidelines.
- 30 • Support the management of timberlands suitable for commercial harvest for timber or wood-fiber
- 31 production.
- 32 • Support the management of forestlands not suitable for commercial harvest to maintain forest-
- 33 cover species with emphasis on production of other forest resources and uses.
- 34 • Support the management of non-commercial aspen stands in mixed-age groups to provide forage.
- 35 • Support the use of commercial sales of timber and forest products and thinning to control
- 36 stocking where opportunities exist.
- 37 • Support harvest of forest products when the activity would improve water production and/or does
- 38 not adversely affect water quality.
- 39 • Where feasible, encourage the harvest of forest products in areas of proposed or existing
- 40 vegetation treatments to offset costs of treatments and reduce the need for additional site entries.
- 41 • Support planting new trees to provide desired cover where natural regeneration is insufficient.
- 42 • Support the use of mechanical removal, chemical removal, or fire to alter or perpetuate forests
- 43 and increase herbaceous yield where timber harvest is impractical or demand does not exist.
- 44 • Understand current and emerging enabling technologies for wood processing.
- 45 • Develop an inventory of possible large, medium, and small business possibilities that could
- 46 utilize small-diameter wood.
- 47 • Conduct an initial industry viability assessment based on analyzing a variety of business
- 48 configuration scenarios.
- 49 • Provide an initial assessment report and presentation.
- 50 • Support federal partnerships with industry to create scalable projects to provide certainty in the
- 51 supply of timber.



- 1 • Support the re-establishment of a viable wood-fiber industry.
- 2 • Support the use of the timber industry to sequester carbon through the harvest of wood products.
- 3 • Oppose federal designations for mature and old-growth forest based on specific boundaries
- 4 rather than forest characteristics.
- 5 • The State of Utah generally opposes any designation, policy, or other action that limits, restricts,
- 6 or impedes the State's ability to conduct forest management statewide.
- 7 • There are established and designated Utah Timber Agricultural Commodity Zones for the purpose
- 8 of:
- 9 (a) preserving and protecting the agricultural timber, logging, and forest-products industry
- 10 within these zones from ongoing threats;
- 11 (b) preserving and protecting the significant history, culture, customs, and economic value of
- 12 the agricultural timber, logging, and forest-products industry within these zones from
- 13 ongoing threats; and
- 14 (c) maximizing efficient and responsible restoration, reclamation, preservation,
- 15 enhancement, and development of timber, logging, and forest products and affected natural,
- 16 historical, and cultural activities within these zones, in order to protect and preserve these
- 17 zones from ongoing threats.

18  
19 **State Code**

20  
21 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
22 *following are selected portions of the Utah State Code and do not represent every potential legal*  
23 *reference in the Code related to this section of the State Resource Management Plan or the*  
24 *administration of public lands.*

25  
26 **Public Lands Planning**

27  
28 § 63L-11-302. Principles to be recognized and promoted.

29  
30 § 63L-11-303. Findings to be recognized and promoted.

31  
32 **State Land Use and Management Planning for Federal Lands**

33  
34 § 63L-8-104. State land-use planning and management program.

35  
36 **Forestry, Fire, and State Lands**

37  
38 § 65A-8-105. Urban and Community Forestry Program.

39  
40 § 65A-8-301. Legislative finding and purpose.

41  
42 **Utah Forest Practice Act**

43  
44 **Uniform Agriculture Cooperative Association Act**

45  
46 **Plant Pest Emergency Control Act**

47  
48 **References:**

- 49  
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- 5 5. <https://ffsl.utah.gov/forestry/about-forestry/forest-action-plan/>
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- 8 8. <https://ffsl.utah.gov/forestry/about-forestry/forest-action-plan/>
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# GEOLOGICAL AND PALEONTOLOGICAL

## Introduction

Utah is widely recognized for the diversity of its geological and paleontological resources. Straddling three physiographic provinces— (1) Basin and Range Province, (2) Middle Rocky Mountains, and (3) Colorado Plateau—Utah’s geology and topographic variety are foundational to the state’s economic prosperity and quality of life, providing opportunities for mineral and energy resource development as well as recreation and tourism.

Mineral and energy in Utah includes such diverse resources as the metallic mineral concentrations that led to creation of one of the world’s largest open-pit mines; oil and natural gas accumulations that represent a significant contribution to the nation’s fossil-fuel supply; critical minerals and rare-earth elements that contribute to national security and economic prosperity; geothermal resources that contribute to a diverse renewable-energy portfolio; and a variety of salts and other industrial minerals and substances from Great Salt Lake (see Mineral and Mining and Energy Resources). Utah’s geology contains world-class fossil localities, including dinosaur fossils and world-class scenic and recreational resources. These resources attract many visitors to Utah’s five national parks and its dozens of national monuments, national recreation areas, and state parks. Utah has the most complete record of the history of life on Earth for an area its size.

Along with the benefits that Utah’s geologic resources bring, ongoing geologic processes also present challenges for, and hazards to, Utah’s citizens and economic concerns. For example, hazardous faults can generate large earthquakes, with potentially devastating effects; slopes underlain by weak rock or soil are prone to land sliding; clayey bedrock and soils are locally prone to expansion or collapse; and uranium-bearing rocks and soil produce potentially deadly radon gas. Also, Utah’s status as the second-driest state in the nation brings a related set of challenges and hazards for development and quality of life: water-supply resources are limited, and water quality is vulnerable to degradation from development activity; subsidence and earth fissuring occur locally over aquifers depleted by consumptive use; and the precipitation that does fall often triggers flooding and debris flows, typically as the result of rapid spring snowmelt and intense ~~cloudburst~~ storms. Proactive mitigation of geologic hazards is key to sustaining the health, safety, and welfare of Utah’s citizens and visitors.

## Findings

Many of Utah’s most interesting geological sites coincide with popular recreation destinations, particularly its national parks, national monuments, national recreation areas, and state parks. In addition to these high-profile locales, there are numerous other notable sites throughout the state, and the Utah Geological Survey (UGS) features these on its interactive [GeoSights map](#)[Geographic Maps Portal](#).

Utah is famous for its dinosaur fossils. The Mesozoic Era is known as the “Age of Dinosaurs,” and Utah has perhaps the best Mesozoic rock record in the world. Well-known dinosaur localities in Utah include Dinosaur National Monument in northeastern Utah, Cleveland-Lloyd Dinosaur Quarry at the Jurassic National Monument in the northern San Rafael Swell, St. George Dinosaur Discovery Site at Johnson Farm, and Utahraptor State Park. Utah is also famous for its trilobite and other Cambrian fossils dating back to the origins of multicellular life. Trilobites are a class of extinct marine invertebrate popular with collectors; Utah’s Cambrian includes four levels preserving soft-bodied fossils, which in other countries (China and Canada) are surrounded by national reserves. The rest of Utah’s marine Paleozoic record is just as extraordinary, as is its marine Mesozoic record. The Uinta Basin preserves a spectacular record of the first half of the Age of Mammals, with critical records documenting the origins of nearly all the modern orders of mammals as exhibited at the Utah Field House of Natural History in Vernal, Utah.

1 Utah’s fossil record of nearly every vertebrate group is extraordinary (although lacking in any fossil  
2 whales). Utah specimens can be seen in museums throughout the world.

3  
4 Utah’s extraordinary paleontological record includes the following:

- 5
- 6 ● Invertebrate localities, which are fossil remnants of multi-celled lifeforms without vertebral  
7 columns, backbones, vertebrae, or full-length notochord.
- 8 ● Vertebrate localities, which include fossil remnants of lifeforms with some form of vertebrae.  
9 This may include mammals, dinosaurs, fish, birds, and reptiles.
- 10 ● Floral leaf and wood localities, which are remnants of plants (e.g., Escalante Petrified Forest State  
11 Park).
- 12 ● Trace fossils, which may include skin impressions, eggs, track sites, and remnants of burrows or  
13 borings.

### 14 15 **Additional Findings**

16  
17 Utah Code §17-27a-401-2-e (County) and 10-9a-401-2-e (Municipal) require general plans to “promote  
18 health, safety, and welfare” through the protection of urban development. Utah statutes allow local  
19 jurisdictions to address geologic hazards through zoning districts and ordinances to regulate land used in  
20 floodplains and potential geologic hazard areas (Utah Code §17-27a-505-1-c [County] and 10-9a-505-1-c  
21 [Municipal]). Utah Code §17-27a-703 (County) and 10-9a-703 (Municipal) defines a process for private  
22 property owners within counties and municipalities to appeal land-use decisions restricting development  
23 in areas defined as geologic hazards.

24  
25 Utah Code §79–3–202 defines the powers and duties of the ~~Utah Geological Survey~~ [UGS](#) with regard to  
26 the investigation and research of geological and paleontological resources and geologic hazards, as well  
27 as collection, preservation, and distribution of data.

28  
29 Additional information on Utah’s geologic hazards, as well as guidelines for conducting geologic-hazard  
30 investigations, can be found in *UGS Circular 122, Guidelines for Investigating Geologic Hazards and*  
31 *Preparing Engineering-geology Reports, with a Suggested Approach to Geologic-hazard Ordinances in*  
32 *Utah.* [1]

33  
34 There are no state requirements for paleontological resources on private lands. Should the Utah ~~S~~state  
35 ~~P~~paleontologist identify a particular area as sensitive for such resources on state lands or federal lands, it  
36 will likely be necessary to hire a professional paleontologist to assist in the project. The State of Utah  
37 maintains a list of paleontologists with permits for state lands in Utah, and the ~~U.S.~~ Bureau of Land  
38 Management (BLM) maintains a list of paleontologists with permits for BLM lands.

39  
40 There are federal and state laws and regulations protecting significant paleontological resources,  
41 including the Antiquities Act (16 USC §432, 433 et seq. [1906]) and National Environmental Protection  
42 Act (NEPA) (42 USC §4321-4327 [1969]). However, the most recent and most important law protecting  
43 paleontological resources on federal lands (except Indian Reservations) is the Omnibus Public Land  
44 Management Act, Subtitle D–Paleontological Resources Preservation (P.L. 111-011; 123 Stat. 1172; 16  
45 USC 470aaa). In addition, the BLM has developed regulations for the protection of paleontological  
46 resources on lands administered by their field offices.

47  
48 Utah Code §79–3–501 through 510 addresses permits required to excavate critical paleontological  
49 resources on lands administered by the state, ownership of collections and resources, designation of  
50 paleontological landmarks, requirement for report of discovery on state or private lands, establishment of

1 a state paleontological register, and protection of School and Institutional Trust Lands Administration  
2 interests relating to paleontological resources.

3  
4 Where possible, the State of Utah will promote the curation and display of paleontological materials near  
5 their point of collection. Only a handful of federal paleontological repositories exist in Utah, and most are  
6 far from rural communities and the areas of collection. Federally approved repositories from throughout  
7 the United States may curate paleontological materials in their own collections from federal lands in Utah.  
8 It is understood that paleontological collections and materials from federal lands, and their curation, are  
9 subject to the Paleontological Resources Preservation Act of 2009, whereas the regulations were created  
10 to “establish definitions, standards, procedures and guidelines to be followed by Federal agencies to  
11 preserve collections of prehistoric and historic material remains.” While the regulations require that a  
12 facility meet high standards for long-term curatorial storage as defined by the U.S. Department of the  
13 Interior (DOI), museum collection is available for “scientific and educational uses.” Local communities,  
14 museums, and others may request a loan of federal paleontological materials from the approved curation  
15 facility housing the specimens. Federally accredited institutions in Utah for the repository of  
16 paleontological materials include the Natural History Museum of Utah (NHMU) (Salt Lake City),  
17 Prehistoric Museum at Utah State University Eastern (Price), BYU Paleontological Museum (Provo), and  
18 Vernal Field House of Natural History State Park and Museum (Vernal). Additionally, the St. George  
19 Dinosaur Discovery Site at Johnson Farm and the Museum of Moab may curate limited paleontological  
20 materials, but are still seeking full federal repository status.

21  
22 Paleontological collections from state and private lands have more flexibility in their availability for  
23 display, and the state should promote loan and display of these types of collections for the benefit of local  
24 communities. Utah Code §53B-17-601 designates the NHMU as the state-mandated museum, and  
25 indicates the NHMU shall “make available to people throughout the state, through traveling exhibits and  
26 outreach programs, archeological and paleontological objects retrieved from the state of Utah” and “shall  
27 provide professional expertise and assistance in the proper care of the archeological and paleontological  
28 collections from state lands as they are housed throughout the state.” The NHMU must approve  
29 repositories of paleontological collections on an annual basis for other institutions within Utah and for  
30 curation out of state.

### 31 32 **Summary of Potential Fossil Yield Classification (PFYC) System**

33  
34 The Potential Fossil Yield Classification (PFYC) system [2] is meant to provide baseline guidance for  
35 predicting, assessing, and mitigating paleontological resources. The classification should be considered at  
36 an intermediate point in a paleontological resource assessment, and should be used to assist in  
37 determining the need for further mitigation assessment or actions.

38  
39 Occurrences of paleontological resources are closely tied to the geologic units (i.e., formations, members,  
40 or beds) that contain them. The probability for finding paleontological resources can be broadly predicted  
41 from the geologic units present at or near the surface. Therefore, geologic mapping can be used for  
42 assessing the potential for the occurrence of paleontological resources.

43  
44 Using the PFYC system, geologic units are classified based on the relative abundance of vertebrate fossils  
45 or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a  
46 higher-class number indicating a higher potential. This classification is applied to the geologic formation,  
47 member, or other distinguishable unit, preferably at the most detailed mappable level. It is not intended to  
48 be applied to specific paleontological localities or small areas within units. Although significant localities  
49 may occasionally occur within a geologic unit, a few widely scattered important fossils or localities do  
50 not necessarily indicate a higher class; instead, the relative abundance of significant localities is intended  
51 to be the major determinant for the class assignment.

1 The descriptions for the various classes can be found at this [link](#) and are intended as guidelines rather than  
2 as strict definitions. Knowledge of the geology and the paleontological potential for individual units or  
3 preservational conditions should be considered when determining the appropriate class assignment.  
4 Assignments are best made by collaboration between land managers and knowledgeable researchers.

5  
6 Statewide geology and geologic resource maps have been compiled by the UGS. The maps are available  
7 through the UGS website (<https://geology.utah.gov>).

## 8 9 **Economic Considerations**

10  
11 Cultural, historical, geological, and paleontological resources are often connected with tourism and  
12 recreation. For example, the UGS has created a GeoSites online interactive map to help people explore  
13 Utah’s geological sites.

14  
15 Please refer to the *2022 Economic Report to the Governor* for economic considerations related to mineral  
16 and energy resources. This report is updated annually and the most recent version should be used when  
17 reviewing related economic considerations. [3]

18  
19 Additional data can be found in *UGS Circular 121, Utah’s Energy Landscape*.  
20 (<https://ugspub.nr.utah.gov/publications/circular/c-121.pdf>).

## 21 22 **Goals, Objectives, and Policies**

23  
24 State of Utah objectives related to geological and paleontological resources are encapsulated in Utah State  
25 Code, under “Powers and duties of [the Utah Geological] survey” (§ 79–3–202). In summary, the state’s  
26 objectives are to investigate, research, and analyze geological and paleontological resources “in order to  
27 facilitate their economic use,” to “contribute to the most effective and beneficial administration” of lands  
28 administered by the state, and “to serve the needs of the state and to support the development of natural  
29 resources and utilization of lands within the state.” Additionally, Utah State Code tasks the UGS with  
30 determining and investigating “areas of geologic and topographic hazards that could affect the safety of,  
31 or cause economic loss to, the citizens of the state.”

32  
33 The state shall ensure all of Utah’s communities have access to these resources and collections, and will:

- 34
- 35 ● support efforts of local communities to create displays and museums that meet federal standards
  - 36 for the display, and possible curation, of paleontological materials as close to their point of origin
  - 37 as possible;
  - 38 ● promote local efforts for traveling exhibits and display of state-owned paleontological materials
  - 39 for educational and local economic opportunities; and
  - 40 ● collaborate with local federal offices to engage local communities and tourists in awareness and
  - 41 appreciation of Utah’s rich paleontological legacy.
- 42

## 43 **State Code**

44  
45 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
46 *following are selected portions of the Utah State Code and do not represent every potential legal*  
47 *reference in the Code related to this section of the State Resource Management Plan or the*  
48 *administration of public lands.*

## 49 50 **State of Utah Resource Management Plan for Federal Lands**

1            § 63L-8-104. *State land-use planning and management program.*  
2

3 **Paleontology**  
4

5            § 79-3-501. *Permit Required to Excavate Critical Paleontological Resources on State*  
6 *Lands—Removal of Specimen or Site.*  
7

8            § 79-3-502. *Permit Required to Excavate Critical Paleontological Resources on*  
9 *School and Institutional Trust Lands—Removal of Specimen or Site.*  
10

11           § 79-3-503. *Ownership of Collections and Resources.*  
12

13           § 79-3-505. *Paleontological landmarks.*  
14

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16

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21

# IRRIGATION

## Introduction

Irrigation is the practice of applying supplemental water to land (beyond that which is received by the land from naturally occurring precipitation) for the purpose of increasing the agricultural output of cropland and sustaining additional vegetation growth throughout the landscape.

Much of Utah’s agriculture would not be possible without irrigation. Utah’s arid climate provides limited and frequently unreliable annual rainfalls. Traditionally, irrigation water has been distributed via a network of canals and ditches from rivers and streams, but many have been converted to pipelines. Additionally, because of the extensive conversion of agricultural lands into more-urban uses, some irrigation water is now distributed through secondary irrigation supply lines that parallel the municipal culinary water supply, which allows water users to irrigate using water previously allotted to farmland [1]. The owner of a ditch, canal, flume, or other watercourse is required to maintain the watercourse in order to prevent damage to the property of others and maintain an open route of travel [2].

Within each watershed, various entities and individuals have legal claims (i.e., water rights) to use the water for “beneficial use” and are permitted to divert water from streams into the storage dams, canals, and pipelines. Beneficial use is “the basis, the measure, and the limit of all rights to the use of water” in the state of Utah [3]. Activities that promote the economy are generally considered to be beneficial uses. The use of water for beneficial purposes has been declared to be a public use [4]. The distribution of water in Utah is governed by state law and is based largely on geographic proximity, available supply, and ownership of the water rights [5].

## Findings

According to the Utah Division of Water Resources, approximately 75 percent of water diverted from natural sources in Utah goes to agriculture. Nearly all of this water is used for agricultural irrigation. By some estimates, more than 70 percent of Utah’s diverted water is carried in canals, which are managed and maintained by nonprofit, shareholder-owned irrigation companies. There are more than 1,000 of these irrigation companies, most of which are more than 100 years old and administered by volunteer directors. [6]

There are more than 5,000 miles of canals in Utah that carry more than 5 cubic feet per second of water, and perhaps twice that many smaller canals. This figure does not include the thousands of miles of drainage ditches that make land farmable and carry return flows back to streams. These thousands of miles of canals transport the surface water used to irrigate a majority of the ~~1.1 million~~ [853,471](#) acres of irrigated agricultural land in Utah; the balance is irrigated with groundwater. Approximately 97 percent of irrigated lands are harvested croplands. [7]

Though they were built to carry irrigation water to farms, canal systems in urban settings also serve municipal and industrial interests. They supply water for industrial processes; deliver irrigation water to suburban lawns through so-called “secondary water systems;” move stormwater away from threatened homes, businesses, and institutions; and support wetlands and other riparian environments that would otherwise be lost. [8]

Significant water resources have historically been devoted to agricultural production. However, in the face of competing demands for water from Utah’s current urbanization trends and land-use transitions, the multiple social values supported by water allocated to agriculture are too often overlooked. These values include security of local food production, sustaining rural Utah economies and communities, open space



1 in increasingly urbanized areas, improved capacity for both drought management and flood control, and  
2 other ecosystem services, such as providing wildlife habitat and buffering wetlands and other critical  
3 lands from impacts of urban development.  
4

5 Increasing the efficiency of this key resource has been a top priority of local, state, and federal efforts.  
6 Through programs funded by the United States Department of Agriculture (USDA), such as the  
7 Environmental Quality Incentives Program (EQIP) managed by the Natural Resource Conservation  
8 Service (NRCS), along with the Agricultural Resource Development Loan (ARDL) program from the  
9 Utah Department of Agriculture and Food (UDAF), many improvements have been made to farm  
10 irrigation systems. Such improvements have included enclosing ditches and conveyances to reduce water  
11 loss to seepage, replacing less-efficient systems with higher-efficiency sprinklers, pivot systems, precision  
12 laser leveling of flood-irrigated fields, and converting orchards to ultra-efficient micro-irrigation/drip  
13 systems. These improvements will continue to be a priority for years to come, but must be undertaken  
14 with care due to the effects such changes may have on river-basin hydrology, downstream water users,  
15 and local ecosystems.  
16

17 A more-glaring yet largely unaddressed issue is the aging of irrigation delivery systems. Canals and  
18 ditches continue to age and fall into disrepair. This is largely due to the overwhelming cost of piping  
19 and other improvements, and the lack of grant resources available to address these issues. The required  
20 technology is readily available. The reality is that there are two things that must happen. First,  
21 meaningful grant resources must be made available; and, second, there must be a conceptual shift in  
22 the minds of irrigation companies and their shareholders. While it is understood that agriculture  
23 generally has a small profit margin, the public has reaffirmed through the Envision Utah effort that  
24 maintaining the agriculture industry is of high value. This, along with other considerations, validates  
25 the use of public funds to address the aging infrastructure so vital to agricultural profitability. At the  
26 same time, water shareholders and users must change their mentality as to the cost of their water  
27 shares. They must be willing to accept an increased water assessment, with foresight equal to irrigation  
28 forbearers, and take advantage of low- and no-interest loan programs that are available. Some  
29 companies have been able to do this, but the majority continue to merely “make it through one more  
30 year.”  
31

32 Furthermore, in 2022, a special topic on “productive agriculture” was published as part of Utah’s  
33 Coordinated Action Plan for Water [9]. Previous water planning efforts have identified more than 200  
34 unique recommendations to better secure Utah’s water future. The implementation of many of these  
35 recommendations will require changes to state water law, other legislative actions, or partnerships with  
36 non-state entities. The intent of Utah’s Coordinated Action Plan for Water is to identify specific  
37 actions that Utah’s executive branch can undertake immediately to help move some of these many  
38 recommendations forward.  
39

## 40 **Economic Considerations**

41  
42 In 2017, there were 1.06 million acres of harvested cropland in Utah—of which more than 80 percent  
43 was irrigated—with a value of \$574 million. [10]  
44

45 Irrigation adds tremendous value to agriculture. In 2012, irrigated farms accounted for roughly half of  
46 the total value of crop sales on 28 percent of U.S. harvested cropland [11], a number that is likely  
47 significantly higher in Utah due to extremely low precipitation rates found across most of the state.  
48

49 In 2008, small farms (annual sales under \$250,000) made up 62 percent of the total irrigated farmland  
50 in Utah [12].  
51

1 A 2016 report published by Utah State University details the significant contributions of agriculture to  
2 the state economy. The combined agricultural processing and production sectors account for 15  
3 percent of the state’s total economic output, or \$21.2 billion, after adjusting for multiplier effects. [13]  
4

5 There are more than 250,000 acres of irrigated pasture in Utah, most of which are grazed by livestock  
6 [14]. From 1970 to 2015, direct cash receipts from livestock and products increased from \$1.28 billion  
7 to \$1.57 billion, a 17.5 percent increase [15]. Cash receipts from livestock and products constituted 73  
8 percent of all farm business cash receipts, making livestock the driver behind most of Utah’s  
9 agricultural economic growth [16]. These direct cash receipts do not reflect the full amount of  
10 economic growth provided by livestock and its products due to the multiplier effect that cash receipts  
11 have once they are spent within the community.  
12

13 Irrigation infrastructure also provides tremendous economic benefits to municipalities and industry by  
14 providing pre-existing, low-cost options for water delivery and stormwater removal. While no study  
15 has been conducted to quantify the value of these services, it would be tremendously expensive if each  
16 municipality or industry currently served by Utah’s existing network of canals and ditches had to  
17 devise their own, independent water delivery and removal.  
18

## 19 **Goals, Objectives, and Policies**

### 20 **Goal(s):**

- 21 ● Ensure the safe and reliable conveyance of water resources to promote sustainable agriculture  
22 and other irrigation related activities.  
23  
24  
25

### 26 **Objectives:**

27 Help water rights holders maintain beneficial use and avoid forfeiture of water rights.  
28  
29

30 Create opportunities and incentives for irrigators to make efficiency improvements that protect both the  
31 environment and water rights on the river-basin level.  
32

- 33 ● Ensure the proper and active management of public land watersheds, which supply most of  
34 Utah’s agricultural, municipal, and industrial water.
- 35 ● Preserve the integrity and functionality of Utah’s existing canals and ditches, which water  
36 much of Utah’s irrigated land.
- 37 ● Preserve the integrity and functionality of irrigation companies, which manage and maintain  
38 the vast majority of Utah’s canals and ditches.  
39 Ensure adequate funding for canal infrastructure maintenance and replacement.
- 40 ● Provide public safety by limiting access to dangerous structures, as well as training and  
41 encouraging operators and the public to practice safety and identify safety concerns.
- 42 ● Preserve access and system efficiency with regular maintenance of rights-of-way and  
43 easements. When possible, coordinate efforts between canal operators and government entities  
44 as a means of encouraging cooperative relationships between organizations while facilitating  
45 public interests.  
46

47 Establish long-term plans for:

- 48 ● Preservation of high-value farmland that still allows the orderly, planned transition of other  
49 agricultural land and water resources to municipal use.
- 50 ● Preservation of historical significance and public access where desirable.  
51

- Modernization of shared operations and equipment that facilitate the use of appropriate irrigation technologies.

Encourage agricultural irrigators to:

- Where appropriate, modernize and provide resources to assist with upgrades such as pressurized pipe systems that reduce traditional flood irrigation and favor transitioning to sprinkler and drip irrigation.
- Explore and develop alternative irrigation water management strategies, such as deficit irrigation, split-season leases, water banking, and other practices that can augment municipal supplies or provide environmental benefits such as improved water quality and instream flows for fish habitat.
- Coordinate irrigation scheduling between water users—cooperate with crop irrigators’ operational needs when systems are shared with secondary irrigation users.
- Encourage residential and commercial landscape irrigation efficiency and water-quality protection practices that emphasize native-plant choices, xeriscaping techniques, reduction of impermeable surfaces, reduction in chemical use, proper stormwater handling, etc.
- Utilize stormwater treatment methods that prevent stormwater runoff from entering canals and ditches.

**Policies:**

Support the findings, tasks, and recommendations of Utah’s Coordinated Action Plan for Water.

Support the Recommended State Water Strategy’s recommendation to create basin-level councils to create benefits for farmers who help optimize regional water supplies, conserve in-stream flows, or enhance water quality.

- Management and resource-use decisions by federal land-management and regulatory agencies concerning Utah’s vegetative resources should reflect serious consideration of the proper optimization of the yield of water within the state’s watersheds.
- Encourage indemnity agreements for irrigation companies where their canals are relied upon for flood or stormwater management. Cities and counties must work closely with irrigation companies to ensure canals used for such purposes are properly maintained and have adequate capacity.
- Support cities and counties in preventing the externalization of land-development costs to irrigation companies while still achieving the benefits of land development.
- Ensure the full funding of revolving loan funds managed by the Utah Division of Water Resources and maintain irrigation companies’ access to these funds for canal and ditch infrastructure improvement and replacement.
- Encourage federal agencies to implement proper watershed management to minimize the impacts on diversions, headboxes, canals, and ditches due to heavy flooding and debris flow as a result of catastrophic wildfire.
- Encourage federal agencies to implement proper watershed management to provide adequate water quantity and quality to meet present and future needs.
- Oppose special designations on federal land that would restrict the tools available and increase costs to maintain or improve irrigation infrastructure.

1 **State Code**  
2

3 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
4 *following are selected portions of the Utah State Code and do not represent every potential legal*  
5 *reference in the Code related to this section of the State Resource Management Plan or the*  
6 *administration of public lands.*  
7

8 **Title 73: Water and Irrigation**  
9

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11

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## LAND ACCESS

### Introduction

Approximately 71.64 percent of Utah consists of public lands managed by federal or state agencies. These lands and their resources cannot be separated from the cultural fabric, quality of life, historic uses, and economic wellbeing of the State of Utah. The many vital industries in Utah, including but not limited to recreation and tourism, oil and gas, renewable energy, agriculture, mining, and timber, require access to public lands. Roads, trails, and other types of access are also used by law enforcement and emergency medical services in the protection of residents and visitors.

Roads created prior to October 21, 1976, that cross non-reserved federal lands are known as Revised Statute 2477 (R.S. 2477) roads. The rights-of-way for these roads were granted in accordance with the Mining Act of 1866. [The state has the burden of proof to show the historic and continued use of all 12,326 right-of-ways across BLM lands.](#) Roads are a vital part of Utah’s infrastructure. They provide access to public lands for towns, mines [and energy development](#), ranches, natural resources, grazing allotments, water systems, lands held in trust for the benefit of Utah’s schoolchildren, hunting, fishing, camping ~~and~~ picnicking, and sightseeing. Roads provide access for administrative uses such as school buses, emergency vehicles, mail delivery, search and rescue, and land management. Land access contributes to the preservation of Utah’s culture and heritage. R.S. 2477 rights-of-way and other access opportunities may include, but are not limited to, horse trails, cattle trails, maintenance routes (e.g., for waterways and pipelines), wagon roads, jeep trails, logging roads, homestead roads, mine-to-market roads, and all other rights-of-way established and held consistent with the law.

[The term “access” includes motorized and non-motorized public access via the full range of vehicle technologies.](#)

### Findings

The State of Utah has undertaken efforts during the past several years to identify and plot the location of all Class B and Class D roads crossing U.S. Bureau of Land Management (BLM) land that are legitimately part of the state’s transportation system.

There are 12,326 roads covering over 35,700 miles in Utah that have been identified, reviewed, documented, and inventoried for inclusion in the state road system with R.S. 2477 right-of-way status. Many additional and important roads exist in the state road system that may or may not qualify for R.S. 2477 (pending further review and evaluation).

The Public Lands Policy Coordinating Office has prepared an [interactive map](#) [2] (known as “Access Map 360”) to highlight the current transportation system, in areas within the stewardship of the BLM, setting forth all roads claimed by the state and counties as part of their transportation systems. The map includes but is not limited to all roads claimed by the State of Utah and counties pursuant to R.S. 2477. It is expected that the BLM will conform to the transportation provisions of resource management plans to be consistent with this map, as required by The Federal Land Policy and Management Act of 1976 (FLPMA) Section 1712(c)(9).

Thousands of miles of roads and other access opportunities also exist on land managed by the U.S. Forest Service (Forest Service). These roads provide critical access for recreation, hunting, fishing, livestock ranching, timber harvesting, and other activities. Many roads within national forests have not been identified or documented as qualifying for R.S. 2477 right-of-way status because of the early establishment of Utah’s ~~N~~ational ~~F~~orests and the resulting federal withdrawal of R.S. 2477 claims.

1 Nevertheless, roads within national forests continue to provide much-needed access to public lands and  
2 private lands within the boundaries of Utah's national forests, and the State of Utah will work to ensure  
3 access for current and future generations.  
4

5 The state recognizes that roads within R.S. 2477 rights-of-way, regardless of ownership, are historical  
6 features that must be recorded as archaeological sites and evaluated for National Register of Historic  
7 Places eligibility pursuant to the Section 106 process (36 C.F.R. §800 Part B).  
8

### 9 Bellwether

10  
11 The court created a “Bellwether” process (Kane Cnty (2) v. U.S., 2:10-cv-1073- CW (D. Utah)) (the  
12 “Bellwether Case”), in which the court approved fifteen (15) Class B and Class D roads in Kane County  
13 as representative of the remaining legal issues to be resolved to determine Utah’s claimed R.S. 2477  
14 rights-of-way. The selected R.S. 2477 rights-of-way were taken to trial in the U.S. District Court for the  
15 District of Utah in a three-week bench trial before Judge Waddoups in February 2020. (Two roads that  
16 have critical maintenance and repair issues were added post-trial for a total of seventeen (17) roads in the  
17 Bellwether process).  
18

19 As a result of the pandemic and other judicial rescheduling, motions to dismiss filed by the federal  
20 government on jurisdictional grounds were finally argued on July 27, 2023. The federal government  
21 claimed that the Court lacks jurisdiction to hear the Bellwether Case because there is no case or  
22 controversy (the federal government has not disputed title on specific R.S. 2477 Roads), or alternatively  
23 that either the state statute of limitations of 7 years or the federal Quiet Title Act (QTA) statute of  
24 limitations of 12 years bars the State/County claims.

25 On August 9, 2024, Judge Waddoups issued a Memorandum Decision and Order re: Motions to Dismiss  
26 and Definition of a “Holder” (the “Memorandum Holder”) regarding the federal Motions to Dismiss and  
27 ruled:  
28

29 First, the Court denied US Motion to Dismiss on the grounds of no case or controversy on all Bellwether  
30 Roads except K1410, a D Road on which he ruled the State’s and the County's claims were barred by the  
31 QTA 12-year statute of limitations. K1410 was a road going into a Wilderness Area and was originally  
32 selected for inclusion in the Bellwether Case by a special interest group. K1410 had issues re: visibility  
33 on the ground and sufficient testimony to support 10-years of continuous use. The QTA 12-year statute of  
34 limitations does not apply to the remainder of the Bellwether Roads.  
35

36 Second, the Court held the statute of limitations of 7 years within which to bring action affecting title to  
37 real property as set forth in the Utah Code does not apply to County and State R.S. 2477 claims.  
38

39 Third, the Court ruled that the State and County are holders of a property interest and have vested title in  
40 R.S. 2477 rights-of-way, although title may not yet have been perfected.

41 Federal actions of denying State and County the status as a holder of a ROW creates a dispute as to title.  
42 A vested title holder has the right to conduct “maintenance” on the rights-of-way but still must consult  
43 with BLM to construct “improvements.” The definition of “maintenance” versus “improvement” is an  
44 active issue between the parties. A holder also has the right to assert police power, conduct search and  
45 rescue, and provide signage on the R.S. 2477 rights-of-way.  
46

47 Fourth, the Court ruled: “In accordance with the [R.S. 2477] congressional grant, ...consistent with the  
48 status of being an R.S. 2477 holder, then the United States has an obligation to continue allowing the

1 State and counties to exercise their vested property rights without interference.” As of August 30, 2024,  
2 the Court has not ruled on whether the State and County have perfected title to the 15 R.S. 2477 rights-of-  
3 way on which evidence was taken at trial in the Bellwether Case or the scope of the roads to which title  
4 has been perfected. A briefing schedule is being set for Motions for Summary Judgment on the issue of  
5 title to and scope of the 2 additional rights-of-way added to the Bellwether Case.

## 7 **Economic Consideration**

8  
9 Land access is critical to the health, safety, and economic viability of Utah. The state defends the  
10 current and historic right to access both federal and state lands in the pursuit of recreational activities,  
11 mining, energy development, ranching, farming, logging, motorized vehicle use, hunting, fishing, and  
12 other historic uses.

13  
14 As of 2022, Utah’s recreation industry contributes 66,736 jobs, \$3.1 billion in wages and salaries, \$6.1  
15 billion ~~dollars~~ in total outdoor recreation value added to the state economy, and accounts for 2.7  
16 percent of Utah’s gross domestic product (GDP) [3].

17  
18 ~~Likewise, as of 2017, Utah’s mining and energy~~ A 2023 economic and fiscal impacts study conducted  
19 on behalf of the Utah Petroleum Association estimated Utah’s petroleum industry directly and  
20 ~~indirectly supported 3.8 percent of the state’s employment, 4.2 percent of earnings, and 5.7 percent~~  
21 ~~of total labor income impacts are \$9.0 and \$24.1 billion respectively for the years 2020 – 2024. This~~  
22 value increases to \$30.9 and 55.4 billion when considering the industry’s direct and total value-added  
23 impacts across Utah [4]. Furthermore, the direct, indirect, and induced employment in the industry is  
24 expected to support 77,970 jobs across the state’s GDP [4].

25  
26 In 2021, Utah generated approximately \$2 billion in cash receipts, primarily from cattle, dairy  
27 products, and hay, ~~and which~~ accounted for 2.6 percent of the GDP when combined with the  
28 agricultural-processing industry [5]. These economic contributions are particularly important and  
29 impactful in rural communities around the state. It is important to note that all of these industries, and  
30 countless others, are supported by access to public lands and resources.

## 32 **Goals, Objectives, and Policies**

### 34 **Goal(s):**

- 36 • Protect current and future access to, and use of lands managed by the BLM, Forest Service, ~~U.S.~~  
37 National Park Service, ~~U.S.~~ Fish and Wildlife Service, and all other publicly owned areas of the  
38 State of Utah.
- 39 • Elevate federal agencies’ recognition of Utah’s legal access rights to and across federal lands.

### 41 **Objectives:**

- 43 1. Protect traditional and cultural access to public lands.
- 44 2. Maintain access to all R.S. 2477, Class B, and Class D roads and pursue judicial recognition of  
45 vested interests and rights through the Quiet Title Act and other legal means.
- 46 3. Strategically expand access to state, School and Institutional Trust Lands Administration  
47 (SITLA), and federal lands to increase the value and enjoyment of parcels.
- 48 4. ~~Promote~~ Consider the transfer of ~~SITLA~~ properties within national monument boundaries for  
49 properties with greater access and economic opportunities.-

- 1 5. Encourage regular review of existing roadway infrastructure, planning documents, and policies to  
2 address future needs.
- 3 6. Maintain road systems for safe, convenient, and equitable access for citizens of all ages and  
4 physical conditions.
- 5 7. Provide and protect access for utility and communication providers.
- 6 8. Oppose new roadless areas and similar designations that limit access.
- 7 9. Identify dedicated easements by each county and locally protect them to maintain access.
- 8 10. Preserve traditional access roads and trails serving mines and other historical uses, in current and  
9 future national monuments, and incorporate them into travel-management plans and land-use  
10 plans.
- 11 11. Educate the public about the importance of public-land access, multiple-use of public lands, and  
12 sustainable-yield land use and activities.
- 13 12. Encourage the provision of additional road infrastructure to accommodate safe and enjoyable  
14 outdoor recreation practices on public lands.
- 15 13. Expedite the National Environmental Policy Act (NEPA) and policy process in order to avoid,  
16 minimize, or mitigate access limitations on public lands.
- 17 14. Any NEPA analysis should analyze/weigh the potential benefits of a federal action, not just the  
18 negative impacts.
- 19 15. Ensure access to ~~for~~ emergency service response to responders for fires, medical incidents, search  
20 and rescue, and similar incidents efforts.
- 21 16. Ensure access to forestry, mineral, energy, and other needed resources for state and national  
22 security and for economic prosperity.
- 23 17. Ensure access for forest management and stewardship projects.
- 24 18. Keeping roads, trails, and routes open promotes environmental justice and allows underserved  
25 communities to access and connect with nature for mental and physical health purposes.

## 26 Policies:

- 27 • Because the State and County are holders of a vested property interest and have vested title in  
28 R.S. 2477 rights-of-way, although title may not yet have been perfected, the State and County will  
29 proceed with maintenance and other activities as designated by the Court's decisions.
- 30 • Support the protection of traditional and cultural access to public lands.
- 31 • Resist as non-negotiable all status changes to public rights-of-way established under R.S. 2477 by  
32 state and federal agencies. They are vested property rights, held jointly by the state and counties,  
33 duly recognized in federal and state law.
- 34 • Honor FLPMA Title V grants to county governments or the State of Utah in perpetuity. Nothing  
35 in Title V gives the U.S. Secretary of the Interior, or any other decision maker, the authority to  
36 arbitrarily close a road or a corridor once access has been granted except by cooperation and  
37 coordination with the government entity holding the grant. In applying for a right-of-way, or other  
38 use of lands under FLPMA Title V, consistent with Utah Code § 72-3-108, the state or counties  
39 do not relinquish their rights to the land, its use or property ownership under R.S. 2477 or any  
40 other law, regulation, or act.
- 41 • Enact policies on the assumption that transportation and access routes to and across federal lands,  
42 including all rights-of-way vested under R.S. 2477, are vital to Utah's economy and quality of life  
43 and must provide, at a minimum, a network of roads, trails, and other necessary infrastructure that  
44 provides for:  
45 ○ Movement of people, goods, and services across public lands;  
46 ○ Reasonable access to a broad range of resources and opportunities throughout the  
47 resource-planning area, including:  
48 ○ livestock operations, trailing, and range improvements;



- 1                   ▪ solid, fluid, and gaseous mineral operations including critical minerals, renewable
- 2                   energy locations, and fuels minerals;
- 3                   ▪ recreational opportunities and operations, including motorized and non-motorized
- 4                   recreation,
- 5                   • including the infrastructure needed to meet visitors' current and future
- 6                   needs (such as trailheads, parking areas, restrooms, information centers,
- 7                   and signage);
- 8                   ▪ public safety needs (including law enforcement, firefighting, search and rescue,
- 9                   and EMS);
- 10                  ▪ access for transportation of wood products to market;
- 11                  ▪ safe and comfortable access for people with disabilities and the elderly; and
- 12                  ▪ access to state lands and SITLA lands to accomplish the purposes of those lands.
- 13                  • Support expanding access to state and SITLA lands to increase the economic value of parcels.
- 14                  • Encourage regular review of existing access infrastructure and future needs in an effort to
- 15                  maintain transportation systems for safe and convenient access.
- 16                  • Keep roads open for utility and communications companies to ensure reliable delivery of services
- 17                  to citizens of Utah and allow for the maintenance of current and future infrastructure, including
- 18                  but not limited to transmission and distribution lines, pipelines, and communications towers.
- 19                  • Oppose any additional evaluation of Forest Service land, or other federally managed lands, as
- 20                  "roadless" or "un-roaded" beyond the Forest Service's second roadless-area review evaluation
- 21                  (RARE2) and oppose efforts by agencies to specially manage those areas in a way that:
- 22                    ○ closes or declassifies existing roads without the coordination and consent of the local
- 23                    government;
- 24                    ○ permanently bars travel on existing roads;
- 25                    ○ excludes or diminishes traditional, multiple-use activities, including grazing, proper
- 26                    forest harvesting, hunting, fishing, and vegetation management;
- 27                    ○ interferes with the enjoyment and use of valid, existing rights, including water rights,
- 28                    local transportation plan rights, R.S. 2477 rights-of-way, grazing allotment rights, and
- 29                    mineral leasing rights; or,
- 30                    ○ prohibits development of additional roads reasonably necessary to pursue traditional
- 31                    multiple-use activities.
- 32                  • Encourage the Forest Service to review and amend its roadless rule to allow for additional access
- 33                  to reduce fuel loads and to improve water quality and quantity, wildlife habitat, species diversity,
- 34                  and forest ecosystem health.
- 35                  • Maintain access to and across public lands, including R.S. 2477 rights-of-way. The right of the
- 36                  public to have unrestricted access to all roads granted under R.S. 2477, or FLPMA Title V, shall
- 37                  be held inviolate.
- 38                  • Maintain access to roads that provide access to and across public lands managed by any land-
- 39                  management agency unless concurrence on the closure of unnecessary or unsafe roads can be met
- 40                  through cooperation and coordination with the state and the counties within which the roads in
- 41                  question are located.
- 42                  • Maintain access to lands managed by the State of Utah and establish new roads where access to
- 43                  state lands is currently not available.
- 44                  • Support recognition by the federal government of the public use of R.S. 2477 rights-of-way and
- 45                  urge the federal government to administratively and formally recognize the rights-of-way and
- 46                  their use by the public as expeditiously as possible.
- 47                  • Take reasonable administrative and legal measures to protect and preserve access to valid existing
- 48                  rights-of-way granted by Congress under R.S. 2477 and to support and work in conjunction with
- 49                  counties to redress cases where R.S. 2477 rights-of-way, and other access options, are not
- 50                  recognized or are impaired.

- 1 • Assist in identifying and inventorying roads and participate with federal land-management
- 2 agencies in the land-use planning process, including travel and transportation management.
- 3 • Consider, evaluate, and analyze access and transportation needs during land-use planning
- 4 processes. No roads, trails, rights-of-way, easements, or other traditional access for the
- 5 transportation of people, products, recreation, energy, or livestock may be closed, abandoned,
- 6 withdrawn, or have a change of use without full public disclosure, analysis, and coordination with
- 7 state and county plans and personnel.
- 8 • Maintain access to all water-related facilities such as dams, reservoirs, delivery systems,
- 9 monitoring facilities, livestock water, handling facilities, etc. Ensure that this access is
- 10 economically feasible with respect to the method and timing of such access.
- 11 • Support the supposition that each county should determine what roads to which they have a right-
- 12 of-way, as stated in Utah code 72-5-104, which dedicates public rights-of-way on certain roads on
- 13 private land. Encourage Utah counties to inventory roads that have been traditionally used for
- 14 public access to public lands and make needed amendments to local plans to establish authority
- 15 and enforcement protocols. Federal agencies should abide by sState eCode and shall respect
- 16 county decisions regarding dedicated easements.
- 17 • Maintain access provided by Utah code 72-5-104 as essential for landowners to access private
- 18 property and for the public to access and use public lands.
- 19 • Support and protect private property rights within the confines of Utah law.
- 20 • Maintain accessibility to state and federal lands and amenities via multiple modes of
- 21 transportation, inclusive to persons with disabilities, and in accordance with relevant accessibility
- 22 guidelines to the extent possible.
- 23 • Maintain and protect access to approved roads, trails, mines, historic uses, etc., within national
- 24 monuments, and add or reroute any access network if needed for the safety, health, economy, and
- 25 welfare of Utah citizens.
- 26 • Support educational campaigns and marketing strategies that educate the public about access to
- 27 and multiple-use and sustainable-yield practices on public lands.
- 28 • Supports and assists in obtaining and maintaining access to public lands to facilitate vegetation
- 29 management and wildlife habitat projects implemented by the Shared Stewardship Program,
- 30 Watershed Restoration Initiative, or other similar programs.
- 31 • Identify individual roads of significant importance and address associated concerns regarding
- 32 those roads with federal and county stakeholders during the management-planning process, rather
- 33 than deferring conversations to later dates.
- 34 • Support administrative access for all valid permit holders.
- 35 • Support increasing access to, and provide infrastructure for, outdoor recreational activities on
- 36 public lands.
- 37 • Oppose pauses or moratoriums that limit access to public lands for multiple-use, sustainable yield,
- 38 historic, cultural, and traditional practices.
- 39 • Support and encourage an expedited NEPA process and policy decisions.
- 40 • Support the use of Class 1 and Class 2 electric-assist bicycles wherever mountain bike use is
- 41 permitted in an effort to provide equity in access to federal lands for citizens of all age groups and
- 42 physical abilities.
- 43 • It is the policy of the State of Utah that creating new roads for public access must be considered
- 44 as a reasonable alternative when reviewing federal land-use plans or transportation plans.
  - 45 ○ The practice of only-analyzing roads for closure-only is arbitrary and capricious due to
  - 46 the fact that NEPA requires the consideration of all reasonable alternatives.
- 47 • Oppose conservation and mitigation leases on public lands that limit, reduce, or impede other
- 48 multiple-use and sustained yield practices as defined by FLPMA and NFMA.

49  
50 **State Code**

51

1 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
2 *following are selected portions of the Utah State Code and do not represent every potential legal*  
3 *reference in the Code related to this section of the State Resource Management Plan or the*  
4 *administration of public lands.*

5  
6 **Public Lands Planning**

7  
8 **§ 63L-11-302.** *Principles to be recognized and promoted.*

9  
10 **§ 63L-11-303.** *Findings to be recognized and promoted.*

11  
12 **State Land Use and Management Plan for Federal Lands**

13  
14 **§ 63L-8-104.** *State land-use planning and management program.*

15  
16 **References:**

- 17 1. 43 U.S.C. 25 § 1063  
18 2. <https://publiclands.utah.gov/accessmap360/>  
19 3. <https://outdoorindustry.org/state/utah>  
20 4. [https://utahpetroleum.org/wp-content/uploads/2023/04/UPA-Economic-and-Fiscal-Impact-Final-](https://utahpetroleum.org/wp-content/uploads/2023/04/UPA-Economic-and-Fiscal-Impact-Final-Report_04112023.pdf)  
21 [Report\\_04112023.pdf\]](https://utahpetroleum.org/wp-content/uploads/2023/04/UPA-Economic-and-Fiscal-Impact-Final-Report_04112023.pdf)  
22 5. <https://economic-impact-of-ag.uada.edu/utah/>

## LAND USE

### Introduction

In Utah, land-use issues and policies fall under the jurisdictions of federal, state, ~~tribal~~, and local government entities. Land use on federal lands (i.e., U.S. Forest Service [Forest Service], US Bureau of Land Management [BLM], and National Park Service [NPS]) is guided by federal land and resource management plans. Land use on state lands is determined by the managing state agency. Land use on ~~tribal~~ lands is determined by the ~~tribal~~ government or, for trust lands, by the Bureau of Indian Affairs. Land use on private lands is ~~determined~~regulated by the county or, in incorporated municipalities, by the municipality through land-use and zoning ordinances.

Land use is not a resource in the same sense as most other state resources. Land use depends heavily on the preferences and policies of the managing entity and the desires/investments of private property owners. Consequently, due to the substantial amount of Utah's lands that are federally owned, federal land-management policies significantly impact Utah's economic development. Rural counties throughout the state are reliant on federal land for resources that spur economic growth and stability. These resources include minerals, recreation, oil and gas, timber, water, agriculture, fisheries, and wildlife.

Utah contains a patchwork of land-use authorities. Land-use decisions made by each of these authorities affect the other authorities. Coordination of planning efforts in a proactive, cooperative manner helps ensure that land-use decisions complement rather than contradict each other.

Public land management is dictated by laws and regulations. These laws and regulations require public land-management agencies to prepare land and resource management plans, which include land-use allocations that specify locations that are available, or not available, for certain uses. These include decisions such as what lands are available for livestock grazing, mineral material use, oil and gas leasing, and locatable mineral development; what lands may be available for disposal via exchange and/or sale; and what lands are open, closed, or limited to motorized travel. The laws and regulations also require the federal land-management agencies to involve local governments in the planning and decision-making processes. Further, federal land managers are required to ensure that land-use plans and management decisions are consistent with local governments' approved plans, ordinances, and policies to the fullest extent possible while maintaining consistency with federal law.

The Utah Legislature has established land-use planning zones for energy, forestry, and grazing (Utah Code 63J, Chapter 8) and has outlined specific findings and principles for public land planning (Utah Code 63L, Chapter 11) [1]. The legal descriptions for the aforementioned planning zones can be found in Utah Code 63J-8, and visual maps can be obtained from the Public Lands Policy Coordinating Office. The management of these lands by federal agencies should be in accordance with Utah's land-use prescriptions to the maximum extent allowable by federal law.

During the 2024 General Legislative session, House Bill 496 established state code prohibiting defined actions by natural asset companies and the use of conservation leases.

### Findings

The list of federal land uses and types of designations is extensive and is constantly altered by the various federal managing agencies and Congress [2].

**Bureau of Land Management: Designations and Planning [3]**

1 The BLM administers more than 247 million acres of public lands, primarily in the western United  
2 States. All BLM-administered public lands are managed in accordance with approved resource  
3 management plans (RMPs). The RMPs establish how the public lands will be used and allocated for  
4 different purposes; and are required under the Federal Land Policy Management Act (FLPMA) to be  
5 developed with public participation and collaboration. The RMPs ~~decisions~~ establish goals and objectives  
6 for resource management (desired outcomes) and the measures needed to achieve these goals and  
7 objectives (management actions and allowable uses).

8  
9 Most of the BLM’s land-use plans will contain one or more special designations that require the land to  
10 be managed with a particular focus to provide for public recreation or to conserve some significant  
11 resource. These special designations include:

12  
13 **Special Recreation Management Area (SRMA):** The BLM’s land-use plans may designate  
14 SRMAs to provide specific recreational opportunities, such as developing trailhead areas for  
15 hikers, mountain bikers, and off-road vehicle users.

16  
17 **Wilderness Area:** In 1964, Congress passed the Wilderness Act, which established the first  
18 wilderness areas. The law defined wilderness areas as places “where the earth and its community  
19 of life are untrammelled by man, where man himself is a visitor who does not remain.” The BLM  
20 is responsible for 223 wilderness areas, which encompass more than 8.7 million acres in 10  
21 western states. The BLM manages these lands to ensure that they maintain these wilderness  
22 characteristics.

23  
24 (Please refer to the Wilderness section of the State Resource Management Plan.)

25  
26 **Wilderness Study Area (WSA):** In 1976, under ~~the Federal Land Policy and Management Act~~  
27 ~~of 1976 (FLPMA)~~, Congress directed the BLM to review the roadless areas it managed to  
28 determine if they met certain standards for wildness. After an extensive public involvement  
29 process, the BLM in 1980 designated about 25 million acres of lands that met these standards as  
30 WSAs. Since that time, Congress has reviewed some of these areas and has designated some as  
31 wilderness and released others for non-wilderness uses. Until Congress makes a final  
32 determination on a WSA, the BLM manages these areas to preserve their suitability for  
33 designation as wilderness.

34  
35 Under FLPMA, Congress also directed the BLM to maintain and update an inventory of lands  
36 that met the act’s wilderness standards. Conditions relating to wilderness characteristics may  
37 change over time, so the BLM continues to maintain and update this inventory. Changes to the  
38 inventory do not change those lands designated as WSAs.

39  
40 **Area of Critical Environmental Concern (ACECs):** ACEC designations are used for areas  
41 where special management attention is needed to protect important historical, cultural, and scenic  
42 values, or fish and wildlife or other natural resources. ACECs can also be designated to protect  
43 human life and safety from natural hazards. ACECs can only be designated during the land-use  
44 planning process. (Research Natural Areas are considered a type of ACEC).

45  
46 Other designations commonly associated with BLM management include, but are not limited to ~~N~~ational  
47 ~~S~~cenic ~~T~~rails, ~~N~~ational ~~H~~istoric ~~T~~rails, ~~N~~ational ~~R~~ecreation ~~T~~rails, ~~N~~ational ~~R~~ecreation ~~A~~reas,  
48 ~~N~~ational ~~M~~onuments, and ~~N~~ational ~~C~~onservation ~~A~~reas. [4]

49  
50 **U.S. Forest Service: Designations and Planning**

1 The history of the Forest Service and forest planning dates back more than 115 years, but most planning  
2 policies and actions related to modern forestry management began with the passing of the National Forest  
3 Management Act (NFMA) in 1976 [5]. The 2012 Planning Rule [6] is the most recent planning process  
4 change, and amendments to the 2012 rule were proposed in December 2016 to clarify the  
5 ~~Department's~~USDA direction for plan amendments, including direction for amending land-management  
6 plans developed under the 1982 rule [7]. During the forest-planning process several topics are considered  
7 including, but not limited to:

8  
9 Adjacent lands and holdings; air quality; climate change; cultural resources; ecological  
10 sustainability; fire and fuel management; fish, wildlife, and plants (including threatened  
11 endangered, proposed, and candidate species; species of conservation concern; management  
12 indicator species and, species used and enjoyed by the public); fishing, hunting, trapping, and  
13 gathering; forests and timber management; grazing and rangelands; renewable and nonrenewable  
14 energy and mineral resources; social and economic sustainability; soil; sustainable recreation;  
15 water and watersheds; wild and scenic rivers; and, wilderness. [8]

16  
17 Designations commonly associated with Forest Service management include, but are not limited to,  
18 Wilderness, Wilderness Study Areas, Wild and Scenic Rivers, National Scenic Trails,  
19 National Historic Trails, National Recreation Trails, National Scenic Areas, National Science  
20 Research Areas, National Scenic and Wildlife Areas, National Scenic Recreation Areas,  
21 National Recreation Areas, National Recreation and Geologic Areas, National Monuments,  
22 National Volcanic Monuments, Special Management Areas, National Protection Areas,  
23 National Conservation Areas, Research Natural Areas, National Historic Sites, and Inventoried  
24 Roadless Areas. [9]

## 25 26 **National Park Service: Designations**

27  
28 Utah is home to Zion, Arches, Capitol Reef, Canyonlands, and Bryce Canyon national parks. These  
29 parks, commonly referred to as the Mighty Five-® bring millions of visitors to Utah every year from  
30 around the world.

31 ¶  
32 Designations that are associated with the ~~National Park Service~~NPS include, but are not limited to  
33 National Parks, National Monuments, National Recreation Areas, Wilderness, Wild and  
34 Scenic Rivers, National Scenic Trails, National Historic Trails, National Recreation Trails,  
35 National Preserves, National Seashores, National Lakeshores, National Historic Sites,  
36 National Memorials, National Battlefields, and national Historic Parks. [10]

## 37 38 **U.S. Fish and Wildlife Service: Designations and Management**

39  
40 The Great Salt Lake and surrounding areas are essential locations for migrating bird populations, and the  
41 U.S. Fish and Wildlife Service (USFWS) operates several different locations ~~and~~ to benefit these species,  
42 in coordination with the State of Utah.

43  
44 Designations ~~that are~~ associated with ~~the~~ (USFWS) include, but are not limited to, National  
45 Monuments, Wilderness, Wilderness Study Areas, Wild and Scenic Rivers, National  
46 Wildlife Refuges, Waterfowl Production Areas, Wildlife Coordination Areas, and National  
47 Fish Hatcheries. [11]

## 48 49 **National Monuments**

1 The nine national monuments in Utah are Dinosaur, Natural Bridges, Cedar Breaks, Jurassic, Hovenweep,  
2 Timpanogos Cave, Rainbow Bridge, Bears Ears, and the Grand Staircase-Escalante. The first seven  
3 national monuments are smaller in size than the Bears Ears and Grand Staircase-Escalante, which in  
4 total encompass more than 3,200,000 acres in southern Utah. National monuments are created by  
5 [proclamation of](#) the President of the United States using powers vested by the Antiquities Act, which  
6 states that all national monuments must “be confined to the smallest area compatible with proper care and  
7 management of the objects to be protected.” [12]

## 9 **Visual Resource Management**

10  
11 The BLM ~~also~~ uses Visual Resource Management Classes as part of the land-use planning process and  
12 management. [13]

13  
14 ~~The Bureau of Land Management (BLM) administers more than 247 million acres of public~~  
15 ~~lands, primarily in the western United States. BLM-administered public lands are managed in~~  
16 ~~accordance with approved resource management plans (RMPs). The RMPs establish how the~~  
17 ~~public lands will be used and allocated for different purposes; they are developed with public~~  
18 ~~participation and collaboration. RMP decisions establish goals and objectives for resource~~  
19 ~~management (desired outcomes) and the measures needed to achieve these goals and objectives~~  
20 ~~(management actions and allowable uses).~~

## 21 22 **Visual Inventory Values and Visual Resource Management Class Designation**

23  
24 For visual resources on BLM-administered lands, the visual values reflected in Visual Resource  
25 Inventory (VRI) classes are considered in establishing goals and objectives for resource  
26 management. When Visual Resource Management (VRM) class objectives are designated for the  
27 lands in the RMP, management actions and allowable uses are determined that reflect the VRM  
28 class objectives.

29  
30 The VRI class values reflect the quality of the visual resource, but they are not the sole  
31 determinant of how the visual resources on the lands are to be managed; the BLM manages lands  
32 for a variety of purposes, and preservation of scenic values is only one of many factors to  
33 consider in determining land management objectives. The VRI class values must be considered  
34 when determining VRM objectives in the RMP process, but they are not intended to  
35 automatically become VRM class designations.

36  
37 [The](#) VRM classes are determined through careful analyses of other resource values, and other  
38 potential land uses and demands. The VRM class determination is based on a full assessment that  
39 evaluates the VRI in concert with needed resource uses and desirable future outcomes. The VRM  
40 class designations may be different than the VRI classes assigned in the inventory and should  
41 reflect a balance between protection of visual values and meeting America’s energy and other  
42 land use or commodity needs.

## 43 44 **VRM Classes and Objectives**

45  
46 The VRM classes set VRM objectives for lands in each class, as well as the level of visual change  
47 in the landscape character that is allowed as a result of proposed management activities. The  
48 objectives and allowed levels of change for each of the four VRM classes are as follows:

49  
50 VRM Class I Objective: To preserve the existing character of the landscape. Allowed Level of  
51 Change: This class provides for natural ecological changes; however, it does not preclude very

1 limited management activity. The level of change to the characteristic landscape should be very  
2 low and must not attract attention.

3  
4 VRM Class II Objective: To retain the existing character of the landscape. Allowed Level of  
5 Change: The level of change to the characteristic landscape should be low. Management activities  
6 may be seen, but should not attract the attention of the casual observer. Any changes must repeat  
7 the basic elements of form, line, color, and texture found in the predominant natural features of  
8 the characteristic landscape.

9  
10 VRM Class III Objective: To partially retain the existing character of the landscape. Allowed  
11 Level of Change: The level of change to the characteristic landscape should be moderate.  
12 Management activities may attract attention, but should not dominate the view of the casual  
13 observer. Changes should repeat the basic elements found in the predominant natural features of  
14 the characteristic landscape.

15  
16 VRM Class IV Objective: To provide for management activities which require major  
17 modification of the existing character of the landscape. Allowed Level of Change: The level of  
18 change to the characteristic landscape can be high. Management activities may dominate the view  
19 and may be the major focus of viewer attention. However, the impact of these activities should be  
20 minimized through careful siting, minimal disturbance, and repeating the basic elements of form,  
21 line, color, and texture within the existing setting.

## 22 23 **Project Conformance with VRM Class Objectives**

24  
25 Once the VRM class is determined for a tract of BLM-administered land in the RMP, BLM  
26 policy requires that proposed management activities, such as cattle grazing, or constructing and  
27 operating a utility-scale renewable energy facility on that tract, must meet the requirements of the  
28 VRM class. Disclosure of impacts to the visual values of the project area and conformance with  
29 the VRM class requirements is determined through the Visual Contrast Rating process during the  
30 environmental impact analysis for the project.

31  
32 If the Visual Contrast Rating process confirms that the project conforms to the VRM class  
33 objectives and the project is allowed, a concerted effort must still be made to reduce the visual  
34 contrasts, even if the proposed project meets the VRM class objectives. If the contrast rating  
35 determines that, as proposed, the project will not conform to the VRM class objectives, additional  
36 visual impact mitigation must be implemented until the project does comply with the VRM class  
37 requirements. If additional mitigation will not result in the project meeting VRM class  
38 requirements, the project is not permitted. However, in some circumstances the BLM may  
39 consider amending the RMP to change the VRM class objective.

40  
41 The Forest Service's Scenery Management System (SMS) is similar to the BLM's VRM system. Scenic  
42 attractiveness as defined in the SMS consists of the following three levels: (1) distinctive, (2) typical, and  
43 (3) indistinct. Distinctive scenic attractiveness is defined by areas where landforms, vegetation patterns,  
44 water characteristics and cultural features combine to provide unusual and outstanding scenic qualities.  
45 The SMS specifies five scenic integrity objective levels (SIOs) ranging from "very high," "high,"  
46 "moderate," "low," to "very low." [These](#) SIOs are used for project planning, analysis, implementation,  
47 and monitoring work. [14]

## 48 49 **Land Exchanges, Acquisitions, and Conveyances**



1 Periodically, land exchanges occur as the result of federal actions (e.g., the Dingell Act [15] or Emery  
2 County Public Land Management Act [16]) or as need arises for the Utah State Institutional Trust Lands  
3 Administration (SITLA) [17]. In the event of a land trade, it is important that the consequences of the  
4 trade be taken into consideration. For example, when SITLA trades lands with the BLM, grazing  
5 permittees operating through the BLM are then required to lease from SITLA. These consequences could  
6 potentially displace a ranching family when other uses for a given SITLA parcel are explored and  
7 considered (e.g., utility-scale solar [energy](#)). Operators with existing leases/permits should be given  
8 priority and if they are displaced they should be mitigated accordingly.

9  
10 Other purposes could include, but are not limited to the following:

11  
12 The Recreation and Public Purpose Act (RPPA), which allows the State of Utah, or jurisdictions within  
13 the state, to receive up to 25,600 acres per year [upon approval by the Secretary of Interior](#). [18]

14  
15 The Small Tract Act, which was enacted in 1983 “to help the Forest Service resolve land disputes and  
16 boundary management problems for parcels that generally were small in scale (less than ten acres) with  
17 land values that did not exceed \$150,000.” Eligible lands for sale, exchange, or interchange included  
18 National Forest System lands encumbered by an encroachment like a house or fence; roads or road rights-  
19 of-way in excess of Forest Service transportation needs; and “mineral survey fractions,” or small parcels  
20 of National Forest System lands interspersed with or adjacent to lands transferred out of federal  
21 ownership under mining laws. [19]

## 22 23 **Utah Division of Wildlife Resources: Conservation Easements** [20]

24  
25 Since the first property acquisition in 1909, the Utah Division of Wildlife Resources (DWR) has been  
26 acquiring and managing land across Utah for wildlife, habitat, and wildlife-related recreation  
27 opportunities. These properties are not multiple-use properties like BLM or Forest Service lands.  
28 Furthermore, it is important to research what access and recreational opportunities are permitted on each  
29 property prior to visiting the location.

30  
31 The DWR owns approximately 460,000 acres of fee-title property, which includes Wildlife Management  
32 Areas, Waterfowl Management Areas, and access points for hunting and fishing across 28 of the state’s  
33 29 counties.

34  
35 The DWR also holds partial interest rights through access easements and conservation easements, or  
36 through management agreements on more than 150,000 acres across the state. This type of land  
37 conservation allows private landowners to maintain ownership and control of their land, while allowing  
38 DWR to manage the property for crucial habitat and wildlife purposes. These easement quantifications  
39 include only conservation easements and angler access agreements—not Utah Mitigation and  
40 Conservation Commission lands managed by the DWR.

41  
42 The DWR also carries out a successful walk-in access program, which creates agreements with private  
43 landowners to allow their property to be open to hunters, anglers, and wildlife recreators. The walk-in  
44 access program brings recreational opportunities on more than 38,000 acres and almost 40 miles of stream  
45 access to Utahns across the state.

46  
47 Additionally, DWR holds an access agreement that keeps 3.4 million acres of Utah trust lands open to  
48 hunters and anglers. Property acquisition and land-management efforts are funded by Utah ~~state~~-hunting  
49 and fishing license sales, a federal excise tax on equipment, wildlife-oriented grants, outside group  
50 partnerships, and generous donations.

1 Each year, DWR works on dozens of new land projects, partnering with private landowners, other state  
2 agencies and wildlife-focused organizations to acquire or preserve land for wildlife purposes. The DWR  
3 is committed to continuous efforts to serve the people of Utah as the trustee and guardian of the state’s  
4 protected wildlife and habitat.

## 5 6 **Economic Considerations**

7  
8 Land use related to agriculture, livestock and grazing, mineral extraction, and recreation and tourism has  
9 resulted in economic benefits for the State of Utah.

10  
11 The federal government makes ~~payments in lieu of taxes (PILTs)~~ directly to county governments to help  
12 offset foregone property tax revenues due to nontaxable federal lands within their boundaries. The  
13 payments are made annually in June for tax-exempt federal lands administered by the BLM, NPS, Forest  
14 Service, USFWS, and for federal water projects and some military installations. The formula used to  
15 compute the payments is based on the amount of federal land within an affected county; population, with  
16 less populous counties paid at a higher per-capita rate than more populous counties; prior-year payments  
17 from other federal land-payment programs, such as secure rural schools, mineral lease revenues and  
18 grazing receipts; the existence of state laws directing county payments from federal land agencies to a  
19 particular purpose (pass-through requirements); and the Consumer Price Index. Local governments may  
20 use their ~~PILTs-payment~~ for any governmental purpose. All 29 counties in Utah collectively receive  
21 ~~PILTs-payments~~ from the federal government. In 2023, Utah received \$46,208,003 in ~~PILTs-payments~~ for  
22 approximately 33 million acres of federal land. [21] This calculates to \$1.40 per acre, which is a fraction  
23 of what counties could collect if such lands were under private ownership.

24  
25 The Great American Outdoors Act (GAOA) [22] was adopted in March 2020 to provide financial  
26 assistance to public land-management agencies to address the maintenance backlog in order to protect  
27 Utah’s natural resources and provide safe and reliable access to the public. ~~in order to enjoy their public~~  
28 ~~lands.~~

29  
30 The Great American Outdoors Act (GAOA, ~~Act~~) is a historic investment in the protection and  
31 sustainment of our public lands and Bureau of Indian Education (~~BIE~~)-funded schools. The ~~A~~act  
32 established the National Parks and Public Land Legacy Restoration Fund (~~LRP~~) to address  
33 overdue maintenance needs. GAOA also permanently authorized funding for the Land and Water  
34 Conservation Fund (~~LWCF~~)—a separate fund aimed at safeguarding our natural areas and cultural  
35 heritage.

36 By addressing the maintenance backlog, federal agencies are ensuring that visitors and staff are  
37 safe and comfortable as they access our national parks, public lands and roads, national wildlife  
38 refuges, and ~~BIE~~Bureau of Indian Education-funded schools. The ~~Interior~~US Department of the  
39 Interior and bureaus are planning and executing important projects through the ~~Great American~~  
40 ~~Outdoors Act~~GAOA and hope the public will take the time to explore the projects to see how this  
41 significant legislation is benefiting visitors and their communities across the country.

42  
43 Federal land-management agencies in Utah have received several million dollars since the passing of the  
44 GAOA and have initiated 12 projects in Utah thus far [23]. ~~The proportion of funds received has far~~  
45 ~~outweighed by the contributions made by companies operating in Utah on public lands into the fund.~~

## 46 47 **Goals, Objectives and Policies**

48  
49 **Goal(s):**

- The State of Utah is invited and involved in all coordination related to land-use planning, designations, acquisitions, dispositions, trades, and other federal actions that impact Utah’s public lands.

**Objectives:**

1. ~~Agree with federal~~ Federal agency resource-management planning on public lands ~~to~~ involves active participation from state agencies, local government, and affected private individuals as contributing members. When possible, state and local governments officials must be included as members of the interdisciplinary teams for each project. State and local governments should also be designated as cooperating agencies to the maximum extent possible. All federal policies and management plans acknowledge and consider the cultural, economic, and environmental importance of agriculture to the state and its inhabitants.
2. Encourage federal agencies to work with state and local governments to increase flexibility and reduce the time required to implement projects affecting federal lands. The environmental impact statement and environmental assessment processes must be expedited to reduce repetition and lengthy delays.
3. Promote land uses on federal lands consistent with the principles of multiple-use and sustained-yield as directed by the FLPMA and the Multiple Use and Sustained Yield Act of 1960.
4. Foster trusting relationships with local BLM range conservationists and forest rangers to improve the management of federal lands within the state. Return the majority of decision-making authority to local BLM and Forest Service personnel for site-specific projects.
5. Call upon federal land agencies to consider allowing for the production of food and fiber where feasible on federal lands, including planting crops and using the ground for animal forage. Foster working relationships between the agricultural community and community leaders in areas where urban expansion is conflicting with agricultural land use. Although Utah is trending toward urban expansion, it is vital that agricultural interests are seriously considered and compromises are reached that satisfy all parties ~~are reached~~ through collaborative processes.
6. Improve education and support applications for Agricultural Protection Areas, Conservation Easements, and both Grassland and Wetland Reserves from local producers.
7. Avoid loss of private lands within ~~the~~ county boundaries as measured by acreage and fair market value.
8. Improve communication and coordination among various federal, state, ~~T~~Tribal, and local land-use authorities.
9. Encourage disposal of federal lands, where appropriate, to support community growth and community needs.
10. Minimize impacts of development and land-use changes on local governments, infrastructure, and community services.
11. Ensure that adjacent land uses and land-use restrictions do not deny private property owners the right of fair use, access to, and enjoyment of their property.
12. Discourage or eliminate land-use restrictions or special designations that restrict economic growth and activity, especially on federal lands.
13. Designate GAOA funding for maintaining current lands and ensure that new land acquisitions are in full coordination and cooperation with the State of Utah and the county in which the property or easement is to be acquired.
14. Better coordinate local community and federal agency planning, both on paper, in-person, and on the ground. Incorporate planning processes of other agencies to help streamline the efforts. Develop joint plans that carry actions across management borders. Plans and management objectives to coordinate include (but are not limited to):
  - Fire prevention and management plans
  - Transportation and access plans

- 1           ○ Water resource management
- 2           ○ Development standards in the wildland-urban interface
- 3           ○ Utility plans
- 4 15. Protect the interests of the ~~S~~state prior to and during the creation, planning, or implementation of
- 5           any actions related to the Antiquities Act and/or the implementation of said Act to create a
- 6           National Monument.
- 7 16. When considering National Monument designations, federal agencies recognize and protect
- 8           access to public roads, existing and potential mining claims, grazing rights, private property
- 9           rights, etc. and other multiple uses that are part of the history and culture of the area.
- 10 17. Oppose the ~~Bureau of Land Management~~BLM's use of the National Landscape Conservation
- 11           System (~~NLCS~~) to remove discretionary uses from public lands.
- 12 18. All FLPMA multiple-use and sustained-yield mandates must be protected and adhered to in any
- 13           federal designation.
- 14 19. Require that the designation of any portion of public lands greater than 5,000 acres must be
- 15           coordinated with the state and local governments before taking effect (see Utah Code § 63L-2-
- 16           3(3)).
- 17 20. Ensure that federal land-management agencies adhere to their Congressionally approved ~~A~~acts
- 18           (e.g., FLPMA, NFMA, NEPA).
- 19 21. Ensure that ~~Areas of Critical Environmental Concern (ACECs)~~ are created only after an official,
- 20           publicly-visible, land-use planning process ~~and is completed after~~ substantive state and local
- 21           cooperation and participation.
- 22 22. Wildlife is declared property of the state under Utah Code § 23A-1-102 which reads that,
- 23           “Wildlife existing within this state, not held by private ownership and legally acquired, is the
- 24           property of the state.”
- 25 23. Oppose the elevation of conservation and protection to become an equal priority with multiple-
- 26           use and sustained-yield on public lands as required by Congress, via FLPMA.
- 27 24. The concepts of “intact landscapes” (or intactness) is likely to run counter to the multiple-use
- 28           mandates in FLPMA and be inconsistent with state and county resource management plans.
- 29 25. Ensure that federal agencies give traditional cultural knowledge (e.g., ranching knowledge) ~~is~~
- 30           ~~given~~ the same level of considerations as indigenous knowledge.

### 31 Policies:

- 32
- 33
- 34 • Support maximized land use in Utah for its citizens, industries, and government purposes. Land
- 35           use should be determined or influenced to the greater degree by those who are most affected by
- 36           management decisions. Local voices should carry the greatest weight when deciding on land-use
- 37           approaches.
- 38 • Encourage federal agency resource and land-management planning on public lands to involve
- 39           active participation from state agencies, local governments, and affected private citizens as
- 40           contributing members.
- 41 • Call upon federal land-management agencies to work closely and cooperatively with the State of
- 42           Utah to ensure motorized and non-motorized access to public lands. Because approximately 63
- 43           percent of Utah consists of federal lands, the state’s livelihood is substantially affected by the
- 44           policies of federal land-management agencies. As such, it is vital that federal land-management
- 45           agencies should:
  - 46           ○ Include state-agency personnel as members of interdisciplinary teams when developing
  - 47           land-use plans.
  - 48           ○ Provide the State of Utah a constructive role in drafting land-use plans.
- 49 • Support the concept of multiple-use and sustained-yields on public lands. Federal lands should
- 50           be managed to produce the maximum yield of timber, forage, recreation, and minerals at
- 51           sustainable levels. Agriculture is an integral part of the multiple-use concept.

- 1 • Call upon ~~the BLM and Forest Service~~ [federal agencies](#) to avoid participation in sue and settle  
2 agreements with non-governmental organizations when such settlements affect land use within  
3 Utah without first properly consulting the State of Utah.
- 4     ○ Utah opposes the culture of sue and settle as a means to limit access to public lands, slow  
5     down range improvement projects, and drain limited resources from land-management  
6     agencies.
- 7 • Grazing allotment animal-unit months (AUMs) within the state should remain at or above current  
8 levels unless a scientific need for temporary reduction is demonstrated to the satisfaction of State  
9 of Utah officials.
- 10     ○ In the case that AUMs are temporarily reduced, these reductions shall be reinstated at the  
11     earliest possible moment once vegetative health has been restored to its previous levels.
- 12 • Oppose passive land-management practices that negatively impact forage production,  
13 maintenance of natural habitat, and native ecosystems. The State of Utah also opposes passive  
14 management that leads to greater risk of catastrophic wildfires.
- 15 • Support the designation of official roads, trails, and paths that allow access for all public land  
16 users [via the full range of vehicle technologies](#).
- 17 • Protect access across federal land to all SITLA parcels.
- 18 • Federal lands shall be available for disposal when lands are difficult to manage or consist of  
19 isolated tracts, when such disposal meets the important public objective of community expansion  
20 or economic development, or when the disposal would serve the public interest.
- 21 • Support [the](#) national interest in energy independence and bridge the gap between production and  
22 consumption by ensuring that public lands remain open for oil and gas exploration and  
23 production.
- 24 • As a sovereign entity, the State of Utah requires extensive coordination and the opportunity for  
25 substantive involvement in the proclamation, planning, or implementation of all components  
26 related to the creation of National Monuments by means of the Antiquities Act.
- 27 • National Monuments must “be confined to the smallest area compatible with proper care and  
28 management of the objects to be protected.” [Landscape-scale monuments are not consistent with](#)  
29 [the Antiquities Act](#).
- 30     ○ Any designation, monument or not, greater than 5,000 acres must be coordinated with  
31     state and local government prior to the creation of the designation.
- 32 • Provide reasonable protection to objects requiring protection.
- 33     ○ Reasonable protection should not be translated to mean the maximum amount of  
34     protection possible.
- 35 • Oppose any Areas of Critical Environmental Concern (ACECs) that are not created through  
36 publicly-visible land-use planning efforts and/or that do not include state and local government  
37 cooperation. Full coordination, consistency review, and consultation should be granted to state  
38 and local governments prior to implementation of any ACECs.
- 39 • The ~~S~~state has primacy of wildlife, and wildlife parts (e.g., shed antlers), located within the State  
40 of Utah.
- 41 • Cooperating agency (NEPA) relationships and coordination (FLPMA) relationships are not the  
42 same. Inviting the ~~S~~state to participate as a cooperating agency doesn’t meet the coordination  
43 requirements under FLPMA.
- 44 • Federal agencies must allow state and local governments sufficient time and resources to provide  
45 substantive comments as cooperating agencies and as part of coordination.
- 46 • It is the policy of the ~~S~~state that conservation does not have equal footing with multiple-use and  
47 sustained-yield mandates on public lands as defined in FLPMA by Congress.
- 48 • Conservation can-not be implemented at the exclusion of other Congressionally approved uses.
- 49 • [A natural asset company may not purchase or lease state public lands](#).

- On public lands within the state, a natural asset company may not own or manage a conservation lease or purchase or lease ecosystem services.

## State Code

*State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The following are selected portions of the Utah State Code and do not represent every potential legal reference in the Code related to this section of the State Resource Management Plan or the administration of public lands.*

### State Land Use Authority

Municipal Land Use, Development, and Management Act

### Public Lands Planning

§ 63L-11-302. *Principles to be recognized and promoted.*

§ 63L-11-303. *Findings to be recognized and promoted.*

(3) transportation and access routes to and across federal lands, including all rights-of-way vested under R.S. 2477, are vital to the state's economy and to the quality of life in the state, and must provide, at a minimum, a network of roads throughout the resource planning area that provides for:

- (a) movement of people, goods, and services across public lands;
- (b) reasonable access to a broad range of resources and opportunities throughout the resource planning area, including:
  - (i) livestock operations and improvements;
  - (ii) solid, fluid, and gaseous mineral operations;
  - (iii) recreational opportunities and operations, including motorized and non-motorized recreation;
  - (iv) search and rescue needs;
  - (v) public safety needs; and
  - (vi) access for transportation of wood products to market;
- (c) access to federal lands for people with disabilities and the elderly;
- (d) and access to state lands and school and institutional trust lands to accomplish the purposes of those lands;

### State Land Use and Management Plan for Federal Lands

§ 63L-8-104. *State land-use planning and management program.*

### State of Utah Resource Development Act

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## LAW ENFORCEMENT

### Introduction

The federal government owns and administers certain lands in Utah under the auspices of the U.S. Bureau of Land Management (BLM), U.S. Forest Service (Forest Service), National Parks Service (NPS), U.S. Bureau of Reclamation (BOR), and ~~the~~ U.S. Fish and Wildlife Service (USFWS). These “public lands” are held by the federal government in a proprietary interest only. Accordingly, federal law-enforcement authority on public lands is limited to the authority delegated to it by the U.S. Constitution, specifically by Article IV, Section 3, Clause 2 (i.e., the Property Clause). Federal law enforcement is, therefore, limited to the enforcement of rules and regulations which are “needful” for the protection of the public lands. The State of Utah, as sovereign within its borders, retains full police powers on the public lands to enforce its civil and criminal laws and ordinances in the protection of the public’s health, safety, and welfare.

Questions have arisen with respect to the authorities of federal law-enforcement agents, rangers, officers, and county sheriffs to enforce state and federal laws on the public lands. This has led to breakdowns in coordination and cooperation between federal and county law enforcement agencies. Much of the needed coordination and cooperation can be established if state laws and county ordinances are enforced as state and county law, rather than as federal law adopted through federal regulations. This change in approach could be implemented through deputization of federal agents, rangers, and officers by county sheriffs pursuant to Utah Code Annotated Section 53-13-106.9 and 10.

### Economic Considerations

In light of rapid growth throughout Utah and increased outdoor recreation on public lands, the need for law enforcement and emergency medical services has never been more important. The funding associated with providing these essential services is balanced against a variety of sources, and filling these positions with trained professionals can prove challenging for agencies.

### Goals, Objectives, and Policies

It is the desire of the State of Utah to restore proper coordination and cooperation, and to better serve the public, by implementing a system of county-specific, law-enforcement agreements between county officials and each of the federal agencies that have management authority within counties, (i.e., the BLM, Forest Service, NPS, BOR, and USFWS), whereby duties and responsibilities are established and clearly defined. Such law-enforcement agreements will be facilitated and directed through law-enforcement agreements between the State of Utah and the BLM, Forest Service, and NPS. The negotiation of the terms and conditions of county-specific law-enforcement agreements will be left to each county and applicable local or regional federal agencies. However, the following basic principles shall govern:

1. The county sheriff is the chief law enforcement officer throughout the county, including on the public lands, and is charged with the following duties: (1) protect the lives, property, and rights of all people, (2) maintain order, and (3) enforce all state laws and county ordinances.
2. To the maximum extent feasible, law-enforcement efforts on the public lands shall be coordinated with the county sheriff.
3. Enforcement of all state laws and county ordinances, including arrest, investigation and prosecution, shall be under state law and state courts.



1 4. State laws and county ordinances shall not be enforced on the public lands by federal agents, rangers,  
2 or officers unless such agents have been deputized by the county sheriff, which would eliminate the need  
3 to adopt state laws and county ordinances as federal law through regulation.  
4

5 5. Any deputized federal agent, ranger, or officer making an arrest under state law or county ordinance  
6 shall, as soon as practicable, notify the county sheriff of the arrest and will in all cases turn the  
7 investigation and prosecution of the offense over to county law-enforcement authority.  
8

9 6. Should a federal agency determine that assistance is necessary in enforcing federal laws on the public  
10 lands, the federal agency may offer such enforcement to the county sheriff, who may choose whether to  
11 accept such an offer as well as the terms under which the offer is accepted.  
12

### 13 **State Code**

14  
15 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
16 *following are selected portions of the Utah State Code and do not represent every potential legal*  
17 *reference in the Code related to this section of the State Resource Management Plan or the*  
18 *administration of public lands.*  
19

### 20 **Public Safety Code**

#### 21 **§ 53-2a. Emergency Management Act**

22

## LIVESTOCK AND GRAZING

### Introduction

Livestock is generally defined as domesticated animals raised in an agricultural setting to create food, fiber, labor, or other products. According to Utah's State Code, livestock means cattle, swine, equines, sheep, camelidae, ratites, bison, goats, and domesticated elk [1]. Grazing is defined as a method of feeding livestock, whereby domestic animals consume plant material and convert it into meat, milk, and other products. The practice of raising livestock and grazing animals is considered part of agriculture.

Livestock and grazing in Utah is important for the natural, cultural, social, and economic benefits it provides. Since the mid-nineteenth century, a variety of livestock including cattle, sheep, and horses, have been and will continue to be a mainstay of Utah's agricultural economy. Many "century farms" have been designated throughout Utah. The State of Utah considers agriculture a large part of its history, customs, and culture.

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."

Throughout the early settlement period of Utah, as well as the western frontier in general, livestock grazing on federal or "public" land was undertaken without restriction. Cattle and sheep flourished on the mountain grasses, and livestock numbers soared. However, with the unregulated grazing came problems. Overgrazing, particularly by large sheep herds, denuded the land in many areas of Utah, causing erosion and watershed disasters. Constant conflicts between livestock owners arose over the use of the land and who owned the rights to graze where and when. In response to these problems, Congress passed the Taylor Grazing Act in 1934. This led to the creation of grazing districts, through preference rights, in which grazing use was apportioned and regulated. The Division of Grazing was created within the U.S. Interior Department to administer the grazing districts. This division later became the U.S. Grazing Service and was headquartered in Salt Lake City. In 1946, the Grazing Service was merged with the General Land Office to become the U.S. Bureau of Land Management (BLM). Similar legislation was later passed under the name Granger-Thye Act (1950) to regulate grazing on National Forest System lands.

After the passage of the Taylor Grazing Act, the Grazing Service, through advisory boards, created an adjudication process to determine where, when, and what type of livestock grazing would occur on public rangelands. To receive an allotment through this process, the stockman was required to have:

- (1) "commensurate base property" on which livestock could graze when not using federal lands,
- (2) an economically viable livestock operation, and
- (3) be members of the local community and support the local economic stability of the community.

With the passage of the Taylor Grazing Act came a new management structure for regulating grazing and protecting natural resources. To control animal movement and enhance grazing activity, fencing and water developments were put in place. Forage surveys were implemented to balance resource demands with range productivity and carrying capacity. The ranchers who utilized the land had a greater vested interest in their stewardship of those lands as grazing rights were created.

1 By the 1960s, regulation of public lands began to tighten as ever-more restrictive federal policies were  
2 enacted and management goals began to change. Laws such as the National Environmental Policy Act  
3 (NEPA), Endangered Species Act (ESA), National Forest Management Act (NFMA), and Federal Land  
4 Policy and Management Act (FLPMA) diverted management attention away from grazing and forage  
5 production to “environmental protection” concerns raised by special interest groups. The result has been  
6 endless environmental studies, a backlog of litigation, ongoing bureaucratic delays, heavily prioritized  
7 management of riparian areas, sensitive species and special land-status designations, and far less  
8 emphasis on range improvement activities and forage production.

9  
10 Today, federal agencies regulate livestock grazing in a manner aimed at achieving and maintaining the  
11 health of the land and sustaining resources. To achieve desired conditions, the agencies use forest and  
12 rangeland health standards as a guide. Standards describe specific conditions needed for long-term  
13 sustainability, such as the presence of streambank vegetation and adequate canopy cover. Guidelines are  
14 developed to direct management strategies that achieve or maintain healthy lands and ecosystems as  
15 defined by the standards. Grazing management strategies designed to attain these standards may include  
16 periodic rest, rotation, or deferment from specific allotment usage; water developments; and vegetation  
17 treatments that increase forage production.

18  
19 Current authorized grazing levels were established from 1940 to 1965, during which time the BLM  
20 completed livestock forage inventories to establish estimated grazing capacity. These levels have been  
21 adjusted over the years to accommodate fluctuations in production capabilities and use by other species.  
22 Livestock grazing is regulated by the use of Animal-unit Mmonths (AUMs), or Herd Mmonths  
23 (HMs) on the forest. The AUM quantifies the amount of forage needed to sustain one cow or five sheep  
24 for 1 month, while an HM is simply an occupancy measurement. One hundred AUMs/HMs would equate  
25 to 100 cows for 1 month or 10 cows grazing for 10 months. Since 1940, data from the BLM indicate that  
26 grazing AUMs for livestock have been reduced by more than two-thirds, from 2,749,000 to 675,000  
27 AUM<sup>2</sup>s in 2009 [2]. Almost as dramatic, HM numbers on Forest Service lands over the same time period  
28 have been reduced by half [3]. These reductions in AUMs/HMs from the federal agencies are a result of  
29 burgeoning regulatory restrictions, modified terms and conditions on grazing permits, inflexibility within  
30 federal policies, and numerous rangeland factors including the following: uncontrolled pinyon/juniper  
31 expansion, noxious weed invasion, altered fire regimes, reduction in the sheep industry, expansion of  
32 wildlife populations, and the overpopulation of wild horses (*please refer to the section on Wild Horses  
33 and Burros in this plan*). A new modern threat is the effort of special interest groups to eliminate grazing  
34 on public lands through aggressive marketing, lobbying, and litigation.

35  
36 During the 2006 Utah legislative session, in response to declines in grazing, the Rangeland Improvement  
37 Act was passed. The bill provided for the establishment of a State Grazing Advisory Board and six  
38 regional advisory boards to improve the grassroots voice of both private and public land grazers. A new  
39 division was then established within the Utah Department of Agriculture and Food, known as the Utah  
40 Grazing Improvement Program (GIP). The mission of GIP is to “improve the productivity, health and  
41 sustainability of our rangelands and watersheds.” The GIP program operates under the basic belief that  
42 “well planned and managed livestock grazing is the most important landscape scale tool for maintaining  
43 healthy rangelands, watersheds, and wildlife habitats” and that “healthy rangelands contribute to a healthy  
44 livestock industry and productive rural economies.”

45  
46 Grazing is one of the earliest and most important uses of public lands in Utah. This form of land use  
47 continues to be important on those same lands today. *Livestock Grazing in Utah: History and Status*, a  
48 2008 study of grazing in Utah by the Public Lands Policy Coordinating Office, showed that livestock and  
49 livestock products accounted for 75 percent of the total agricultural cash receipts in the state. This study  
50 gave clear evidence of the importance of public-land grazing to individual livestock producers and the  
51 industry as a whole, by showing (1) the number of animals raised by permit holders was much higher than

1 those without permits; (2) ranching operations with permits were more dependent on livestock production  
2 that those without; (3) permittee operations commonly involved more than one family, while non-  
3 permittee operations were single-family businesses; (4) most livestock operations were multi-generational  
4 family businesses, especially permittee-based operations; (5) livestock producers buy and sell locally,  
5 which impacts local economies more directly than other business; (6) grazing public lands reduced  
6 producers' dependency on hay as a source of feed; (7) livestock grazing has a positive influence on fire  
7 suppression; and (8) the cattle industry has become the dominant sector in Utah agriculture.

8  
9 Historically, Utah's rangeland has been highly utilized for livestock grazing and remains an important  
10 resource for the ranching industry today. Cattle and sheep ranchers typically graze during the spring and  
11 summer months in upland ranges administered by the Forest Service, BLM, and [SITLA Utah School and](#)  
12 [Institutional Trust Lands Administration](#). In fall, cattle and sheep are generally moved to lower rangeland  
13 to graze crop aftermath in irrigated, private fields and are fed hay in winter. Other ranchers utilize private  
14 rangelands year-round. Ranchers are challenged with limited water and watering facilities, invasive and  
15 noxious weeds, and yearly changes to grazing permit numbers and durations.

## 16 17 **Findings**

18  
19 *Livestock Grazing in Utah: History and Status* states, "Rangelands in Utah are primarily administered by  
20 the Bureau of Land Management (BLM) and Forest Service (FS) [4]. Data from the BLM indicate that  
21 use by domestic livestock has declined more than two-thirds over time [5]. Most of this decline has been  
22 associated with the reduction of the sheep industry. Similar data for the FS indicates that declines in the  
23 use of FS lands have not been as dramatic as on BLM lands, but usage of FS lands today is about half  
24 what it was 60 years ago."

25  
26 The report also explains that every Utah livestock producer identified by the ~~Utah office of the~~ National  
27 Agricultural Statistics Service (~~NASS~~), as well as out-of-state operators with permits to graze public lands  
28 in Utah, were sent a survey that was designed to obtain information not available elsewhere. Analysis of  
29 this data indicates the following:

30  
31 The number of animals owned by permittees is much larger than those owned by non-permittees.  
32 Permittee operations are generally more dependent on livestock production than are non-permittees.

33  
34 Most livestock operations have been owned by the same family for many years (commonly more than 50  
35 years), and a large portion plan to have a family member operate the ranch in the future. This is especially  
36 true of permittee ranches.

37  
38 A large portion of livestock producer sales are made to local firms, but an even larger percentage of their  
39 purchases are from local firms. As a result, firms in communities where livestock production is a large  
40 portion of the area's economic activity are intimately concerned with the health of the livestock industry.

41  
42 Pasture is the primary source of feed for non-permittee livestock operators when they are not being fed  
43 hay (winter), while forage from public lands is the most important source of feed for permittee operators  
44 [6]. Pasturelands are an important source of feed for all operators, but use of federal lands allows  
45 permittees to reduce their dependence on hay, ~~or~~ [and other](#), more-expensive feed sources. Without the  
46 use of federal lands, many ranching operations in Utah could not be sustained as economically viable. The  
47 most critical period of use of public lands for most permittees was during ~~the~~ summer.

48  
49 The amount of federally permitted AUMs/HMs in Utah declined four-fold between 1940 and 2005 [7].  
50 On BLM land, 2,749,000 AUMs were available in 1940, but this number was reduced to fewer than  
51 675,000 AUMs in 2009 [8]. On Forest Service land, the AUMs/HMs available decreased from 2.7 million

1 in 1940 to 614,000 in 2008 [9]. In response to these declines, the Utah legislature passed the Rangeland  
2 Improvement Act, which established the Utah Grazing Improvement Program [10]. The goals of the act  
3 are to strengthen Utah’s livestock industry, improve rural economies, enhance the environment, and to  
4 promote efficient multiple-use management of rangeland resources.

5  
6 Animal agriculture in Utah represents the single largest sector of farm income in Utah. At a value of more  
7 than \$1 billion, 25 of the state’s 29 counties report livestock as the dominant agricultural sector. [11]

8  
9 Utah ranchers are challenged with limited water and watering facilities on rangelands, especially in  
10 grazing areas in the lower elevations, which receive little precipitation. The same problem exists for  
11 wildlife. Many existing watering facilities are runoff catchment facilities or unlined ponds. Water in these  
12 facilities is usually lower in quality and has a higher concentration of dissolved solids, specifically soluble  
13 salts. Historically, cattle have also watered out of open canals used for water distribution. However, the  
14 ongoing transition from open canals and ditches to sprinkler irrigation has eliminated many open canals,  
15 leaving ranchers with fewer options for watering livestock while also reducing watering facilities for  
16 wildlife. Partnerships must be developed between ranchers, wildlife managers, and land managers to  
17 create more watering facilities for livestock as well as wildlife. The Carbon Canal Winter Water project  
18 serves as an example of successful partnering in order to improve watering facilities [12]. Such  
19 partnerships will result in greater distribution of wildlife and livestock, which will also result in improved  
20 utilization of rangeland vegetation and fewer impacts to private cropland.

21  
22 Utah’s rangeland is infested with cheat-grass, annual mustard weed, and sagebrush. The higher elevations  
23 are covered with pinion and juniper trees. Range condition inventories suggest they are producing  
24 approximately 50 percent of their potential. The main resource concerns consist of degradation and  
25 removal of native plant species, introduction of invasive species (weeds), juniper encroachment, and sheet  
26 and rill erosion.

## 27 **Economic Considerations**

28  
29 A 2016 report published by Utah State University details the significant contributions of agriculture to the  
30 state economy. The combined agricultural processing and production sectors account for 15 percent of  
31 Utah’s total economic output, or \$21.2 billion, after adjusting for multiplier effects. [13]

32  
33 From 1970 to 2015, direct cash receipts from livestock and products increased from \$1.28 billion to \$1.57  
34 billion, a 17.5 percent increase [14]. Cash receipts from livestock and products constituted 73 percent of  
35 all farm business cash receipts, making livestock the driver behind most of Utah’s agricultural economic  
36 growth. These direct cash receipts do not reflect the full amount of economic growth provided by  
37 livestock and its products due to the multiplier effect that cash receipts have once they are spent within  
38 the community.

39  
40 In total, Utah has an estimated 1,289,000 AUMs/HMs between BLM and Forest Service land. The total  
41 economic impact of an AUM/HM in 2013 was roughly \$100 [17]. Using these conservative estimates, the  
42 economic impact of federal AUMs/HMs is more than \$128 million in Utah. Consequently, federal  
43 agencies’ land-management policies directly affect a substantial portion of Utah’s economic growth [15].  
44 For example, BLM’s reductions in AUMs from historic levels constitutes an annual economic loss of  
45 roughly \$207 million. Forest Service AUM/HM reductions from historic levels have resulted in an annual  
46 economic loss of more than \$208 million. Overall, land-management decisions by federal agencies have  
47 resulted in a total annual economic loss of \$415 million. [16]

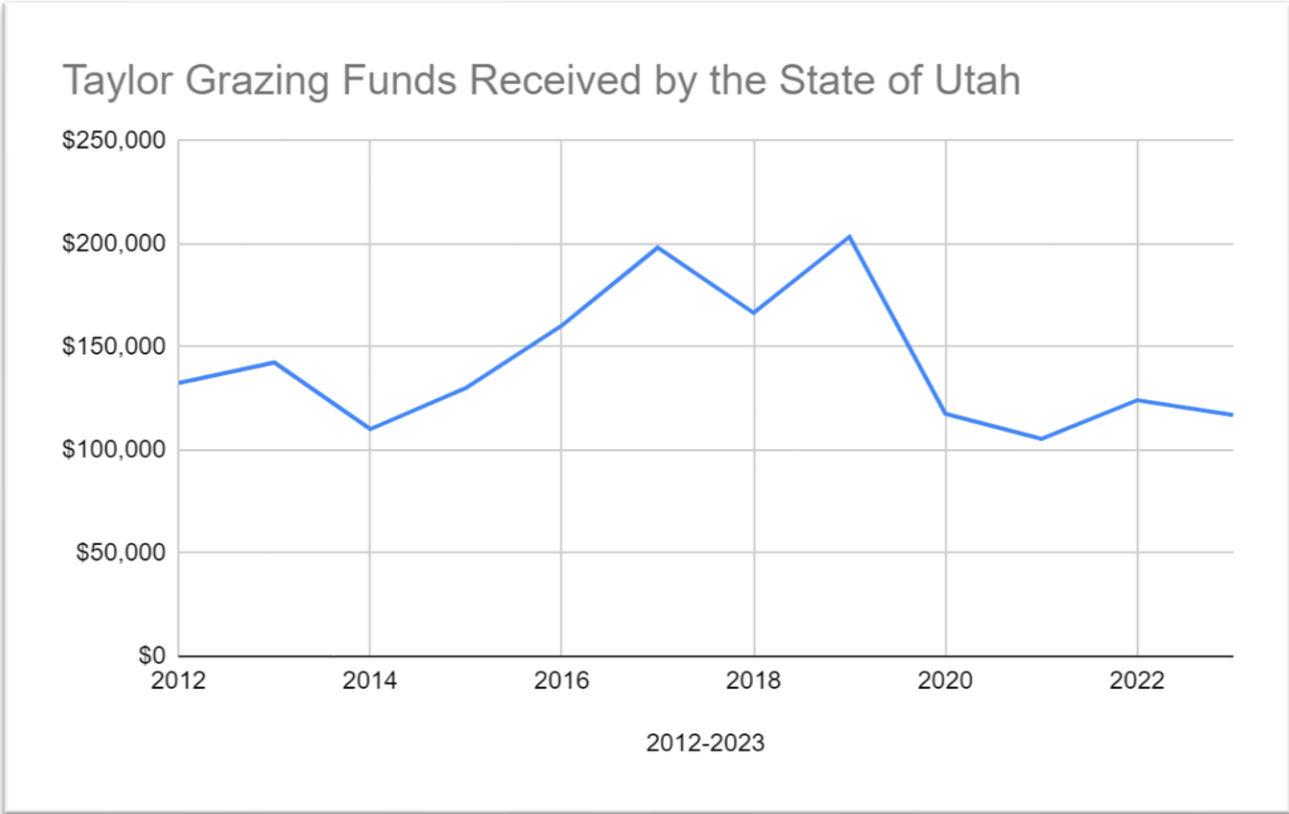
48  
49 The estimated \$128 million in annual economic value, as well as the estimated annual economic loss of  
50 \$415 million, of federal AUMs/HMs are concentrated in Utah’s rural counties. ~~Rural counties~~ which have  
51

1 the highest percentage of federally owned land in the state. The economic value that AUMs/HMs and  
2 livestock bring to Utah’s rural counties is vital because residents in those areas have a much lower median  
3 household income compared to the more-populated areas of the state [18]. The decline in federal  
4 AUMs/HMs has financially impacted Utah’s rural counties. Agriculture and livestock grazing contribute  
5 substantially to these rural economies through local buying and selling as well as employment. In  
6 addition, other industries that have traditionally spurred economic growth in rural Utah (e.g., logging and  
7 mining) vary substantially, leaving rural communities with economic uncertainty. Agriculture and grazing  
8 have provided a stable, year-round industry upon which rural economies can rely without significant  
9 booms and busts.

10  
11 Utah Department of Agriculture and Food receives a small share of Taylor Grazing funds from AUM fees  
12 to be used for range improvements.

13  
14 From 2012 to 2023, the ~~S~~state received the following amounts from the Taylor Grazing funds:

15



16  
17 In ~~2023~~ 2021, animal-production jobs averaged an annual salary of ~~\$42,800~~ ~~\$38,526~~ ~~IN~~(the national  
18 average: ~~is \$49,101~~ ~~\$44,463~~) while crop-production jobs averaged ~~\$36,027~~ ~~\$32,762~~ ~~IN~~(the national  
19 average: ~~is \$43,536~~ ~~\$40,116~~), for an overall average of ~~\$39,413~~ ~~\$35,933~~ [19]. From 1990 to 2020, wages  
20 increased by 32.8 percent in animal production and 51.7 percent in crop production [20]. Operators in  
21 animal production average the highest pay within the farming and agricultural industry. ~~Animal producers~~  
22 ~~average \$31,573 annually while the overall farm average is only \$28,792. From 1990 to 2015, the average~~  
23 ~~annual wages of animal producers in Utah has increased by 17.5 percent, from \$26,867 to \$31,573.~~

24  
25 Utah’s level of agricultural employment is at approximately the same level as 1970, showing a relatively  
26 stable number of jobs within the industry. Currently, farm jobs constitute approximately 1.0 percent of  
27 Utah’s total employment, contributing ~~20,552~~ ~~21,081~~ jobs to Utah’s economy [21]. Of the total

1 agricultural employment, ~~15,766~~15,598 jobs (0.9 ~~0.8~~ percent of total employment) are farm proprietors  
2 [22]. The majority of individuals employed in agriculture are small business owners who create jobs and  
3 generate revenue within the more-rural and generally less-affluent areas of the state.  
4

5 ~~As of 2015, Utah's level of agricultural employment is at the same levels as 1970, showing a relatively~~  
6 ~~stable number of jobs within the industry. Currently, farm employment constitutes 1.1 percent of Utah's~~  
7 ~~total employment, contributing 20,550 jobs to Utah's economy. Of the total agricultural employment,~~  
8 ~~16,177, or 0.9 percent of total employment, are farm proprietors.~~  
9

10 The majority of individuals employed in agriculture are small business owners who create jobs and  
11 generate revenue for the more rural and generally poorer areas of the state.  
12

### 13 **Utah's Watershed Restoration Initiative [23]**

14  
15 Utah's Watershed Restoration Initiative (WRI) provides a balancing influence that promotes wildlife  
16 values and supports agricultural needs. Significant investments have been made through WRI to improve  
17 rangeland health and watershed conditions. In fiscal year 2014, the Utah Legislature contributed \$3.95  
18 million to WRI. Ninety-one participating partners completed restoration of 112,987 acres of uplands and  
19 55 miles of stream and riparian areas, leveraging the legislative funds by a factor of 7-to-1. Grazing fees  
20 paid by allotment owners and sportsmen-generated funding, which plays an important role in the WRI.  
21 Counties in general appreciate the benefits that are enabled through WRI habitat-restoration projects. The  
22 long-term results of the WRI will be measured in reduced wildfire acreage and suppression costs, reduced  
23 soil loss from erosion, reduced sedimentation and storage loss in reservoirs, improved water quality and  
24 yield, improved wildlife populations, reduced risk of additional federal listing of species under the  
25 ~~Endangered Species Act~~ESA, improved agricultural production, and resistance to invasive plant species.  
26 To participate effectively, counties ~~need their staff to~~staff members must attend meetings of the WRI  
27 regional teams, expressing their views and advocating for the kinds of watershed-restoration efforts they  
28 feel are most important.  
29

### 30 **Goals, Objectives, and Policies**

31  
32 All federal agency resource management planning on public lands must involve active participation from  
33 state agencies, local government, and grazing permittees as contributing members. When possible, state  
34 and local governments must be included as members of the interdisciplinary teams for each project. All  
35 federal policies and management plans must acknowledge and consider the cultural, economic, and  
36 environmental importance of the livestock industry to the state and its inhabitants.

37 In order to be consistent with State Code 63L-11-302 § 13, the subsequent goals, objectives, and policies  
38 have been revised through coordination with stakeholders to balance the foraging needs of livestock and  
39 wildlife.  
40

#### 41 **Goal(s):**

- 42  
43 • Balance the grazing and livestock needs on public lands in an equitable manner that benefits  
44 livestock producers, wildlife populations, and the natural environment.  
45

#### 46 **Objectives:**

- 47  
48 1. Ensure that AUMs/HMs within Utah remain at or above current levels.
- 49 2. Employ range improvements and forage restoration-projects to return active AUMs/HMs to  
50 permitted levels.

3. Utilization is not a land health standard. It is scientifically inappropriate to incorporate utilization as a land health standard. It is equally inappropriate to use utilization as a compliance metric.
4. Oppose the relinquishment, retirement, or restriction of AUMs in favor of conservation, wildlife, and other uses, and the transfer of AUMs to wildlife for supposed reasons of rangeland health.
5. Uphold the preference for domestic grazing over alternate forage uses in established grazing districts while upholding practices that optimize and expand forage for grazing and wildlife.
6. Grazing within the state of Utah should be performed according to best grazing practices and sound scientific management of local environments. Livestock operators should be given maximum flexibility concerning seasons of use, stocking rates, and rangeland-improvement decisions.
7. Call upon federal agencies to reduce the time required to implement range improvements, grazing permit renewals, and adjustments to stocking rates and seasons of use. Encourage expedited environmental documentation (environmental impact statements and environmental assessments) to give livestock operators more certainty and flexibility in their operations.
8. Encourage ~~National Environmental Policy Act~~ NEPA processes that establish a reasonable set of desired conditions for grazing allotments and allow permittees maximum flexibility in stocking rates, range improvements, and seasons of use in managing to those standards.
9. Improve vegetative health on public and private lands through range improvements, prescribed fire, vegetation treatments, and active management of invasive plants and noxious weeds.
10. Actively remove pinyon-juniper encroachment due to its substantial consumption of water and its detrimental effect on sagebrush, other vegetation, grazing, and wildlife [24].
11. Foster trusting relationships with local BLM rangeland specialists ~~and~~ Forest Service rangers, and state agency personnel to improve the management of federal lands within the state.
12. Return the majority of decision-making authority to local BLM and Forest Service personnel, rather than locations and persons outside of Utah.
13. Protect historic trailing rights, as these rights are critical for ingress and egress by livestock producers moving livestock on the range.
14. Support the use of best-available science to establish grazing AUM/HM levels and seasons of use.

#### Policies:

- A grazing allotment on federal public lands is a valid existing right for purposes of federal land withdrawals when the owner of the grazing allotment meets the requirements described in Section 63L-8-404 (House Bill 363, 2024).
- Because approximately ~~60~~64 percent of Utah is made up of federal lands, the state's livelihood is substantially affected by the policies of land-management agencies. As such, it is the ~~s~~State of Utah's policy that federal land-management agencies work closely and cooperatively with the state to ensure access to public lands.
  - Include state agency personnel as members of interdisciplinary teams when developing land-use plans.
  - Allow the state ~~a more-of-a~~ a constructive role in drafting land-use plans, rather than a reactionary role.
- Support the concept of multiple-use and sustained-yield~~s~~ on public lands. Livestock grazing is an integral part of the multiple-use concept. Reductions of livestock numbers through frivolous lawsuits and barriers to infrastructure improvements and maintenance necessary for effective grazing management are unacceptable. It is the State of Utah's policy:
  - That BLM and Forest Service do not participate in sue and settle agreements with other organizations without properly consulting the state.



- To oppose the culture of sue and settle as a means to limit access to public lands, slow down range improvement projects, and drain limited resources from land-management agencies.
- Support and value the ranching industry as an integral part of Utah’s history, culture, and heritage. Ranching and agriculture are recognized as a cultural resource within the state of Utah.
- Adopt a stance of not only “no-net-loss” with regard to grazing AUMs/HMs on federal lands, but also a stance that supports the expedited return of all permitted AUMs/HMs to active status at the earliest opportunity.
  - Active AUMs/HMs within the state must remain at or above current levels unless a scientific need for temporary reduction is demonstrated to the satisfaction of state officials.
  - Employ strategic and targeted annual rangeland health evaluations as a tool for returning all permitted AUMs to active status as range conditions improve.
  - In the case that AUMs/HMs are temporarily reduced, these reductions are reinstated at the earliest possible moment once vegetative health has been restored to its previous levels.
- Support the use of the best-available science to establish grazing AUM/HM levels.
  - In the case of increased forage availability and upward stable vegetative trends, the state supports a subsequent increase in domestic livestock AUMs/HMs.
  - Effective monitoring must occur to achieve healthy rangelands and a vibrant diversified economy in Utah.
- Encourage upward and stable trends in vegetation and soil condition on public lands in Utah.
  - This is best achieved through active management by federal agencies and public land users of all federal lands including national forests, national parks, areas of critical environmental concern, and wilderness areas.
  - The state supports rapid removal of all invasive plant species and noxious weeds on both public and private lands.
  - The state supports the active removal of pinyon-juniper encroachment on other ecosystems, such as decadent sagebrush, due to its consumption of water, detrimental effects on vegetation and available forage, and its negative effects on wildlife habitat.
- Supports prompt approval by land-management agencies of all range improvements, increased water infrastructure, and vegetation treatments to benefit domestic livestock, wildlife, and consequently the health of federal lands.
  - Livestock operators are encouraged to employ sustainable, best-management practices in managing their livestock to improve the health of public lands in ~~the state of~~ Utah.
  - Livestock operators are also encouraged to monitor and keep records of forage yield, utilization rates, the class of livestock being run, exact dates of use, and additional information concerning land health to help facilitate continued and increased livestock grazing on public lands.
  - Support the active management of wild horse and burro populations to remove excessive populations from rangelands. The current population of wild horses and burros within the state is unacceptable and ~~needs to~~ must be managed to appropriate management levels ~~(AML)~~.
    - *please refer to the Wild Horses and Burros section in this plan*
- Assume a policy preference for domestic grazing over alternate forage uses in established grazing districts, while upholding management practices that optimize and expand forage for grazing and wildlife.
  - The state supports quickly and effectively adjusting wildlife population goals and population census numbers in response to variations in the amount of available forage caused by drought or other climatic adjustments, giving due regard to the needs of the

1 livestock industry and the need to protect the decline of a wildlife species to a point of  
2 listing under the terms of the ~~Endangered Species Act~~ESA.

- 3 • When rangeland improvement practices increase a grazing allotment’s forage beyond the  
4 total permitted forage use that was allocated to that allotment in the last federal land-use  
5 plan or allotment management plan still in existence as of January 1, 2005, the state  
6 supports allocating a reasonable and fair portion of the excess to ~~excess to~~wildlife as  
7 recommended by a joint, evenly balanced committee of livestock and wildlife  
8 representatives that are appointed and constituted by the ~~G~~Utah governor for that  
9 purpose. These decisions will be consistent with Title 23A (Utah Wildlife Code) and the  
10 authority granted to the Wildlife Board and Title 4 (Utah Agricultural Code).
  - 11 ○ Wildlife habitat ~~needs to~~must be managed in a manner that improves vegetative health,  
12 maintains adequate forage at permitted levels for domestic livestock, and ensures proper  
13 water quality.
  - 14 ○ The state opposes the relinquishment of AUMs/HMs as well as the transfer of  
15 AUMs/HMs for conservation, wildlife, supposed rangeland health, and other uses.
  - 16 ○ In established grazing districts, AUMs/HMs that have been reduced due to rangeland  
17 health concerns should be restored to livestock when rangeland conditions improve, and  
18 should not be converted to wildlife or other uses.
  - 19 ○ Managing predators to appropriate levels is vital to ensure that ranchers do not face losses  
20 through predation of livestock. Predators that repeatedly prey on livestock should be  
21 relocated or be eliminated and ranchers compensated for their losses.
- 22 • The designation of endangered species or critical habitat must be proven through scientifically  
23 sound evidence. This research should be conducted in collaboration and partnership with the State  
24 of Utah.
  - 25 ○ All industries must be considered and collaborated with when considering the designation  
26 of an endangered, sensitive, or any other type of at-risk species.
  - 27 ○ Collaboration should include consideration of the economic and social costs in making  
28 any endangered, threatened, or sensitive species determinations.
  - 29 ○ Proven unoccupied critical habitat for endangered, threatened, or sensitive species does  
30 not need to be managed as if the species are present.
- 31 • Support private ownership of water rights.
  - 32 ○ Adequate private water rights for livestock and agricultural uses is supported and  
33 protected by the state.
  - 34 ○ Grazing permit renewals shall not be withheld by federal agencies as a means to acquire  
35 water rights within the state.
  - 36 ○ Water ~~R~~ights held by federal agencies where beneficial use is maintained by grazing  
37 domestic livestock shall be expressly reserved and used for domestic livestock grazing on  
38 allotments and subject to forfeiture if grazing is reduced or eliminated.
  - 39 ○ The state will support the ~~Grazing Improvement Program~~GIP and any associated projects  
40 that improve range conditions, water availability, or other grazing improvement  
41 activities.
- 42 • Recognize and support the use of public lands grazing as a tool to manage wildfire risk. Through  
43 grazing, fuel loads are reduced, resulting in a decreased risk of catastrophic wildfires.
- 44 • Support the use of targeted grazing alongside other forms of treatment to suppress, manage, and  
45 eradicate noxious weeds. Invasive and noxious weeds reduce rangeland health and available  
46 forage for livestock and wildlife.
- 47 • Support the use of the “Good Neighbor” ~~p~~Program to partner with federal agencies to better  
48 manage forage, fiber, and water on federal lands in Utah.
- 49 • Support policies such that, when range-monitoring data are collected from “key areas” or  
50 important ecological sites chosen to represent the effects of grazing, the information cannot be

1 extrapolated to represent the area as a whole, and shall not be used for establishing range trends  
2 or influencing management actions.

- 3 • Follow the provisions of R.S. 2477, in which claims shall be resolved in Utah’s counties as  
4 expeditiously as possible.
- 5 • Develop policies in which monitoring systems are developed to separate resource use by species  
6 (e.g., wild horses, wildlife, or livestock) to inform management decisions. If a resource problem  
7 is occurring, the source of the problem must be positively identified in order to tailor a proper  
8 management response.
- 9 • The State [of Utah](#) does not support the permanent retirement of any grazing allotment.
- 10 • Insist that vacant grazing allotments are assigned to permittees affected by fire, large energy-  
11 development projects, or other resource-disrupting activities that will cause economic disruption  
12 to permittees.
- 13 • Livestock trailing rights and easements must be protected to ensure the viability of ranching  
14 operations. Such trails are critical for moving livestock across rangelands and to markets.
- 15 • There are established Utah Grazing Agricultural Commodity Zones (Utah Code 63J-8-105.8) in  
16 the counties of Beaver, Emery, Garfield, Kane, Piute, Iron, Sanpete, San Juan, Sevier,  
17 Washington, and Wayne for the purpose of:
  - 18 (a) preserving and protecting the agricultural livestock industry from ongoing  
19 threats;
  - 20 (b) preserving and protecting the history, culture, custom, and economic value of the  
21 agricultural livestock industry from ongoing threats; and
  - 22 (c) maximizing efficient and responsible restoration, reclamation, preservation,  
23 enhancement, and development of forage and watering resources for grazing and wildlife  
24 practices and affected natural, historical, and cultural activities.

## 25 26 **State Code**

27  
28 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
29 *following are selected portions of the Utah State Code and do not represent every potential legal*  
30 *reference in the Code related to this section of the State Resource Management Plan or the*  
31 *administration of public lands.*

## 32 33 **Public Lands Planning**

34  
35 **§ 63L-11-302.** *Principles to be recognized and promoted.*

36  
37 **§ 63L-11-303.** *Findings to be recognized and promoted.*

38  
39 (3) transportation and access routes to and across federal lands, including all rights-  
40 of-way vested under R.S. 2477, are vital to the state’s economy and to the quality of life  
41 in the state, and must provide, at a minimum, a network of roads throughout the resource  
42 planning area that provides for:

- 43 (a) movement of people, goods, and services across public lands;
- 44 (b) reasonable access to a broad range of resources and opportunities  
45 throughout the resource planning area, including:
  - 46 (i) livestock operations and improvements;
  - 47 (ii) solid, fluid, and gaseous mineral operations;
  - 48 (iii) recreational opportunities and operations, including motorized  
49 and non-motorized recreation;
  - 50 (iv) search and rescue needs;
  - 51 (v) public safety needs; and

- (vi) access for transportation of wood products to market;
- (c) access to federal lands for people with disabilities and the elderly;
- (d) and access to state lands and school and institutional trust lands to accomplish the purposes of those lands;

**State Land Use and Management Plan for Federal Lands**

**§ 63L-8-104.** *State land-use planning and management program.*

**Department of Agriculture**

**§ 4-2-102.** *Department created.*

(1) There is created within the state government the Department of Agriculture and Food.

(2) The department created in Subsection (1) is responsible for the administration and enforcement of all laws, services, functions, and consumer programs related to agriculture in this state as assigned to the department by the Legislature.

**Uniform Agriculture Cooperative Association Act**

**§ 3-1-1.** *Declaration of policy.*

“It is the declared policy of this state, as one means of improving the economic position of agriculture, to encourage the organization of producers of agricultural products into effective associations under the control of such producers, and to that end this act shall be liberally construed.”

**Livestock Dealers’ Act**

**§ 4-7-102.** *Purpose declaration.*

The Legislature finds that the public interest requires regulation of the sale of livestock between the producer and a person who purchases livestock for resale to protect the producer from unwarranted hazard and loss in the sale of livestock.

**§ 4-7-104.** *Unlawful to act as an agent or dealer without license—Exception.*

Except as exempted by Section 4-7-105, no person may act as an agent or dealer in this state without being licensed under this chapter.

**Agriculture Fair Trade Act**

**§ 4-8-102.** *Purpose declaration.*

(1) The Legislature finds and declares that in order to preserve the agricultural industry of this state it is necessary to protect and improve the economic status of persons engaged in the production of products of agriculture.

(2) To carry out the policy described in Subsection (1), the Legislature determines it necessary to regulate the production and marketing of such products and to prohibit unfair and injurious trade practices.

(3) This chapter shall be liberally construed.

**Conservation Commission Act**

**§ 4-18-102.** *Findings and Declarations – Duties.*

- 1 (1) In addition to the policy provided in Section 4-46-101, the Legislature finds and  
2 declares that:
- 3 (a) the soil and water resources of this state constitute one of the state's basic  
4 assets; and
- 5 (b) the preservation of soil and water resources requires planning and programs to  
6 ensure:
- 7 (i) the development and use of soil and water resources; and  
8 (ii) soil and water resources' protection from the adverse effects of wind  
9 and water erosion, sediment, and sediment related pollutants.
- 10 (2) The Legislature finds that local production of food is essential for:
- 11 (a) the security of the state's food supply; and  
12 (b) the self-sufficiency of the state's citizens.
- 13 (3) The Legislature finds that sustainable agriculture is critical to:
- 14 (a) the success of rural communities;  
15 (b) the historical culture of the state;  
16 (c) maintaining healthy farmland;  
17 (d) maintaining high water quality;  
18 (e) maintaining abundant wildlife;  
19 (f) high-quality recreation for citizens of the state; and  
20 (g) helping to stabilize the state economy.
- 21 (4) The Legislature finds that livestock grazing on public lands is important for the proper  
22 management, maintenance, and health of public lands in the state.
- 23 (5) The Legislature encourages each agricultural producer in the state to operate in a  
24 reasonable and responsible manner to maintain the integrity of soil, water, and air.
- 25 (6) The department shall administer the Utah Agriculture Certificate of Environmental  
26 Stewardship Program, created in Section 4-18-107, to encourage each agricultural producer in  
27 this state to operate in a reasonable and responsible manner to maintain the integrity of the  
28 state's resources.
- 29 (7) The Legislature finds that soil health is essential to protecting the state's soil and  
30 water resources, bolstering the state's food supply, and sustaining the state's agricultural  
31 industry.

### 32 33 **Plant Pest Emergency Control Act**

### 34 35 **State of Utah Resource Management Plans for Federal Lands**

36  
37 **§ 63J-8-105.8.** *Utah grazing agricultural commodity zones established.*

### 38 39 **References:**

- 40 1. [https://le.utah.gov/xcode/Title4/4.html?v=C4\\_1800010118000101](https://le.utah.gov/xcode/Title4/4.html?v=C4_1800010118000101)  
41 2. <https://ag.utah.gov/utah-grazing-improvement-program/history-of-grazing-in-utah/>  
42 3. <https://ag.utah.gov/utah-grazing-improvement-program/history-of-grazing-in-utah/>  
43 4. <https://ag.utah.gov/utah-grazing-improvement-program/history-of-grazing-in-utah/>  
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# MINING AND MINERAL RESOURCES

## Introduction

Mineral resources are raw materials extracted from the earth and used to manufacture many of the products that make modern society possible. Minerals resources are used in the manufacture and production of buildings, roads and highways, automobiles, electricity, and countless other goods and benefits for consumers. Mineral resources require varying levels of effort, processing, and refining, which are often dictated by their end use. As society changes and advances, additional mineral resources will be required. For instance, the transition to renewable energy will require substantial additional production of copper, lithium, cobalt, rare-earth elements (REEs), and others.

The abundant mineral resources in Utah have proven to be a great benefit to the people of Utah and the United States for more than 170 years. The production of salt from ~~the~~ Great Salt Lake and lime products were some of the state's first commercial products, which resulted from operations that began shortly after Mormon settlers arrived in the Salt Lake Valley in 1847. Most of the buildings constructed after 1872 at Fort Douglas were constructed of sandstone from nearby Red Butte Canyon, and many other homes and buildings throughout the state were constructed of various types of stone from other quarries [1]. Commercial-scale production of metals, consisting primarily of gold and silver, began in 1865. Copper and lead production reached commercial levels in 1870 and, together with the precious metals, reached a total value of over \$1 million ~~dollars~~ that year [2]. The late 1800s also saw the development of Utah's famous Bingham mining district. After the transcontinental railroad was completed in 1869, a number of branch lines were constructed, and this contributed to the increase in metal production that pushed total extractive industry values to more than \$100 million by 1917 [3]. Simultaneously, a number of large smelters were constructed in the Salt Lake Valley, mostly just after the turn of the century. These new facilities helped to establish Utah as a major regional mining and smelting center by the early 1900s. Since that time, Utah's mining industry has continued to expand and is an important producer of numerous mineral resources.

Currently, mining in Utah occurs within a complex configuration of federal, state, and privately-owned lands. As a result, regulation and development of Utah's mineral resources are managed by various state and federal agencies, including the following: the Utah Division of Oil, Gas and Mining (DOGM); U.S. Bureau of Land Management (BLM); U.S. Forest Service (Forest Service); Utah Department of Environmental Quality; Utah School and Institutional Trust Lands Administration; and Utah Division of Forestry, Fire and State Lands.

Mining in Utah is regulated primarily by DOGM. Their mission is to regulate the exploration and development of coal and non-coal minerals in a manner which [4]:

- encourages responsible reclamation and development;
- protects correlative rights;
- prevents waste; and
- protects human health and safety, the environment, and the interests of the state and its citizens.

In 1975, the Utah Legislature assigned DOGM the responsibility for administration of the Mined Land Reclamation Act. The act's primary function was to "prevent conditions detrimental to the general safety and welfare of the citizens of the state of Utah" that could result from activities of the mining industry in the state. Permitting, inspection, and enforcement procedures initiated by the act ensure proper mine operation and the reclamation of affected lands. The act also made it illegal for mines to be abandoned without reclamation.

1 Implementation of the Mined Land Reclamation Act was initially paid for solely with Utah state general  
2 funds. A specific law to address the reclamation of coal mines, the Utah Coal Mining and Reclamation  
3 Act, was passed in 1979, and in 1981 Utah received primacy for the regulation of coal mining and  
4 reclamation under the federal Surface Mining Control and Reclamation Act of 1977 (SMCRA). In March  
5 1987, DOGM assumed sole responsibility under a cooperative agreement for permitting, inspection, and  
6 enforcement with respect to mining on federal lands in Utah. Federal money is now provided for  
7 regulation of coal mining and reclamation on federal and nonfederal lands. Funds for the regulation of  
8 non-coal minerals exploration and development continue to come primarily from Utah’s general fund but  
9 are supplemented by a modest permit-fee program implemented in 1998.

10  
11 The DOGM’s Abandoned Mine Reclamation Program (AMRP) conducts reclamation of abandoned mine  
12 sites under Title IV of SMCRA. Funds for this program come from appropriations of federal fees paid by  
13 the coal industry, based on a per-ton produced rate. Modest funding agreements with private and federal  
14 partners also supplement some of the work in the Abandoned Mine Reclamation Program. The AMRP  
15 works to protect the public from the dangers of old mines by sealing off access to openings and cleaning  
16 up waste. Old mining sites can be intriguing to the public but can be unstable, contain dangerous gases,  
17 and present other hazards. Today there are an estimated 17,000 mine openings scattered across Utah. [5]

18  
19 The Minerals Program within DOGM regulates all non-coal mining operations in the state with a few  
20 exceptions. The mission of the Minerals Regulatory Program is to regulate exploration for, and  
21 development and reclamation of, non-coal mineral resources of the state in conformance with the Utah  
22 Mined Land Reclamation Act, UCA 40-8 in a manner which [6]:

- 23  
24 • supports the existence of a viable minerals mining industry to preserve the economic and physical  
25 well-being of the state and the nation;  
26 • safeguards the environment while protecting public health and safety; and  
27 • achieves the successful reclamation of lands affected by mineral mining activities.

28  
29 From Rio Tinto’s Bingham Canyon mine; (the largest open-pit mine in ~~the state, Utah~~) to small operations  
30 mining for trilobite fossils, the Minerals Regulatory Program staff works to ensure mining operation  
31 procedures are followed. This includes verifying operators work within their permit boundaries, ensuring  
32 that mining operations pose no threat to public safety or the environment, and holding appropriate  
33 reclamation fees or bonds in the event that they are needed.

34  
35 The mission of the Utah Geological Survey’s (UGS) ~~mission~~ is to provide “timely scientific information  
36 about Utah’s geologic environment, resources, and hazards,” and it acts as the primary repository for  
37 mineral resource information across the state. The UGS generates, collects, compiles, and distributes  
38 mineral-resource data and information to public, private, and government users. In those roles, the UGS  
39 conducts original research on Utah’s mineral resources but also preserves existing data made available  
40 from other sources, such as industry. In ~~2023~~ 2020, the UGS produced Circular ~~135~~ 429, *Critical*  
41 *Minerals of Utah, Second Edition*. Much of the data in this section is derived from this report. [7]

42  
43 The UGS has partnered with the BLM to provide a Mineral Resources web application that includes  
44 information on Utah’s mineral resources including critical minerals ~~and other mineral occurrences in~~  
45 ~~Utah~~. [8]

## 46 47 **Findings [9]**

48  
49 Utah hosts a variety of mineral resources and produces significant quantities of base metals, precious  
50 metals, and industrial minerals. The U.S. Geological Survey (USGS) ranked Utah 8th in the nation for  
51 nonfuel (metals and industrial minerals) mineral production value in 2020, accounting for nearly 4



1 percent of the ~~U.S.~~ total [in the United States](#) [10]. Utah consistently ranks in the top 10 states for  
2 production value of nonfuel minerals.

3  
4 The UGS estimates that the production value of Utah’s mines, excluding coal, was \$3.2 billion in 2020.  
5 Base-metal production contributed \$1.5 billion to that total and includes copper, magnesium, beryllium,  
6 and molybdenum. Notably, copper accounted for 57 percent of Utah’s base-metal production value in  
7 2020. Precious metals produced in Utah include gold and silver, and 2020 production was valued at \$350  
8 million. Utah also produced several industrial mineral commodities, including sand ~~and~~, gravel, crushed  
9 stone, salt, potash, cement, lime, phosphate, lithium, uintaite (Gilsonite®), clay, and gypsum. The  
10 estimated value of Utah’s industrial mineral production in 2020 was \$1.4 billion.

11  
12 Notably, Utah is home to the Bingham Canyon mine, which is a world-class copper-molybdenum-gold  
13 porphyry deposit. The great majority of Utah’s copper, gold, and silver production, and all of its  
14 molybdenum production, comes from the Bingham Canyon mine. The mine and associated refineries and  
15 facilities are located on the west bench of the Salt Lake Valley in the Oquirrh Mountains. Utah also  
16 remains the only state to produce magnesium metal, beryllium concentrate, potassium sulfate, and uintaite  
17 (Gilsonite®); of these mineral commodities, magnesium [metal](#) and beryllium are included in the USGS’s  
18 2022 list of critical minerals [11]. Lithium, also deemed a critical mineral, was produced in Utah for the  
19 first time in 2020, making Utah one of only two lithium-producing states.

20  
21 Currently, there are more than 400 non-coal mines with active permits from DOGM statewide [12]. The  
22 metals and industrial minerals sections below detail the most significant mineral resources mined in Utah.

## 23 Metals

24  
25  
26 **Copper.** Copper is the largest single commodity contributor to Utah’s non-fuel mineral portfolio. The  
27 Bingham Canyon mine is, by far, the primary producer of copper in Utah, and in 2020 it produced 309  
28 million pounds (154,000 short tons), which was valued at \$864 million. Smaller producers have  
29 intermittently operated in San Juan and Beaver counties in recent years. Utah copper is used to create  
30 various alloys for numerous products, including electrical wiring, electronic components, and pipe for  
31 plumbing, refrigeration, and heating systems.

32  
33 **Magnesium.** Utah is home to the ~~U.S.~~ Magnesium plant in Tooele County, which is the only facility  
34 producing magnesium metal from a primary source within the United States. Magnesium chloride-rich  
35 brine is derived from Great Salt Lake and is converted to magnesium metal using evaporation and an  
36 electrolytic process. The plant has a production capacity of approximately 70,000 tons of magnesium  
37 metal per year. This metal is used in industrial applications, (such as a constituent of aluminum-based  
38 alloys for aerospace and defense applications,) and ~~also~~ to add strength, decrease weight, and increase  
39 corrosion resistance of alloys for desulfurization of iron and steel. Other potential magnesium resources [in](#)  
40 [brines](#) are located in the Great Salt Lake Desert/Bonneville Salt Flats, Sevier Lake, and the Paradox  
41 Basin.

42  
43 **Beryllium.** Utah currently remains the sole producer of beryllium ore in the United States. Materion  
44 Natural Resources, Inc., extracts bertrandite, a beryllium mineral, from the Spor Mountain area in Juab  
45 County, and then produces bertrandite concentrate at their mill in Millard County. The beryllium mill  
46 processes the bertrandite ore into beryllium hydroxide, which is then shipped out of state for further  
47 refining. In 2020, beryllium production from Utah totaled 333,840 pounds (167 tons), having a value of  
48 \$94 million. The Spor Mountain mine is the largest producer of beryllium in the world, accounting for  
49 approximately 63 percent of the world’s production in 2020. The proven and probable reserves at Spor  
50 Mountain are estimated to be enough to maintain mining at current production levels for another 75 years.  
51 Beryllium is an essential component in aerospace and defense applications due to its light weight and its

1 ability to withstand significant temperature variations and mechanical distortion. It is also an important  
2 component for automotive and consumer electronics, telecommunications infrastructure, and energy  
3 applications.

4  
5 **Gold and Silver.** Most of Utah’s gold and silver are produced from the Bingham Canyon mine. However,  
6 lesser amounts of both metals are also produced at the Kiewit (Tooele County) and Trixie (Juab County)  
7 mines. Utah produced 175,043 troy ounces of gold in 2020 valued at \$310 million. Utah produced 2.2  
8 million troy ounces of silver in 2020 valued at \$44 million.

9  
10 **Molybdenum.** Molybdenum is produced in Utah exclusively from the Bingham Canyon mine. In 2020,  
11 Bingham produced 45,000,000 pounds (22,490 tons) of molybdenum, valued at \$408 million.  
12 Molybdenite, the ore mineral of molybdenum, is not refined at Bingham Canyon. The molybdenite is  
13 concentrated, dried, and shipped to other refineries in Arizona and Mexico. Molybdenum is used  
14 primarily in alloys, particularly in the stainless-steel alloys that are widely used in the petroleum industry.

15  
16 **Iron.** Utah intermittently produces iron from the Iron Springs district in Iron County and recently  
17 resumed production following a shutdown in 2014. The Iron Springs district has historically been the  
18 largest iron producer in the western United States. Iron mineralization at the Black Iron open-pit mine,  
19 which restarted operations in 2020, occurs as massive magnetite skarn/replacement deposits adjacent to  
20 Miocene monzonite laccoliths.

## 21 Industrial Minerals

22  
23  
24 **Potash.** Utah is one of only two potash-producing states in the country, and three locations in Utah  
25 produce potash. Compass Minerals in Ogden produces potassium sulfate from Great Salt Lake brine,  
26 Intrepid Potash-Wendover produces potassium chloride from shallow subsurface brines in the Great Salt  
27 Lake Desert, and Intrepid Potash-Moab produces potassium chloride from a solution mine targeting deep,  
28 subsurface evaporites of the Pennsylvanian-age Paradox Formation. In 2020, potash production in Utah  
29 totaled 461,000 short tons, which was valued at \$227 million. Uniquely, Utah produces two types of  
30 potash: potassium sulfate and potassium chloride. Potassium sulfate has a significantly higher ([more than](#)  
31 \$376 per ton in 2020) market value than potassium chloride. As previously noted, Utah is the sole  
32 domestic producer of potassium sulfate. The primary use of both types of potash is fertilizer; however,  
33 potash is also used in the production of soap, glass, ceramics, and batteries, and it is a component in  
34 drilling mud used in the oil and gas industry.

35  
36 **Sand and Gravel, Crushed Stone, and Dimension Stone.** Sand and gravel, crushed stone, and  
37 dimension stone are produced by many private, county, state, and federal entities in Utah. These  
38 commodities are produced from several types of unconsolidated deposits. Sand and gravel and crushed  
39 stone, known generically as construction aggregate, are widely used for concrete aggregate, road  
40 construction, asphalt aggregate, fill, and for other construction uses. During 2020, approximately 40  
41 million short tons of sand and gravel were produced in Utah, worth an estimated \$309 million, and about  
42 14 million short tons of crushed stone were produced, worth \$105 million [13]. Several thousand tons of  
43 dimension stone were also produced. A strong construction market in Utah, particularly in the residential  
44 sector, has kept demand for construction aggregates relatively high for the past several years.

45  
46 **Salt.** Utah has extensive salt resources. Salt produced in Utah is used for a variety of purposes including  
47 road deicing, water treatment, and agricultural and industrial applications. ~~One~~ [Two operations in central](#)  
48 [Utah, produces food-grade salt: Morton Salt from Great Salt Lake and](#) Redmond Minerals, ~~also produces~~  
49 ~~food-grade salt~~ from their underground operation [in central Utah](#). Utah salt production in 2020 amounted  
50 to approximately 3.3 million short tons and had a production value estimated at \$207 million. About 76  
51 percent of the salt was produced from Great Salt Lake brine by three operators that use evaporation ponds

1 for production: Compass Minerals Ogden, Cargill Salt, and Morton ~~International~~ Salt. The remaining 24  
2 percent came from Redmond Minerals, Intrepid Potash-Moab, Intrepid Potash-Wendover, and Willow  
3 Creek Salt. Redmond Minerals and Willow Creek Salt use conventional methods to mine rock salt, and  
4 Intrepid uses evaporation ponds to produce salt. Intrepid Potash-Wendover primarily extracts salt from  
5 shallow subsurface brines, and Intrepid Potash-Moab solution mines salt from deep subsurface salt beds.  
6

7 **Portland Cement, Lime, and Limestone.** Multiple mining operations in Utah mine limestone for  
8 purposes beyond construction aggregate to create value-added products such as Portland cement and lime.  
9 Ash Grove Cement and LafargeHolcim produced about 1.8 million short tons of Portland cement in Utah  
10 during 2020, having an estimated value of \$207 million. Ash Grove Cement operates the Leamington  
11 quarry and plant east of Leamington in Juab County, whereas LafargeHolcim operates the Devils Slide  
12 quarry and plant east of Morgan in Morgan County. Besides mining limestone for Portland cement, Ash  
13 Grove and Holcim also produce small amounts of sandstone, clay, and shale, which are lesser feedstock  
14 for their cement plants. During 2020, Graymont Western U.S. was the sole producer of lime in Utah, and  
15 they produced high-calcium quicklime and dolomitic quicklime from their quarry and plant in the Cricket  
16 Mountains in Millard County. Lime is used for flue-gas desulfurization, steel production, and a variety of  
17 other construction, chemical, and industrial applications. Limestone is also mined for flue-gas  
18 desulfurization at coal-fired power plants and “rock dust,” used to coat the walls of coal mines to keep  
19 coal dust from accumulating.  
20

21 **Phosphate.** Utah is one of four states in the country that produces phosphate rock. Most of the phosphate  
22 rock mined domestically is used to manufacture phosphoric acids to make ammonium phosphate  
23 fertilizers and animal feed supplements. Simplot Phosphates is the major phosphate producer in Utah,  
24 mining the Meade Peak Member of the Permian Phosphoria Formation. Their phosphate operation is 12  
25 miles north of Vernal in Uintah County. In 2020, the mine produced nearly 3.2 million short tons of ore,  
26 yielding about 1.2 million short tons of phosphate concentrate after processing. The concentrate is  
27 transported in slurry through a 96-mile underground pipeline to the Simplot fertilizer plant near Rock  
28 Springs, Wyoming. A few thousand tons of organically certified phosphate is produced from another  
29 mine in Utah County.  
30

31 **Uintaite (Gilsonite®).** Uintaite, also known as Gilsonite®, is a shiny, black, solid hydrocarbon that occurs  
32 in a swarm of narrow, but laterally and vertically extensive veins in the Uinta Basin. It has been mined  
33 since the late 1880s, mostly in Utah with some minor production in the Colorado part of the basin. In  
34 2020, American Gilsonite Company and Table Rock Minerals, LLC, were the only producers of uintaite,  
35 both located in Uintah County. ~~Over the past decade, U~~uintaite production from the Uinta Basin ~~has~~  
36 ~~ranged up to about 85,000~~is typically 10s of thousands of short tons per year, depending on market  
37 conditions. Utah is the only place in the world that contains large deposits of uintaite, which has been  
38 shipped worldwide for use in numerous and diverse products including asphalt paving mixes, coatings,  
39 inks, and paints [14]. The oil and gas industry has also used uintaite as an additive in drilling fluids.  
40 Uintaite helps control fluid loss and seepage, increases wellbore stability, prevents loss of circulation, and  
41 stabilizes shale.  
42

43 **Clay and Shale.** Clay and shale production (including bentonite, common clay, high-alumina clay, and  
44 expanded shale) in Utah totaled at least 341,000 short tons in 2020. Clay and shale are produced at  
45 various small and large mines, commonly on an intermittent basis. Bentonite was produced by Western  
46 Clay and Redmond Minerals. Uses for bentonite include well drilling and foundry operations, various  
47 civil engineering applications, and litter-box filler. Some of the largest producers of clay and shale  
48 products are Utelite (expanded shale), Interstate Brick (common clay), Ash Grove Cement (high-alumina  
49 clay), and LafargeHolcim (high-alumina clay). In Utah, common clay is used mostly to make bricks,  
50 whereas high-alumina clay is most commonly used to make Portland cement. Applied Minerals, Inc.,  
51 intermittently produces small amounts of specialty clay (halloysite) and iron oxide from the Dragon mine

1 in the Tintic Mountains. Expanded shale in Utah is produced by Utelite at their quarry and plant near  
2 Wanship in Summit County. Expanded shale is a lightweight aggregate used mainly by the construction  
3 industry. The material is used in roof tile, concrete block, structural concrete, and horticulture additives,  
4 as well as for highway construction and geotechnical fill.

5  
6 **Silica and industrial sand.** Silica and industrial sand produced in Utah are used for flux and frac sand.  
7 Production in Utah during 2020 had an estimated value of about \$19 million. On Stansbury Island,  
8 Bolinder Resources mines quartzite from the Devonian-Mississippian Stansbury Formation as a source of  
9 industrial silica that is used as a flux at the Kennecott smelter. North of Vernal, Ramsey Hill Exploration  
10 produces frac sand from Quaternary unconsolidated mixed alluvial and eolian deposits. Frac sand is  
11 relatively pure silica sand that is used for hydraulic fracturing stimulations in oil and gas wells, and  
12 Ramsey Hill supplies this sand for local use in the Uinta Basin.

13  
14 **Gypsum.** Utah has significant gypsum resources, and gypsum produced in Utah is used primarily in raw  
15 or crude form by regional cement companies as an additive to retard the setting time of cement and by the  
16 agriculture industry as a soil conditioner. Lesser amounts of the higher-value calcined gypsum are used to  
17 make wallboards. Four operators reported combined gypsum production in Utah of about 553,000 short  
18 tons in 2020, the estimated value of which was \$6.6 million. The four Utah gypsum producers were  
19 Progressive Contracting, Inc.; United States Gypsum Co.; Sunroc Corp.; and Diamond K Gypsum. Two  
20 gypsum wallboard plants are located near Sigurd in Sevier County, but only one is currently active.

21  
22 **Lithium.** For the first time in 2020, lithium was produced in Utah by U-S- Magnesium as a byproduct.  
23 Lithium is concentrated along with magnesium in U-S- Magnesium’s solar evaporation ponds, and as part  
24 of the magnesium-refining process, lithium is separated from magnesium. U-S- Magnesium has been  
25 stockpiling lithium ore from this process for many years. Their estimated capacity for lithium production  
26 is about 10,000 tons of lithium carbonate per year. Lithium is used primarily in batteries, but is also used  
27 in ceramics, glass, lubricating grease, pharmaceuticals, and other applications. Other potential lithium  
28 resource areas in Utah include the Paradox Basin, Sevier Lake, and the Great Salt Lake Desert.

## 29 30 **Coal**

31  
32 *(See Energy Resources Section)*

## 33 34 **Exploration and Development**

35  
36 Exploration and development activity for mineral resources in Utah remains an important pursuit.  
37 Exploration and development involve locating a potential mineral deposit, acquiring a land position,  
38 defining the potential mineral resources (which includes mapping, sampling, and drilling), economic  
39 evaluation, permitting, and other activities. Utah has a long history of exploration for metallic resources,  
40 and exploration is currently taking place in many of Utah’s mining districts [15] for copper, gold, silver,  
41 lead, and zinc. Recent exploration for industrial mineral commodities includes fluorspar, lithium, frac  
42 sand, potash, pozzolan, and phosphate.

## 43 44 **Critical Minerals and Rare Earth Elements (REEs)**

45  
46 **Critical Minerals.** In 2022, the USGS designated 50 non-fuel minerals as critical minerals [16]. Critical  
47 minerals are defined as those necessary for economic or national security and are dependent on a supply  
48 chain that is vulnerable to disruption. As of early 2022, Utah produces six of these critical minerals (i.e.,  
49 lithium, beryllium, magnesium metal, platinum, palladium, and tellurium) [17]. Platinum, palladium, and  
50 tellurium are all produced as byproducts from the Bingham Canyon mine. The production of lithium,  
51 beryllium, and magnesium metal is discussed above.

1  
2 In addition to the six produced critical minerals, Utah hosts ~~established~~[known](#) resources of seven more  
3 (i.e., fluor spar, vanadium, aluminum, indium, gallium, germanium, and zinc). Ares Strategic Mining is  
4 currently developing the Lost Sheep fluor spar mine in Juab County, with plans to begin production in [the](#)  
5 [near future](#) ~~2022~~. It would be the largest fluor spar producer in the United States. Other recent activities in  
6 Utah related to critical minerals have included exploration for vanadium, indium, and lithium. The 2018  
7 critical mineral list also included potash, helium, and rhenium, all of which Utah produces, but, based on  
8 the USGS’s updated criteria for inclusion as critical minerals, they were removed from the list [in 2022](#)  
9 [\[18\]](#). Also, although it was on the 2018 critical mineral list, uranium was not evaluated for inclusion on  
10 the 2022 critical minerals list because it is a fuel mineral—~~Utah has significant uranium resources. Utah~~  
11 ~~does not currently produce uranium, but it does host the country’s only active uranium mill.~~

### 13 **Rare Earth Elements (REEs)**

14  
15 No significant REE deposits have historically been found in the state of Utah. Minor modern exploration  
16 has re-evaluated previously deprioritized targets (e.g., Lake Bonneville beach gravels in Juab County).  
17 Byproduct REE production from existing mine tailings, such as the beryllium tailings at Spor Mountain  
18 or coal ash stockpiled at coal-fired power plants, may be possible and is the subject of current research.  
19 [The White Mesa uranium mill near Blanding in southeast Utah has been processing heavy mineral sands](#)  
20 [from Georgia to produce an intermediate rare earth element concentrate.](#)

### 22 **Critical Materials Uranium**

23  
24 In 2023, the U.S. Department of Energy Development (~~DOE~~) began the process of creating a “Critical  
25 Materials Assessment” to account for minerals not included on the [USGS](#) critical minerals list. Uranium  
26 was excluded from this list and the USGS Critical Minerals list. These lists are updated every three years.  
27 [\[19\] It is problematic that landscape-scale federal designations make America’s uranium supply](#)  
28 [inaccessible. Underground uranium resumed in Utah in 2024 near La Sal in southeast Utah, and the ore is](#)  
29 [processed nearby at the White Mesa mill in Blanding. This is particularly true in Utah and Arizona, both](#)  
30 [of which are nearest to the only uranium mill in the United States. The recent creation of a national](#)  
31 [monument in Arizona increased the dependency of the United States on foreign enriched uranium](#)  
32 [providers—a market that is primarily controlled by China and Russia](#) [The Prohibiting Russian Uranium](#)  
33 [Imports Act \(federal H.R.1042\) signed in 2024 is likely to support continued domestic uranium mining](#)  
34 [and processing.](#)

35  
36 The [Strategic Vision](#) for the Office of Nuclear Energy and the U.S. Department of Energy states that  
37 “Nuclear is one of the most resilient, environmentally sustainable, and reliable energy sources on the grid  
38 today... nuclear provides approximately 20 percent of our electricity, more than 55 percent of our  
39 clean energy, and supports about half a million American jobs.”

### 41 **Economic Considerations**

42  
43 The mining industry is an important contributor to Utah’s economy. As previously noted, Utah ranked 8th  
44 in the United States for value of nonfuel (metals and industrial minerals) mineral production in 2020, and  
45 the total value of those commodities produced in 2020 was approximately \$3.2 billion. The metal and  
46 industrial mineral industries paid nearly \$66 million in property taxes during 2020 and more than \$13  
47 million (in fiscal year 2020) in mining-related severance taxes. All extractive industries, including oil and  
48 gas, paid nearly \$45 million in federal mineral lease disbursements in fiscal year 2020. About 1 percent of  
49 Utah’s gross domestic product came from the mining industry in 2019—1.4 percent if oil and gas are  
50 included [\[20\]](#). According to the Utah Department of Workforce Services, about \$390 million in wages  
51 were earned in 2020 by mining employees in Utah.

1 Utah will continue to regulate the exploration and development of minerals in a manner that encourages  
2 responsible reclamation and development; prevents waste; and protects human health and safety, the  
3 environment, and the interests of the state and its citizens. The State of Utah will advance Utah’s mineral  
4 development sectors through planning, policy, and engagement with the mining industry, the public, and  
5 stakeholders.  
6

7 Products from the mining industry are integral to every Utahns’ lifestyle and standard of living, and they  
8 support the nation’s economy. From the sand and gravel used to build roads and lay foundations for  
9 homes and buildings, to coal and uranium used to generate more than half of the nation’s electricity, to  
10 the copper wire that connects billions of computers to global networks, this country’s economy and way  
11 of life depend on the vital resources provided by mining. Because of its importance to society, mineral  
12 resource development in Utah is supported by state policy. The following statements describe the state’s  
13 positions on mineral resources and mineral development on state and federal lands within the State of  
14 Utah.  
15

## 16 **Goals, Objectives, and Policies**

17

### 18 **Goal(s):**

- 19 • Promote responsible and sustainable stewardship and development of Utah’s mineral resources.  
20  
21

### 22 **Objectives:**

- 23 1. Protect and expand access to significant mineral resources, including critical minerals and REEs,  
24 for current and future generations of Americans.
- 25 2. Encourage the mining, transportation, and processing of mineral resources in Utah, including  
26 critical minerals and REEs.
- 27 3. Support the investigation and processing of mine tailings and new mineral resources to extract  
28 critical minerals and REEs, while avoiding undue environmental harm.
- 29 4. Ensure that the UGS has adequate funding to investigate and make needed data publicly  
30 available. This process may include the need to hire additional employees to do research, collect  
31 and synthesize data, and generate reports.  
32  
33

### 34 **Policies:**

- 35 • Encourage the exploration and production of mineral resources, including critical minerals and  
36 REEs.
- 37 • Oppose land-use plans or designations that impede access to important mineral resources ~~to~~  
38 include or the ability to mine, produce, process, or transport those resources.
- 39 • Oppose any land-use restrictions or designations that could impede mineral-resource  
40 development and production prior to the federal government funding and completing a  
41 comprehensive mineral-resource assessment of areas subject to such restriction or designation.
- 42 • Support federal initiatives to reduce the nation’s reliance on imported mineral resources.
- 43 • Encourage the Department of Energy and ~~Utah States Geological Survey~~ to recognize the  
44 importance of uranium for economic prosperity and national defense.
  - 45 ○ Encourage federal agencies to include uranium on critical mineral and critical material  
46 lists even though it is classified as a fuel mineral under the Energy Act of 2020.
  - 47 ○ Oppose federal designations that would withdraw areas rich in uranium, critical minerals,  
48 ~~rare earth elements~~ REEs, or critical materials from mining activity.  
49

- 1 • Support streamlined and expedited processes in National Environmental Policy Act (NEPA)
- 2 compliance and permitting, so that mineral resources can be accessed, produced, processed, and
- 3 transported in a timely manner.
- 4 • Support legislation and policies that facilitate exploration and development of the mineral
- 5 resources in Utah.
- 6 • Support responsible and environmentally conscious mining for mineral resources on lands
- 7 managed by the State of Utah, BLM, and Forest Service.
- 8 • ~~Do not support~~ Oppose the withdrawal of lands managed by the BLM or the Forest Service from
- 9 available mineral extraction unless the proposed mineral withdrawal is agreed upon through
- 10 coordination with the state and counties within which the proposed mineral withdrawal is located.
- 11 • Engage with federal land-management agencies on all mining-related projects to promote the
- 12 responsible mining of mineral resources.
- 13 • Supports a positive working relationship between the federal land-management agencies and the
- 14 DOGM to promote responsible mining of the mineral resources that support Utah's economy and
- 15 quality of life, while safeguarding Utah's environment.
- 16 • Include state-agency personnel as members of interdisciplinary teams preparing NEPA
- 17 documents affecting mineral resources in Utah.

18  
19 **State Code**

20  
21 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*

22 *following are selected portions of the Utah State Code and do not represent every potential legal*

23 *reference in the Code related to this section of the State Resource Management Plan or the*

24 *administration of public lands.*

25 **Public Lands Planning**

26  
27 **§ 63L-11-302.** *Principles to be recognized and promoted.*

28  
29 **§ 63L-11-303.** *Findings to be recognized and promoted.*

30  
31 (3) transportation and access routes to and across federal lands, including all rights-

32 of-way vested under R.S. 2477, are vital to the state's economy and to the quality of life

33 in the state, and must provide, at a minimum, a network of roads throughout the resource

34 planning area that provides for:

- 35 (a) movement of people, goods, and services across public lands;
- 36 (b) reasonable access to a broad range of resources and opportunities
- 37 throughout the resource planning area, including:
  - 38 (i) livestock operations and improvements;
  - 39 (ii) solid, fluid, and gaseous mineral operations;
  - 40 (iii) recreational opportunities and operations, including motorized
  - 41 and non-motorized recreation;
  - 42 (iv) search and rescue needs;
  - 43 (v) public safety needs; and
  - 44 (vi) access for transportation of wood products to market;
- 45 (c) access to federal lands for people with disabilities and the elderly;
- 46 (d) and access to state lands and school and institutional trust lands to
- 47 accomplish the purposes of those lands;

48  
49 **State Land Use and Management Plan for Federal Lands**

50  
51 **§ 63L-8-104.** *State land-use planning and management program.*

1 **Mines and Mining (Title 40)**

2  
3 **Utah Geological Survey (§ 79-3)**

4 **Utah Energy Act (§ 79-6)**

5  
6 **Concurrent Resolution Highlighting Utah’s Rare Earth Mineral Position**

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# NOXIOUS WEEDS

## Introduction

In 1971, the Utah Legislature passed the Utah Noxious Weed Act, Title 4, Chapter 17 into law. After enactment of the law, the Utah Department of Agriculture and Food (UDAF) adopted rules and regulations to guide its implementation [1]. The Noxious Weed Act is administered by the UDAF, and its enforcement is the responsibility of county commissioners, assisted by their respective county weed boards and the county weed supervisor.

Giving enforcement authority to county weed boards establishes a bottom-up approach, ~~with in which~~ the local elected officials and those assisting them ~~being are~~ closest to ~~the people those~~ making the majority of the decisions. The custom of maximizing local management to achieve the best results has proven extremely effective in Utah, and is part of the state’s weed-management culture. Local elected officials and their respective weed boards and county supervisors have taken an educational and cooperative approach to assist landowners.

As defined by the Utah Noxious Weed Act a “noxious weed” is “any plant the commissioner (Utah Commissioner of Agriculture and Food) determines to be especially injurious to public health, crops, livestock, land, or other property [2].” County commissioners also have authority and do declare plants as county “noxious weeds.”<sup>2</sup> Often, noxious weeds are very invasive, nonnative plant species with undesirable biological characteristics that enable them to spread rapidly on land that has been properly or poorly managed.

## Findings

Invasive noxious weeds are a threat to Utah’s ecosystems, waterways, agricultural production, land health, and public safety. The areas of most concern are riparian areas, cropland, rangeland, and forestland. Development, global human travel, movement of equipment and animals, and various recreational activities continually bring new invasive weeds into the state.

Noxious weeds are easily spread through contaminated agricultural machinery, livestock feed, hay, straw, soils, sod, nursery stock, and manure. Preventive measures begin by thoroughly cleaning agriculture machinery and equipment (which has come in contact with weeds) before it is transported to other locations. Vehicles transporting seed, feed, and other agricultural materials should take measures to prevent spilling and spreading materials during transport. Transportation of topsoil, fill materials, construction equipment, recreation, and wildlife can also spread weeds.

Areas of land in all of Utah’s 29 counties are infested with at least one of the 54 state-designated noxious weeds. When a new invasive species is found, it is mapped, classified, and added to an early detection and distribution (EDD) online mapping database and is then considered for designation as a noxious weed. It is likely that some potentially dangerous noxious weeds have, so far, escaped detection.

The State Noxious Weed list of 54 species ~~and is prioritized at one and categories is~~ categorized in terms of early detection and rapid response (EDRR) as follows:

### CLASS 1A: EARLY DETECTION RAPID RESPONSE (EDRR) WATCH LIST

Declared noxious weeds and invasive weeds that are not native to Utah, are not known to exist in the state but pose a serious threat, and should be considered a very high priority.

1 CLASS 1B: EDRR

2 Declared noxious and invasive weeds not native to Utah that are known to exist in the state in very  
3 limited population, pose a serious threat to the state, and should be considered as a very high priority.  
4

5 CLASS 2: CONTROL

6  
7 Declared noxious and invasive weeds not native to Utah that pose a threat to the state and should be  
8 considered a high priority for control. Weeds listed in the control list are known to exist in varying  
9 populations throughout the state. The concentration of these weeds is at a level where control or  
10 eradication may be possible.

11  
12 CLASS 3: CONTAINMENT

13  
14 Declared noxious and invasive weeds not native to Utah that are widely spread. Weeds listed in the  
15 containment noxious weeds list are known to exist in various populations throughout the state. Weed-  
16 control efforts may be directed at reducing or eliminating new or expanding weed populations. Known  
17 and established weed populations, as determined by the weed-control authority, may be managed by any  
18 approved weed-control methodology, as determined by the weed-control authority. These weeds pose a  
19 threat to the agricultural industry and agricultural products.  
20

21 CLASS 4: PROHIBITED

22  
23 Declared noxious and invasive weeds, not native to Utah, that pose a threat to the state through the retail  
24 sale or propagation in the nursery and greenhouse industry. Prohibited noxious weeds are annual,  
25 biennial, or perennial plants that the commissioner designates as having the potential or are known to be  
26 detrimental to human or animal health, the environment, public roads, crops, or other property.  
27

28 **COUNTY LISTED WEEDS**

29  
30 Each county in Utah may have different priorities regarding specific state-designated noxious weeds and  
31 is therefore able to reprioritize these weeds for their own needs.  
32

33 The ~~weed specialist~~ [weed specialist](#) coordinates weed-control activities among the county weed  
34 organizations and agricultural field representatives. Surveys of serious weed infestations are conducted  
35 and control programs are developed through county supervisors, county weed boards, and various  
36 landowning agencies. The weed specialist and inspectors work continually with extension and research  
37 personnel, encouraging the use of the most effective methods to control the most-serious weed  
38 infestations.  
39

40 The negative impacts of noxious weeds on other resources are well known and significant. These include  
41 the following:  
42

- 43 ● Weed infestations can create monocultures that eliminate diverse plant communities.
- 44 ● Watersheds dominated by noxious weeds are less-efficient in absorbing and storing water, which  
45 results in increased runoff, flooding, and soil erosion.
- 46 ● Noxious weed infestations can reduce forage production and quality for all herbivores and habitat for  
47 birds and animals.
- 48 ● Some noxious weeds are poisonous and injurious to animals.  
49 Noxious aquatic weeds can obstruct irrigation systems, clog machinery, destroy fish habitat,  
50 contribute to flooding, and negatively impact recreational use of waterways.
- 51 ● Noxious weeds can cause physical injury or irritation to people, pets, and livestock.

- Fire is a control method often used to treat [some weeds, such as](#) phragmites, but the resulting smoke may lead to air-quality issues, which must be considered.
- Many noxious weeds, such as cheatgrass, are very flammable and increase the risk of wildfires. After a fire burns a weed-infested area, the weeds often recover before native plants and are thus able to dominate native plant species by taking over water and soil resources.

If left unchecked, noxious weeds can spread at average rates of 3 to 60 percent annually. In addition, new class-1B noxious weeds have been recently found and declared noxious in Utah [3]. These include: elongated mustard, garlic mustard, ventenata, and viper grass. Because 64 percent of land in Utah is federally owned, a significant responsibility for noxious weed control and management rests with federal land-management agencies. These federal agencies are required by the Utah Weed Control Act, their respective organic acts, and their management plans to take responsibility for and control invasive noxious weeds on lands they administer. However, these agencies have not yet budgeted a reasonable amount of funding nor allocated the necessary human resources to adequately address the magnitude of their noxious weed problem.

Each of the state’s 29 counties have an active Local Weed Control Program in place. These local programs are responsible for noxious-weed management within their respective boundaries with help from partners such as the UDAF. ~~Examples of some local weed control programs include:~~

- ~~• [Morgan County Weed Program](#)~~
- ~~• [Salt Lake County Weed Control Program](#)~~
- ~~• [Tooele County Road Department](#)~~
- ~~• [Weber County Weed Department](#)~~

~~-~~  
Cooperative Weed Management Areas (CWMAs): These provide weed control across large areas, ~~like~~ [such as](#) watersheds, and without specific consideration of land ownership, to more effectively treat weed infestations. [The](#) CWMAs are also used to coordinate treatment efforts and pool resources. Weed control is most effective when all land managers and landowners act quickly to address infestations when they first begin.

There are currently 23 CWMAs in Utah, divided by region. Some excellent examples of CWMAs and their partners within the Wasatch Front Regional Council area include:

- Bonneville CWMA. Tooele County, Salt Lake County, Utah Department of Transportation (UDOT), US Bureau of Land Management (BLM), and U.S. Forest Service (Forest Service)
- Weber River CWMA. Weber County, Davis County, Antelope Island, Utah Department of Wildlife Resources, UDOT, and BLM
- Squarrose CWMA. Tooele County, Forest Service, Utah School and Institutional Trust Lands Administration, and Utah State University, and BLM

## Economic Considerations

Weeds create significant economic impacts. Weeds compete with crops and reduce the quality of food, feed, and fiber. During the 1950s, agricultural producers lost about \$5.1 billion per year to reduced crop yield and quality, and to the cost of weed control. This value doubled by 1979. During the 1980s, farmers spent more than \$3 billion annually for chemical weed control and about \$2.6 billion for cultural, ecological, and biological methods of weed control. During this time, about 17 percent of crop value was being lost because of weed interference and the cost of weed control [4].

More recently, in the United States agricultural sector, losses and control costs associated with weeds in crops, pasture, hay, and range were estimated to be approximately \$33 billion per year. In non-crop

1 sectors (e.g., turf, and ornamental landscaping), losses and control costs totaled about \$1.5 billion per  
2 year. [5]

3  
4 Production agriculture and the associated processing sector accounts for more than 15 percent of Utah's  
5 economy. [6]

6  
7 In addition, Utah's heritage as a western state has attracted countless visitors to experience the western  
8 lifestyle and see Utah's rangelands. The expansion of noxious weeds threatens the lifestyle, custom, and  
9 culture of Utah's people. Without active, effective weed control and management, Utah's cropland,  
10 rangeland, forestland and private property will become much less productive and biologically diverse.

11  
12 The importance of herbicides as a weed-control and weed-management tool cannot be overstated. It is  
13 estimated that losses in the agricultural sector would increase about 500 percent without the use of  
14 herbicides. [7]

15  
16 In Utah, the value of yield losses in crops due to weeds varies annually as the price of the commodity  
17 fluctuates. ~~However, the percentage yield loss of some significant crops in the state has been estimated as~~  
18 ~~[8] shown in the tables below:~~

19  
20 Although the total cost to manage noxious weeds in Utah is not known, noxious weeds have a severe  
21 impact on multiple industries in Utah, including agriculture, tourism, and private property. The state  
22 legislature appropriates about \$2.0 million annually for the UDAF-administered Invasive Species  
23 Mitigation Program for projects to control and manage noxious weeds throughout Utah.

## 24 25 **Best-Management Practices and Implementation**

26  
27 The invasion of noxious weeds and undesirable invasive plant species into the state should be reversed,  
28 their presence eliminated, and their return prevented. State land managers, local governments, and  
29 property owners are responsible for controlling weed species on the state's noxious weeds list, and local  
30 weed species of concern if necessary. Weed control includes both lands under local management (roads,  
31 rights-of-way, parks, etc.) as well as enforcing weed laws on private lands. State law provides county  
32 weed managers the right to treat weeds on private lands (assuming proper notice is provided) if the  
33 landowner is unwilling or unable to treat the problem themselves, and seek reimbursement or apply liens  
34 for the work.

35  
36 Handling the issue of invasive plants in Utah is an ongoing effort. Nonnative plants will be part of the  
37 landscape throughout Utah's future. Strategies and tools can be implemented to reduce the state's  
38 susceptibility to new invasions and empower all of us to reduce the effects of weeds. The development of  
39 an invasive species program can be based on the application of Dr. Steve Dewey's Biological Wildfire  
40 Model as applied to weeds [9]. The key elements are as follows:

- 41
- 42 1. Prevention
- 43 2. Early Detection and Rapid Response
- 44 3. Management of Established Populations
  - 45 a. Identify the perimeter
  - 46 b. Eradicate satellite populations
  - 47 c. Contain and suppress main population
- 48 4. Revegetation or Rehabilitation
- 49 5. Protect Defensible Spaces
- 50

1 All federal agency resource-management planning on public lands must involve active participation from  
2 state agencies, local government, and local property owners as contributing members.

3 When possible, state and local governments must be included as members of the interdisciplinary teams  
4 for each project. All federal policies and management plans acknowledge and consider the cultural,  
5 economic, and environmental importance of agriculture and recreation on public lands and the threat that  
6 noxious weeds pose.

7  
8 Increased education is needed for recreation, tourism, the general public, K-12 schools, elected officials,  
9 and state agencies concerning the harmful effects of noxious weeds and how to prevent their spread when  
10 vacationing and recreating.

11  
12 Further research is needed on cost-effective ways to control and manage noxious weeds, track and  
13 monitor them, and rehabilitate treated areas.

14  
15 The use of EDD Maps should be mandated, which is the established comprehensive noxious weed  
16 mapping system broadly accepted by the State of Utah Weed Committee, and is used by the Utah  
17 Department of Agriculture and Food, and Utah's counties to map and assess the current condition of  
18 noxious weeds in Utah. These EDD Maps should be used to monitor, track, and document the spread of  
19 noxious weeds by obtaining and inputting accurate data in a timely manner.

20  
21 Additional mapping and monitoring information is needed to identify and quantify areas that are infested  
22 with noxious weeds, what types of weeds are present, and the location of noxious weeds in Utah.  
23 Improved monitoring will help the state improve an accurate online map database of noxious weeds in  
24 Utah.

- 25  
26
- Identify and record GPS locations of noxious and invasive weed species.
  - Accurately calculate the total number of acres for priority weeds.
  - Determine how fast noxious weeds are spreading by comparing weed inventories over time.
  - Identify boundaries of newly invading species.
- 29

30  
31 Increase emphasis on prevention as a strategy to manage noxious weeds in Utah. Prevention is the most  
32 effective tactic to fight noxious weeds. Healthy ecological systems with well-established native plants are  
33 much less susceptible to invasive and noxious plants. Consequently, proper and active land management  
34 to establish healthy ecosystems is one of the first steps to preventing noxious weeds.

- 35
- Track invasive species via EDD ~~M~~maps in neighboring counties and states and share information  
37 through partnerships with [the](#) Utah Weed Committee, Utah Weed Control Association and county  
38 weed supervisor association.
  - Develop and use weed control and management guidelines, and educational materials (public,  
40 highway and construction companies, nurseries, railroads, etc.).
  - Regulate known pathways for invasive species (e.g., federal agencies requiring washing of  
42 equipment, requirements for rinsing watercraft when transporting between waterbodies and weed-free  
43 seed and forage programs).
  - Encourage development of weed-invasion risk-analysis in federal and statewide planning efforts.
  - Encourage Utah's project and land-planning teams to include analysis of what potential new invaders  
46 are likely to occur and identify where, based on ecological conditions, the most susceptible areas for  
47 future invaders are.
- 48

49 Early detection and rapid response (~~EDRR~~) are vital as noxious weeds spread into new ecosystems. The  
50 earlier that county, state, and federal agencies detect and treat noxious weed infestation, the better the

1 management outcome will be. As noxious weeds become more established in new areas, they destroy  
2 native ecosystems and are more difficult and expensive to treat.

- 3
- 4 • Use and keep updated the 1A EDDR watch list for the state and for counties with high probabilities of
- 5 new invasive noxious weed problems.
- 6 • Use the established EDD ~~M~~map online network for reporting new invasive species.
- 7 • Encourage routine and systematic surveys as part of all weed programs.
- 8 • Map invasive species and high-risk areas.
- 9 • Provide resources to land managers for proper identification.

10

11 Quicker responses to the presence of all noxious weeds in Utah is necessary to minimize damage to  
12 ecosystems, efficiently use limited funds, and prevent land health degradation.

- 13
- 14 • Use the coordinated “decision support system” provided by the State of Utah Weed Committee, Utah
- 15 Weed Supervisors Association Executive Committee, Utah Weed Control Association Executive
- 16 Committee, county weed boards, Utah State University (~~USU~~)-Extension, and CWMA (or other
- 17 partner groups) to help set noxious-weed priority.
- 18 • Distribute “Weed Alerts” through communication networks, mailings, and websites.

19

20 More-integrated weed management is necessary to improve the management of noxious weeds. Because  
21 land in Utah is administered or owned by federal, state, and private owners, effective weed management  
22 requires an integrated approach. Due to the nature of noxious weeds, management must occur on all land  
23 within the state, or effective management will provide few results. The Utah strategic weed-control plan  
24 promotes an integrated approach, where “prevention is the best method” of weed management.

25 Consider each of the following action items when developing an integrated weed-management plan:

- 26
- 27 • Weed reproduction and dispersal
- 28 • Weed ecology
- 29 • Plant competition
- 30 • Biological weed control
- 31 • Chemical weed control
- 32 • Preventive weed control
- 33 • Cultural weed control
- 34 • Mechanical (physical) weed control
- 35 • Integrated pest management
- 36 • Targeted livestock grazing [10]

37

38 Establish immediate revegetation or rehabilitation after treatment. This is the only way that land will not  
39 continue to be susceptible to noxious weeds. Alongside treatment, the establishment of healthy  
40 ecosystems is the most effective way of preventing the spread of noxious weeds.

- 41
- 42 • Obtain a knowledge of the system
- 43 • Properly identify the problem weed
- 44 • Plant species with the end result in mind
- 45 • Develop a plan for each situation
- 46 • Evaluate yearly success

47

48 Improve education, regulation and enforcement of the Utah Noxious Weed Act. Proper education and  
49 enforcement are vital to ensure that effective management on state and private ground occurs.

50 Appropriate sufficient resources to adequately manage noxious weeds. Resource appropriation is vital to  
51 properly manage noxious weeds in Utah. The state legislature appropriated \$2.0 million to fight noxious

1 weeds in 2021, which helps private landowners. Federal dollars must also prioritize effective weed  
2 management to maintain healthy public lands, manage the spread of noxious and invasive weeds, and  
3 reduce the risk of catastrophic wildfire.  
4

## 5 **Goals, Objectives, and Policies**

6

- 7 ● Support efforts to improve education concerning noxious weeds. All industries, including  
8 tourism, agriculture, government and elected officials, the general public, and youth must  
9 understand the negative effects of noxious weeds and how to prevent their spread.
- 10 ● Support collaboration between experts in the field and researchers. Through innovation and  
11 improved technology, weed-management techniques will improve and become more efficient.  
12 ○ Included among this research should be the use of integrated types of weed management.  
13 Only by utilizing every management tool ~~will~~can the State of Utah and its partners ~~be~~  
14 ~~able to~~ effectively manage noxious and invasive weeds.
- 15 ● Support the use of established online mapping database resources (EDD ~~M~~maps) to better  
16 understand what areas of the state are afflicted with noxious weeds.  
17 ○ In addition to mapping, the State of Utah supports active monitoring to ensure that  
18 information is accurate and ~~to ensure~~ that priority is given to the right areas within the  
19 state.
- 20 ● Support prevention as one of the best methods of managing noxious weeds.
- 21 ● Support education as one of the key tools for prevention alongside healthy ecosystems. Managing  
22 land to ensure its health helps prevent the establishment of invasive and noxious species.
- 23 ● Support ~~s~~ proactive management of noxious weeds. Effective management by federal, state, and  
24 private entities is vital to protect agriculture, rangelands, and private property.  
25 ○ The state supports efforts to ensure that noxious weeds are detected early to reduce the  
26 risk of ecosystem degradation, crop and rangeland damage, and higher costs to manage  
27 established weed communities.  
28 ○ In addition to early detection, the state supports rapid response efforts on private, state,  
29 and federal land. Faster responses allow agencies to more effectively eliminate new  
30 noxious weed infestations.
- 31 ● Support adequate funding to combat the spread of noxious weeds. In addition, the state supports  
32 the removal of noxious weeds from affected areas and rehabilitation of affected areas ~~post~~after  
33 treatment. Weed treatments and rehabilitation must occur on federal land as well, to prevent the  
34 spread of weeds from public to private and state land.
- 35 ● Mandate the post-treatment revegetation and rehabilitation of areas that have been invaded by  
36 noxious weeds. The goal after treatment is to return the area to a desirable species composition if  
37 possible. As native vegetation is re-established, the risk of future invasions of noxious weeds  
38 decreases.
- 39 ● Support and value the agricultural industry as an integral part of Utah’s history, culture, and  
40 heritage. All types of agriculture are recognized as a cultural resource in Utah that is threatened  
41 by noxious weeds.
- 42 ● Support and enhance the capabilities of state agencies to actively manage watersheds, riparian  
43 areas, and wetlands to remove tamarisk, Russian Olive, phragmites, and other invasive species.
- 44 ● Promote partnering with federal programs and agencies to comprehensively remove invasive  
45 species and leverage funding opportunities at larger scales.
- 46 ● Require federal agencies to add herbicides to federal agency ~~-~~approved lists when they are  
47 approved by the ~~EPA~~US Environmental Protection Agency (e.g., herbicides to treat cheatgrass).  
48  
49  
50  
51

1 **State Code**  
2

3 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
4 *following are selected portions of the Utah State Code and do not represent every potential legal*  
5 *reference in the Code related to this section of the State Resource Management Plan or the*  
6 *administration of public lands.*  
7

8 **Public Lands Planning**  
9

10 **§ 63L-11-302.** *Principles to be recognized and promoted.*  
11

12 **§ 63L-11-303.** *Findings to be recognized and promoted.*  
13

14 (3) transportation and access routes to and across federal lands, including all rights-  
15 of-way vested under R.S. 2477, are vital to the state's economy and to the quality of life  
16 in the state, and must provide, at a minimum, a network of roads throughout the resource  
17 planning area that provides for:

- 18 (a) movement of people, goods, and services across public lands;
  - 19 (b) reasonable access to a broad range of resources and opportunities  
20 throughout the resource planning area, including:
    - 21 (i) livestock operations and improvements;
    - 22 (ii) solid, fluid, and gaseous mineral operations;
    - 23 (iii) recreational opportunities and operations, including motorized  
24 and non-motorized recreation;
    - 25 (iv) search and rescue needs;
    - 26 (v) public safety needs; and
    - 27 (vi) access for transportation of wood products to market;
  - 28 (c) access to federal lands for people with disabilities and the elderly;
  - 29 (d) and access to state lands and school and institutional trust lands to  
30 accomplish the purposes of those lands;
- 31

32 **State Land Use and Management Plan for Federal Lands**  
33

34 **§ 63L-8-104.** *State land-use planning and management program.*  
35

36 **Agriculture Fair Trade Act**  
37

38 **§ 4-8-102.** *Purpose declaration.*

39 (1) The Legislature finds and declares that in order to preserve the agricultural industry  
40 of this state it is necessary to protect and improve the economic status of persons engaged in  
41 the production of products of agriculture.

42 (2) To carry out the policy described in Subsection (1), the Legislature determines it  
43 necessary to regulate the production and marketing of such products and to prohibit unfair  
44 and injurious trade practices.

45 (3) This chapter shall be liberally construed.  
46

47 **Conservation Commission Act**  
48

49 **§ 4-18-102.** *Findings and Declarations – Duties.*  
50



- 1 (1) In addition to the policy provided in Section 4-46-101, the Legislature finds and  
2 declares that:
- 3 (a) the soil and water resources of this state constitute one of the state's basic  
4 assets; and
- 5 (b) the preservation of soil and water resources requires planning and programs to  
6 ensure:
- 7 (i) the development and use of soil and water resources; and  
8 (ii) soil and water resources' protection from the adverse effects of wind  
9 and water erosion, sediment, and sediment related pollutants.
- 10 (2) The Legislature finds that local production of food is essential for:
- 11 (a) the security of the state's food supply; and  
12 (b) the self-sufficiency of the state's citizens.
- 13 (3) The Legislature finds that sustainable agriculture is critical to:
- 14 (a) the success of rural communities;  
15 (b) the historical culture of the state;  
16 (c) maintaining healthy farmland;  
17 (d) maintaining high water quality;  
18 (e) maintaining abundant wildlife;  
19 (f) high-quality recreation for citizens of the state; and  
20 (g) helping to stabilize the state economy.
- 21 (4) The Legislature finds that livestock grazing on public lands is important for the proper  
22 management, maintenance, and health of public lands in the state.
- 23 (5) The Legislature encourages each agricultural producer in the state to operate in a  
24 reasonable and responsible manner to maintain the integrity of soil, water, and air.
- 25 (6) The department shall administer the Utah Agriculture Certificate of Environmental  
26 Stewardship Program, created in Section 4-18-107, to encourage each agricultural producer in  
27 this state to operate in a reasonable and responsible manner to maintain the integrity of the  
28 state's resources.
- 29 (7) The Legislature finds that soil health is essential to protecting the state's soil and  
30 water resources, bolstering the state's food supply, and sustaining the state's agricultural  
31 industry.

### 32 **Plant Pest Emergency Control Act**

### 34 **Aquaculture Act**

35 **§ 4-37-102.** *Purpose statement--Aquaculture considered a branch of agriculture.*

36 (1) The Legislature declares that it is in the interest of the people of the state to  
37 encourage the practice of aquaculture, while protecting the public fishery resource,  
38 in order to augment food production, expand employment, promote economic  
39 development, and protect and better utilize the land and water resources of the  
40 state.

41 (2) The Legislature further declares that aquaculture is considered a branch of the  
42 agricultural industry of the state for purposes of any laws that apply to or provide for the  
43 advancement, benefit, or protection of the agricultural industry within the state.  
44

### 45 **Citations:**

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  - 49 3. *Smith, H. A., Johnson, W. S., Shonkwiler, J. S., and Swanson, R. S. 1999. The Implications of*  
50 *Variable or Constant Expansion Rates in Invasive Weed Infestations. Weed Science 47: 62-66.*  
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- 1 4. <https://www.invasivespeciesinfo.gov/subject/economic-and-social-impacts>
- 2 5. <https://www.invasivespeciesinfo.gov/subject/economic-and-social-impacts>
- 3 6. [https://extension.usu.edu/apec/files/EconomicContributionofAgriclturetotheUtahEconomy2014.p](https://extension.usu.edu/apec/files/EconomicContributionofAgriclturetotheUtahEconomy2014.pdf)
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- 5 7. <https://www.invasivespeciesinfo.gov/subject/economic-and-social-impacts>
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# OUTDOOR RECREATION, TOURISM, AND FILM

## Introduction

In 2019, travelers in Utah spent \$10.06 billion (up from \$8.4 billion in 2016) [1], which generated \$732 million in state tax revenue and \$607 million in local tax revenue (a total of \$1.34 billion) [2]. Travel and tourism in the state employs 141,500 Utahns [3]. While many business travelers come to Utah for meetings and conventions, one of the main reasons tourists come to Utah is for outdoor recreation. Utah boasts 14 world-class ski and summer resorts featuring The Greatest Snow on Earth®, The Mighty Five® national parks, 9 national monuments, 2 national recreation areas, 6 national forests, 46 state parks, and multiple nationally recognized scenic byways.

Outdoor recreation generates ~~contributes~~ more than \$6.1 ~~42~~ billion to Utah's economy and accounts for 67,000 jobs ~~employs more than 122,000 people~~. Recreation generates hundreds of ~~\$856~~ millions in state and local tax revenue and ~~\$3.6~~ billions of dollars in wages and salaries. Many outdoor recreation equipment companies have relocated or formed in Utah due to the state's friendly business climate and proximity to nearly all types of outdoor recreation. A recent study found that the number-one reason that technology sector employees moved to Utah was for outdoor recreation opportunities and access to wilderness and public lands. [4]

The former Utah Office of Outdoor Recreation is the first office of its kind in the country and subsequently became the Utah Division of Outdoor Recreation (UDOR), a division of the Utah Department of Natural Resources. The Division's mission is to ensure health, safety, enjoyment, and economic benefit through life-enriching, high-quality outdoor recreation for all of Utah's residents and visitors. The UDOR works with other government agencies to maintain a nationwide recreation management standard and ensure that Utah's natural assets can serve Utahns ~~sustain economic growth~~ for generations ~~years~~ to come. The UDOR administers the Utah Outdoor Recreation Grant (UORG), OHV Recreation ~~Fiscal Incentive~~ Grant, Recreational Trails Program, and the Land and Water Conservation Fund, all of which helps build tourism in communities around Utah with the construction, ~~and~~ expansion, and maintenance of outdoor recreation amenities.

Over the past 100 years, Utah has been a destination for film, television, and commercial production and thousands have been filmed in Utah. Notable films shot in Utah include ~~inge~~ *Butch Cassidy and The Sundance Kid*, *Thelma & Louise*, and *Footloose*. ~~episodic~~ Television series located in Utah include *Yellowstone*, *Touched by an Angel* and *Westworld*. A 2023 study shows that 37% percent of Utah visitors indicate that they are aware of films and ~~or~~ TV shows filmed in Utah —and say that these films ~~and~~ TV shows had some influence on their decision to visit the state.

## Findings

Utah's travel and tourism industry—the hardest-hit industry by the COVID-19 pandemic—experienced a healthy recovery statewide, particularly in Utah's rural areas. [5]

Utah's ski and snowboard industry achieved a record-setting 7.1 ~~5.8~~ million skier days in the 2022–2023 season, up from the previous record of 5.8 ~~.3~~ million skier days, which was set during the 2021–2022 season (a 22% increase). Ten of Utah's resorts are located less than 1 hour from Salt Lake City International Airport. Accessibility and the quality of the snow are the top two selling points for Utah's ski and snowboard industry. Utah's resorts undergo infrastructure improvements every year. A record-breaking year of snowfall—with 44 powder days—brought more people to Utah's resorts than ever before, spending more than \$2.54 billion. [6] ~~Improved snowmaking capability has made many of the~~

1 ~~resorts less dependent on natural snowfall, but the number of skier visits is usually higher in positive~~  
2 ~~snow years.~~

3  
4 Utah's Mighty Five national parks total visitation was approximately 10.7 million visitors in 2019 and 7.8  
5 million visitors in 2020 [7]. Utah is unique in that it boasts so many national parks that are so close to  
6 each other. Utah's national parks are gems that drive both domestic and international visitation.

7  
8 Utah state park visitation in 2019 was approximately 8 million visitors and jumped to more than 10  
9 million visitors in 2020 despite the COVID-19 pandemic. In 2021, the Utah Legislature appropriated  
10 more than \$120 million ~~dollars~~ to create Utahraptor State Park and Lost Creek State Park, along with  
11 funding improvements to camping, parking, and day-use amenities statewide at the other 44 existing state  
12 parks. Additionally, the Utah Division of Parks has recently added a new designation of state monuments  
13 to their management portfolio. [8]

14  
15 National parks nationwide are dealing with increased visitation and shrinking budgets. They have a  
16 backlog of maintenance and infrastructure projects, and many lack sufficient staffing. County and state  
17 tourism agencies and other stakeholders, together with park personnel, are encouraging visitors to (1) visit  
18 Utah's national and state parks (rather than visiting only the most popular locations), (1) visit during the  
19 shoulder seasons (rather than only in peak months), and (3) come better prepared for activities within the  
20 parks. Stakeholders are also encouraging visitors to stop at national monuments, historic sites, state parks,  
21 and scenic byways, rather than visiting only the national parks. The June 2020 passage of the Great  
22 American Outdoors Act (GAOA) [9] will incrementally provide funding to federal land-management  
23 agencies to assist with reducing the facility and infrastructure improvement backlog nationwide. Funds  
24 for the GAOA are generated by royalties collected from the oil and gas industry. The Utah Legislature  
25 funds the Outdoor Adventure Infrastructure Restricted Account through 1% percent of the ~~S~~state's sales  
26 and use tax to go toward outdoor recreation infrastructure.

27  
28 There is created within the GO Utah office the Utah Office of Tourism [10], which is required to:

- 29  
30 (a) be the tourism development authority of the state;  
31 (b) develop ~~a~~ tourism advertising, marketing, branding, destination-development, and destination-management programs for the state;  
32 (c) receive approval from the board under Subsection 63N-7-202(1)(a) before implementing the  
33 program described in Subsection (3)(b);  
34 (d) develop a plan to increase the economic contribution by tourists visiting the state;  
35 (e) plan and conduct a program of information, advertising, and publicity relating to the recreational,  
36 scenic, historic, cultural, and culinary tourist attractions, amenities, and advantages of the state at large;  
37 (f) encourage and assist in the coordination of the activities of persons, firms, associations,  
38 corporations, travel regions, counties, and governmental agencies engaged in publicizing, developing, and  
39 promoting the tourist attractions, amenities, and advantages of the state;  
40 (g) conduct a regular and ongoing research program to identify statewide economic trends and  
41 conditions in the tourism sector of the economy; and  
42 (h) ensure that any plan or program developed under this Subsection (3) addresses, but not be limited  
43 to, the following policies:  
44 (i) enhancing the state's image;  
45 (ii) promoting the state as a year-round destination;  
46 (iii) encouraging expenditures by visitors to the state; and  
47 (iv) expanding the markets where the state is promoted.  
48  
49

1 ~~The Utah Film Commission falls under the umbrella of the Utah Office of Tourism and assists producers~~  
2 ~~with multimedia projects, including projects on public lands.~~ ¶

3 As part of the Governor’s Office of Economic Opportunity, the Utah Film Commission markets the entire  
4 state as a destination for film, television, and commercial production by promoting the use of professional  
5 local crews and talent, support services, Utah locations, and the Motion Picture Incentive Program. The  
6 office also serves as a liaison to the film industry, facilitating production needs across the state.  
7 Visitors also come to Utah for activities such as road cycling, mountain biking, fishing, boating,  
8 whitewater rafting, OHV riding, ~~boating~~, rock climbing, hunting, and other types of recreation. Many  
9 rural counties in Utah are more dependent on tourism than counties along the Wasatch Front, but some  
10 lack sufficient infrastructure (hotels, restaurants, signage, shopping, etc.) to provide the type of experience  
11 that would attract larger numbers of visitors.

12  
13 Additionally, recreation opportunities, tourism, and film production have been limited and restricted by  
14 cumbersome permitting processes and timelines for guides, outfitters, filmmakers, and other groups  
15 attempting to work with federal land-management agencies to obtain required permits.

## 17 **Economic Considerations**

18  
19 The tourism, recreation, and film industries are major drivers of Utah’s economy. Without Utah’s travel  
20 and tourism industry, it is estimated that each Utah household would have had to pay an additional \$1,200  
21 in state and local taxes to maintain the same level of government services [11]. In 2019, visitor spending  
22 generated close to \$462 million in total income tax revenue that was allocated to Utah education funding.  
23 Approximately \$65 million in total tourism-generated motor-fuel tax revenue was directed to Utah’s  
24 transportation system and associated infrastructure. An additional \$525 million in total state sales tax  
25 revenue was deposited in Utah’s general fund, ~~where it~~which was used to pay for essential services,  
26 including the following:

- 27
- 28 • Health and human services
- 29 • Corrections, courts, and the justice system
- 30 • Public safety
- 31 • Economic development programs
- 32

33 The UORG, which is administered by the UDOR, helps build tourism in communities around the state  
34 with the construction and expansion of outdoor recreation amenities. New trails and other outdoor  
35 recreational opportunities aid in local economic development. Communities have found that having  
36 nearby recreation opportunities improves the quality of life of local citizens, helps to attract new  
37 residents, and can lead to an increase in local property values. Businesses, ~~especially high tech firms,~~  
38 consider having nearby outdoor recreation amenities as “absolutely vital” to attracting and keeping high-  
39 value employees.

40  
41 From 2021-to 2023, Utah’s film industry generated \$1.83 billion in economic impact in the state through  
42 the production of film, television series, and commercials, much of which occurs~~red~~ in rural counties. On  
43 average, productions spend between \$100,000 and \$250,000 per day, many of which come to the state  
44 during the off-season, keeping hotels and restaurants and the people they employ busy.

## 46 **Goals, Objectives, and Policies**

### 48 **Goals:**

1 Ensure public safety in outdoor recreation, promote the sustainability and resiliency of Utah recreational  
2 opportunities, which attract millions of visitors annually and contribute significantly to the physical and  
3 mental health of Utah residents and to state and local economies.

## 4 5 **OBJECTIVES**

- 6
- 7 • Ensure that Utah is prosperous. This requires a diversified and enduring economy. To achieve this  
8 goal, the State of Utah must pursue the development of the recreational economy.
- 9 • Ensure that promoting one economic sector does not unduly constrain another.
- 10 • Maintain Utah's beauty. This means the State of Utah must care for and protect the state's natural  
11 treasures in a balanced and sustainable manner.
- 12 • Ensure Utahns are ~~that Utah is~~ healthy. Physical activity and stress relief—both associated with  
13 recreation—are keys to good physical and mental health. Encouraging active lifestyles can reduce  
14 health care costs and increase personal well-being.
- 15 • Create accessible recreation opportunities in Utah. A range of outdoor amenities must be  
16 physically and financially accessible to people of diverse incomes, abilities, and interests. In  
17 addition, the State of Utah must ensure Utahns' ability to access and enjoy traditional outdoor  
18 recreational areas is not unduly affected by commercial expansion.
- 19 • Promote ~~Build~~ an ethic of public lands stewardship and build a sense of community in Utah. The  
20 backpacker and the OHV rider, the rural rancher and the urban cyclist, the energy executive and  
21 the environmentalist—all are part of Utah and care about the state's future. What unites Utahns is  
22 greater than what divides us ~~them~~. The State of Utah must identify and build on shared values and  
23 create a Utah where all can enjoy the elevated quality of life this state offers. The ~~S~~state  
24 emphasizes a responsible recreation and stewardship ethic through both youth and adult education  
25 and education promotion. This has benefits for natural ~~resource~~ protection and reduction in  
26 search ~~and~~ rescue calls.
- 27 • Ensure that Utah's residents and visitors recreate safely and responsibly in order to reduce the  
28 burden on local search and rescue providers.

29  
30 Resource management objectives that will benefit Utah's tourism, recreation, and film industries include:

- 31
- 32 • Maintain easy access to Utah's ski and summer resorts and public lands.
- 33 • Improve air quality.
- 34 • Build relationships with the ~~U.S.~~ National Park Service (~~NPS~~), ~~U.S.~~ Bureau of Land Management  
35 (BLM), ~~U.S.~~ Forest Service (Forest Service) and other federal and state agencies and local  
36 stakeholders to provide a satisfying visitor experience on Utah's public lands.
- 37 • Ensure Utah's lakes, reservoirs, rivers, and streams are clean and healthy, while protecting  
38 riparian areas.
- 39 • Assist Utah communities in improving tourism, outdoor recreation, and film infrastructure.
- 40 • Preserve Native American architecture, artifacts, pictographs and petroglyphs.
- 41 • Conserve and actively manage wildlife.
- 42 • Improve relationships between state and federal land-management agencies to streamline the  
43 permitting process for film, television and commercial ~~multi-media~~ productions in order to attract  
44 more film companies to Utah, particularly rural Utah, to showcase the beauty of our natural  
45 resources and to provide economic support for the industry and Utah communities.

## 46 **Policies**

- 47
- 48 • Encourage input from key stakeholders on matters related to outdoor recreation, tourism, and  
49 public land management.

- 1 • Encourage Congress to provide more financial support to national parks and public lands, and  
2 help eliminate maintenance backlogs and improve the visitor experience.
- 3 • Encourage Congress to allow more flexibility for how federal funding can be utilized.
- 4 • Plan for the future of Utah’s recreation, tourism, and film industry with a long-term outlook.
- 5 • Ensure balanced and responsible use and development of Utah’s public lands. Utahns value their  
6 public lands, which support a range of uses, including resource development, recreation, wildlife  
7 habitat, grazing, and environmental services. With diverse uses comes some conflict. The State of  
8 Utah should approach public-land issues with a proactive, creative, and collaborative approach to  
9 find the right balance among the uses, all of which are important.
- 10 • Encourage education about the benefits of multiple-uses for public lands (e.g., recreation and  
11 other public-land uses are compatible and not mutually exclusive).
- 12 • Through public processes, identify the most-valued recreational areas in Utah and explore how to  
13 optimize the recreational experience for visitors to those areas.
- 14 • Resolve claims associated with Revised Statute 2477 (Section 8 of the Mining Act of 1866) in  
15 Utah’s counties as expeditiously as possible and with consideration of access to popular  
16 recreational areas.
- 17 • Call upon the Forest Service and BLM to involve the State of Utah as a cooperating agency in  
18 management plans and other management processes, and to seek to implement the State of Utah’s  
19 recreational vision to the greatest extent possible. The federal government should seek wide  
20 support for the finished plans to minimize subsequent opposition and contention.
- 21 • Encourage county and regional stakeholders to resolve the state’s many longstanding public lands  
22 issues in Utah, such as wilderness designations, infrastructure rights-of-way, and water  
23 development.
- 24 • Recognize Utah’s coming challenges and make outdoor recreation a part of the state’s strategic  
25 planning, legislation, and infrastructure development.
- 26 • Collaborate with Utah universities and colleges to expand the reach of recreational programs into  
27 the broader community, especially secondary schools, which would help strengthen and expand  
28 the outdoor recreation workforce.
- 29 • Support linking Utah communities through the creation of trail systems to meet the recreational  
30 needs of all visitors and citizens, including youth and groups with special needs.
- 31 • Support the continuation of the UORG (and other grant and funding options) to promote and fund  
32 outdoor recreation infrastructure on Utah’s federal, state, and private land.
- 33 • Educate and foster relationships with stakeholders ranging from the Utah State Legislature and  
34 Governor’s Office to local governments, ~~t~~ribal governments, and federal agencies.
- 35 • Make recreation a priority on federal lands, improving recreational access, and removing  
36 unnecessary barriers so that all Americans can enjoy outdoor recreation experiences.
- 37 • Encourage federal legislation that would streamline the permitting processes for guides and  
38 outfitters.
- 39 • Support access to public lands for multiple uses, including the utilization of public lands for film,  
40 television and commercial ~~multi-media~~ productions.
- 41 • Federal land-management agencies shall work expeditiously with the Film Commission and  
42 production companies to permit film, television and commercial ~~multi-media~~ productions on  
43 public lands under the multiple-use mandates required by the federal government.

44  
45 **State Code**

46  
47 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
48 *following are selected portions of the Utah State Code and do not represent every potential legal*  
49 *reference in the Code related to this section of the State Resource Management Plan or the*  
50 *administration of public lands.*

1 **Public Lands Planning**

2  
3 **§ 63L-11-302.** *Principles to be recognized and promoted.*

4  
5 **§ 63L-11-303.** *Findings to be recognized and promoted.*

6  
7 (3) transportation and access routes to and across federal lands, including all rights-  
8 of-way vested under R.S. 2477, are vital to the state's economy and to the quality of life  
9 in the state, and must provide, at a minimum, a network of roads throughout the resource  
10 planning area that provides for:

- 11 (a) movement of people, goods, and services across public lands;  
12 (b) reasonable access to a broad range of resources and opportunities  
13 throughout the resource planning area, including:  
14 (i) livestock operations and improvements;  
15 (ii) solid, fluid, and gaseous mineral operations;  
16 (iii) recreational opportunities and operations, including motorized  
17 and non-motorized recreation;  
18 (iv) search and rescue needs;  
19 (v) public safety needs; and  
20 (vi) access for transportation of wood products to market;  
21 (c) access to federal lands for people with disabilities and the elderly;  
22 (d) and access to state lands and school and institutional trust lands to  
23 accomplish the purposes of those lands;  
24

25 **State Land Use and Management Plan for Federal Lands**

26  
27 **§ 63L-8-104.** *State land-use planning and management program.*

28  
29 **Natural Resources**

30  
31 **§ 79-4.** *State Parks.*

32  
33 **§ 79-5.** *Recreational Trails*

34  
35 **§ 79-7.** *Outdoor Recreation Act.*

36  
37 **§ 79-8.** *Outdoor Recreation Grants.*

38  
39 **§ 41-22.** *Off Highway Vehicles Act*

40  
41 **§ 73-18.** *State Boating Act*

42  
43 **Recreational, Tourist, and Convention Bureaus**

44 **§ 17-31-2.** *Purposes of transient room tax and expenditure of revenues--Purchase or lease of*  
45 *facilities-- Mitigating impacts of recreation, tourism, or conventions--Issuance of bonds.*

46 **Economic Opportunity Act**

47  
48 **§ 63N-4.** *Rural Development Act.*

49  
50 **§ 63N-7.** *Utah Office of Tourism.*



1            **§ 63N-8. Motion Picture Incentives.**  
2

3            **References:**

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16           *Gardner Policy Institute, University of Utah*  
17

# PIPELINES AND INFRASTRUCTURE

## Introduction

For the purposes of this planning document, pipelines and infrastructure are defined as the primary physical structures and facilities used to transport and store raw materials, energy, water, utilities, products, and people within and across Utah. This chapter will focus on pipelines, electrical transmission, telecommunications, vehicle and rail transportation, and other major infrastructure.

## Electrical Transmission

Electrical transmission infrastructure is primarily constructed and operated by private utility companies, cooperatives, and interlocal utilities to convey high-voltage electricity from a generation source to load-center substations, where it's transformed into lower-voltage electricity for distribution to end-users. Major components of electrical transmission infrastructure include transformers, towers, foundation materials, and conductors (transmission lines). High-voltage transmission can be either alternating current (AC) or direct current (DC). Alternating current, the most commonly used form of transmission, has the ability to convert to different voltages using a transformer, whereas DC is not easily converted. Typical voltage for transmission ranges from 69 Kilovolt (kV) up to 500 kV. Table 1 shows the right-of-way width needed for electrical transmission, which varies by line voltage and maintenance requirements.

**Table 1:** Recommended right-of-way (ROW) width for electrical transmission lines by voltage class.

Line Voltages (in Kv)	Typical ROW Total Widths (in feet)
69	75–100
115	100–125
138	100–150
161	100–150
230	125–200
345	150–225
500	150–250

Source: BLM West-Wide Energy Corridor Guidebook (HDR et al. ND).

Electrical transmission systems from individual utility companies (including those in Utah) are interconnected to the entire electrical network of generation facilities and transmission grids across the western United States. Utah is part of the Western Electricity Coordinating Council (WECC) in the geographic region called the Western Interconnection, one of three major electric interconnections that operate independently of each other within the United States. The Western Interconnection and the PacifiCorps East (PACE) balancing allows load-balancing throughout the network. That is, power generated by utilities with excess generation capacity can be provided to utilities that cannot meet their peak load demand (EIM 2021). The Western Energy Imbalance Market (EIM) is a wholesale energy trading market where bulk power can be purchased and sold (EIM 2021). Because the EIM connects multiple generators in a marketplace, individual utilities can buy electricity to meet peak demand at reasonable rates. Renewable energy generators can also sell excess power capacity through the EIM instead of resorting to curtailment (Larsen 2018).

1 For information on the process of identifying and permitting the construction of electricity transmission  
2 infrastructure on federal land, refer to the Utility Corridor section.

### 3 4 **Legal context**

5  
6 The Federal Powers Act of 1921 (16 U.S.C. § 12), as amended, provides for federal oversight of the bulk  
7 electrical transmission system by the Federal Energy Regulatory Commission (FERC). The Energy Policy  
8 Act of 2005 (among other items) enables FERC to facilitate transmission planning to meet the needs of  
9 utilities serving retail customers. In 1996, FERC issued Order No. 888, which opened all interstate  
10 transmission lines for use by any power generator to transmit power across the bulk transmission grid,  
11 provided the power generator pays tariffs to the transmission line utility owners. This is known as the  
12 Open Access Transmission Tariff (OATT). The FERC’s Order No. 889, sets standards of conduct for  
13 power generators utilizing OATT transmissions with additional reforms, Order No. 890 and Order No.  
14 890-A in 2007.

### 15 16 **Natural Gas Pipelines**

17  
18 Natural gas pipelines are constructed by private utility companies to move natural gas from production  
19 areas to end users (54 Utah Code § 13). Gathering pipelines move extracted raw materials from wellheads  
20 to processing plants, where natural gas is separated from other gases, hydrocarbon gas liquids, and water.  
21 The refined natural gas is then pressurized and added to the mainline transmission system, which consists  
22 of large-diameter, high-pressure pipelines. Compressor stations along the network maintain pressure and  
23 move product down the line to storage areas, major industrial consumers, power plants, shipping ports,  
24 and distribution companies. From there, distribution transmission systems operate with smaller-diameter  
25 lines and lower pressure. Finally, service lines transport natural gas to the end users.

26 This planning document focuses on pipeline infrastructure located within designated utility corridors  
27 (typically major transmission lines), but may also include some gathering and distribution lines. More  
28 information on natural-gas production and distribution from the US Energy Information Administration  
29 (EIA) can be found here.

30  
31 For information on the process of identifying and permitting the construction of natural gas pipeline  
32 infrastructure on federal land, refer to the Utility Corridor section.

### 33 34 **Legal context**

35  
36 The Natural Gas Act (15 U.S.C 15B § 717) enabled the federal regulation of companies transporting and  
37 distributing natural gas both intrastate and interstate. The Public Law 109-468 (2006), an amendment to  
38 49 U.S.C § 60101, provides enhanced environmental and safety protection in the transportation and  
39 handling of national energy products. This includes the construction and demolition of pipelines for the  
40 purpose of transporting oil and gas products.

41  
42 The Pipeline and Hazardous Materials Safety Administration (PHMSA) exercises authority under the  
43 Pipeline Safety Act (49 U.S.C. § 60101) to prescribe minimum safety standards governing the location,  
44 design, construction, operation, and maintenance of liquefied natural gas facilities in or affecting  
45 interstate and foreign commerce. Whereas FERC serves as the lead federal agency for satisfying  
46 compliance with the National Environmental Policy Act (NEPA) (42 U.S.C. § 4321) for liquefied natural  
47 gas facilities subject to its jurisdiction (McIntyre 2018).

48  
49 Utah Code § 54-13 provides for state control over the regulation of intrastate pipeline transportation while  
50 (Utah Code §17-53-223(1)(A)) grants counties the authority to supplement state and federal safety laws

1 with its own regulations for oil and gas transmission so long as they are not repugnant to state or federal  
2 law (BMP 2021).

### 3 4 **Oil Pipelines**

5  
6 Oil pipelines are very similar to natural gas pipelines in that the products are transported through  
7 networks of pipes and pump stations from production areas to consumers. First, the raw material (in this  
8 case, crude oil) is gathered from wellheads and moved downstream through trunkline pipelines to  
9 refineries, which separate the oil into numerous petroleum products. From the refinery, pipelines are used  
10 to transport petroleum products to various destinations for local use or export to other markets. A third  
11 product, called hydrocarbon gas liquid (HGL) is a secondary product created during the processing of  
12 natural gas. Because HGL is a liquid petroleum product, pumped through pipelines in a manner similar to  
13 oil, it is included in this section. More information on oil production and distribution from the EIA can be  
14 found [here](#).

15  
16 For information on the process of identifying and permitting the construction of oil and gas pipeline  
17 infrastructure on federal land, refer to the Utility Corridor section.

### 18 19 **Legal context**

20  
21 The PHMSA exercises authority under the Pipeline Safety Act ([49 U.S.C. § 60101](#)) to prescribe minimum  
22 safety standards governing the location, design, construction, operation, and maintenance of liquefied  
23 natural gas facilities in or affecting interstate or foreign commerce. Whereas FERC serves as the lead  
24 federal agency for satisfying compliance with NEPA ([42 U.S.C. § 4321](#)) for liquefied natural gas facilities  
25 subject to its jurisdiction (McIntyre 2018). Similar to natural gas pipelines, [Utah Code § 54-13](#) provides  
26 for state control over the regulation of intrastate pipeline transportation while ([Utah Code §17-53-](#)  
27 [223\(1\)\(A\)](#)) grants counties the authority to supplement state and federal safety laws with its own  
28 regulations for oil and gas transmission so long as they are not repugnant to state or federal law (BMP  
29 2021).

### 30 31 **Hydrogen Pipelines**

32  
33 In contrast to oil and natural gas, which are extracted from the earth, hydrogen is a manufactured product.  
34 Hydrogen gas can be manufactured from fossil fuels such as natural gas (“grey hydrogen”) or coal  
35 (“brown hydrogen”), or it can be created from water using electrolysis. When the electricity used in the  
36 electrolysis process is derived from a renewable energy source, the resulting hydrogen is known as “green  
37 hydrogen.” Hydrogen can also be produced from biomass.

38  
39 Pipelines and other infrastructure used to transport hydrogen are similar to those used to transport natural  
40 gas. Large-diameter pipes are first used in the transmission of high-pressure hydrogen gas. When blended  
41 with natural gas (at up to 15 percent hydrogen), existing natural gas pipelines can be used instead of  
42 installing separate hydrogen pipelines. [However](#), the infrastructure must be retrofitted to handle the  
43 higher operating pressure and smaller particle sizes of hydrogen gas (NREL 2013)

44  
45 For information on the process of identifying and permitting the construction of hydrogen gas pipeline  
46 infrastructure on federal land, refer to the Utility Corridor section.

### 47 48 **Legal Context**

49  
50 The PHMSA exercises authority under the Pipeline Safety Act ([49 U.S.C. § 60101](#)) to prescribe minimum  
51 safety standards governing the location, design, construction, operation, and maintenance of liquefied

1 natural gas facilities in or affecting interstate or foreign commerce. Whereas FERC serves as the lead  
2 federal agency for satisfying compliance with NEPA (42 U.S.C. § 4321) for liquefied natural gas facilities  
3 subject to its jurisdiction (McIntyre 2018). The US Department of Transportation (DOT), through  
4 PHMSA, has regulated hydrogen pipelines since 1970 via 49 CFR § 192. This code of regulation  
5 stipulates that a minimal level of safety standard needs to be met when transporting natural and other  
6 gasses. Regulations apply to pipeline construction, material standards, operations, and maintenance of  
7 pipeline structures.

8  
9 Similar to natural gas pipelines, Utah Code § 54-13 provides for state control over the regulation of  
10 intrastate pipeline transportation, while (Utah Code §17-53-223(1)(A)) grants counties the authority to  
11 supplement state and federal safety laws with its own regulations for oil and gas transmission so long as  
12 they are not repugnant to state or federal law (BMP 2021).

### 13 14 **Water Pipelines**

15  
16 For the purposes of this planning document, water pipelines consist of substantial infrastructure projects  
17 used to transport large quantities of water over long distances through varying terrain and elevations from  
18 reservoirs and rivers to major population centers and agricultural users.

### 19 20 **Legal eContext**

21  
22 The Colorado River Compact created the Upper and Lower Colorado River Basin. In the Upper Colorado  
23 River Basin Compact of 1948, Utah is allocated 23 percent of the upper basin water allotment, which  
24 totals 1.73 million acre-feet. The Colorado River Storage Project Act (Public Law 485, 70 Stat. 105) was  
25 enacted to authorize the Central Utah Project (CUP) among many other such development projects within  
26 the Colorado River Basin. Congress enacted the Central Utah Project Completion Act (CUPCA) (P.L.  
27 102-575) on October 30, 1992, providing policy guidance and direction for completing the CUP,  
28 including transferring all construction responsibilities from the ~~BOR~~ [Bureau of Land Management](#)  
29 to the Central Utah Water Conservancy District, while retaining federal oversight. The Ute Indian Unit was  
30 de-authorized by the 1992 CUPCA (DOI 2021a).

31  
32 All water use within the State of Utah is governed by Utah Code, Title 73. With respect to the Bear River,  
33 the Bear River Compact of 1958 divides the river into three main divisions: the Upper Division, Central  
34 Division, and Lower Division. The compact grants the State of Idaho the first right to develop and deplete  
35 125,000 acre-feet in the Lower Division, the State of Utah the second right to develop and deplete  
36 275,000 acre-feet in the Lower Division, and divides the next 150,000 acre-feet of water depletion equally  
37 between Utah and Idaho in the Lower Division. The compact then divides Bear River water in excess of  
38 the above allocations between Utah and Idaho, with Idaho receiving 30 percent and Utah 70 percent in the  
39 Lower Division. The compact further designates 36,500 acre-feet of “Original Compact Storage” above  
40 Bear Lake and allocates Utah 17,750 acre-feet of storage.

41  
42 The Bear River Development Act (Utah Code § 73-26) directs the Utah Division of Water Resources to  
43 “develop the surface waters of the Bear River and its tributaries through the planning and construction of  
44 reservoirs and associated facilities as authorized and funded by the Legislature.” The “associated  
45 facilities” include pipelines, pump stations, and reservoirs. The Bear River Development Project will  
46 provide 220,000 acre-feet of water to four Water Conservancy Districts (WCD). These are the Bear River  
47 WCD (which is allocated 60,000 acre-feet), Cache WCD (60,000 acre-feet), Jordan Valley WCD (50,000  
48 acre-feet), and Weber Basin WCD (50,000 acre-feet) ([UDWR 2021](#)).

1 The Lake Powell Pipeline Development Act of 2006 (Utah Code § 73-28) authorized the construction of  
2 the pipeline to utilize a portion of Utah’s water allocation from the Colorado River with the intention of  
3 delivering water from Lake Powell to Washington County.  
4 For information on the process of identifying and permitting the construction of water pipelines on federal  
5 land, refer to the Utility Corridor section.

## 6 **Telecommunications**

7  
8  
9 Telecommunications refer to the infrastructure used to transmit and distribute electronic information. For  
10 this study, the discussion of telecommunications will focus on broadband infrastructure, typically  
11 transmitted through fiber optic cable, used by service providers to connect consumers to the Internet,  
12 which allows large quantities of digital information to be transmitted at high speeds.

## 13 **Legal context**

14  
15  
16 Coordination of highway and broadband information is regulated by Utah Code § 63N-3-501 (2020),  
17 which dictates the collection and maintenance of broadband data from providers and private or public  
18 entities.

19  
20 For the purposes of telecommunication installation, utility access to the US interstate highway system,  
21 including the right-of-way areas, is regulated by Utah Code § 72-7-108 and Utah Administrative Rule §  
22 907-64. These regulations facilitate longitudinal access to or use of any part of the right-of-way of a  
23 highway on the interstate system.

24  
25 The placement and relocation of utility facilities that conflict with the construction or maintenance of  
26 highways (which applies to any and every facility, utility, or other structure not owned by the State of  
27 Utah) falls under the Utility Accommodation Rule (Utah Administrative Rule § 930-7). Utah Code § 54-  
28 23 instructs railroads to allow fiber-optic carriers to cross under railroad rights-of-way for a fee, provided  
29 certain safety conditions and no federal laws are violated.

30  
31 For information on the process of identifying and permitting the construction of telecommunication  
32 infrastructure on federal land, refer to the Utility Corridor section.

## 33 **Transportation Infrastructure**

34  
35  
36 Transportation infrastructure is the backbone network of major roads, highways, railroads, and other  
37 infrastructure used to transport goods and services within and across Utah. For the purposes of this  
38 planning document, the roads and highways managed by the Utah Department of Transportation (UDOT)  
39 and major railroads are considered.

## 40 **Legal context**

41  
42  
43 A significant portion of the funding for construction of highways in Utah comes from the Federal-Aid  
44 Highway Program administered by the Federal Highway Administration (FHWA) (CRS 2021).  
45 However, each state is required to have a ~~D~~department of ~~T~~transportation, which is charged with (among  
46 other things) ~~with~~-determining which construction projects are funded. The UDOT was established to  
47 have the authority and responsibility for planning, research, design, construction, maintenance, security,  
48 and safety of state transportation systems (Utah Code § 72-1-201). This includes the preparation and  
49 adoption of standard plans and specifications for the construction and maintenance of state highways.

## 50 **Other Infrastructure**

1 Other infrastructure includes mechanical wastewater-treatment facilities, sewer collection systems,  
2 sewage lagoons, and stormwater systems. The vast majority of these systems in Utah are owned and  
3 operated by local municipalities and service districts. For information on the process of identifying and  
4 permitting the construction of infrastructure on federal land, refer to the Utility Corridor section.

## 6 **Legal Context**

7  
8 The Federal Water Pollution Control Act of 1972, commonly referred to as The Clean Water Act 40 CFR  
9 § 1, Subchapters D, N, and O (Parts 100-140, 401-471, and 501-503), gives the US Environmental  
10 Protection Agency (EPA) the federal authority to set standards for allowable pollutants for point and  
11 nonpoint source discharge into waterways. The Utah Water Quality Act as amended establishes a  
12 framework for Sstate oversight of water quality.

## 14 **Findings**

### 16 **Electrical Transmission**

17  
18 The majority of electricity generation and bulk energy transmission capacity in Utah is owned by  
19 PacifiCorp (note: Rocky Mountain Power is owned by PacifiCorp). According to company statistics,  
20 PacifiCorp serves 948,000 customers in Utah across 26 counties (Cox 2021).

21  
22 Other power generators and distributors in Utah include the Utah Rural Electric Cooperative Association  
23 (URECA), Utah Municipal Power Agency (UMPA), and Intermountain Power Agency (IPA).

24  
25 The URECA is a collective of nine local power generators and transmission companies from six states.  
26 Utah members of the cooperative include Deseret Power Electric Cooperative, Dixie Power, Garkane  
27 Energy, and Moon Lake Electric Association. Combined, they service about 70,000 utility meters and  
28 250,000 consumers in Utah (J. Peterson, URECA, personal communication, 10/28/2021).

29  
30 The UMPA comprises the communities of Levan, Manti, Provo, Salem, and Spanish Fork. In 2013,  
31 UMPA generated approximately 26 percent of its electricity and purchased the other 74 percent from the  
32 Colorado River Storage Project, Deer Creek, PacifiCorp, Deseret Power, and spot markets (UMPA  
33 2013).

34  
35 The IPA sells power to 23 municipal customers across the state as well as URECA members in Utah,  
36 Nevada, and Wyoming. They also sell power to municipal customers in California.

37 These power co-ops and associations make use of the OATT, provided by FERC Order numbers 888 and  
38 889, to purchase transmission capacity on PacifiCorp's transmission infrastructure to provide power to  
39 their customers without having to install their own transmission lines.

40 Within and across Utah, PacifiCorp's infrastructure provides the majority of electrical transmission  
41 capacity. Other transmission infrastructure owners include the IPP, which owns a 500kC DC transmission  
42 line that services its California customers. Figure 1 shows the major existing transmission lines in Utah  
43 while Table 2 shows the approximate length of transmission line by voltage class.

44  
45 The majority of future planned utility transmission infrastructure in Utah will be owned by PacifiCorp.  
46 Their 2021 Integrated Resource Plan describes new transmission projects intended to (1) strengthen the  
47 backbone of Utah's energy grid for future energy loads, (2) improve interstate energy market connections  
48 through the Western EIM, and (3) change generation sources to include greater renewable contingents.  
49 PacifiCorp's IRP includes the Energy Gateway South project, which consists of a 416-mile 500 kV AC  
50 transmission line from Aeolus, Wyoming to Mona, Utah, with an estimated completion date of October  
51 2024.

1 The proposed TransWest Express Transmission Project consists of 732 miles of high-voltage  
2 transmission lines. The project consists of a 500 kV DC line from Sinclair, Wyoming, to Delta, Utah, and  
3 a 500 kv AC line from Delta to southern Nevada. This transmission line will eventually provide 3,000  
4 megawatts of transmission capacity, which will be generated by wind power in Wyoming (TransWest  
5 Express 2021).

6  
7 The Cross-Tie transmission line is a 500 kV AC transmission project runs through Juab and Millard  
8 counties connecting the Clover substation near Mona, Utah with the Thirty Mile substation near Ely,  
9 Nevada. This project will relieve congestion on existing transmission lines and provide access to  
10 renewable energy production in the region. TransCanyon will develop, own, and operate the new  
11 facilities. (TransCanyon 2024).

12  
13 The URECA has indicated they have no new transmission projects planned in the near future (Peterson  
14 2021).

15  
16 When planning for new utility-scale solar developments, considerations should be made for the inversion  
17 of DC power generated from solar arrays prior to connection to the AC bulk power grid.

18  
19 Another consideration for the planning of electrical transmission in Utah includes future chokepoints or  
20 bottlenecks in transmission-line capacity. This issue has been studied with respect to electrical  
21 transmission in the 2021 Utah Transmission Study, which determined that (under scenarios of high  
22 renewable energy buildout in southern Utah) electrical transmission needs might exceed capacity (Energy  
23 Strategies 2021).

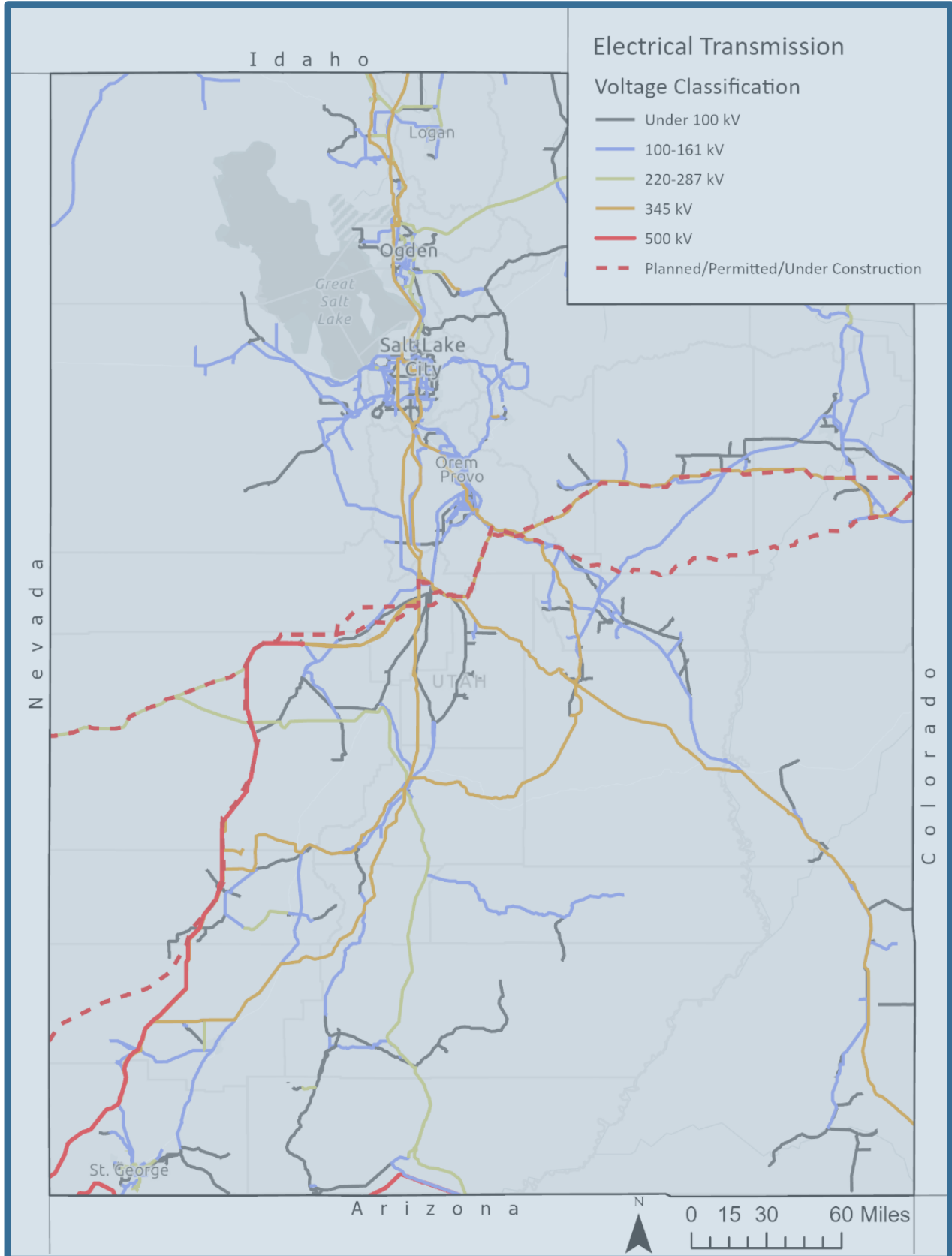
24  
25 Resilience and redundancy of electrical transmission are issues that have been identified by stakeholders.  
26 Many rural locations in Utah are served by single transmission lines, referred to as “radial transmission  
27 lines.” Radial transmission lines are the least costly option for providing some remote locations with  
28 electrical power, but they also leave those areas vulnerable to utility disruptions because of their lack of  
29 redundancy. Additional transmission connections are ~~costly~~expensive not only because of the high cost of  
30 their construction-~~costs~~, but also due to the expense and time required to place utility corridors on federal  
31 lands. Refer to the Utility Corridor section for more information.

32  
33 Other locations experiencing issues with expanding electrical transmission capacity and redundancy are  
34 Dixie Power and Rocky Mountain Power in Washington County. Dixie Power’s current transmission line  
35 (which supplies electricity to Washington County) runs through ~~BLM~~US Bureau of Land Management  
36 land on which critical desert tortoise habitat has been designated. This land-use change prohibits upgrades  
37 to the existing transmission line, which has resulted in the need to locate alternative transmission corridor  
38 locations (J. Peterson, URECA, personal communication).

39  
40 **Figure 1:** Major electrical transmission lines in Utah (HIFLD ~~2021~~2021-2024).



1



2

1 **Table 2:** Electrical transmission line length by type and voltage class.  
 2

<b>Alternating Current (AC) Transmission Line Length</b>		<b>Substations-</b>
<b>Kilovolt Category</b>	<b>Miles</b>	<b>Count</b>
Under 100	<del>2,292</del> 2,380	596
100-161	<del>3,642</del> 3,708	641
220-287	1,005	109
345	2,218	27
500	<del>4547</del>	0
<b>Direct Current (DC) Transmission Line Length</b>		<b>Substations-</b>
500	207	1
<b>Permitted/Planned Transmission Line Length</b>		<b>Permitted Substations-</b>
<u>Cross-Tie 500 kV AC¶</u>		<u>136¶</u>
Gateway South 500 kV AC	<del>186.6</del> 183	N/A
TransWest Express 500 kV AC/DC	<del>418.7</del> 389	N/A
<b>Grand Total</b>	<b>10,01482</b>	<b>1,374</b>

3 *Source: Homeland Security Infrastructure Program, Electrical Power Transmission Lines (HIFLD 2024).*  
 4 ¶

5 **Natural Gas Pipelines**

6  
 7 Natural gas production in Utah is located primarily in Uintah and Grand counties (Vanden Berg 2020).  
 8 Multiple interstate pipelines cross through Utah to transport natural gas from principal producing basins  
 9 in Colorado, Utah, and Wyoming, to consumer markets in other states, and for export to foreign markets  
 10 around the world. Figure 2 shows existing natural gas pipelines in Utah.

11  
 12 The majority of local natural gas transmission infrastructure in Utah is provided by Dominion Energy.  
 13 The company owns 20,189 miles of transmission and distribution lines and has 1,090,000 customers  
 14 (Dominion Energy 2020). Dominion Energy produces a large portion of the gas it sells to customers, but  
 15 it also purchases natural gas from other interstate pipeline companies for delivery to residential,  
 16 commercial, and industrial customers.

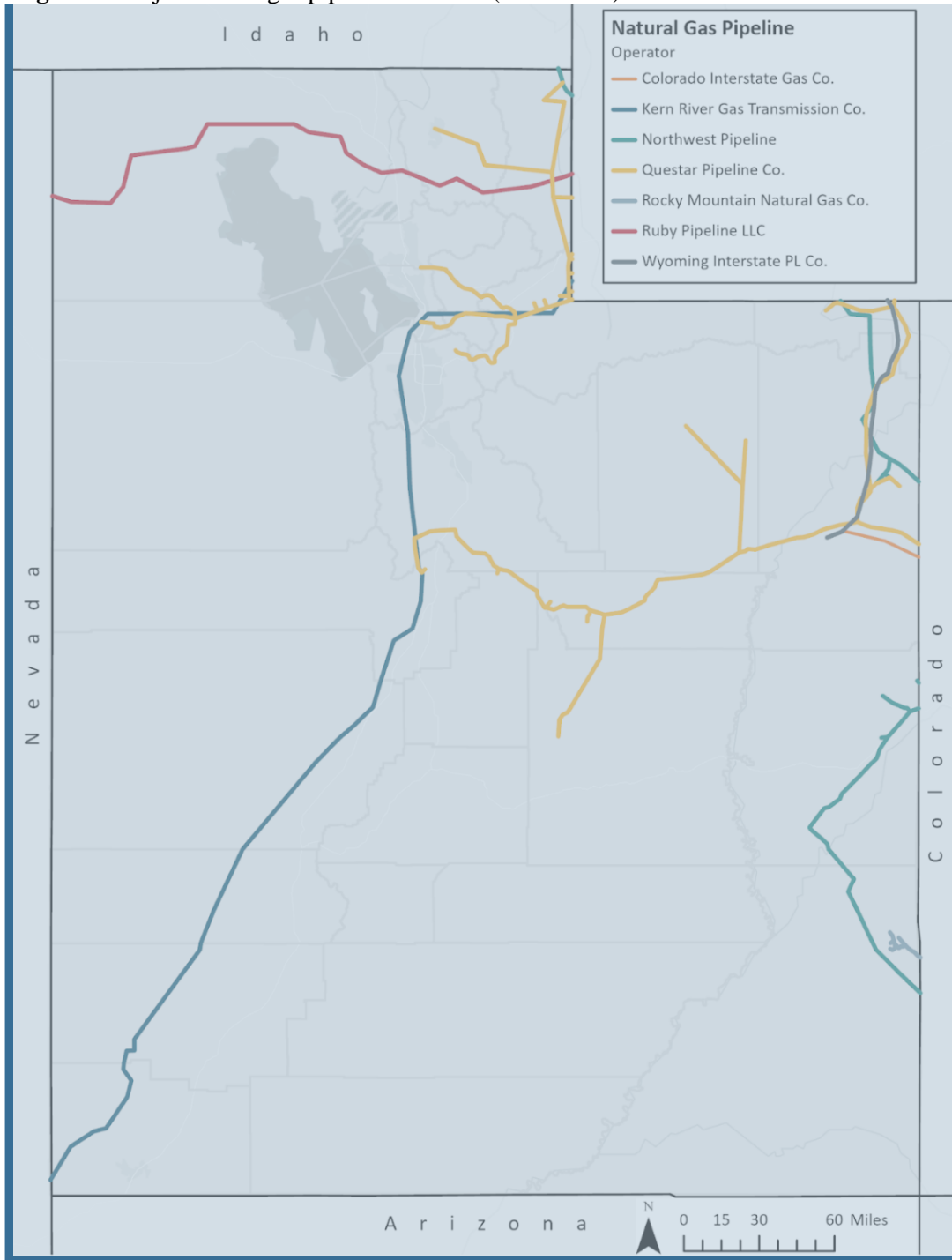
1 Major natural gas pipelines in Utah include those found in table 3.

2

3 Natural gas can also be produced from renewable sources to create a product known as “renewable  
4 natural gas” (RNG). A recent pilot project developed by Dominion Energy and Smithfield Foods (near  
5 Milford, Utah) converts methane from pig farms into RNG for distribution to Dominion Energy  
6 customers (Bioenergy Insight 2020).

7

8 **Figure 2:** Major natural gas pipelines in Utah (EIA 2020a).



9  
10

1 **Table 3:** Utah natural gas pipelines in Utah by operator.

<b>Natural Gas Pipeline</b>	
<b>Operator</b>	<b>Total (miles)</b>
Colorado Interstate Gas Co.	25
Kern River Gas Trans Co.	364
Northwest Pipeline	219
Questar Pipeline Co.	664
Rocky Mountain Natural Gas Co.	22
Ruby Pipeline LLC	178
Wyoming Interstate PL Co.	80
<b>Grand Total</b>	<b>1,552</b>

2 *Source: U.S. Energy Information Administration), U.S. Natural Gas Interstate and Intrastate Pipelines*  
 3 *(EIA 2020a.)*

4

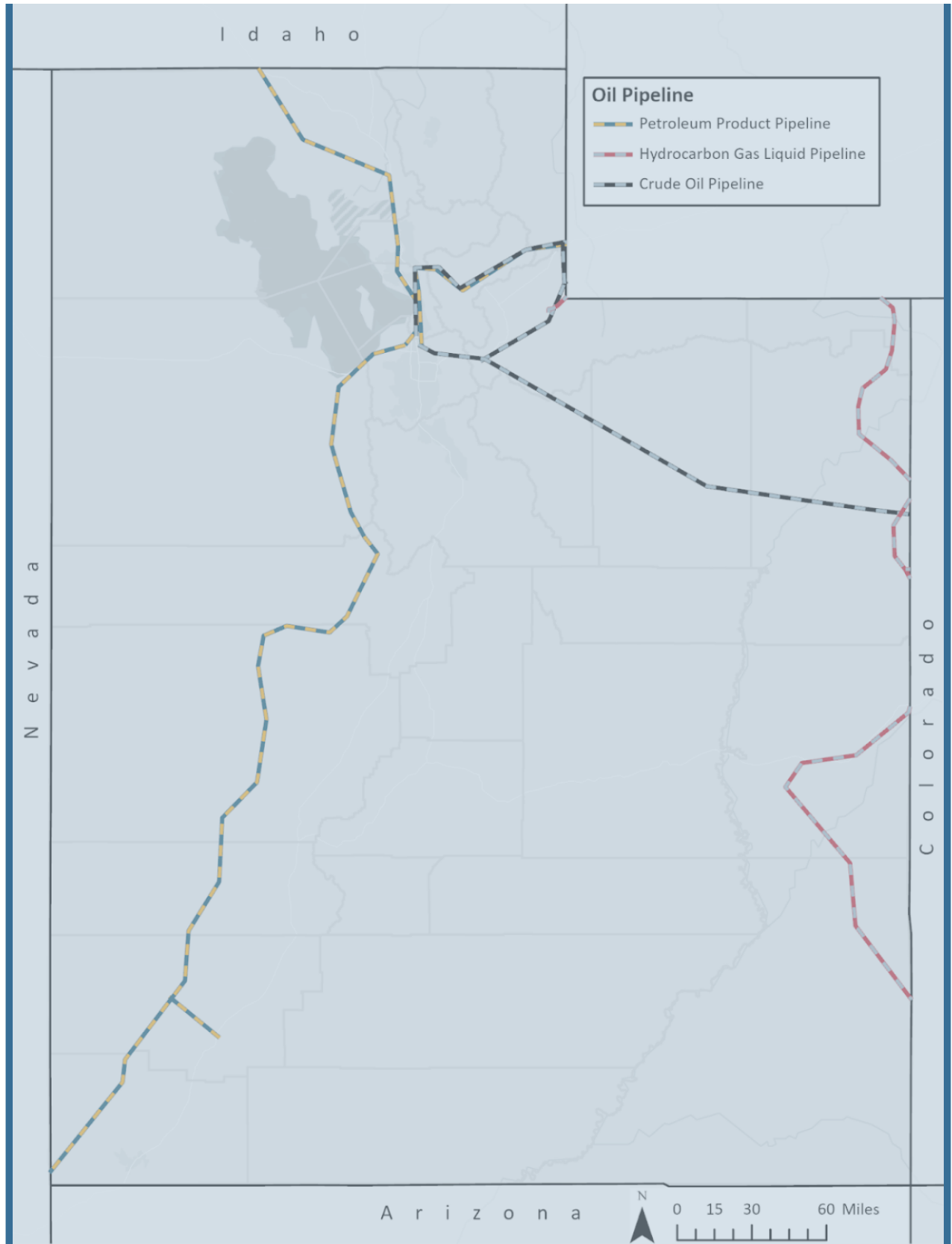
5 **Oil Pipelines**

6

7 According to the Utah Geologic Survey (UGS), Utah is consistently one of the top 15 oil-producing states  
 8 in the United States (Chidsey 2021). In their recent circular, Utah’s Energy Landscape, the UGS reported  
 9 the majority of oil production in Utah is occurring in Duchesne, Uintah, and San Juan ~~C~~counties. Oil  
 10 produced from wells in the Uinta Basin and further east in Colorado is transported in oil pipelines and  
 11 trucks to refineries in Salt Lake City. Crude oil produced in San Juan County is transported in pipelines  
 12 south to refineries in New Mexico. Crude oil from Canada and Wyoming is delivered through pipelines to  
 13 Salt Lake City for refining. Pipelines transport some petroleum products refined in Salt Lake City to other  
 14 parts of Utah and out-of-state markets. The Tesoro pipeline transports products to the northwestern states,  
 15 while the UNEV line supplies Cedar City and Las Vegas. Table 4 shows the lengths of oil pipelines by  
 16 product type and operator.

17

18 **Figure 3:** Major oil pipelines in Utah (EIA 2020b).



1  
2

1 **Table 4:** Utah oil pipeline length by product type and operator.  
 2

<b>Oil Pipelines</b>			
<b>Type</b>	<b>Operator</b>	<b>Pipeline</b>	<b>Total (miles)</b>
Crude Oil	Holly Energy	Frontier Aspen Pipeline	73
	Holly Energy	Salt Lake Crude Pipeline	162
	Plains All American Pipeline	Rocky Mountain	50
Hydrocarbon Gas Liquid	Enterprise Products	-	235
Petroleum Product	Chevron Pipeline Co.	Salt Lake Products	108
	Phillips 66 Pipeline	Pioneer	76
	UNEV Pipeline	UNEV Pipeline	342
<b>Grand Total</b>			<b>1045</b>

3 *Source: U.S. Energy Information Administration, U.S. Crude Oil Pipelines, HGL Pipelines, and*  
 4 *Petroleum Pipelines (2020b).*  
 5

6 **Hydrogen Pipelines**  
 7

8 Presently, Utah has no pipelines designated for transporting compressed hydrogen because the demand  
 9 for hydrogen as a fuel source is limited. One anticipated major hydrogen user in Utah is the IPP facility  
 10 near Delta, which is scheduled for 2025 to begin energy generation from a fuel mixture of 70 percent  
 11 natural gas and 30 percent hydrogen (Intermountain Power 2021). Eventually, their energy production  
 12 will be converted to 100-percent green hydrogen. Related to this IPP development is a utility-scale  
 13 hydrogen storage project that is intended to supply IPP with green hydrogen that will be generated on  
 14 site.

15 Broader use of hydrogen, such as for motor vehicles and freight transport, is uncertain at this time. Wide-  
 16 spread adoption of hydrogen as a transportation fuel would require a distribution network, either through  
 17 pipelines or by tanker trucks, to fueling stations throughout the state to alleviate drivers’ “range anxiety.”  
 18

19 **Water Pipelines**  
 20

21 Two primary water pipelines and water development projects utilize (or plan to utilize) water allocated to  
 22 Utah from the Colorado River Compact, CUP, and the Lake Powell Pipeline.

23 The CUP is a complex, trans-basin water development and delivery infrastructure project that provides  
 24 water storage and conveyance within the Uintah Basin and Wasatch Front of Utah. The CUP consists of  
 25 four units—water projects that, when combined, comprise the entirety of the CUP. The Bonneville Unit  
 26 is the primary unit. It enables transport of water from the Uinta Basin to the Wasatch Front. Within the  
 27 Bonneville Unit is the Diamond Fork system. This system comprises the Diamond Fork Pipeline, which  
 28 delivers 101,900 acre-feet of water to the Wasatch Front (DOI 2021b).  
 29

30 The Lake Powell Pipeline Project is a proposed ~~pipeline project~~ that would convey up to 83,756 acre-feet  
 31 of water from Lake Powell for use in Washington County (LPP 2021). A draft environmental impact

1 statement for the project was developed by the [US Bureau of Reclamation \(BOR\)](#). The Southern  
2 Alternative route proposed for the pipeline and associated power transmission infrastructure from Lake  
3 Powell to St. George would utilize a portion of Section 368 energy corridors through northern Arizona.  
4

5 The Bear River Development Act instructs the utilization of waters allocated to Utah in the Bear River  
6 Compact. To this end, the 2019 Bear River Development Report outlines planning and studying aspects  
7 of developing these water resources for the State of Utah. The report determined that the need for water  
8 may not occur until 2050, but corridors needed for pipelines for conveyance of the water as well as  
9 storage locations should be acquired in the near future.

10 Within Iron County, several projects have been proposed. The Pine Valley Water Supply Project  
11 (PVWS), as proposed, is a 66-mile pipeline that would bring water pumped from groundwater wells in  
12 the West Desert (known as “Pine Valley”<sup>2</sup>) to Cedar Valley (BLM 2021). The proposed pipeline  
13 operated by the Central Iron County Water Conservancy District would transfer about 15,000 acre-feet of  
14 water per year (CICWCD 2021). Approximately 42.6 miles of project length is located on BLM lands and  
15 would require a 50-foot-wide right-of-way. A second water project in Iron County is the Airport Recharge  
16 Project, which is intended to pump surface waters into a local aquifer in an attempt to recharge the  
17 overdrawn groundwater (UDWR 2021).  
18

## 19 **Telecommunications**

20

21 The State of Utah is committed to deploying and expanding broadband and making it accessible across  
22 the entire state. To this end, the 2020 Utah Broadband Plan identifies a series of goals ~~to meet that goal~~.  
23 As of June 2021, 94 percent of Utah has access to broadband Internet service with speeds of 100 mbps or  
24 faster. Approximately 68 percent of Utahns have access to fiber-optic services with a State Broadband  
25 Access Ranking of 29th in the United States (BroadbandNow 2021).  
26

27 The widespread access to high-speed Internet service across rural Utah is due in large part to the UDOT  
28 Fiber Program. For the ~~l~~past 20 years, UDOT has been working to install a robust fiber-optic network  
29 along state highways to connect traffic cameras, digital road signs, weather stations, and other sensors to  
30 provide real-time traffic updates (UDOT ND). This fiber-optic backbone also provides access for private  
31 companies to connect to broadband Internet networks and provide high-speed Internet to their customers.  
32 UDOT established a Public Private Partnership with private telecom companies to connect communities  
33 while expanding UDOT’s Intelligent Transportation System.  
34

35 The UDOT’s existing fiber-optic network consists of approximately 3,808 miles of cable (UDOT 2021a).  
36 A fiber-optic priority assessment revealed that 309 miles of fiber-optic network has been proposed with  
37 an additional 317 miles to meet existing needs (UDOT 2021b). Approximately 105 miles of fiber-optic  
38 network are in progress, with another 146 miles scheduled for installation (as of November 2021).  
39

## 40 **Other Infrastructure**

41

42 There are 36 mechanical water-treatment plants in Utah. These range in capacity from 0.25 million  
43 gallons per day (mgd) in Oakley City to 75 mgd at the Central Valley Water Reclamation Facility in Salt  
44 Lake City. Statewide, wastewater treatment plants are operating at 65 percent of capacity (WFWQC  
45 2019).  
46

47 A total of 29 sewer lagoons, which discharge treated effluent into waters of the State of Utah, serve a  
48 population of 73,500 people. Another 49 wastewater treatment facilities and lagoons are non-discharging  
49 operations that use evaporation, percolation and land disposal to handle wastewater and serve a  
50 population of 132,500 people (Krouth 2019, DWQ 2022).  
51

1 A 2019 study of existing sewer pipelines across Utah estimated there are 12,202 miles of sewer pipeline  
2 in the state with an average age of 35 years. The same study estimates that 7,320 miles of pipeline will  
3 need to be relined or replaced by 2060, and an additional 2,567 miles of new pipeline will need to be  
4 installed in the same timeframe (Forsgren 2019).

5  
6 A 2019 study of stormwater pipes across Utah estimated there are 4,673 miles of existing stormwater  
7 pipes in the state with an average age of 29 years. The study estimates that 2,395 miles of this pipeline  
8 will need to be replaced by 2060, and another 956 miles will need to be installed in the same time period  
9 to accommodate new population growth (Forsgren 2019).

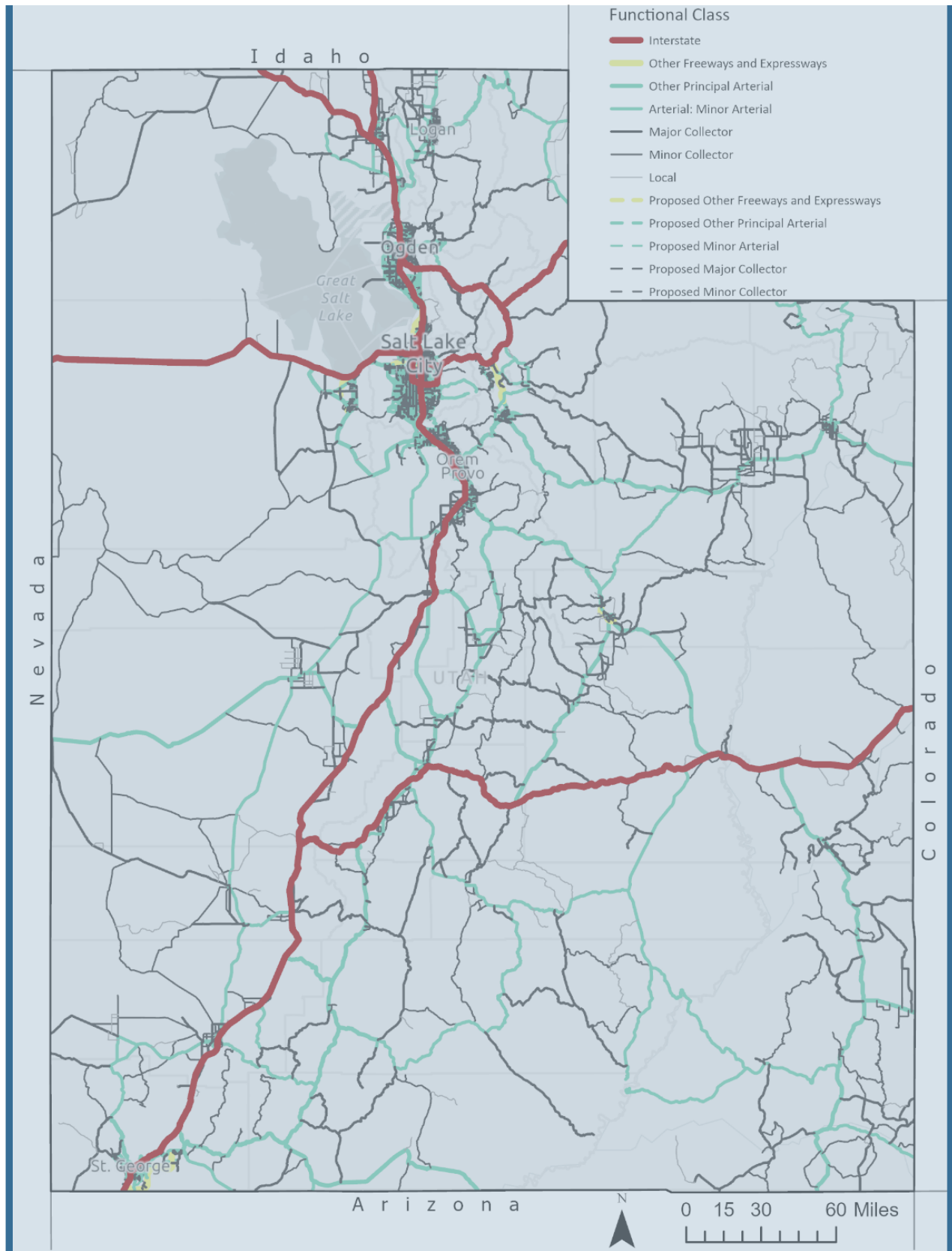
10 Water discharged into state waterways from mechanical wastewater treatment plants, sewage lagoons,  
11 and stormwater systems are subject to clean-water standards established by the EPA and the Utah  
12 Division of Water Quality. Those standards are defined here.

### 13 14 **Transportation Infrastructure**

15  
16 The planning, construction, and maintenance of US interstate highways, state highways, and some local  
17 roads in Utah are completed through collaboration with UDOT. Roadway planning occurs during the  
18 compilation of the Unified Transportation Plan. The planning process is a unification of multiple  
19 transportation plans across the state, which include those of local governments, rural planning  
20 organizations, metropolitan planning organizations, transit districts/authorities, and UDOT. Construction  
21 of new federal and state roadways and bridges as well as upgrades to existing infrastructure is prioritized  
22 during the planning process and ultimately approved by the Utah Transportation Commission appointed  
23 by the Governor of Utah. Maintenance of roadways within UDOT’s jurisdiction is carried out through a  
24 system of maintenance facilities placed strategically across the state.

25  
26 **Figure 4:** Existing roadways length by functional class (UDOT, ~~2022~~, 2024).





1  
2

1 **Table 5:** Existing and planned roadway length by functional class.

Roadway Length		
Functional Class	Existing Total (miles)	Planned Total (Miles)
Interstate	<del>2,314.5</del> <u>2,304</u>	0
Other Freeway and Expressway	<del>151.9</del> <u>153</u>	<del>25.2</del> <u>29</u>
Other Principal Arterials & Minor Arterial	<del>3,928.7</del> <u>3,999</u>	<del>98.7</del> <u>79</u>
Major Collector & Minor Collector	<del>8,406.2</del> <u>4</u>	<del>97.1</del> <u>88</u>
Local (UDOT only)	<del>1,016.6</del> <u>3</u>	<del>0.0</del> <u>0</u>
<b>Grand Total</b>	<b><del>15,818.1</del><u>15,893</u></b>	<b><del>204.6</del><u>176</u></b>

2 *Source: Utah Department of Transportation, roadway functional class (UDOT, 2022 2024)*

3  
 4 The Utah Freight Plan addresses issues and needs specific to the statewide highway and multimodal  
 5 freight networks. The UDOT, in conjunction with the Utah Transit Authority, also compiled the Utah  
 6 State Rail Plan, a plan for freight and passenger rail transportation in Utah.

7 ¶  
 8 Finally, Utah is in the planning process to site and construct a new rail connection between the Uinta  
 9 Basin and the existing interstate railroad network. The preferred route would travel from Kayune, Utah, to  
 10 Myton, Utah, passing south of Duchesne along US Highway 191 through Indian Canyon. About 12 miles  
 11 of the route would be through USFS Forest Service (Forest Service) land, which required preparation of  
 12 an environmental impact statement. The USFS Forest Service issued a draft Record of Decision on  
 13 October 26, 2021, to allow the project to proceed on forest land. On December 15, 2021, the federal  
 14 Surface Transportation Board granted final approval for construction and operations of the Uintah Basin  
 15 Railway. On July 14, 2022, the USFS Forest Service signed the final Record of Decision authorizing the  
 16 Uintah Basin Railway.

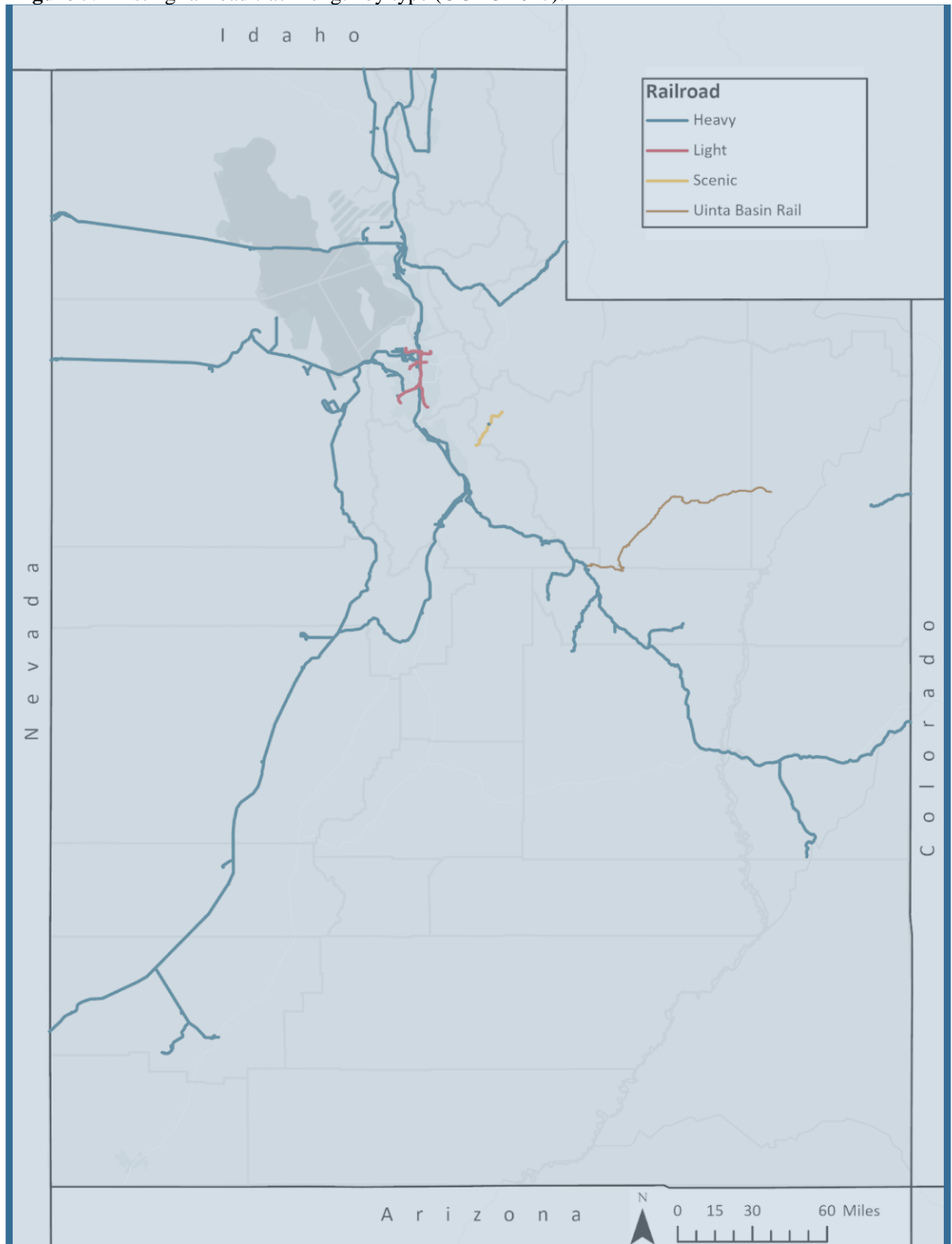
17  
 18 **Table 6:** Existing railroad track length by type.

Track Length	
Type	Total (miles)
Heavy Rail	2,609
Light Rail	102
Scenic Rail	18
Grand Total	2,729

20  
 21 *Source: Utah Geospatial Resource Center data portal, railroads (UGIC 2017).*

22

1 **Figure 5:** Existing railroad track length by type (UGRC 2017).



2

1 **Economic Considerations**

2

3 **Electrical Transmission**

4

5 Rocky Mountain Power and its parent company PacifiCorp employ more than 1,800 people in Utah.

6

7 Lack of sufficient generation resources during peak demand puts utilities and customers at risk of high  
8 prices from the energy market during emergencies. This happened in Texas ~~during~~in February 2021,  
9 during which a winter storm and freezing temperatures disrupted one third of Texas’s power-generation  
10 capacity, resulting in astronomical power costs over just ~~two~~2 days (Hersher 2021). A robust transmission  
11 system can reduce the potential for this kind of problem because transmission connects multiple  
12 generation sources across large regions.

13 ¶

14 **Natural Gas Pipelines**

15

16 Natural-gas distribution companies employ as many as 700 employees in Utah (DWS 2021)-~~with~~ Questar  
17 Gas (now Dominion Energy) ~~being~~is the largest natural gas company in the state.

18

19 **Oil Pipelines**

20

21 Sinclair Oil in Salt Lake City employs 1,200 people (Kolmar 2021).

22

23 **Hydrogen Pipelines**

24

25 Hydrogen has only limited use within Utah. This may change in the future if hydrogen is adopted as a  
26 transportation fuel or as a large-scale component of utility-scale electricity generation.

27

28 **Water Pipelines**

29

30 According to the 2020 ~~Statewide Water Infrastructure Plan~~[Water Resources Plan](#), over the next 50 years,  
31 the State of Utah and municipal water providers will need to spend \$20.6 billion to repair and replace  
32 existing infrastructure and another \$17.6 billion for new infrastructure and to develop new water supplies  
33 for future growth (BRWCD et al. 2020). The five river basins with the highest estimated costs are Bear  
34 River Basin, Kanab Creek/Virgin River Basin, Weber River Basin, Utah Lake Basin, and the Jordan  
35 River Basin.

36

37 The construction cost of the Pine Valley Pipeline Project is estimated at \$254 million. The Bear River  
38 Development Project could cost between \$1.5 billion and \$2.8 billion, depending on the ultimate project  
39 design constructed (UDWR 2019). The Lake Powell Pipeline is estimated to cost between \$1.5 billion  
40 and \$3.2 billion (Utah Water Law 2016.).

41

42 **Telecommunications**

43

44 The Utah Broadband Advisory Council considers broadband essential to economic success (UBAC  
45 2020). Broadband is essential for Utah businesses because it allows them to be nationally and  
46 internationally competitive. The technology also promotes entrepreneurship, attracts investments, and  
47 supports state and municipal governments. The partnerships developed through the UDOT Fiber Program  
48 have saved the state an estimated \$105.8 million while connecting many parts of Utah to high-speed  
49 Internet service.

50

51 **Other Infrastructure**

1 According to a recent study by the Utah Department of Environmental Quality, the present value of  
2 existing wastewater-treatment facilities in Utah is estimated to be \$4 billion (Reclaim 60 ND). However,  
3 wastewater-conveyance and treatment facilities must be maintained to operate effectively. Utah faces an  
4 additional cost of \$5.3 billion for infrastructure renewal and replacement, and another \$1.3 billion for  
5 upgrades to meet future regulatory requirements. New infrastructure required to meet the needs of  
6 population growth across Utah is expected to cost \$2.1 billion. Over the next 40 years, the total cost for  
7 wastewater treatment has been estimated to be \$8.7 billion (Reclaim 60 ND).

8  
9 In addition to wastewater treatment facility costs, other infrastructure must be replaced or upgraded over  
10 the next 40 years. Wastewater pipelines represent a cost of \$4.3 billion, sewer lagoons are expected to  
11 cost \$432 million, and stormwater-collection systems are estimated to cost \$1.3 billion (Reclaim 60 ND).

### 12 **Transportation Infrastructure**

14  
15 The Unified Plan determined a total of \$108.5 billion would be needed between 2019 and 2050 to fund  
16 the maintenance of current infrastructure, to expand capacity of existing roads, and to build new roads.  
17 This estimate also includes funds for upgrading transit and railway infrastructure (UDOT et al. 2021).  
18 Funding for the construction and maintenance of major highway infrastructure is provided by federal and  
19 state funds, which are generated from fuel taxes, vehicle registrations, and general funds.

### 20 **Goals, Objectives, and Policies**

#### 21 **Goals:**

22  
23  
24  
25 In light of Utah's arid environment and the world's changing climate conditions, the need for sufficient  
26 and reliable water, energy, and critical resources, the ~~need for~~importance of storage and related  
27 infrastructure is ever increasing. Therefore, to ensure Utah's ongoing drought resilience, energy security,  
28 and to provide for current and future needs, the ~~S~~state supports efforts to build and invest in necessary  
29 infrastructure, including additional pipelines, dams, reservoirs, above- and below-ground storage  
30 facilities, and other feasible infrastructure.

#### 31 **Objectives:**

- 32 1. Provide statewide economic opportunities and resilience for Utah communities.
- 33 2. Develop and allow pipelines and sufficient infrastructure to meet Utah's current and future needs.
- 34 3. Ensure that project continuity issues on public lands do not inhibit project implementation.
- 35 4. Explore opportunities for above- and below-ground water storage statewide at different scales,  
36 finalize projects that have been proposed and vetted, and complete projects that were never  
37 constructed.
- 38 5. Support ~~t~~Tribal pipeline and infrastructure projects that receive federal appropriations.
- 39 6. Conduct feasibility studies to prioritize water storage and pipeline projects and become proactive  
40 in order to capitalize on high water flows during flood years.
- 41 7. Improve techniques and the utilization of aquifer storage and recovery.
- 42 8. Efficient and timely delivery of water and energy resources without damaging infrastructure.
- 43 9. Support innovative and proven technologies to line earthen and concrete canals in order to reduce  
44 water loss and increase transportation efficiency.
- 45 10. Increase pipeline capacity and availability to decrease evaporation and unnecessary loss.
- 46 11. Form partnerships with stakeholders and obtain funding from the ~~Bureau of Reclamation~~BOR to  
47 form partnerships that benefit communities.
- 48 12. Support counties and water conservancy districts in applying for grants to improve water delivery  
49 systems.
- 50
- 51

- 1 13. There may be a future need to supply hydrogen along major highway arteries. There are several  
2 different methods of utilizing hydrogen opportunities that need to be further studied and  
3 strategically implemented.
  - 4 ○ Avoid hydrogen production that requires excessive water consumption.
- 5 14. Investigate and strategically support and implement hydroelectric production by using new  
6 technology such as in-pipe hydro systems within existing and future pipelines.
- 7 15. When feasible, and in the best interest of the state or local communities, encourage the  
8 maintenance required to avoid decommissioning hydroelectric power facilities.
- 9 16. Develop infrastructure projects aimed at recharging depleted aquifers.
- 10 17. Encourage xeriscaping policies, incentive programs, and educational campaigns to reduce water  
11 usage and reliance.
- 12 18. Increase watershed yields through active management of forests and other vegetated areas.
- 13 19. Support programs like [the Shared Stewardship Program](#) and the Watershed Restoration Initiative  
14 to enhance water yields.
- 15 20. Support the implementation of the Utah State Water Plan and Utah’s Coordinated Action Plan for  
16 Water.
- 17 21. Strategically promote watershed restoration and flood abatements after wildfires to improve soil  
18 retention, improve water quality, and reduce downstream impacts caused by flooding, siltation  
19 and debris flows.
- 20 22. Incorporate silt traps and other mechanisms to trap silt upstream and keep it from entering water  
21 treatment plants and downstream reservoirs that will ultimately need to be dredged when their  
22 storage capacity is reduced.
- 23 23. Mitigate the “use-it-or-lose-it mentality” by providing alternative options to water consumers  
24 (e.g., water banking or short-term leasing).
- 25 24. Support innovation to make existing and future water storage and delivery systems more efficient,  
26 reliable, safe, climate friendly, and sustainable.
- 27 25. Support a network for the distribution of natural gas, crude oil, and refined petroleum products to  
28 domestic and foreign markets.
- 29 26. Develop agreements with federal agencies to make it possible to maintain and improve dams,  
30 impoundments, and other facilities on federal lands with limited access in a timely and  
31 economically feasible manner. It is not economically feasible to transport equipment and supplies  
32 by helicopter.
- 33 27. Encourage the use of Advanced Metering Infrastructure (AMI) to quickly identify water leaks  
34 reducing wasted water. The technology also allows remote monitoring and manipulation (valves,  
35 flow rates, pressure, etc.) of water conveyance infrastructure.
- 36 28. Work to include pipeline and infrastructure projects in federal land-use plans.

37  
38 **Policies:**

- 39
- 40 ● The State [of Utah](#) supports coordinated efforts across all agencies, governments, ~~†~~[T](#)ribal nations,  
41 and other land ownerships on infrastructure projects to minimize delays.
- 42 ● The State [of Utah](#) encourages and requests federal appropriations for water infrastructure,  
43 including pipelines, water storage, and aquifer recharge.
- 44 ● The State [of Utah](#) supports active forest management to increase water yields and water quality.
- 45 ● The State [of Utah](#) supports active forest management to decrease water quality issues from  
46 wildfire, flooding, etc., which impacts water storage, water treatment, and water delivery  
47 systems.
- 48 ● The State [of Utah](#) supports the plans and strategies presented by the Shared Stewardship Program,  
49 Watershed Restoration Initiative, and the Utah Division of Water Resources.
- 50 ● The State [of Utah](#) will support the Utah Watershed Council Act.
- 51 ● The State [of Utah](#) encourages water conservation measures, education, and incentives.

- 1 • The State [of Utah](#) supports maintaining access to water in the Colorado River and its access to
- 2 state and county-owned shares that have not been fully exercised as a result of access and
- 3 transportation limitations.
- 4 • The State [of Utah](#) supports the development of pipelines from the natural gas and crude oil
- 5 producing areas to refineries, export terminals, or to other associated transportation systems.
- 6 • The State [of Utah](#) discourages natural gas vent pipes (e.g., pig lines) in close proximity to
- 7 electrical transmission and distribution lines, or any other non-compatible operations.
- 8 • The State [of Utah](#) supports federal appropriations for methane capture while maintaining safety
- 9 protocols.
- 10 • The State [of Utah](#) supports the effort to conserve water by creating hydrogen through natural gas,
- 11 coal, and other sources.
- 12 • The State [of Utah](#) supports creating a strategy to provide consumers with hydrogen access along
- 13 major transportation arteries, if or when markets support this energy transfer option in the future.
- 14 • The State [of Utah](#) supports and encourages the maintenance and development of pipelines and
- 15 infrastructure that improve the state's market share and improve the quality of life for
- 16 Utahns, provided such can be maintained and developed in a sustainable manner.
- 17 • The State [of Utah](#) opposes the creation of pipelines and infrastructure to remove water resources
- 18 from ~~the state of~~ Utah in order to transport it to other states.
- 19 • The State [of Utah](#) expects pass-through pipelines and associated infrastructure to continually
- 20 benefit the citizens of Utah and communities.
- 21 • The State [of Utah](#) desires unimpeded and timely access to water-storage facilities on federal
- 22 lands to feasibly improve and maintain infrastructure in an effort to address water-storage needs.
- 23 • The State [of Utah](#) supports the completion of the ~~Central Utah Project~~ [CUP](#), as originally
- 24 proposed, to fulfill all promises made to Uintah Basin counties to mitigate for the transfer of
- 25 water to the Wasatch Front.
- 26 • The State [of Utah](#) supports projects that conserve water by the lining of ditches and canals.
- 27 • The State [of Utah](#) supports the preservation of existing hydroelectric facilities and construction of
- 28 new facilities, including in-pipe hydro systems and other innovative technologies.
- 29 • The State [of Utah](#) supports the construction and operation of pipelines and other infrastructure to
- 30 enable the production and transportation of mineral resources from federal lands.
- 31 • The State [of Utah](#) supports making strategic amendments to federal land-use plans to allow for
- 32 future water storage, pipelines, and infrastructure on public lands.
- 33 • Oppose special designations on federal land that would prohibit the establishment of corridors for
- 34 pipelines and associated infrastructure.
- 35 • Support and promote the planning, construction, and maintenance of pipelines and infrastructure
- 36 to transport resources from their point of origin to the consumer.

37

38 **State Code**

39

40 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*

41 *following are selected portions of the Utah State Code and do not represent every potential legal*

42 *reference in the Code related to this section of the State Resource Management Plan or the*

43 *administration of public lands.*

44

45 **Utah Energy Act**

46

47 **§ 79-6-301.** *State energy policy.*

48

49 **Public Utilities - Title 54**

50

51 **Railroads - Title 56**

1 **Transportation - Title 72**

2  
3 **Public Lands Planning**

4  
5 **§ 63L-11-302.** *Principles to be recognized and promoted.*

6  
7 **§ 63L-11-303.** *Findings to be recognized and promoted.*

8  
9 (3) transportation and access routes to and across federal lands, including all rights-  
10 of-way vested under R.S. 2477, are vital to the state's economy and to the quality of life  
11 in the state, and must provide, at a minimum, a network of roads throughout the resource  
12 planning area that provides for:

- 13 (a) movement of people, goods, and services across public lands;  
14 (b) reasonable access to a broad range of resources and opportunities  
15 throughout the resource planning area, including:  
16 (i) livestock operations and improvements;  
17 (ii) solid, fluid, and gaseous mineral operations;  
18 (iii) recreational opportunities and operations, including motorized  
19 and non-motorized recreation;  
20 (iv) search and rescue needs;  
21 (v) public safety needs; and  
22 (vi) access for transportation of wood products to market;  
23 (c) access to federal lands for people with disabilities and the elderly;  
24 (d) and access to state lands and school and institutional trust lands to  
25 accomplish the purposes of those lands;

26  
27 **State Land Use and Management Plan for Federal Lands**

28  
29 **§ 63L-8-104.** *State land-use planning and management program.*

30  
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# PREDATOR MANAGEMENT

## Introduction

The Utah Division of Wildlife Resources (UDWR) recognizes predator management as an important tool available to UDWR staff and that of the Utah Department of Agriculture and Food (UDAF) and U.S. Department of Agriculture Wildlife Services personnel, when needed. The UDWR strives to ensure that predatory species populations continue to inhabit Utah while at the same time addressing impacts predators have on prey species, the public, and the state's economic interests.

## Findings

The primary agent for predator management to protect livestock from predation is UDAF in cooperation with the U.S. Department of Agriculture, Animal Plant Health Inspection Service, Wildlife Services (WS) [1]. This cooperative program protects livestock from coyotes, and in cooperation with UDWR, includes cougars, black bears, eagles, and wolves that cause damage to livestock. In the absence of these protective programs, for example, annual lamb losses are estimated to be as high as 30 percent, whereas the WS program kept losses below 9 percent in fiscal year 2019 (the most recent year for which data is available). Cougars and bears cause an estimated 19 percent of lamb predation in the state, which generally occurs during the summer, when sheep are grazed on high-elevation mountain ranges. Utah Code 23-13-3 provides that wildlife is declared the property of the state. The UDWR has been given authority to manage "protected" wildlife. Predator damage is managed through hunting permits, reimbursement for livestock damage, issuing depredation permits to producers to take cougars when they suffer chronic losses, and through assistance of UDAF/WS [2]. In addition to these efforts, the Utah Legislature has enacted programs to address coyote damage to mule deer populations. One of these programs is an incentive program that pays coyote hunters \$50 dollars for each coyote turned in to UDWR. In FY23 this incentive program removed 3,72698 coyotes. Another program focuses on coyote predation in areas where mule deer give birth and raise fawns. This program funds targeted removal efforts in partnership with WS and the UDAF. Funds are also provided as a match to counties for removal of coyotes that benefit both livestock and wildlife. In fiscal year 2021, these programs resulted in the removal of 6,154 coyotes.

## Economic Considerations

Livestock production contributes significantly to the economy of counties and communities throughout Utah. Agriculture generated \$2,122,720,000 in cash receipts in Utah in 2020 [3].

Livestock production, including cattle, domestic turkeys, and sheep, are the primary agricultural industries, and accounted for 70 percent of all agricultural cash receipts statewide in 2017 [4].

In fiscal year 2020, Utah cattle and calf inventory totaled 820,000 head. Beef cow replacement heifers were estimated at 85,000 head, and other heifers not intended for replacement totaled 60,000. The inventory of steers weighing 500 pounds or more was 80,000 head. Calves weighing less than 500 pounds totaled 65,000 head, and the 2019 calf crop was 400,000. The number of cattle lost to predators each year is unavailable; however, calves are vulnerable when on the range. The beef industry is Utah's largest agricultural economic driver, bringing in nearly \$499 million in cash receipts in fiscal year 2019 alone. [5]

Because the livestock herds are migratory and use federal, state, and private lands, the numbers of livestock fluctuate by county and time of year.

1 During fiscal year 2020, Utah breeding sheep inventory, including replacement lambs, totaled 285,000  
2 head. The sheep and lambs kept for breeding numbered 240,000 head, and ewes for breeding (1-year-old  
3 and older) totaled 195,000 head. The 2019 lamb crop was 230,000 head, and lambs for breeding  
4 replacement were estimated at 38,000 head, and sheep 1-year-old and older totaled 7,000 head. Market  
5 sheep and lambs were estimated at 45,000 head. Utah sheep ranchers lost 40,000 sheep and lambs to all  
6 causes during 2019, but the largest single cause of death in lambs before docking was coyotes, which  
7 killed 5,400 head, accounting for about 32 percent of all lamb losses before docking. Coyotes also  
8 accounted for the largest number of lambs killed after docking, totaling 6,700 head, or about 45 percent  
9 losses after docking. Losses of sheep 1-year-old and older to coyotes were 2,100 head. The total loss in  
10 dollar value in the sheep industry caused by predators was \$3.4 million in fiscal year 2020. [6]

## 11 **Goals, Objectives and Policies**

### 12 **Goals:**

13  
14  
15  
16 The primary focus of predator management in Utah is (1) reducing or mitigating ~~for~~ damage to livestock  
17 from coyotes, black bear, and cougar; and (2) protecting mule deer populations and other wildlife  
18 populations (threatened and endangered species) from declines caused by cougars, bears, coyotes, raptors,  
19 ravens, and small mammalian predators.

### 20 **Objectives and Policies**

21  
22  
23 Since 2012, predator-management programs have been able to reduce sheep and lamb losses from 27,600  
24 to 20,400, reducing the economic loss from \$8.5 million in 2012 to \$3.4 million in 2020. These successes  
25 are encouraging, but the ~~UDWR~~, WS, and UDAF continue to work with producers to address depredation  
26 conflicts and provide tools to eliminate individual predators that target livestock.

### 27 **Improve the efficiency of responses to predator attacks**

28  
29  
30 Once predators begin to prey on domestic livestock, they often continue to return to ~~follow~~ the herd or  
31 band, which increases losses for specific producers. Sheep bands are especially vulnerable to predators.  
32 An increase in personnel and efficiency to reduce the response time in predator attacks is a necessity to  
33 prevent increasing economic losses for Utah's livestock producers. The UDAF's trappers are spread thin  
34 due to unfilled positions and a lack of funding. Returning trappers to historic employment numbers in the  
35 state will help improve predator management within the state.

### 36 **Predators are being managed under certain circumstances**

37  
38  
39 If predator populations are limiting ~~UDWR's~~ ability to reach other wildlife-management objectives,  
40 wildlife officials may choose to implement predator-management plans. The ~~UDWR~~ continues to direct  
41 financial resources to ~~WS~~ UDAF for coyote predator-management efforts in areas where mule deer give  
42 birth and raise fawns. In addition, the ~~UDWR~~ oversees a bounty program on coyotes killed and turned in.  
43 For each eligible coyote killed, a hunter or trapper receives \$50. The ~~UDWR~~ provides over \$1 million  
44 ~~dollars~~ to these efforts each year.

45  
46 The Utah Legislature recently enacted a law that enables the director of the ~~UDWR~~ to take immediate  
47 action when predatory species are limiting the ability of prey populations to meet objectives. Under this  
48 new legislation, the ~~UDWR~~ will establish predator-management plans to reduce predator population  
49 densities on units where ungulates are significantly below their population objectives due to either direct  
50 predation or during the population declines that follow natural events and when predators are slowing or  
51 preventing prey populations from increasing ~~back to objective.~~ ~~In 2021, 36 of 53 cougar management~~

1 ~~units have established predator management plans to address concerns with mule deer and bighorn sheep~~  
2 ~~populations.~~ In addition, the legislature changed the management of cougars in Utah to allow unlimited  
3 hunting year-round to people who purchase a hunting or combination license.  
4

5 ~~In addition to these efforts, the UDWR director has enacted a “spot and stalk” cougar hunting opportunity~~  
6 ~~for hunters each year from July 1 to June 30. During this hunt, a hunter may not use dogs to pursue or~~  
7 ~~harvest a cougar.~~  
8

### 9 **UDWR implements predator management in certain units**

10  
11 The UDWR manages predators in specific units, for the following species and situations:

- 12 • Ravens, ~~coyotes~~, red foxes, and badgers, all of which prey on sage-grouse and their eggs
  - 13 • Raccoons and red foxes, which prey on waterfowl and their eggs (foxes take nesting hens and
  - 14 eggs)
  - 15 • Cougars that prey on adult mule deer or bighorn sheep
  - 16 • Coyotes that prey on mule deer fawns or pronghorn fawns
- 17

18 Of these programs, the one that targets coyotes is the largest and most costly for UDWR. Appropriately  
19 targeting critical fawning areas and timing predator removal to occur just prior to coyote pair bonding and  
20 mule deer fawning is essential for reducing the impact that coyotes have on fawn survival. In Utah,  
21 targeted management from aircraft ~~targeted contracts~~ allows removal of coyotes from fawning grounds  
22 from March through August, and the coyote bounty program is most effective during the coyote breeding  
23 season (January–March).  
24

### 25 **Coyote Bounty Program**

26  
27 Utah’s Mule Deer Protection Act went into effect in July 2012. The primary goal of the program was to  
28 remove coyotes from areas where they may prey on deer fawns. The Utah Legislature set aside \$500,000  
29 from the state’s general fund to pay individuals to kill coyotes in Utah. To process the payments and track  
30 harvest and participation, UDWR created Utah’s Predator Control Program. This program took the place  
31 of previous coyote-bounty programs administered by participating counties.  
32

33 The UDWR established locations throughout the state where program participants can check-in coyotes  
34 for a \$50 payment. Participants must use a smartphone application to log each coyote killed, which  
35 records the location of the kill as well as other data required for payment. Coyotes removed and turned in  
36 for payment, as well as the amount of compensation paid each year can be found in the table below. The  
37 bounty program likely increased the number of coyotes killed in Utah and provided government-supplied  
38 economic rewards to individuals and businesses throughout the state.  
39

YEAR	COYOTES REMOVED	COMPENSATION AMOUNT
2013	<del>7,592</del> <u>7,129</u>	<del>\$379,600</del> <u>356,450</u>
2014	<del>9,835</del> <u>7,041</u>	<del>\$491,750</del> <u>352,050</u>
2015	<del>9,801</del> <u>8,192</u>	<del>\$490,050</del> <u>409,600</u>
2016	<del>10,518</del> <u>9,728</u>	<del>\$525,900</del> <u>486,400</u>
2017	<del>11,502</del> <u>11,644</u>	<del>\$575,100</del> <u>582,200</u>

2018	10,589 <del>5</del>	\$529, <del>7</del> 450
2019	8,232	\$411,600
2020	4,109	\$205,450
2021	4,99 <del>3</del> 1	\$249 <del>6</del> ,550
2022	3,472	\$173,600
2023	3,7 <del>2</del> 698	\$ <del>186,300</del> 189,900

1

2 The Coyote Bounty Program is essential to protect wildlife and livestock in Utah. Increasing the  
3 efficiency of this program to mitigate losses is vital for the economic benefits that wildlife and livestock  
4 bring to the state. Improving both the efficiency and productivity of this program through improved  
5 marketing, increased funding, and a larger number of hunters is greatly supported by the State of Utah  
6 and the Wildlife Board.

7

8 **Black bears and wolves present different management challenges**

9

10 Two additional wildlife species can at times exhibit predatory behavior in Utah: black bears and wolves.  
11 Both of these species are managed under specific plans (i.e., the Utah Black Bear Management Plan and  
12 Utah Wolf Management Plan).

13

14 **Bears**

15

16 Black bears occur in stable, healthy populations across certain parts of Utah. Normally, they don't occur  
17 in the mountain ranges of the western deserts. Black bears are omnivores, and the majority of their diet  
18 consists of plant material and, at certain times of the year, insects and insect larvae. When black bears  
19 prey on mammals, they commonly target mule deer that are either scavenged or (during early summer)  
20 newborn fawns. Mule deer fawn studies in New Mexico and Colorado attributed between 3 and 4 percent  
21 (respectively) of fawn mortality to black bears.

22

23 **Wolves**

24

25 Wolves exhibit behavior patterns, such as cooperative hunting in packs, which clearly distinguish them  
26 from bears and other predators. By any measure, wolves are highly effective and efficient predators.  
27 Currently, there are no established breeding populations of wolves in Utah. However, there are occasional  
28 transients and migrants.

29 The status of wolves under the Endangered Species Act (ESA) in Utah has changed repeatedly in the last  
30 decade and is again under review. Currently (~~7~~[as of June 2023](#)4), wolves in the majority of the state are  
31 considered endangered. Wolf management in Utah is dictated by the 2010 Wolf Management Act (S.B.  
32 36). The law directs DWR to prevent any packs of wolves from establishing within the delisted portion  
33 of Utah which is the zone north of ~~H~~[I](#)-80 and east of ~~H~~[I](#)-84. Wolves outside of the delisted area are  
34 endangered and fully protected under the ESA. ~~As required by the Wolf Management Act, UDWR~~  
35 ~~requests that the USFWS remove any wolves from the listed part of the state~~[Under a permit from the US](#)  
36 [Fish and Wildlife Service \(USFWS\) and a memorandum of understanding with the state of Colorado,](#)  
37 [wolves found in Utah may be captured and moved to Colorado.](#) It is the policy of the ~~s~~[State](#) of Utah to

1 legally advocate and facilitate the delisting of wolves in Utah under the ESA and the return of  
2 management authority to the state.

3 ~~As of January 2021, wolves were delisted throughout Utah and are no longer regulated under the~~  
4 ~~Endangered Species Act. The Utah Wolf Management Plan outlines Utah's strategies and protocols for~~  
5 ~~managing wolves statewide. Under state management, wolves are a protected species. While there is~~  
6 ~~currently no state administered hunt for wolves,~~ In the delisted area, Utah livestock producers have  
7 options to protect livestock from wolf depredation and may be compensated if a wolf attacks their  
8 animals. The UDWR has given authority to the [WSUDAF](#) to act on UDWR's behalf to resolve livestock  
9 depredation incidents that involve wolves.

10

### 11 **Cougar and Bear Livestock Depredation**

12

13 Black bears can cause site-specific depredation problems among livestock, especially domestic sheep  
14 bedded down for the night during the summer months. It has been confirmed that black bears were  
15 responsible for the loss of ~~2295~~22 ewes and ~~129255~~129 lambs in fiscal year 2022~~1~~. Black bears were  
16 confirmed to have killed ~~two~~ one calf in fiscal year 2022. Total value of losses to black bears in fiscal  
17 year 2022 was \$47,352 ~~64,255~~.

18

19 Although cougars prey primarily on adult deer, they are opportunistic predators and can also cause site-  
20 specific livestock depredation problems. Cougars were verified as responsible for the loss of ~~184~~143 ewes  
21 and ~~428~~289 lambs in fiscal year 2022. Eight ~~Ten~~ buck sheep and ~~two~~ goats were also confirmed as killed  
22 by cougars in fiscal year 2022. Total value of confirmed losses was \$133,712 ~~114,485~~. Livestock  
23 depredation incidents are immediately referred to UDAF~~AW~~S staff who specialize in removal of specific  
24 predators associated with depredation incidents. Wildlife Services confirms losses to predation by bears  
25 or cougars. It should be noted that confirmed losses are based on what producers or UDAF~~AW~~S agents  
26 find in the field, and may not represent total losses to a producer caused by cougars or bears. The UDWR  
27 provides compensation to ranchers with documented livestock losses attributed to cougars and bears. The  
28 UDWR also issues increased public cougar and bear permits, as well as permits to producers to take bears  
29 ~~and cougars~~ causing damage in areas with chronic livestock losses caused by predation from these  
30 species. Producers can now remove cougars year-round with a hunting or combination license under new  
31 legislation.

32

33 The State of Utah is fully committed to managing predators to improve the survival rates of mule deer and  
34 to reduce the number of livestock lost to predators. Increased efficiency and resources for wildlife  
35 services and other predator management programs are a priority to protect agriculture, wildlife, and the  
36 economic benefits that both bring to the State of Utah.

37

### 38 **State Code**

39

40 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
41 *following are selected portions of the Utah State Code and do not represent every potential legal*  
42 *reference in the Code related to this section of the State Resource Management Plan or the*  
43 *administration of public lands.*

44

### 45 **Public Lands Planning**

46

47 **§ 63L-11-303.** Findings to be recognized and promoted.

48

49 23(d) provisions for predator control initiatives or programs under the direction of state and  
50 local authorities should be implemented; and



1  
2 **Utah Code (Title 23A).** *Wildlife Resources Code of Utah.*

3  
4 **§ 23A-14-203.** *Taking red fox or striped skunk*

5  
6 **§ 23A-8-201.** *Procedure to obtain compensation for livestock damage done by bear, mountain*  
7 *lion, wolf, or eagle.*

8  
9 **§ 23A-8-202.** *Livestock depredation by predators.*

10  
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12

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21

## RIPARIAN AREAS

### Introduction

The U.S. Fish and Wildlife Service defines riparian areas, in a mapping context, as, “plant communities contiguous to and affected by surface and subsurface hydrologic features of perennial or intermittent lotic and lentic water-bodies (rivers, streams, lakes, or drainage ways).” Riparian areas are found in the transitions between wetland and upland areas and can have distinctly different plant species than adjacent areas or similar species that exhibit more robust or vigorous growth. [1]

Riparian areas are typically dependent on a natural hydrologic regime, especially annual and episodic flooding. Riparian areas occur within the flood zone of rivers, on islands, on sand or cobble bars, and immediately adjacent to streambanks and lakeshores. They can take the form of large, wide areas on mid-channel islands in larger rivers or narrow bands on small, rocky canyon tributaries and well-drained benches.

Riparian areas commonly support specialized vegetation associated with surface or subsurface moisture. Riparian resources include wetland areas that require prolonged saturation of soils and include certain vegetative species dependent upon saturation (see [the Wetlands section of this document](#)), though many most riparian areas do not qualify as wetlands. Riparian resources are commonly located along major streams, drainages, and spring sites. They occur more frequently in forests and areas that receive more precipitation than arid lowlands.

### Findings

Properly functioning riparian areas help maintain the quality and quantity of water in adjacent lakes and streams, which may be used for both culinary and agricultural purposes. Riparian areas also (1) support habitat for migratory birds, raptors, and fish; (2) support forage and browse for wildlife, wild horses, and livestock; and (3) provide numerous recreation opportunities. Riparian wetlands can also help slow and detain floodwaters, which may reduce flood risk.

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

Riparian resources are described through reference to the Properly Functioning Condition (PFC), which is a qualitative analysis used to assess the condition of riparian areas developed by the US Bureau of Land Management. The term is used to describe the assessment process and define the potential functional capacity a particular riparian area could reach with appropriate management practices. PFC is a state of resiliency that measures the potential for an area to produce anticipated ecologic values. Riparian areas that are not reaching the functional capacity determined to be PFC are at risk of losing these values. Functioning condition is rated by category to reflect ecosystem health as follows:

Proper Functioning Condition (PFC). When adequate vegetation, landform, or large woody debris is present to dissipate energy associated with (1) high flow; (2) filter sediment, capture bedload, and aid floodplain development; (3) improve flood-water retention and groundwater recharge; (4) develop root masses that stabilize stream banks against cutting action; (5) develop diverse ponding and channel characteristics; and (6) support greater biodiversity.

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

3  
4 Nonfunctional. Riparian areas that clearly are not providing adequate vegetation, landform, or large  
5 woody debris to dissipate stream energy associated with high flows, and therefore are not reducing  
6 erosion, improving water quality, etc.

7  
8 Unknown. Riparian areas that have not been inventoried or where there is insufficient information to make  
9 any form of determination.

10  
11 Riparian areas meet PFC when a stream channel exhibits morphology and functionality similar to  
12 riparian areas in the planning area that have not been substantially altered by outside influences. These  
13 areas would have vegetation capable of attenuating flood flows, reducing erosion, and creating  
14 conditions suitable for the long-term and vigorous occupation of native vegetation on streambanks or in  
15 wetlands.

16  
17 Riparian areas also can be monitored using quantitative short-term and long-term indicators. This  
18 monitoring procedure evaluates indicators for long-term trends, including vegetative composition  
19 near the water's edge, woody species regeneration, streambank stability, channel and water width  
20 and depth, and substrate composition. The procedures also help determine if short-term  
21 management practices are meeting allowable-use criteria. Examples of short-term indicators  
22 include woody species use, stubble height, and streambank alteration.

23  
24 Vegetation in riparian areas is a dominant characteristic and includes trees, shrubs, sedges, and  
25 grasses. Invasive vegetation is common within riparian areas and often consists of exotic trees  
26 (e.g., Russian olive and tamarisk) and other noxious species (e.g., Russian knapweed and purple  
27 loosestrife). Generally, the upland vegetation surrounding riparian systems is different, definable,  
28 and ranges from grasslands to forests. In recent decades, pinyon and juniper have also invaded  
29 riparian areas, putting additional pressure on limited water resources.

30  
31 Grass species and communities are a major component in most riparian and wetland areas. A mix of  
32 grasses can normally be found in riparian areas, with wide variability in the number of species, extent, and  
33 location. Depending on the degree of inundation or saturation, grasses can include obligate wetland  
34 species where sufficient saturation occurs yearlong, facultative wetland grasses, or upland grass species.

35  
36 Riparian ecological systems contain early, mid-, and late-seral riparian plant associations.  
37 They also contain non-obligate riparian species. Cottonwood communities are early, mid-, or  
38 late-seral, depending on the age-class of the trees and the associated species. Mature  
39 cottonwood occurrences do not reach a climax stage and do not regenerate in place, but  
40 regenerate by "moving" up and down a river reach. Over time, a healthy riparian area with  
41 appropriate ecological site conditions supports all stages of cottonwood communities.  
42 Riparian ecosystems are extremely susceptible to fire because they support native woody  
43 species that are fire intolerant. This may result in catastrophic loss to fire, especially when an  
44 area is subsequently invaded by exotic species (e.g., tamarisk).

45  
46 Associations in this ecological system are adapted to soils that may be flooded or saturated throughout  
47 the growing season. They may also occur in areas with soils that are only saturated early in the  
48 growing season, or intermittently. Typically, these associations are tolerant of moderate-intensity  
49 ground fires and late-season livestock and wildlife grazing. Most appear to be relatively stable types,  
50 although in some areas these may be impacted temporarily by intensive livestock grazing.

1 Causal factors for riparian areas not meeting PFC vary. These factors are inside and outside  
2 management control, and in most cases, no single factor is responsible for conditions less than PFC.  
3 Common causal factors include (in no particular order of importance) dewatering, drought, incised  
4 channels, excessive erosion/sedimentation because of poor upland conditions (e.g., pinyon-juniper  
5 woodland expansion), OHV use, wildlife and livestock grazing, and invasive species encroachment.  
6

7 Land managers emphasize maintenance of riparian areas and wetlands. Management actions and projects  
8 have been implemented to improve riparian conditions, including planting willows to reintroduce a  
9 native-woody species component, stream-bank stabilization, sediment reduction, flood attenuation, and  
10 vegetative recovery in riparian areas and wetlands. Restoration projects that use simple low-cost  
11 materials to add structure to streams and mimic natural functions have become increasingly popular,  
12 particularly beaver dam analog projects that use manmade [beaver](#) dams to help slow the flow from  
13 streams, capture sediment, and restore riparian areas. Agencies have also initiated adaptive livestock and  
14 wildlife management actions to balance grazing and resource protection.

15 The Utah Wildlife Action Plan (WAP) is a wildlife planning document compiled by ~~from~~ the DWR and  
16 partners that identifies native ~~sensitive~~-species ~~and key habitats~~ in need of conservation attention [and key](#)  
17 [habitats that they rely upon](#), and pinpoints threats, limiting factors and crucial data gaps for species and  
18 their habitats. The plan provides strong, clear guidance for improving habitats and strengthening wildlife  
19 populations, and, if fully implemented, can help reduce and prevent listings under the federal Endangered  
20 Species Act. Projects that address threats to key habitats are prioritized for funding under the Watershed  
21 Restoration Initiative’s prioritization process. The current version of the WAP, which covers the period  
22 from 2015 to 2025, lists forested and shrub-scrub wetlands as key habitats; these wetlands are usually  
23 found in riparian areas. Riparian areas more broadly are not listed in the WAP due to the lack of any  
24 readily available spatial data showing the extent of riparian areas in Utah. However, the next version of  
25 the WAP, currently under development, will include riparian areas as a key habitat.  
26

27 The Governor’s Coordinated Water Action Plan was released in November 2022. “Instream flows and  
28 riparian and aquatic ecosystems” is identified as one of the key policy issues in the Healthy Waters and  
29 Watersheds section of the plan due to challenges in maintaining enough instream flow to support healthy  
30 wildlife and riparian vegetation. The Plan noted the need for (1) identification of the thresholds needed to  
31 maintain viable fish and wildlife populations, (2) functioning water markets and resources to allow for  
32 water rights transactions to secure instream flows, and (3) adequate measuring devices to ensure that  
33 water reaches its intended destination. The plan notes the need to protect riparian areas given their high  
34 value relative to the small geographic area they cover; Action 4 in the Healthy Waters section is to  
35 “prioritize and target land conservation and restoration in riparian corridors, floodplains, and other areas  
36 with high values for watershed health, wildlife habitat, and public access and recreation.” Key tasks under  
37 this action that could benefit riparian areas include (1) “invest state and federal funds, and encourage  
38 public-private partnerships to purchase conservation easements or compensate producers for development  
39 rights restrictions in key watersheds and riparian areas with multiple benefits” and (2) “determine how to  
40 include riparian and watershed health into County Resources Management Plans and community land-  
41 use plans and ordinances.”  
42

43 [After the development of the Governor’s Coordinated Water Action Plan, the Great Salt Lake Basin](#)  
44 [Integrated Plan \(GSLBIP\) was completed in 2024. The Functional Flow Study was partially funded](#)  
45 [through the GSLBIP. This study, led by Utah State University, Utah Department of Environmental](#)  
46 [Quality, Water Resources and Wildlife Resources, is modeling functional flow \(environmental flow\)](#)  
47 [needs across the Great Salt Lake Basin. This study will identify the stream flows needed to maintain](#)  
48 [water quality and healthy stream fisheries by stream reach and by season. When completed, the](#)  
49 [functional flows will be integrated into water management models as another piece of information for](#)  
50 [water managers to consider when making water management decisions. Another project from the](#)

1 [GSLBIP is a flow monitoring GAP analysis to identify where additional water infrastructure monitoring](#)  
2 [needs are that could improve water deliveries. Both studies should be completed in the next few years.](#)¶

3 The terms “riparian” and “wetland” are sometimes used interchangeably. Wetlands are regulated by the  
4 federal government under the Clean Water Act and are defined based on indicators related to hydrology,  
5 vegetation, and soils. Wetlands can be adjacent to streams and lakes or more isolated, such as some spring  
6 systems in Utah. Many riparian areas in Utah meet the technical definition of wetland but some areas do  
7 not. Some local governments in Utah have enacted ordinances to protect riparian areas and floodplains  
8 from development to protect functions and values that their communities rely on and help eliminate costly  
9 flood damage.

## 10 **Economic Considerations**

11  
12  
13 Riparian area vegetation is a key factor in reducing downstream flooding. As flood water flows through  
14 a vegetated area, the plants resist the flow and dissipate its energy, increasing the time available for  
15 water to infiltrate into the soil and be stored for use by plants. Flooding is the most expensive geologic  
16 hazard in Utah; 16 major flood events since 1923 have caused more than \$1.3 trillion in damage. [2]

17  
18 Healthy riparian areas can improve fish and wildlife populations, which have an impact on recreational  
19 usage and economic benefits. Many species of greatest conservation need in Utah as identified in the  
20 WAP are dependent on riparian areas; maintaining healthy riparian areas can decrease the chances of  
21 costly Threatened and Endangered Species listing decisions. Increased vegetation from healthy riparian  
22 areas can have impacts on grazing as a result of increased forage.

23  
24 Property values in riparian areas have a significant price premium.

## 25 **Goals, Objectives, and Policies**

### 26 **Goal(s):**

27  
28 Actively manage and maintain healthy riparian areas that contribute to healthy watersheds, safe  
29 communities, and resilient ecosystems.

### 30 **Objectives:**

- 31  
32  
33  
34  
35 1. Employ active management to improve and enhance riparian resources to provide for  
36 appropriate physical, biological, and chemical function.  
37 2. Meet or make progress toward attainment of the Utah Standards and Guidelines for healthy  
38 Rangelands according to riparian site capability.  
39 3. Prioritize and manage riparian areas to attain desired future conditions for riparian- related  
40 resources (e.g., fishery habitat, water quality, wildlife and livestock forage, and soil stability).  
41 4. Manage riparian areas for the mutual and maximum benefit of wildlife, livestock, and special-  
42 status species.

### 43 **Policies:**

- 44  
45  
46 • Support the use of structural and non-structural improvements in unstable water courses to  
47 restore riparian areas properly functioning/desired future conditions.  
48 • Engage with federal land-management agencies to support active management of healthy  
49 riparian areas on federal land.  
50 • Attain an optimal mix of native and desirable nonnative species to support desired ecological  
51 conditions and a properly functioning ecosystem.

- 1 Support the removal of invasive species from riparian areas on public lands.
- 2 • Work cooperatively with federal land-management agencies and livestock producers to
  - 3 determine the appropriate level and type of livestock grazing to occur in riparian areas on
  - 4 public land.
  - 5 • Work cooperatively with federal land-management agencies and livestock producers to
  - 6 determine the appropriate balance of uses in riparian areas between wildlife, domestic
  - 7 livestock, and feral animals such as wild horses.
  - 8 • Support the responsible management of riparian areas to accommodate successful livestock
  - 9 production while protecting riparian health.
  - 10 • Request monitoring protocol to identify which ungulates are impacting riparian zones.

## 11 **State Code**

12  
13  
14 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
15 *following are selected portions of the Utah State Code and do not represent every potential legal*  
16 *reference in the Code related to this section of the State Resource Management Plan or the*  
17 *administration of public lands.*

### 18 **Public Lands Planning**

19 **§ 63L-11-302.** *Principles to be recognized and promoted.*

20  
21 **§ 63L-11-303.** *Findings to be recognized and promoted.*

22  
23  
24  
25 (3) transportation and access routes to and across federal lands, including all rights-  
26 of-way vested under R.S. 2477, are vital to the state's economy and to the quality of life  
27 in the state, and must provide, at a minimum, a network of roads throughout the resource  
28 planning area that provides for:

- 29 (a) movement of people, goods, and services across public lands;
- 30 (b) reasonable access to a broad range of resources and opportunities
- 31 throughout the resource planning area, including:
  - 32 (i) livestock operations and improvements;
  - 33 (ii) solid, fluid, and gaseous mineral operations;
  - 34 (iii) recreational opportunities and operations, including motorized
  - 35 and non-motorized recreation;
  - 36 (iv) search and rescue needs;
  - 37 (v) public safety needs; and
  - 38 (vi) access for transportation of wood products to market;
- 39 (c) access to federal lands for people with disabilities and the elderly;
- 40 (d) and access to state lands and school and institutional trust lands to
- 41 accomplish the purposes of those lands;
- 42

### 43 **State Land Use and Management Plan for Federal Lands**

44  
45 **§ 63L-8-104.** *State land-use planning and management program.*

### 46 **Water and Irrigation - Title 73**

#### 47 **References:**

- 48  
49  
50  
51 1. <https://www.fws.gov/program/national-wetlands-inventory/classification-codes>

1  
2

2. <https://geology.utah.gov/hazards/flooding/>

# THREATENED AND ENDANGERED SPECIES

## Introduction

Threatened and endangered species refers to plants, animals, and other living organisms that are, to some level, threatened by extinction as defined by the federal Endangered Species Act of 1973 (ESA).

States hold primary management authority for fish and wildlife species found within their borders. However, once a species of plant or animal becomes federally listed under ESA, the federal government holds the primary management authority for that species. The ESA recognizes that our rich natural heritage is of “esthetic, ecological, educational, recreational, and scientific value to our Nation and its people,” and further expresses concern that many of the Nation’s native plants and animals are in danger of becoming extinct.

The stated purpose of the ESA is to protect and recover threatened and endangered species and the ecosystems upon which they depend. It is administered by the U.S. Fish and Wildlife Service (USFWS) and the U.S. Commerce Department’s National Marine Fisheries Service (NMFS). The USFWS has primary responsibility for ESA listed terrestrial and freshwater organisms found in Utah.

Under the ESA, species may be listed as either endangered or threatened. “Endangered” means a species is in danger of extinction throughout all or a significant portion of its range. “Threatened” means a species is likely to become endangered within the foreseeable future. All species of plants and animals, except pest insects, are eligible for listing as endangered or threatened. For the purposes of the ESA, Congress defined “species” to include, subspecies, varieties, and, for vertebrates, distinct population segments.

What may not be immediately apparent is that Utah has hundreds of native species, some of which are in decline. Utah’s goal is to manage native wildlife species and their habitats to help prevent listings under the ESA ([see link](#)). Once a species is listed under the ESA, a state’s ability to manage listed species is diminished and the range of options for managing lands and waters where that species occurs substantially narrows. Utah’s ~~Endangered Species Mitigation Fund~~ (~~ESMF~~[Species Protection Account](#)) provides a state match for USFWS State Wildlife Grant Funding ([SWG](#)); these two funding sources help Utah to conserve ESA-listed species and other species in need of conservation attention. The Wildlife Action Plan ([WAP](#)) is Utah’s ESA listing prevention roadmap ~~tool~~. The WAP identifies species in need of conservation attention, the key habitats that they rely upon, and threats to the species. Projects completed through the Utah Watershed Restoration Initiative ([WRI](#)) work to protect and restore these key habitats and alleviate threats to species in need of conservation. To date, the state and its partners have spent more than \$281 million ~~dollars~~ through the WRI on conservation of wildlife habitat in Utah.

## Findings

There are currently 46 federally listed threatened and endangered species in Utah. Of the species listed, 21 are animals, and 25 are plants. Since the ESA became law in 1973, only 1 percent of listed species have been delisted due to recovery [[1](#)]. That means many of the species that become listed in Utah will likely remain federally listed for a significant amount of time. Further, for most federally listed species in Utah, the USFWS has yet to develop a recovery plan identifying what conservation actions must occur to delist the species. Keeping species from being listed as threatened or endangered under ESA is the goal in Utah. This ensures Utah has healthy populations on the landscape and the state retains management authority. The Division of Wildlife Resources (DWR) and its partners have been successful in preventing more than 20 species listings in the last few decades, and this success is largely because of funding provided through ~~ESMF~~[the Species Protection Account](#) ([boreal toad video](#)).



1 Section 9 of the ESA prohibits “taking” of any endangered or threatened species and the parts or products  
2 of listed animals and plants cannot be possessed, taken, or transported without special permission of  
3 USFWS [2]. This prohibition applies both to private and public actions or activities [3]. “Take” is defined  
4 as actions that harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect listed species or any  
5 to attempt to engage in such conduct [4]. “Taking” of a species includes willfully harming an endangered  
6 or threatened animal [5]. It also includes habitat destruction or degradation that significantly interferes  
7 with an animal’s essential breeding, feeding, or shelter seeking behavior [6]. However, Section 10 of the  
8 ESA allows for non-federal entities to apply for permission to incidentally take a listed species in the  
9 course of an otherwise lawful activity.

10  
11 When a species is federally listed, the USFWS can designate “critical habitat” and develop a recovery  
12 plan [7]. Critical habitat consists of specific areas where the physical and biological features exist that are  
13 (1) essential to the conservation of a species, and (2) require special management considerations or  
14 protection. This includes not only occupied habitats but may also include areas outside the species’  
15 current range when they are considered to be important to the species’ survival and recovery. Critical  
16 habitat may be designated on federal, state or private lands. However, activities on state or private lands  
17 are not restricted by the ESA unless they directly harm the listed species or there is some type of federal  
18 involvement which would require consultation under Section 7 of ESA between the USFWS and the  
19 responsible federal party. Recovery plans are documents that list what should take place to recover a  
20 species to the point that it is no longer threatened or endangered under the ESA.

21  
22 In addition to critical habitat, federal agencies can designate Areas of Critical Environmental Concern or  
23 ACECs, where special management attention is needed on federal land to protect important historical,  
24 cultural, and scenic values, or fish and wildlife or other natural resources. Anyone can nominate an ACEC  
25 during the federal land-use planning process, but designations must be based on the best available  
26 information and science. These determinations are made during the land-use planning process and are  
27 subject to public review and comment.

## 28 29 **Economic Considerations**

30  
31 Species listing can have serious economic impacts to the state and its communities. The passage of H.B.  
32 359 during the 1997 General Session created the ~~Endangered Species Mitigation Fund program (ESMF).~~  
33 ~~The legislation established a~~ Species Protection Account, now outlined in Utah Code 79.2.203. This  
34 account sets aside money to help facilitate conservation, and the program distributes funds through  
35 competitive grants to projects that promote species recovery and conservation.

36 One of the program’s primary efforts is to down-list or delist species listed under the ESA and prevent  
37 new federal listings. Highly successful, the program has on multiple occasions helped prevent federal  
38 listings and the economic harm that often accompanies them.

39  
40 The U.S. Department of Interior estimated that the potential direct costs from the recovery plans of all  
41 listed species were about \$4.6 billion in 1990 [8]. Similarly, the federal government has spent at least \$1  
42 billion ~~dollars a~~per year on ESA listing and delisting efforts each year since 2010 [9]. In 2015, the  
43 USFWS spent \$745,774 on Utah prairie dog conservation efforts alone [10].

44  
45 Utah has spent ~~more than \$183 million on protection of sage grouse to prevent federal listing.~~ hundreds of  
46 ~~However, according to the Utah Office of Energy Development, federal listing of sage grouse as~~  
47 ~~endangered could cost the state more than \$41.4 billion in lost economic development. The State of Utah~~  
48 ~~has also spent more than \$189 millions of~~ dollars ~~on~~ restoring habitat that benefits many threatened,  
49 endangered, and other species throughout Utah. Species listing, however, would result in a much larger

1 cost to Utah citizens because of the non-monetary cost of limitations on resource use and development.  
2 DWR therefore strives to prevent species listings under the ESA.

### 3 4 **Goals, Objectives, and Policies** 5

#### 6 **Goal(s):** 7

- 8 • The primary objective of the ~~Endangered Species Mitigation Fund~~ Protection Account is to direct  
9 funds toward the protection, conservation, and recovery of federally listed species and species of  
10 greatest conservation need as identified in the Utah Wildlife Action Plan.  
11

#### 12 **Objectives:** 13

- 14 1. Work with stakeholders and partners and continue to implement recommendations from the Utah  
15 WAP 2015–2025 to conserve species and their habitat to prevent federal listings.
- 16 2. Identify and minimize the threats to species in need of conservation to ensure healthy and robust  
17 populations in Utah.
- 18 3. Assist the USFWS in developing recovery plans for federally listed species in Utah. The recovery  
19 plans should contain quantifiable recovery goals for the target species. Identify and maintain  
20 wildlife migration corridors for all species in need of conservation.
- 21 4. Work with USFWS to identify means of increasing the effectiveness of species recovery  
22 activities throughout the state.
- 23 5. Restore habitat for species in need of conservation along with all other wildlife through the  
24 Watershed Restoration Initiative.
- 25 6. In consultation with the USFWS, local governments, and state agencies, develop a delisting  
26 strategy for all listed species in Utah and work to eliminate threats to those species.
- 27 7. Engage with statewide and local efforts to ensure wildlife values are incorporated into planning  
28 efforts.
- 29 8. Ensure state control and management of species not listed as threatened or endangered.  
30

#### 31 **Policies:** 32

- 33 • Enact policies regarding the recovery of federally threatened and endangered species based on the  
34 best available, site-specific, biological, and social scientific knowledge and information.
- 35 • Manage species in need of conservation based on the best available, site-specific, biological, and  
36 social scientific knowledge and information.
- 37 • Recognize the State of Utah, its resource agencies, and local governments as partners with federal  
38 agencies in the recovery of federally listed species.
- 39 • Develop ~~F~~ederal ~~R~~ecovery ~~P~~lans in collaboration and consultation with citizens, federal, state,  
40 and local governments, and include specific and measurable goals for recovering threatened and  
41 endangered species.
- 42 • Base all actions taken under the ESA on the best scientific information available.
- 43 • Encourage and incentivize landowners, when possible, to enter into voluntary conservation  
44 agreements to conserve threatened, endangered and other species in need of conservation.  
45 Successful completion of conservation agreements can eliminate the need for listing the species  
46 and assist with down-listing or delisting species already on the ESA.
- 47 • Work with legislatures to identify potential funding sources for the recovery of species in need of  
48 conservation.

- 1 • Withhold support for species recovery outside of the species' historic range and habitat.
- 2 • Support mitigation banking programs as a way to offset impacts to threatened and endangered
- 3 species, species at risk, and their habitats.
- 4 • Withhold support for actions to list any species as a threatened or endangered species under the
- 5 ESA until verifiable scientific data have been available to the public that demonstrates the
- 6 following:
- 7     o the need for the designation;
- 8     o that protections cannot be provided by other methods; and
- 9     o that the area in question is truly unique compared to other area lands.
- 10 • Withhold support for the designation of ACECs until the relevant federal agency complies with
- 11 the State Code referenced below.
- 12 • For the most accurate population estimates, the ~~S~~s~~t~~ate and ~~F~~federal government must include all
- 13 threatened, endangered, or other species in need of conservation found on both private and public
- 14 land in population estimates or counts.
- 15 • Species not listed as threatened or endangered under the protections of the Endangered Species
- 16 Act be under the management authority of the State of Utah and be managed according to the
- 17 Utah Wildlife Action Plan.

## 18

## 19 State Code

20

21 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*

22 *following are selected portions of the Utah State Code and do not represent every potential legal*

23 *reference in the Code related to this section of the State Resource Management Plan or the*

24 *administration of public lands.*

## 25

## 26 Public Lands Planning

27

28 § 63L-11-302. *Principles to be recognized and promoted.*

29

30 § 63L-11-303. *Findings to be recognized and promoted.*

31

32 (3) transportation and access routes to and across federal lands, including all rights-

33 of-way vested under R.S. 2477, are vital to the state's economy and to the quality of life

34 in the state, and must provide, at a minimum, a network of roads throughout the resource

35 planning area that provides for:

- 36 (a) movement of people, goods, and services across public lands;
- 37 (b) reasonable access to a broad range of resources and opportunities
- 38 throughout the resource planning area, including:
- 39 (i) livestock operations and improvements;
- 40 (ii) solid, fluid, and gaseous mineral operations;
- 41 (iii) recreational opportunities and operations, including motorized
- 42 and non-motorized recreation;
- 43 (iv) search and rescue needs;
- 44 (v) public safety needs; and
- 45 (vi) access for transportation of wood products to market;
- 46 (c) access to federal lands for people with disabilities and the elderly;
- 47 (d) and access to state lands and school and institutional trust lands to
- 48 accomplish the purposes of those lands;

1 (6) the state's support for designation of an Area of Critical Environmental Concern  
2 (ACEC), as defined in 43 U.S.C. Sec. 1702, within federal land-management plans will  
3 be withheld until:

4 . it is clearly demonstrated that the proposed area satisfies all the definitional requirements of the  
5 Federal Land Policy and Management Act of 1976, 43 U.S.C. Sec. 1702(a);

6 a. it is clearly demonstrated that:

- 7 1. the area proposed for designation as an ACEC is limited in geographic size; and
- 8 2. the proposed management prescriptions are limited in scope to the minimum necessary  
9 to specifically protect and prevent irreparable damage to the relevant and important  
10 values identified, or limited in geographic size and management prescriptions to the  
11 minimum required to specifically protect human life or safety from natural hazards;

12 b. it is clearly demonstrated that the proposed area is limited only to areas that are already  
13 developed or used or to areas where no development is required;

14 c. it is clearly demonstrated that the proposed area contains relevant and important historic, cultural  
15 or scenic values, fish or wildlife resources, or natural processes which are unique or substantially  
16 significant on a regional basis, or contain natural hazards which significantly threaten human life or  
17 safety;

18 d. the federal agency has analyzed regional values, resources, processes, or hazards for irreparable  
19 damage and potential causes of the damage resulting from potential actions which are consistent with the  
20 multiple-use, sustained-yield principles, and the analysis describes the rationale for any special  
21 management attention required to protect, or prevent irreparable damage to, the values, resources,  
22 processes, or hazards;

23 e. it is clearly demonstrated that the proposed designation is consistent with the plans and policies of  
24 the state and of the county where the proposed designation is located as those plans and policies are  
25 developed according to Subsection (3);

26 f. it is clearly demonstrated that the proposed ACEC designation will not be applied redundantly  
27 over existing protections provided by other state and federal laws for federal lands or resources on federal  
28 lands, and that the federal statutory requirement for special management attention for a proposed ACEC  
29 will discuss and justify any management requirements needed in addition to those specified by the other  
30 state and federal laws;

31 g. the difference between special management attention required for an ACEC and normal multiple-  
32 use management has been identified and justified, and any determination of irreparable damage has been  
33 analyzed and justified for short-term and long-term horizons;

34 h. it is clearly demonstrated that the proposed designation:

- 35 1. is not a substitute for a wilderness suitability recommendation;
- 36 2. is not a substitute for managing areas inventoried for wilderness characteristics after  
37 1993 under the US Bureau of Land Management interim management plan for valid  
38 wilderness study areas; and
- 39 3. it is not an excuse or justification to apply de facto wilderness management standards;  
40 and

41 i. the conclusions of all studies are submitted to the state, as a cooperating agency, for review, and  
42 the results, in support of or in opposition to, are included in all planning documents;

#### 44 **State Land Use and Management Plan for Federal Lands**

46 ~~§ 63L-8-104.~~ *State land-use planning and management program.*

#### 48 **References:**

- 1 1. [https://ecos.fws.gov/ecp/report/species-listings-by-](https://ecos.fws.gov/ecp/report/species-listings-by-state?stateAbbrev=UT&stateName=Utah&statusCategory=Listed)
- 2 [state?stateAbbrev=UT&stateName=Utah&statusCategory=Listed](https://ecos.fws.gov/ecp/report/species-listings-by-state?stateAbbrev=UT&stateName=Utah&statusCategory=Listed)
- 3 2. <https://www.fws.gov/laws/endangered-species-act/section-9>
- 4 3. <https://www.fws.gov/laws/endangered-species-act/section-9>
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- 10 9. [https://www.fws.gov/library/collections/endangered-and-threatened-species-expenditures-](https://www.fws.gov/library/collections/endangered-and-threatened-species-expenditures-reports#:~:text=The%20Endangered%20Species%20Act%20)
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- 14

## UTILITY CORRIDORS

### Introduction

Utility corridors are linear tracts of land set aside for the placement of above- and below-ground infrastructure that transports and conveys raw materials, processed materials, and energy. Utility corridors include the areas necessary for the maintenance and access of utilities infrastructure. Common infrastructure found in utility corridors includes electrical transmission lines, petroleum pipelines, natural gas pipelines, water pipelines, wastewater, transportation infrastructure, and telecommunications conduit. A utility corridor (also known as a “right-of-way” or “easement”) may be located on private, state, and federal public lands. The width of a utility corridor depends on the type of utilities within the corridor and the maintenance requirements of its infrastructure. For example, a utility corridor for a small water pipeline may be just 20 feet wide, while a corridor with co-located high-voltage transmission lines and high-pressure natural gas pipelines may be hundreds of feet wide.

When utility corridors are constructed on federal land in Utah, it’s most often on land administered by the US Bureau of Land Management (BLM) or US Forest Service ([USFS Forest Service](#)), because these agencies administer large land tracts and are governed by the most-accommodating land-use regulations. However, utility corridors sometimes must cross federal land, which are governed by more-restrictive regulations. This may include land administered by the National Park Service, US Fish and Wildlife Service (USFWS), US Department of Defense, US Department of Energy, or Bureau of Reclamation (BOR).

Constructing utility corridors on federal land requires compliance with a number of federal laws and regulations, which vary depending on which agency administers the land in question. Laws and regulations also apply when locating utility corridors on state and private lands, but these are typically less complex than those that apply to federal lands, and they are not discussed here. There are also regulations associated with siting utility corridors across [Tribal](#) lands that will need to be adhered to when crossing [Tribal](#) lands in consultation with the [Tribal](#) governments.

### Legal context

The primary federal laws regulating utility corridor placement on BLM and [USFS Forest Service](#) lands are the [Federal Land Policy and Management Act of 1976 \(FLPMA\)](#) for BLM and [National Forest Management Act of 1976 \(NFMA\)](#) for the [USFS Forest Service](#). Both FLPMA and NFMA require the federal agencies to complete resource management plans that list and describe future goals and objectives for managing lands within their jurisdictions. These documents include any proposed locations for utility corridors.

Federal agency decisions regarding utility corridors must comply with the [National Environmental Policy Act of 1969 \(NEPA\)](#), which stipulates that all projects with the potential to impact the environment must be evaluated via an environmental assessment, environmental impact statement, and other documentation. Regulatory laws that require avoidance, minimization, and possibly mitigation include but are not limited to:

- The Antiquities Protection Act of 1993, which protects significant cultural resources, historic properties, and paleontological resources from negative impacts.
- The [Clean Water Act of 1972](#), which, among other requirements, regulates the discharge of pollutants and fill material into certain jurisdictional waters (also known as “waters of the United States”).
- The [Endangered Species Act](#), which is administered by USFWS, regulates potential project impacts to threatened and endangered species.

1 Section 368 of the Energy Policy Act of 2005 directs federal agencies to designate energy corridors on  
2 federal lands in the western United States. This set of regulations was enacted with the goal to “improve  
3 reliability, relieve congestion, and enhance the capability of the national grid to deliver electricity” (BLM  
4 ND). In compliance with this directive, both the BLM and USFS Forest Service in Utah have identified  
5 utility corridor locations and amended their resource management plans to accommodate the placement  
6 and construction of the designated corridors. The original section 368 corridors were published in 2009;  
7 however, in 2022, a final report was issued to address concerns challenged by environmental  
8 organizations. The proposed changes in this report were minimal in Utah.  
9

## 10 Findings

11  
12 Corridors for utility infrastructure are commonplace in Utah, crossing private, state, Tribal, and federal  
13 lands. On BLM lands, existing utility corridors are usually identified in land-use plans for each BLM field  
14 office. The plans that are pertinent to Utah can be found on the BLM’s planning website, which can be  
15 accessed here. For Forest Service lands, existing utility corridors are identified in the forest plan of each  
16 individual national forest. For lands owned by state entities, such as Utah School and Institutional Trust  
17 Lands Administration (SITLA), Utah Division of Wildlife Resources, or private landowners, utility  
18 corridors are typically identified as easements on land-title documents. This information can be found at  
19 individual county recorder’s offices.  
20

21 To establish new utility corridors on state lands, such as those owned by SITLA, the office may issue  
22 easements for up to 30-year terms, which can be acquired through the application process outlined here.  
23 Utility corridors on Tribal lands require compliance with rules administered by the Bureau of Indian  
24 Affairs. Utility corridors on private lands require negotiation with individual landowners to establish  
25 specific conditions, recordable easement deeds and financial compensation.  
26

27 In addition to crossing federal lands, proposed utility corridors (regional or transmission) can encounter  
28 potentially unexpected federal jurisdictions that require review and compliance with federal  
29 environmental laws and regulations. These should be identified early in the corridor planning process to  
30 prevent project delays. These may include:  
31

32 US Bureau of Reclamation water delivery infrastructure. In addition to lands surrounding reservoirs, the  
33 USBOR owns over 8,000 miles of canals and aqueducts in the western US with around 1,000 miles  
34 occurring within urbanized areas. Use or occupancy of reclamation land, facilities, or waterbodies  
35 requires authorization under federal regulations specified in 43 CFR 429.  
36

- 37 ● Section 408 Civil Works Projects. The U.S. Army Corps of Engineers (USACE) retains authority  
38 to review and approve 408 Permissions for crossings of certain flood control and other projects.  
39 USACE maintains a map of levee projects with information about whether they were federally  
40 funded or not, and a list of local government partners that can be contacted to determine  
41 permitting needs. In Utah this includes Salt Lake County, Sevier County, Beaver County, and  
42 Davis County.
- 43 ● State Wildlife Management Areas were acquired with federal funds. Utility easements through  
44 state lands that were acquired with funds from the federal Wildlife and Sport Fish Restoration  
45 Program require review and approval from the USFWS Regional Director. The approval decision  
46 may require a NEPA process. The Utah Division of Wildlife Resources should be contacted to  
47 determine requirements for a specific location.
- 48 ● Non-project use of lands licensed for a hydropower project by the Federal Energy Regulatory  
49 Commission (FERC). Lands associated with hydroelectric dams and facilities may be operated  
50 under a FERC license. A third-party request for easement or right-of-way on these lands may  
51 require the licensee to apply for a license amendment from FERC. Approval of the amendment

1 may in turn require compliance with federal environmental laws and regulations (FERC 2015).  
2 The licensee of a particular facility should be contacted to determine requirements.  
3

4 Establishing a new utility corridor on or through federal land for electrical transmission, pipelines, and  
5 other utility infrastructure is a major undertaking that may require years to complete. The design, analysis,  
6 public involvement, and documentation required by federal regulations are very complicated. Consider  
7 also that regulations and compliance can vary between jurisdictions, regions, and even within agencies.  
8 Navigating these processes and protocols can be extremely challenging.  
9

10 Recognizing the complex nature of placing utility corridors on public lands, and in light of the growing  
11 need for energy grid improvements, Congress passed the Energy Policy Act of 2005. Section 368 of the  
12 act directs federal agencies to: (1) designate energy corridors on federal lands in 11 western states; (2)  
13 establish procedures to ensure that additional corridors are identified and designated as necessary; and (3)  
14 expedite applications to construct or modify oil, gas, and hydrogen pipelines and electricity transmission  
15 and distribution facilities. These corridors are referred to in this document as “Section 368” energy  
16 corridors.  
17

18 Section 368 energy corridors may facilitate some utility transmission needs in Utah, however, there are  
19 other considerations for utility corridor planning. Even though an environmental impact statement was  
20 completed for the Section 368 energy corridor designation, standard NEPA analysis procedures must  
21 occur again before any utility infrastructure is permitted for construction. The new round of analyses will  
22 use specific information about structure types, placement, and disturbance limits to determine potential  
23 impacts from the proposed project.  
24

25 Section 368 energy corridors are only identified on federal lands, typically those under jurisdiction of the  
26 [USFS Forest Service](#) or the BLM. In some cases, the Section 368 energy corridors may overlap with  
27 corridors identified in local RMP and Forest Plans. Siting utility infrastructure within locally designated  
28 corridors is less complicated because the corridors have already been defined as a permitted use and will  
29 not require a rewrite or modification of existing RMP or Forest Plan as would otherwise be required.  
30 Some portions of Section 368 corridors have potential conflicts with existing land-use designations,  
31 Wilderness Study Areas for example, or critical wildlife habitat. These areas are designated as Corridor of  
32 Concern. Other concerns for Section 368 energy corridors include the challenges of siting transmission  
33 infrastructure on private and state land inholdings embedded along designated Section 368 energy  
34 corridors, as well as where corridors cross out of federal lands (Fisher 2021). Furthermore, designated  
35 Section 368 energy corridors traverse only a portion of Utah, leaving the majority of the state too far from  
36 the corridors to be useful, especially for smaller transmission and distribution systems.  
37

38 **Table 1:** Section 368 Energy Corridors by designated use, local designation, concern, and length.

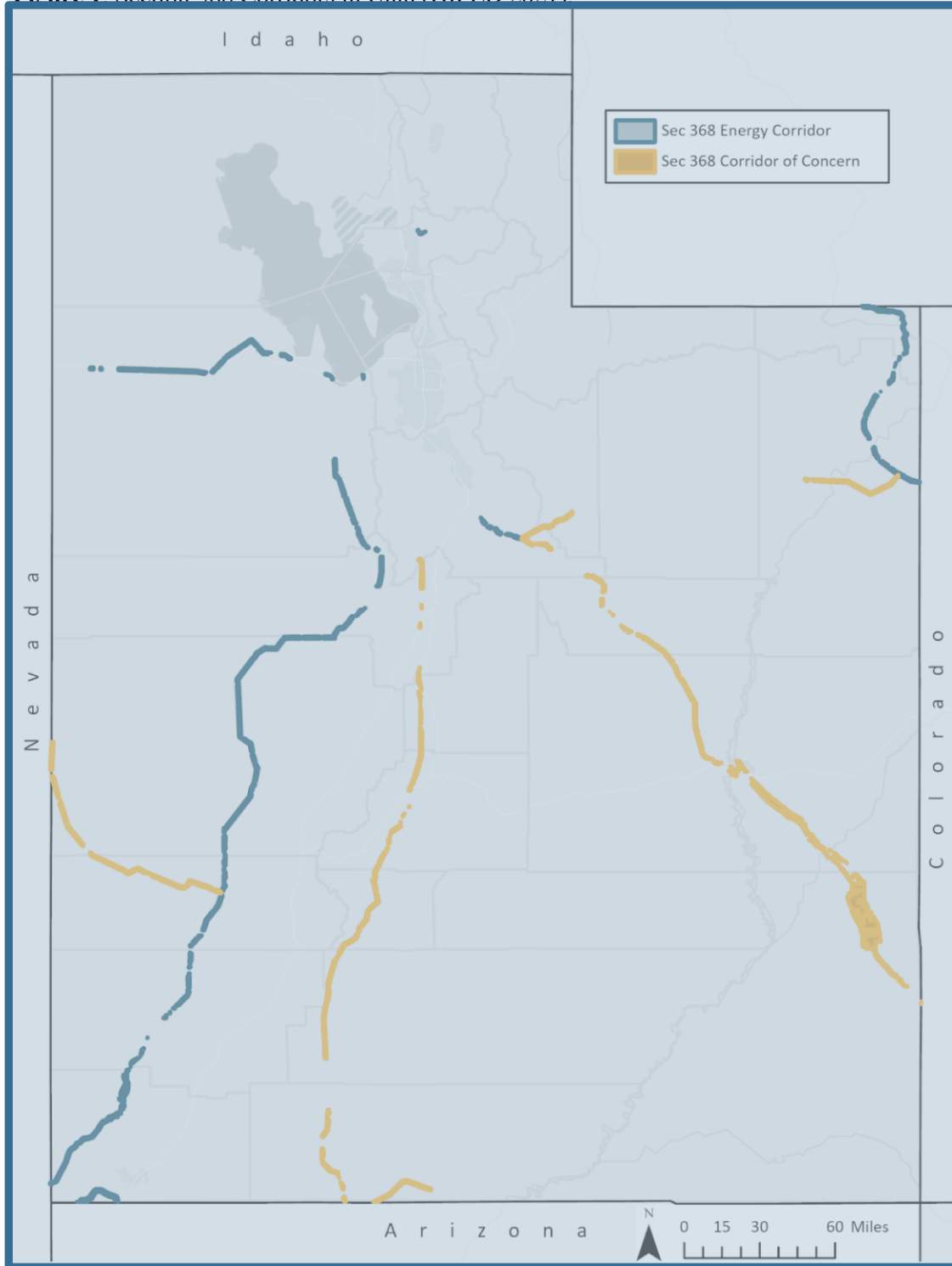
Corridor Name	Designated Use	Local Designation	Corridor of Concern	Total Miles
44-239	Multimodal, default 3500' width	No	No	48.3
66-209	Electric only, default 3500' width	Yes	No	5.7



66-212	Multimodal, default 3500' <sup>1</sup> width	No	Yes	62.7
66-212	Multimodal variable width	No	Yes	42.5
66-259	Multimodal variable width	No	Yes	18.1
68-116	Multimodal, default 3500' <sup>1</sup> width	No	Yes	20.2
110-114	Multimodal, default 3500' <sup>1</sup> width	No	Yes	68.2
113-114	Multimodal, default 3500' <sup>1</sup> width	Yes	No	59.6
113-114	Multimodal variable width	Yes	No	14.5
113-116	Multimodal 5280' <sup>1</sup> width	Yes	No	13.2
114-241	Multimodal, 2000' <sup>1</sup> (3500' <sup>1</sup> for Alt 2)	Yes	No	12.6
114-241	Multimodal, default 3500' <sup>1</sup> width	No	No	120.9
116-206	Multimodal, 2000' <sup>1</sup> (3500' <sup>1</sup> for Alt 2)	Yes	Yes	8.6
116-206	Multimodal, default 3500' <sup>1</sup> width	No	Yes	98.5
126-133	Multimodal, default 3500' <sup>1</sup> width	No	No	4.7
126-218	Multimodal, default 3500' <sup>1</sup> width	No	No	45.9
126-258	Multimodal, default 3500' <sup>1</sup> width	No	Yes	24.5
256-257	Multimodal variable width	Yes	No	2.7
<b>Grand Total</b>				<b>671.4</b>

- 1 Source: U.S. Department of Interior, Bureau of Land Management, West-Wide Energy Corridor  
2 Information Center (BLM, 2009).

1 **Figure 1:** Section 368 Corridors in Utah (HIFLD 2021)



2  
3 Utah's utility corridors and their capacity to accommodate existing and future utility needs was identified  
4 as a concern by Utah's Public Lands Policy Coordination Office. The issue of electrical transmission was  
5 examined in the 2021 Utah Transmission Study, which concluded that (under scenarios of high renewable  
6 energy buildout in southern Utah) transmission needs might exceed transmission capacity (Energy  
7 Strategies 2021). However, the study did not address the specific placement of new infrastructure or

1 whether Section 368 energy corridors would be used. Another study by the National Renewable Energy  
2 Laboratory (NREL) looked at proposed pipeline construction within Section 368 energy corridors  
3 and found that new pipeline construction in Utah is unlikely (O’Neill et al. 2018). Additionally, the only  
4 major natural gas transmission pipelines planned for construction in Utah are a 24-mile pipeline from  
5 Central Gate Station (on the Kern River pipeline) to St. George and to the Intermountain Power Plant  
6 (which will not utilize Section 368 energy corridors) (Dominion Energy 2020), and a new lateral  
7 connection from the Kern River Pipeline near Holden, Utah, to the Intermountain Power Plant near Delta  
8 (Kern River 2020).

9  
10 According to a regional transmission capacity study completed by the NREL, electrical transmission  
11 projects under development will largely meet projected future transmission demands according to their  
12 most-likely future demand scenario. However, under some scenarios, future need for new electricity  
13 transmission in Utah might exceed the capacity of Section 368 energy corridors, especially when  
14 considering the future demand for renewable energy development and transmission (O’Neill et al. 2018).  
15 Furthermore, when considering co-location within corridors, the issues of siting electric transmission and  
16 pipeline projects within the same corridor can require significant separation distances, which may lead to  
17 congested corridors with only a few projects. For example, according to NREL, “The location of steel  
18 pipelines in the vicinity of AC transmission facilities results in mutual electrical interference problems  
19 that can produce damaging effects on both facilities and potentially the public,” (BLM ND).

## 20 21 **Economic Considerations**

22  
23 Power generation in the western United States is transitioning from carbon-based fossil fuels to renewable  
24 energy. And while power plants in Utah still use coal and natural gas to supply a significant portion of  
25 energy generation, the amount of wind and solar power generated is increasing every year. Additionally,  
26 policies to increase the component of renewable energy coming from the federal, state, and local  
27 governments as well as consumer demands, are likely to increase the demand of renewable energy over  
28 the coming decade.

29  
30 Utah has abundant potential for renewable energy generation, as identified in the Utah Renewable Energy  
31 Zone study. However, these resources are not always near existing transmission infrastructure. As power  
32 generators move to develop these renewable resources, there is a need to simultaneously develop the  
33 transmission infrastructure needed to convey power to the electric grid. PacifiCorp has plans to invest  
34 over \$1 billion to build additional transmission lines to strengthen the high-capacity transmission  
35 backbone across their service area (Cox 2021). However, additional corridors for lower-voltage  
36 transmission will still be needed to connect local renewable projects to the primary electric grid.  
37 Primary economic consideration for utility corridors is the lengthy time periods and high costs required to  
38 navigate the federal permitting and compliance processes to place utilities on federal lands. The recent  
39 experience of PacifiCorps’ development of the Gateway South transmission project (which crossed  
40 federal lands both within and outside of Section 368 energy corridors) took over 10 years to complete  
41 (Cox 2021). Such long time periods reduce the ability of utility companies to respond to rapidly changing  
42 energy policies, such as carbon reduction goals and development of Utah’s renewable energy.  
43 The challenging nature of placing utilities across federal lands has economic implications for Utah and  
44 local governments. For communities that have only one supply line for utilities (e.g., electricity, natural  
45 gas, fiber optic), increasing the capacity within an existing utility corridor to provide for growing  
46 communities is problematic. Also, attempts to provide redundant utilities to increase robustness and  
47 reliability of a given service can be hampered by the lack of multiple utility corridors to connect  
48 infrastructure.

1 **Goals, Objectives, and Policies**

2  
3 **Goal:**

4  
5 Proactively plan, coordinate, and provide for the maintenance of existing corridors and future  
6 development of new utility corridors across federal and state lands to meet projected state growth and  
7 demand.

8  
9 **Objectives:**

- 10  
11 1. Meet often with utility companies, cooperatives, the Utah Division of Public Utilities and other  
12 applicable state and federal agencies to coordinate efforts related to existing and future utility  
13 corridors.
- 14 2. Protect access for utility companies to maintain and improve infrastructure and corridors.  
15 ○ Including the removal of vegetation within and around infrastructure and corridors.
- 16 3. Expedite federal approval processes and policies for the maintenance of utility corridors and new  
17 construction projects.
- 18 4. Support [US](#) Bureau of Land Management instruction memorandums (e.g., Utah IM-2021-004)  
19 that allows utility companies to have additional flexibility to access infrastructure and utility  
20 corridors for maintenance purposes and to reduce the risk of wildfire impacts on the utility.
- 21 5. Maintain and update wildland fire protection plans to reduce the risk of wildfire in utility  
22 corridors.
- 23 6. Avoid, minimize, and mitigate challenges that utility corridors may present to cultural resources  
24 and threatened, endangered, and sensitive species.
- 25 7. Provide redundancy and physical separation for utility facilities needed to serve all populated  
26 areas of Utah.
- 27 8. Work with federal and state agencies and tribes to identify utility corridors needed to access and  
28 deliver to foreign or domestic markets, all forms of traditional mineral resources, critical  
29 minerals, and renewable energy resources.
- 30 9. Coordinate various needs and demands with respect to the limited disturbance caps in [G](#)reater  
31 sage-grouse management areas.
- 32 10. Work with federal agencies to identify opportunities to increase disturbance caps and seek out  
33 additional mitigation opportunities related to threatened, endangered, and sensitive species by  
34 providing proactive management and habitat improvements.
- 35 11. Continue participating in the Section 368 (Westwide) corridor planning process and  
36 development.
- 37 12. Ensure that sufficient utility corridors are available to provide essential utilities to rural areas of  
38 the state including areas with current or future federal designations (e.g., national monuments and  
39 roadless areas).
- 40 13. Promote feasibility studies for different types of utility transmission, distribution, and collection  
41 infrastructure.
- 42 14. Support innovation to make existing and future utility corridor infrastructure more efficient,  
43 reliable, safe, climate resilient, and sustainable.
- 44 15. Support a network of utility corridors for the distribution of crude and refined petroleum products  
45 to foreign and domestic markets.
- 46 16. Support the development of rail systems where gaps in service exist.
- 47 17. Provide access to fiber optic resources in rural Utah and Tribal communities, or equivalent (e.g.,  
48 StarLink)
- 49 18. Ensure that needed water resources are capable of being delivered through existing and future  
50 utility corridors in order to meet the needs of the state’s citizens.

- 1 19. Preserve the ability to provide a supply of hydrogen to highway arteries; potentially via natural  
2 gas pipelines.
- 3 20. Explore opportunities for distribution and production of commercial products like ice and dry ice  
4 from CO<sub>2</sub>.

5  
6 **Policies:**

- 7
- 8 • The State of Utah is an “any-of-the-above” energy state and utility corridors must be preserved  
9 and developed to transport the complete range of energy resources.
- 10 • The State [of Utah](#) supports the Office of Energy Development’s recommendations provided in the  
11 [Utah Transmission Study](#), [Utah Energy Innovation Plan](#), and other reports.
- 12 • The State [of Utah](#) supports expedited corridor planning and approvals to address critical  
13 infrastructure needs (refer to [Executive Order 13807](#), Section 5(g)).
- 14 • Support development of utility corridors to accommodate pipelines from the natural gas and  
15 crude oil producing areas to refineries, export facilities or to other transportation networks.
- 16 • Federal agencies shall recognize and aid utilities in implementing wildland fire protection plans  
17 required of qualified utilities under [Title 54-24-201](#) of the Utah Code.
- 18 • Interstate transmission lines should provide access for utilization of energy by citizens of the  
19 ~~s~~State of Utah, or supply significant and continual incentives that benefit the citizens of the state.
- 20 • Utility corridors are needed in the state of Utah to maintain affordable, reliable, abundant, and  
21 dispatchable energy at all times.
- 22 • The State [of Utah](#) will support minimizing impacts to prime and unique soils and irrigable acres  
23 to the maximum extent possible when new utility corridors are being considered.
- 24 • The State [of Utah](#) discourages natural gas vent lines (e.g., pig lines) in close proximity to  
25 electrical transmission and distribution lines, or other non-compatible operations.
- 26 • Every effort should be made to ensure that wildland fires are not caused by utility providers.
- 27 • Support the development and maintenance of effective rail system corridors to support efficient  
28 commercial material and energy distribution to markets and diversify economies.
- 29 • The State [of Utah](#) supports federal appropriations for methane capture while maintaining safety  
30 protocols.
- 31 • The State [of Utah](#) seeks to maintain itself as a net energy exporter by protecting utility corridors,  
32 distribution networks and access to domestic and international markets.
  - 33 • Including the movement of products by rail, pipeline, and other infrastructure.
- 34 • The State [of Utah](#) recognizes the economic and educational importance of internet access.
- 35 • The State [of Utah](#) recognizes that utility infrastructure within established corridors and along  
36 major highways is congested and new areas need to be analyzed and established as corridors to  
37 facilitate future growth and demand.
- 38 • The State [of Utah](#) will support utility companies in being able to maintain vegetation near and  
39 around utility corridors to mitigate risks that could potentially cause wildland fires.
- 40 • Oppose special designations on federal land that would prohibit the establishment of new utility  
41 corridors.
- 42 • Support and promote the planning, construction, and maintenance of new transmission lines to  
43 support new renewable energy generated by nuclear and geothermal power plants.

44  
45 **State Code**

46  
47 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
48 *following are selected portions of the Utah State Code and do not represent every potential legal*  
49 *reference in the Code related to this section of the State Resource Management Plan or the*  
50 *administration of public lands.*

1 **Utah Energy Act § 79-6-301.** *State energy policy.*

2  
3 **Public Utilities - Title 54**

4  
5 **Railroads - Title 56**

6  
7 **Transportation - Title 72**

8  
9 **Public Lands Planning**

10  
11 **§ 63L-11-302.** *Principles to be recognized and promoted.*

12  
13 **§ 63L-11-303.** *Findings to be recognized and promoted.*

14  
15 (3) transportation and access routes to and across federal lands, including all rights-  
16 of-way vested under R.S. 2477, are vital to the state's economy and to the quality of life  
17 in the state, and must provide, at a minimum, a network of roads throughout the resource  
18 planning area that provides for:

- 19 (a) movement of people, goods, and services across public lands;  
20 (b) reasonable access to a broad range of resources and opportunities  
21 throughout the resource planning area, including:  
22 (i) livestock operations and improvements;  
23 (ii) solid, fluid, and gaseous mineral operations;  
24 (iii) recreational opportunities and operations, including motorized  
25 and non-motorized recreation;  
26 (iv) search and rescue needs;  
27 (v) public safety needs; and  
28 (vi) access for transportation of wood products to market;  
29 (c) access to federal lands for people with disabilities and the elderly;  
30 (d) and access to state lands and school and institutional trust lands to  
31 accomplish the purposes of those lands;  
32

33 **State Land Use and Management Plan for Federal Lands**

34  
35 **§ 63L-8-104.** *State land-use planning and management program.*

36  
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2 5D00-71464, 25pg.

# WATER RIGHTS

## Introduction

Water is both an opportunity in Utah and a limitation, and it must be managed intelligently. Utah’s Water Rights Law, Title 73 states water is the “property of the public” and rights are granted to put it to “beneficial use” [1]. The code emphasizes “beneficial use is the basis, the measure and the limit to the use of water in this state” [2]. Utah water law is based on “prior appropriation.” When several people use water from the same source, “the one first in time is first in rights” [3].

The Utah Division of Water Rights (UDWRi) administers Utah’s water right laws. This includes appropriation, distribution, and adjudication of surface and groundwater [4 (a) (b) (c)]. In addition, dam safety, stream alterations, and well drilling are regulated by UDWRi [5(a) (b)]. An extensive website allows access to all water rights, dam, stream alteration, and well databases with full GIS mapping and graphical search capabilities. The website is structured to reflect the office organization and is an excellent resource.

The Utah sState eEngineer directs the UDWRi. The sState eEngineer is appointed by the governor with consent of the state senate and serves a 4-year term [7]. Utah sState eCode states, “The state engineer shall be responsible for the general administrative supervision of the waters of the state and the measurement, appropriation, apportionment and distribution of those waters” [8].

## Findings

~~All~~The waters of the state are ~~owned exclusively by the State of Utah in trust for its citizens. These waters are~~ subject to appropriation for beneficial use and are essential to the future prosperity of Utah and the quality of life within the state. As set forth in Section 73-1-3, this beneficial use shall be the basis, the measure, and the limit of all rights to the use of water in the state. A “water right” is a usufructuary right to divert water from its natural source to use it beneficially. The defining elements of a typical water right will include a:

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

## Responsibilities and Functions

The UDWRi administrative responsibilities are divided into categories as follows:

### Water Right Applications and Records

The sState eEngineer ~~approves~~ is the decision authority for all applications to use water in the state and maintains a comprehensive set of water right records, assembled from the sState eEngineer’s application-approval responsibility.

### Distribution



1 Water is distributed to water users ~~by priority~~ according to the relative priority date of the respective  
2 water right. ~~The state~~ State law requires water users to install and maintain measuring devices at each  
3 location where water is diverted; however, the State ~~e~~Engineer has authority to require ~~that the amount of~~  
4 ~~water diverted is measured~~ additional measuring devices if deemed necessary. Where many users are  
5 competing for water from the same source, the ~~s~~State ~~e~~Engineer may establish a distribution system and  
6 appoints a water commissioner to oversee the day-to-day distribution of water on the system.

### 7 Adjudication

8  
9  
10 The ~~courts have jurisdiction to adjudicate ownership and validity of water rights~~ water rights adjudication  
11 process helps to bring order and certainty to the water rights record throughout the state by defining  
12 existing rights, quantifying unknown rights, and removing unused and abandoned rights from the record  
13 through judicial decree. ~~The state engineer assists in this effort through investigations that compile~~  
14 ~~proposed determinations~~ Under the direction of the district court, the State Engineer provides notice to all  
15 potential water right claimants to submit claims, publishes and files a “List of Unclaimed Rights” with the  
16 district court, evaluates filed water user's claims, prepares a hydrographic survey map, and then prepares  
17 and files a “Proposed Determination” of water rights ~~for decree by in the~~ district courts. (~~Utah Code §73-~~  
18 ~~4~~Utah Code §73-4).

### 19 Well Drilling

20  
21  
22 The UDWRi regulates water-well construction by licensing, registering, and overseeing construction  
23 activities of water-well drillers and drill-rig operators. ~~This also includes~~

### 24 Geothermal Resources

25  
26  
27 The UDWRi has jurisdiction and regulatory authority ~~for over~~ geothermal ~~resources~~ wells and related  
28 operations that seek to produce energy from geothermal resources at temperatures greater than 120  
29 degrees centigrade. (Utah Code ~~§ 73-22-~~4).

### 30 Enforcement

31  
32  
33 The UDWRi ensures compliance with state water law and regulation by ~~investigates~~ ~~and~~  
34 ~~prosecutes~~ alleged violations ~~of water right statutes with~~ and taking corrective actions via State Engineer  
35 orders, fines, and litigation, if necessary.

### 36 Dam Safety

37  
38  
39 The UDWRi ~~approves construction and inspects public and private dams~~ is responsible for ensuring the  
40 safety of non-federal dams within the state. ~~Inspections are based on a dam's hazard rating for loss of life~~  
41 ~~and property~~. The dam safety program involves regular inspections, risk assessments, and regulatory  
42 compliance to prevent dam failures and protect public safety and property. The program aims to manage  
43 and mitigate potential hazards associated with dams through strict oversight and enforcement of safety  
44 standards.

### 45 Stream Channel Alterations

46  
47  
48 The UDWRi administers alterations to natural streams under terms of the Utah code in conjunction with a  
49 general regional permit from the U-S- Army Corps of Engineers.

### 50 Water Resource Cooperative Studies

1 The UDWRi administers a cooperative program of studies to improve the understanding of the water  
2 resources of the state and provide data for technically based water right decisions.~~Water resources~~  
3 ~~conducts quality/quantity studies of various river basins and hydrologic areas of the state in conjunction~~  
4 ~~with the Utah Geological Survey, the U.S. Geological Service, Utah State University, and others~~ The  
5 cooperative program partners with other local, state, and federal entities in areas of common interest to  
6 share costs and study resources.-

## 7 8 ~~Compacts and Agreements~~ Groundwater Management

9  
10 The UDWRi establishes Groundwater Management Plans ~~are created~~ for areas throughout Utah to  
11 promote wise use of the groundwater, protect existing water rights, and address water -quality issues and  
12 over-appropriation of groundwater. The creation, requirements, management, purpose, and effects of  
13 these plans are explained in Section 73-5-15 of the Utah State code.

14  
15 The UDWRi is also the regulatory agency that oversees groundwater recharge and recovery projects in  
16 Utah. These projects are sometimes referred to as aquifer storage and recovery (ASR). Section 73-3b of  
17 the Utah State code, the Groundwater Recharge and Recovery Act, details the application, monitoring,  
18 and reporting processes required to operate a recharge and recovery project.

## 19 20 Administrative Rules

### 21 22 Groundwater Management Plans-

23 Finally, UDWRi cooperatively publishes an annual report with the U.S. Geologic Survey (USGS)  
24 describing groundwater conditions in Utah. The annual reports contain information on well construction,  
25 groundwater withdrawals from wells, water-level changes, precipitation, and streamflow and provides  
26 data that enables awareness of changing groundwater conditions in the State.

## 27 28 Interstate Compacts

29  
30 The Bear River Commission was created in 1958 pursuant to the Bear River Compact (as amended PL  
31 96-189) between the states of Idaho, Utah and Wyoming. The responsibility of the Commission is to  
32 carry out the provisions of the Bear River Compact. The Commission is composed of nine appointed  
33 Commissioners, three from each of the signatory states, as well as a Federal Commissioner appointed by  
34 the President of the United States. The State Engineer serves as the Chair of the Utah delegation alongside  
35 two other commissioners who are appointed by the Board of Water Resources.

36  
37 The Upper Colorado River Commission (UCRC) is an interstate water administrative agency established  
38 by action of five state legislatures and Congress with the enactment of the 1948 Upper Colorado River  
39 Basin Compact. The Commission's role is to ensure the appropriate allocation of water from the Colorado  
40 River to the Upper Division States of Wyoming, Colorado, Utah, and New Mexico and to ensure  
41 compliance with the 1922 Colorado River Compact to the Lower Division States of Nevada, Arizona, and  
42 California and to the Republic of Mexico. The Commission seeks to promote interstate comity, remove  
43 causes of present and future controversies, and to assure the storage of water and agricultural and  
44 industrial development of the Upper Basin. The Commission is comprised of one representative  
45 appointed by the Governor of each Upper Division State and one federal appointee. The State Engineer  
46 serves as an Alternate Commissioner representing Utah.

## 47 48 Federal Reserved Water Rights

1 The State Engineer plays a crucial role in the negotiation and quantification of federal reserved water  
2 rights due to the State Engineer’s statutory responsibility for the administrative supervision of the state’s  
3 water. This involves negotiating with federal agencies asserting reserved water rights to ensure that the  
4 claims are valid and do not exceed the “primary purpose” and “minimal needs” necessary to fulfill the  
5 purpose of the respective reservation. In this capacity, the State Engineer conducts hydrologic and legal  
6 assessments, engages in detailed negotiations, and utilizes scientific data to accurately quantify the  
7 claimed water rights associated with reserved federal lands, such as national parks, forests, and Indian  
8 reservations. Any resulting settlements are subsequently included in a corresponding Proposed  
9 Determination under an ongoing water rights adjudication.

## 11 **DWRi Objectives**

13 ~~The Mission of UDWRi~~ Under the authority of the State Engineer, the mission of the Utah Division of  
14 Water Rights is to provide order and certainty in the beneficial use of Utah’s water resources in  
15 accordance with established laws. ~~The objective of UDWRi is to provide opportunities for waters of the~~  
16 ~~state to be used beneficially in an orderly way. The Utah State Engineer maintains records of water rights,~~  
17 ~~accepts and approves applications for new water uses, and supervises the allocation of the existing water~~  
18 ~~supply to the water right holders respective to each water right priority. In most populated areas of the~~  
19 ~~state, the water resources are fully allocated. New uses in these areas are accommodated by changing~~  
20 ~~rights to existing uses to serve the new uses. The UDWRi has the authoritative role to administer the~~  
21 ~~process of water transfers from current to future proposed uses. The State Engineer's objective in this~~  
22 ~~process is to guarantee that hydrologic systems maintain balance and that existing~~ The Division is  
23 dedicated to providing equitable, prompt, and high-quality service to the public by maintaining detailed  
24 and accessible water rights records, measuring and distributing water, ensuring public safety through  
25 rigorous adherence dam safety standards, and efficient water rights ~~are not impaired by new~~  
26 ~~uses~~ application processing and administration.

## 28 **Economic Considerations**

30 In July 2017, at the request of the governor of Utah, a Water Strategy Advisory Team proposed a  
31 recommended State Water Strategy. The Water Strategy states “Utah faces a daunting challenge. We have  
32 the distinction of being both one of the driest states in the nation and one of the fastest growing. At the  
33 convergence of those two realities is the challenge of providing water for a population that is projected to  
34 nearly double by 2060 while maintaining strong farms and industries and healthy rivers, lakes, wetlands,  
35 and aquifers. This challenge is magnified by climate projections from the ~~S~~Utah state ~~E~~climatologist that  
36 show a significant decrease in Utah’s snowpack, which presently provides more annual water storage  
37 capacity than all of Utah’s human-made reservoirs combined” [9]. A healthy economy is dependent on an  
38 available supply of water to meet future demands.

## 40 **Goals, Objectives, and Policies**

### 42 **Goal(s):**

44 Ensure the protection and legal utilization of water rights in Utah.

### 46 **Objectives and Policies:**

- 47 ● Develop and use Utah’s entitlement to interstate rivers for the benefit of all citizens. All water  
48 rights desired by the federal government must be obtained through the state water appropriation  
49 system.
- 50 ● Recognize Utah’s water laws of prior appropriation doctrine and beneficial use as the legal basis  
51 for perfecting all water rights for the use of all water within the state.

- 1 • Support timely and appropriate negotiated settlement of federally reserved water right claims for
- 2 both Native American trust lands and other existing federal reservations, and oppose any future
- 3 designation of public lands that does not quantify any associated federally reserved water rights.
- 4 • Promote accurate water use measurement, tracking, enforcement, and reporting.
- 5 • Oppose federal agencies conditioning any permit, lease, or other land-use agreement on the
- 6 permanent transfer, relinquishment, or other impairment of any water right.
- 7 • Support voluntary projects that improve water quality and quantity, and those that increase the
- 8 dependability of the water supply.
- 9 • Ensure any recovery plan, habitat management plan, critical habitat designation, or any other plan
- 10 proposing an “in-stream flow” requirement adequately considers local existing and anticipated
- 11 future water uses, local custom and culture, and local economic and individual needs and follows
- 12 Utah Code Ann. §73-3-30.
- 13 • Consider additional water-storage facilities in Utah that ensure present and future growth and
- 14 protection of Utah Water Rights pursuant to the Colorado River Compact.
- 15 • Oppose projects that would transfer water from Utah to other states.
- 16 • Prioritize locally led efforts to monitor and improve water quality and (where feasible) complete
- 17 them in conjunction with existing state and federal agencies with the same mandate.
- 18 • Use the Utah Constitution and Utah statutes as the legal basis for the acquisition of water rights
- 19 and water use in the state, including the right to divert unappropriated waters.
- 20 • Protect privately held water rights from encroachment and/or coerced acquisition.
- 21 • Land-use improvements and practices that promote healthy drainages and watersheds should be
- 22 implemented.
- 23 • [The State recommends that surrounding water right holders be notified when a federal water right](#)
- 24 [is being adjudicated to reduce conflict and increase public participation.](#)

26 The State of Utah will consider the issuance of a water right after analysis of several factors, including the  
 27 following:

- 28 • Availability of unappropriated water at the source.
- 29 • Proposed appropriation will not impair existing water rights.
- 30 • Proposed appropriation of water is physically and economically feasible at the location.
- 31 • Proposed appropriation is not monopolistic or based on speculation.
- 32 • Whether the proposed appropriation ~~is in the public interest and promotes~~ would prove
- 33 detrimental to the public welfare.
- 34 • Whether the proposed appropriation will ~~adversely~~ unreasonably affect the natural stream
- 35 environment or public recreation.

37  
 38 **State Code**

39  
 40 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
 41 *following are selected portions of the Utah State Code and do not represent every potential legal*  
 42 *reference in the Code related to this section of the State Resource Management Plan or the*  
 43 *administration of public lands.*

44  
 45 **Public Lands Planning**

46  
 47 § 63L-11-302. Principles to be recognized and promoted.

48  
 49 § 63L-11-303. Findings to be recognized and promoted.

50  
 51 **State Land Use and Management Plan for Federal Lands**

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**§ 63L-8-104.** *State land-use planning and management program.*  
**Water and Irrigation (Title 73)**

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7. <https://le.utah.gov/xcode/Title73/Chapter2/73-2-S1.2.html>
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# WATER QUALITY AND HYDROLOGY

## Introduction

Water quality is a vitally important natural resource in Utah owing to the state’s uneven distribution of precipitation and reliance on clean water for municipal, industrial, and agricultural uses. Utah’s mountainous areas receive the majority of precipitation falling as rain and snow, while the populated areas in valley bottoms are relatively arid. Water quality is very good in Utah’s mountainous areas, but tends to decline as it travels downstream because of impacts from a variety of inputs including municipal, industrial, agricultural, and natural sources.

The goal of water quality protection and improvement programs is to preserve the use of water for all of its designated uses, as defined in Utah Administrative Code R317-2-6. Designations include water use for domestic purposes (Class 1), recreational use and aesthetics (Class 2), use by aquatic wildlife (Class 3), agricultural use (Class 4), and a special designation for Great Salt Lake (Class 5). Given that most high-quality water has generally already been put to use, future demands will be met by ensuring that Utah’s water is not degraded, which prevents its downstream.

The Utah Department of Environmental Quality, Division of Water Quality (DWQ) is responsible for ensuring that pollutants from anthropogenic sources do not impair the designated uses of Utah’s waters. The DWQ’s mission is “to protect, maintain and enhance the quality of Utah’s surface and underground waters for appropriate designated uses; and protect the public health through eliminating and preventing water related health hazards which can occur as a result of improper disposal of human, animal or industrial wastes while giving reasonable consideration to the economic impact.” This is accomplished through several programs administered by DWQ and its partner agencies, including permitting programs, enforcement activities, voluntary cleanup efforts, financial assistance programs, education and outreach activities, and scientific investigations as stipulated in the federal Clean Water Act and the Utah Water Quality Act [1].

Ultimately, it is the responsibility of individuals to ensure that water quality is protected. This includes those who work for governmental agencies and the elected officials who provide leadership in their communities. Highly visible actions, such as municipal and industrial discharges and construction projects, are closely regulated, while it is the smaller yet widespread and numerous actions that can have very significant effects on water quality. Therefore, promoting a culture of stewardship for Utah’s streams and lakes is critical for sustaining one of Utah’s most precious resources.

## Findings

In 2022, Utah’s Coordinated Action Plan for Water was released. Previous water-planning efforts have identified more than 200 unique recommendations to better secure Utah’s water future [2]. The implementation of many of these recommendations will require changes to state water law, other legislative actions, or partnerships with non-state entities. The intent of Utah’s Coordinated Action Plan for Water is to identify specific actions that Utah’s executive branch can undertake immediately to help move some of these many recommendations forward.

Section 404 of the Clean Water Act (CWA) establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and mining projects. Section 404

1 requires a permit before dredged or fill material may be discharged into waters of the United States,  
2 unless the activity is exempt from Section 404 regulation (e.g., certain farming and forestry activities).

3  
4 The basic premise of the program is that no discharge of dredged or fill material may be permitted if: (1) a  
5 practicable alternative exists that is less damaging to the aquatic environment or (2) the nation's waters  
6 would be significantly degraded. In other words, when a permit is applied for to impact waters of the  
7 United States, the applicant must first show that steps have been taken to avoid impacts to wetlands,  
8 streams, and other aquatic resources; that potential impacts have been minimized; and that compensation  
9 will be provided for all remaining unavoidable impacts.

10  
11 Proposed activities are regulated through a permit-review process. An individual permit is required for  
12 potentially significant impacts. Individual permits are reviewed by the U.S. Army Corps of Engineers  
13 U.S. Environmental Protection Agency (EPA) website, which evaluates applications under a public-  
14 interest review, as well as the environmental criteria set forth in the CWA Section 404(b)(1) guidelines,  
15 regulations set forth by the EPA. Some states have assumed this permitting authority and regulate these  
16 activities.

17  
18 For most discharges that will have only minimal adverse effects, a general permit may be suitable.  
19 General permits are issued on a nationwide, regional, or state basis for particular categories of activities.  
20 The general permit process eliminates individual review and allows certain activities to proceed with little  
21 or no delay, provided that the general or specific conditions for the general permit are met. For example,  
22 minor road activities, utility line backfill, and bedding are activities that can be considered for a general  
23 permit. States also have a role in Section 404 decisions, through state program general permits, EPA  
24 website, water quality certification, or program assumption.

## 26 **Water Quality**

27  
28 The DWQ released a biennial report on the state of Utah's waters, and the results illustrate the challenges  
29 faced [3]. The report identifies new impairments in several waterbodies. Twenty percent of the assessed  
30 freshwater lake acreage failed to meet water-quality standards for their designated uses, while 4 percent is  
31 meeting some designated uses. The high percentage of waters not fully assessed reflects the fact that the  
32 state's largest lake, Great Salt Lake, represents 74 percent of the lake acreage in the state and requires  
33 additional study to perform assessments. While 21 percent of Utah's stream miles assessed met water  
34 quality standards, 47 percent did not. Another 32 percent had insufficient data to ~~make a~~  
35 ~~determination~~decide and will require additional monitoring.

36  
37 The DWQ compiles water quality data every 2 years in an integrated report (IR) to identify whether the  
38 water quality in Utah's lakes, rivers, and streams supports a particular waterbody's designated uses. These  
39 uses include drinking water, recreation, agriculture, waterfowl, fish, and other aquatic life. Data collected  
40 in the San Juan River, a Utah waterway impacted by the Gold King Mine spill, led the DWQ to list two  
41 segments of the river as impaired for metals. Improved assessment methods for harmful algal blooms  
42 (HABs), a nutrient-fueled increase in toxic cyanobacteria that can harm people and pets, resulted in the  
43 listing of Utah Lake as impaired for recreation uses due to HABs.

44  
45 The IR does contain some bright spots, including new sources of data, tailored strategies for restoring and  
46 protecting water quality that move beyond a one-size-fits-all approach, and a draft methodology for  
47 analyzing high-frequency dissolved oxygen data, a critical component of aquatic health.

48  
49 While it is likely that new water-quality concerns will be identified in the future as monitoring efforts  
50 expand and analyses improve, the State of Utah should also recognize its achievements in improving the

1 health of streams and lakes through responsible regulation and voluntary efforts. Rivers that were once  
2 used as open sewers and dumping grounds have been cleaned up and are now home to nature trails and  
3 boating activities. Reservoirs that had accumulated nutrients to the point that they turned bright green  
4 every summer are now supporting thriving fisheries. Water pollution incidents that once went unreported  
5 and unresolved with long lasting public health and ecological impacts are now promptly responded to and  
6 appropriately resolved. Although many challenges remain, the State of Utah has demonstrated that  
7 restoration efforts work and need to be expanded in light of increasing growth and development.

## 8 9 **Hydrology [4]**

10  
11 Winter snowpack accounts for the majority of Utah's water supply. For example, 85 percent of the annual  
12 runoff from the Colorado River basin originates as snowmelt. Throughout Utah, much of the annual  
13 streamflow is directly attributable to springtime melting of snow accumulation from the previous winter;  
14 however, there are also lower-elevation areas that experience snowmelt throughout the winter and spring.  
15 Winter snowpack generally peaks in March through April in alpine areas. During the early spring, gradual  
16 melt rates result in annual hydrographs having rising limbs of characteristically low slope. As the  
17 temperatures rise, the slope of the hydrograph rapidly rises with the majority of runoff experienced  
18 between May and July (depending on elevation and latitude). This runoff is captured and stored for late-  
19 season use in reservoirs and is also the primary source of recharge to aquifers as it flows from the  
20 mountain ranges into the valleys.

## 21 **Primary Sources of Precipitation**

22 There are three primary sources of precipitation in Utah. The major source is the Pacific Ocean. During  
23 fall and winter months, orographic lifting and cooling of Pacific air masses laden with moisture results in  
24 precipitation either as rain or snow. Winter precipitation generally falls as snow in higher elevations. In  
25 the spring and early summer, moisture from the Gulf of Mexico and subtropical Atlantic Ocean becomes  
26 important. Most of the summertime moisture is provided by subtropical or monsoonal air masses arriving  
27 from the Gulf of Mexico.

28 Frontal activity associated with low-pressure systems is responsible for much of the winter precipitation  
29 in the northern Rocky Mountains. Summer precipitation, much of which ends up as evapotranspiration in  
30 the semiarid parts of the state, is mostly influenced by convective activity. The distance of the northern  
31 Rocky Mountain region from the coasts typically results in cold, dry snowpack. Significant energy is  
32 required to raise the temperature of the snowpack to the isothermal and melting stage; as a result, the  
33 snowpack tends to remain well into spring. Rainfall generally does not contribute sufficient energy to  
34 drive snowmelt, until perhaps very late in the season.

35 High elevations in the central Rocky Mountains receive most of this region's annual precipitation as  
36 winter snowfall. Pacific frontal systems bringing most of the winter moisture to this region can arrive  
37 from the west, northwest, or southwest, and this influences the distribution of precipitation. Westerly  
38 tracks are orographically lifted to some extent by the Wasatch Plateau in Utah and are lifted further by the  
39 ranges along the Continental Divide in central Colorado, resulting in the heaviest precipitation west of the  
40 Continental Divide. Northwesterly tracks are lifted by the Wasatch Range, the Uinta Mountains in Utah,  
41 and by the ranges along the Continental Divide in north-central Colorado, resulting in heavier  
42 precipitation at these locations. The lower-elevation areas of the central Rockies receive considerably less  
43 precipitation; most of the region's snowpack storage is concentrated in the higher mountains

## 44 **Measurement and Estimation of Snowpack, Streamflow, Groundwater, and Reservoir Capacity**



1 Water-resource managers forecast the amount of seasonal runoff based in part on estimates of the amount  
2 of snow accumulation, or snow water equivalent (SWE), across a watershed or region and in part on  
3 forecasts of future precipitation. Estimates of SWE and snow-covered area (SCA) are used for a variety of  
4 purposes that are vital to the economy of a region, including: reservoir management, snow load maps,  
5 annual precipitation maps (for planning), drought monitoring, fish and game management, recreation  
6 (e.g., skiing, river trips), and avalanche forecasting.

7 Historically, the Natural Resource Conservation Service (NRCS) has been charged with coordinating  
8 snow surveys or point measurements of SWE. It also prepares seasonal water supply outlooks in the  
9 western United States and Utah. Predictions of water availability in Utah are made by inventorying  
10 snowpacks in winter and early spring using measurements at dozens of snow courses, including many  
11 snowpack telemetry (SNOTEL) sites, which provide continuous data. The remaining sites are manual and  
12 are visited monthly. Empirical relationships between these observations and measured streamflow are  
13 used to forecast streamflow throughout the West. [5]

14 Streamflow measurements are gathered primarily by the U.S. Geological Survey (USGS), which  
15 maintains a vast network of stream gauges throughout the West and in Utah. The USGS also regularly  
16 monitors groundwater throughout the state through a network of monitoring wells. [6]

17 Reservoir capacity is measured by a variety of agencies, with the most comprehensive list of  
18 measurements gathered monthly by NRCS. [7]

## 19 **Climate Variability**

20 Future climate variability and change are expected to result in major changes in the partitioning of snow  
21 and rainfall and the timing of snowmelt, which will have important implications for water use and  
22 resource management in Utah. It is therefore important to understand the processes controlling snowmelt  
23 runoff for both water resources as well as other resource management purposes.

## 24 **Economic Considerations**

25  
26 A healthy environment is essential for continued growth and prosperity in Utah. But increased growth  
27 means increased amounts of pollution unless common pollution controls are put into place, and these  
28 entail additional costs. Balancing the cost of pollution controls versus the benefits to human health and  
29 the environment is an important consideration in any action undertaken by the DWQ and the governor-  
30 appointed Utah Water Quality Board, which establishes water pollution-control rules. As federal grant  
31 funds are generally no longer readily available to help construct new and replace outdated pollution-  
32 control infrastructure, costs have shifted to the responsible entities. Therefore, it is imperative for DWQ to  
33 explain the need for pollution controls so that elected officials and their constituents are satisfied that  
34 expenditures for pollution controls are warranted.  
35

36 A significant water-quality concern identified both within Utah and nationally is the phosphorus and  
37 nitrogen pollution that results from a variety of sources, including agricultural land uses, urban  
38 stormwater, municipal wastewater-treatment facilities, and air deposition. In 2010 these concerns led  
39 Utah, in tandem with many other states, to ban dishwashing detergents that contain high levels of  
40 phosphorus. This ban resulted in a noticeable decrease in effluent phosphorus concentrations from  
41 wastewater treatment facilities. Agricultural sources of nutrient pollution are also being addressed through  
42 the establishment of comprehensive nutrient-management plans, which provide the proper means of  
43 storing and using fertilizers (including livestock manure) to ensure this valuable resource is put to good  
44 use—rather than washed downstream where it can cause public-health and environmental harm.  
45

1 Discharge from wastewater treatment facilities remains one of the most significant sources of nutrient  
2 loading into Utah’s surface waters, especially along the densely populated Wasatch Front. To begin  
3 addressing this issue, the DWQ proposed an adaptive-management approach that sets a technology-based  
4 limit of 1 mg/L of total phosphorus in wastewater effluent [8]. This moderate level of phosphorus  
5 reduction was established after extensive research on what the estimated costs to communities and  
6 individual rate payers would be to achieve this limit. A companion study was also completed, which  
7 demonstrated the restoration benefits of nutrient removal and the willingness of Utah citizens to pay for  
8 the benefit of improved water quality. [9]

9  
10 The take-home message from all of these analyses is that Utahns place a high priority on maintaining  
11 water quality for future generations and are willing to pay upwards of \$271 million a year to improve  
12 waters threatened by increasing levels of nutrients. In terms of economic benefit, the economic study  
13 estimated that Utah residents spend from \$1.4 to \$2.4 billion a year on trips to the state’s waters for  
14 recreational activities, making a significant contribution to the state’s economy. [10]

## 15 16 **Goals, Objectives, and Policies**

### 17 18 **Goal(s):**

19  
20 Work to preserve and improve water quantity, water quality, and appropriate hydrological functions.

### 21 22 **Objectives:**

23  
24 The objective of Utah’s water-quality program is to protect and improve the quality of Utah’s water  
25 resources for the benefit of all who live, work, and recreate here. Water quality is essential to sustain our  
26 health, our economy, and quality of life. Given the limited availability of water in many areas of the state,  
27 and the potential for degradation arising from its use, it is important that everyone appreciate their role in  
28 ensuring that this vital resource is available for current and future generations.

29  
30 Water-quality standards published in Utah Administrative Code R317-2-7 set the maximum concentration  
31 of pollutants that still support a waterbody’s designated uses [11]. Standards are the metric used by DWQ  
32 to assess whether streams and lakes are supporting their designated uses or are impaired. Waters are  
33 assessed every 2 years, and those that do not meet standards are listed as impaired and identified in the  
34 Integrated Report of Water Quality [12]. Impaired waters are required by Section 303(d) of the federal  
35 Clean Water Act to have a total maximum daily load (TMDL) analysis completed for the pollutant(s) of  
36 concern.

37  
38 Utah prioritized its list of impaired waters for TMDL development to focus on water-quality concerns that  
39 are most important to Utah. The primary goal was to identify impaired waters that have the greatest  
40 potential to impact public health [13]. A common measurement used to determine the potential for water  
41 to cause sickness is *Escherichia coli* (*E. coli*), because its presence in water can indicate fecal  
42 contamination. Eleven water-bodies within the Jordan River watershed were identified with *E. coli*  
43 impairments and have been prioritized for TMDL development by 2022. Other priorities are waterbodies  
44 impaired by metals such as cadmium and arsenic. Such impairments are toxic to aquatic life, and  
45 impairments for low dissolved oxygen are characteristic of nutrient enrichment that can eventually result  
46 in toxic algae blooms in lakes and reservoirs.

47  
48 In conjunction with its Watershed Protection Program, which guides the watershed planning and TMDL  
49 process, DWQ maintains a memorandum of understanding (MOU) that implemented the nonpoint source  
50 pollution water quality program. In addition to DWQ, signatories include the Utah Department of  
51 Agriculture and Food (UDAF), Utah Division of Forestry Fire and State Lands (FFSL), Utah Division of

1 Wildlife Resources, U.S. Department of Agriculture, U.S. Forest Service Intermountain Region, U.S.  
2 Department of the Interior, U.S. Bureau of Land Management, and ~~the~~ National Park Service within Utah.  
3 The purpose of the MOU is to coordinate state and federal agency activities for nonpoint source water  
4 quality protection, monitoring, and improvement activities on state and federal lands.  
5

6 In addition to identifying individual agency roles, responsibilities, and authorities, the Utah Nonpoint  
7 Source MOU commits to the following mutual agreements:

- 8 • Cooperate in the protection, restoration, enhancement and management of water resources in  
9 Utah to the extent of each agency's authority, expertise, and resources.
- 10 • Comply with the federal Water Pollution Control Act (Clean Water Act, Pub. L. No. 92-500, 86  
11 Stat. 816 (1972)) Section 208, (33 U.S.C. § 1288) and with the nonpoint source control Sections  
12 (319 and others) of the Clean Water Act, (33 U.S.C. § 1329), and applicable executive orders.
- 13 • Implement the Standards of Quality for Waters of the State, Utah Admin. Code R. 317-2, on  
14 federal lands.
- 15 • Implement the Utah Nonpoint Source Pollution Management Plan and conduct applicable  
16 activities and programs consistent therewith, and participate with DWQ in updating such plans or  
17 developing new addendums.
- 18 • Coordinate pollution-control and abatement programs particularly as they relate to  
19 implementation of TMDLs on impaired waterbodies.
- 20 • Develop cooperative and/or complementary water-quality monitoring systems for water quality  
21 assessments and determination of TMDLs, share technical expertise, and promote research on  
22 water-quality management practices.
- 23 • Coordinate water-quality monitoring activities and cooperate in the collection, analysis, and  
24 processing of water-quality samples when the efforts are mutually beneficial to federal land-  
25 management agencies and the State of Utah.
- 26 • Develop and implement best-management practices (BMPs) for activities and uses of forest and  
27 rangelands with intent to meet state water quality standards.
- 28 • Annually review selected projects for BMP implementation and effectiveness. A review team will  
29 include representatives from the DWQ, UDAF, FFSL and relevant federal land-management  
30 agencies.
- 31 • Cooperate across administrative boundaries to maintain or improve water quality where possible.  
32 Cooperative efforts include sharing data and collaborating on project planning and  
33 implementation efforts.

34 The ultimate goal of Utah's water-quality program is to protect and improve water quality to the point  
35 that all designated uses are supported. The State of Utah has made significant strides in many areas, but  
36 many challenges still exist. One of the most significant of these challenges is to maintain current levels of  
37 water quality, particularly within the rapidly urbanizing Wasatch Front, and in the face of increasing  
38 pollution loads associated with development and population growth. Nevertheless, these challenges can  
39 be overcome by employing low-impact development principles to mitigate stormwater impacts associated  
40 with development and enhanced treatment technologies to offset increased quantities of wastewater.  
41

## 42 **Policies:**

43  
44 Utah's water-quality policy is defined by statute in the Utah Code Section 19-5-103, which establishes the  
45 makeup and responsibilities of the Utah Water Quality Board [14]. The board's membership is designed  
46 to represent various interest groups of the water quality community and members' terms are staggered.  
47 Voting members are appointed by the governor of Utah with the consent of the state senate. The board  
48 comprises the following: representatives of the special-service districts, two government representatives  
49 who do not represent the federal government, one representative from the mineral industry, one  
50 representative from the manufacturing industry, one representative for agricultural and livestock interests,

1 one representative from the public who represents an environmental nongovernmental organization or  
2 represents community interests and not industry, and one representative trained and experienced in public  
3 health. The ninth member of the Water Quality Board is the executive director, or a department employee  
4 designated by the director, who is a non-voting member except in order to break tie votes among voting  
5 members.  
6

7 The DWQ is the administrative arm of the board. Rules governing how it administers programs delegated  
8 by the U.S. Environmental Protection Agency (EPA) and responsibilities assigned by the Water Quality  
9 Board are identified in Utah Administrative Code, Title R317. These programs include the Utah Pollution  
10 Discharge Elimination System and Ground Water Protection program; which establishes the regulation of  
11 point-source discharges into surface- and groundwater (respectively); the State Revolving Fund program,  
12 which provides loans for wastewater collection and treatment systems; and certification programs for  
13 wastewater professionals.  
14

15 Guidelines are also provided by the EPA for delegated programs that are negotiated and implemented  
16 through an annual performance partnership agreement with the Department of Environmental Quality.  
17 These negotiations provide Utah an opportunity to communicate the state's priorities and how they  
18 correspond with federal law, federal priorities and funding requirements. Regular communication and  
19 coordination between DWQ and EPA on expectations and performance of Utah's water-quality program  
20 is essential for maintaining the state's primacy in implementing these programs without undue oversight  
21 or interference at the federal level.  
22

23 As Utah's population grows the demands on water quality also increase significantly. Utah's water-  
24 quality program must seek to meet those demands while reducing the burden on taxpayers through  
25 continuous improvement of practices and procedures. To foster the public's trust and collaboration in  
26 protecting and improving water quality the State of Utah must eliminate activities that don't advance the  
27 state's mission, and more effectively perform those activities that do by implementing innovations that  
28 advance quality, efficiency, and effectiveness.  
29

30 Utah has a long history of taking the initiative and working cooperatively to address difficult problems  
31 that benefit its communities and state as a whole. The DWQ works diligently to ensure that all vested  
32 stakeholders have a seat at the table to cooperatively find pragmatic, collaborative, and fair solutions to  
33 modern environmental concerns. By ensuring everyone affected by an issue has a voice in the process the  
34 State of Utah will be more effective in achieving long lasting and meaningful results.  
35

## 36 **State Code**

37  
38 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
39 *following are selected portions of the Utah State Code and do not represent every potential legal*  
40 *reference in the Code related to this section of the State Resource Management Plan or the*  
41 *administration of public lands.*  
42

### 43 **Public Lands Planning**

44  
45 **§ 63L-11-302.** *Principles to be recognized and promoted.*  
46

47 **§ 63L-11-303.** *Findings to be recognized and promoted.*  
48

49 (3) transportation and access routes to and across federal lands, including all rights-  
50 of-way vested under R.S. 2477, are vital to the state's economy and to the quality of life

1 in the state, and must provide, at a minimum, a network of roads throughout the resource  
2 planning area that provides for:

- 3 (a) movement of people, goods, and services across public lands;  
4 (b) reasonable access to a broad range of resources and opportunities  
5 throughout the resource planning area, including:  
6 (i) livestock operations and improvements;  
7 (ii) solid, fluid, and gaseous mineral operations;  
8 (iii) recreational opportunities and operations, including motorized  
9 and non-motorized recreation;  
10 (iv) search and rescue needs;  
11 (v) public safety needs; and  
12 (vi) access for transportation of wood products to market;  
13 (c) access to federal lands for people with disabilities and the elderly;  
14 (d) and access to state lands and school and institutional trust lands to  
15 accomplish the purposes of those lands;

16  
17 **State Land Use and Management Plan for Federal Lands**

18  
19 ~~§ 63L-8-104.~~ *State land-use planning and management program.*

20  
21 **Wildlife Resources Code of Utah**

22  
23 **Environmental Quality Code of Utah**

24  
25 **Water Quality Act**

26  
27 **§ 19-5-104.** *Powers and duties of board.*

28  
29 **§ 19-5-105.5.** *Agriculture water.*

30  
31 **§ 19-4-110.** *Local jurisdiction over water supply systems.*

32  
33 **§ 19-4-112.** *Limit on authority of department and board to control irrigation facilities--*  
34 *Precautions relating to non-potable water systems.*

35  
36 **§ 19-4-113.** *Water source protection ordinance required.*

37  
38 **§ 19-5-107.** *Discharge of pollutants unlawful--Discharge permit required.*

39  
40 **§ 19-5-114.** *Spills or Discharges of Oil or Other Substance— Notice to Director.*

41  
42  
43 **§ 19-5-116.** *Limitation on Effluent Limitation Standards for Bod, SS, Coliforms, and PH for*  
44 *Domestic or Municipal Sewage.*

45  
46 **§ 19-5-117.** *Purpose and construction of chapter.*

47  
48 **§ 19-5-119.** *State permits not required where federal government has primary responsibility.*

49  
50 **Water and Irrigation**

1 **Utah Forest Practices Act**

2

3 § 65A-8a-105. Division to promote implementation of Forest Water Quality Guidelines

4

5 **Conservation Commission Act**

# WETLANDS

## Introduction

A wetland is land that is flooded or has a high-water table during the growing season on a permanent or seasonal basis. Wetland hydrology is highly variable—wetlands may only be wet some years during all or part of the growing season, including spring flooding from snowmelt or late summer flooding from monsoonal rains. In general, wetlands are wet long enough to have distinct soils and vegetation and include habitats such as wet meadows, marshes, playas, fens, and willow thickets. Wetlands provide habitat for many plants and animals in Utah, perform important functions to help keep our water clean and lessen the impact of floods, and support recreational activities such as bird watching and waterfowl hunting. Because of their importance, wetlands are protected by federal regulations, and many agencies and individuals are interested in conserving and restoring wetlands in Utah.

State agencies in Utah have a large role in managing, protecting, and researching wetlands in the state. Wetlands in Utah are overseen by multiple entities. Wildlife agencies manage many ~~the majority~~ of publicly owned wetlands—federal refuges are run by the U.S. Fish and Wildlife Service (USFWS) and state waterfowl management areas are managed by the Utah Division of Wildlife Resources (DWR). The Utah Division of Forestry, Fire, and State Lands (FFSL) is also responsible for the majority of the wetlands on sovereign lands associated with Great Salt Lake and Utah Lake, and with riparian areas of larger rivers. Many state agencies also hold conservation easements to protect wetlands, usually in association with other goals of the agency, such as protecting habitat for sensitive wildlife in need of conservation attention or maintaining public access to recreational locations. The Utah Geological Survey (UGS) and the Division of Water Quality (UDWQ) have periodically obtained Wetland Program Development Grants from the Environmental Protection Agency (EPA) to conduct research projects to increase information about Utah’s wetlands.

Wetland regulation is primarily conducted at the federal level, though some local governments in Utah have enacted ordinances to protect wetlands within their jurisdiction. Under the Clean Water Act, the Army Corps of Engineers (USACE) regulates wetlands that are considered ~~W~~waters of the U.S. United States (WOTUS). The state can play a role in federal wetland permitting in several ways, including providing input to federal agencies on expected impacts of larger permitting decisions and being involved in mitigation projects to compensate for impacted wetlands. The UDWQ also issues Section 401 certifications to certify that federally issued permits comply with applicable state water quality regulations.

The wetlands section of UGS’s website provides background information on wetlands in Utah, including their distribution in the state, importance to wildlife, the functions they provide, and how they are managed on private lands [1]. The website includes links to UGS reports on wetlands and to external resources, including educational activities and regulatory guidance. There are also links to two wetland applications, one with searchable data on wetland field assessment data [2] and the other that displays the most up-to-date spatial data showing the extent and type of wetlands in Utah [3].

## Findings

Vegetated wetlands are rare in Utah, occupying less than 1 percent of the land surface. ~~occupy approximately 1 percent of the landscape in Utah.~~ The most well-known of these wetlands are those that fringe Great Salt Lake (GSL); these extensive marshes, mudflats, and meadows ~~make up roughly 32% of the state’s vegetated wetlands~~ represent the highest concentration of wetlands found in the state and provide crucial stop-over, wintering, and nesting habitat for millions of shorebirds and waterfowl. Wetlands throughout Utah are very important in providing critical habitat, unique recreation and aesthetic

1 opportunities, and water sources in this arid state. Wetlands also protect downstream aquatic systems by  
2 removing excess nutrients and other pollutants.

3  
4 Because so many of Utah’s wetlands are located around GSL, recent legislation and research focused on  
5 bringing water to GSL include wetland considerations. The Great Salt Lake Advisory Council was  
6 established by HB 343 and is coordinated and assisted by representatives from the Departments of  
7 Environmental Quality and Natural Resources. The Council advises the Governor on the science and  
8 policy of GSL and approves spending royalty money for research on the lake’s ecosystems. Additionally,  
9 the DWR GSL Ecosystem Program manages the avian and aquatic community of GSL, including  
10 gathering environmental data from the lake’s ecosystems and conducting bird surveys. The Division of  
11 Forestry Fire and State Lands (FFSL) guides the GSL Technical Team, which guides data gathering and  
12 dissemination efforts. The Utah Division of Water Resources is overseeing the development of the Great  
13 Salt Lake Basin Integrated Plan, which has the goal of ensuring ongoing, resilient water supply within the  
14 Great Salt Lake Basin. The GSL Water Quality Strategy developed by DWQ in 2014 highlights many  
15 administrative rule changes and data gaps needed to protect the water quality of GSL.

16  
17 Wetland health in Utah has been studied by agencies including the UGS, UDWQ, EPA, and ~~the~~US  
18 Bureau of Land Management to better understand the current condition and common stressors impacting  
19 our wetlands. Common stressors identified in these studies include noxious weeds and other non-native  
20 plant species, overgrazing, altered hydrology, and landscape fragmentation. Fortunately, many wetland  
21 systems are fairly resilient and are still able to provide habitat or help protect water quality even when  
22 impacted by these stressors. However, these studies do not adequately capture information about the  
23 biggest threat to wetlands—wetland loss due to conversion to other land types. The U.S. Fish and  
24 Wildlife Service estimates that Utah lost 30% percent of its wetland area from the 1780s to the 1980s, but  
25 we do not have a good estimate for how much additional wetland area since then has been lost to  
26 development, water diversion or long-term drought.

27  
28 The Utah Wildlife Action Plan (UWAP) is a wildlife planning document compiled by the DWR and  
29 partners. ~~that~~It identifies native species and key habitats in need of conservation attention, and pinpoints  
30 threats, limiting factors and crucial data gaps for species and their habitats. The plan provides strong,  
31 clear guidance for improving habitats and strengthening wildlife populations, and, if fully implemented,  
32 can help reduce and prevent listings under the federal Endangered Species Act. Projects that address  
33 threats to key habitats are prioritized for funding under the Watershed Restoration Initiative’s  
34 prioritization process [4]. Wetland systems are listed as key habitats in the current version of the UWAP,  
35 which goes through 2025, and will remain prominent in the next version, which is currently in  
36 development.

37  
38 Utah’s wetlands are included in the definition of Waters of the State (UAC R317-1-1). All Waters of the  
39 State have a narrative water quality standard that applies to them, prohibiting degradation to aesthetics,  
40 the development of toxic conditions, and change to the biological community (UAC R317-2-7.2). Most  
41 wetlands in Utah are not assigned to any beneficial use category and do not have any numeric water  
42 quality criteria developed to evaluate whether they can meet their uses. The UDWQ does not evaluate  
43 wetland water quality as part of their Integrated Report that assesses the quality of surface waters in the  
44 state and identifies waterbodies not meeting water quality standards.

45  
46 Wetland program plans are voluntary plans that state agencies can develop to establish overall wetland  
47 program goals and identify a course of action to move towards meeting those goals during the timeline  
48 covered by the plan. The EPA reviews and approves the plans, and actions identified in the plans have a  
49 higher likelihood of receiving funding from Wetland Program Development Grants. The most recent plan  
50 for Utah is Utah’s Wetland Program Plan—2018-2023, developed by UDWQ and UGS. The goal of this  
51 plan is to “increase the amount and availability of scientific data on Utah’s wetlands by continuing to



1 build and deploy scientifically-based tools to assess wetland health and to afford greater protection by  
2 determining wetland-specific beneficial uses and criteria to protect those uses.” [The UGS will pursue has](#)  
3 [received](#) funding to develop a new version of the plan to cover future years. The most recent approved  
4 wetland program plans can be found on the EPA’s website.

5  
6 Research conducted by UDWQ under Wetland Program Development Grants has focused on assessing  
7 wetlands around [Great Salt LakeGSL](#) to determine whether the ~~wetlands~~-associated ~~with Great Salt~~  
8 [Lakewetlands](#) are meeting their beneficial use of habitat support for waterfowl and shorebirds [5]. The  
9 UGS has conducted large watershed and ecoregion-based surveys to evaluate the health of wetlands more  
10 generally and also conducts wetland mapping projects to update wetland spatial data. Wetland mapping  
11 follows guidelines established by the U.S. Fish and Wildlife Service and final data products are submitted  
12 to the National Wetland Inventory (NWI). Other wetland studies conducted by the UGS include  
13 hydrologic monitoring of critical wetlands, remote sensing analysis to understand vegetation and  
14 hydrology trends over time, and development of plant identification resources.

15  
16 Utah House Bill 118 (2022) directed the UGS to explore the potential for an In-Lieu Fee (ILF) mitigation  
17 program to improve wetland resources in Utah. An ILF program would allow entities seeking Clean  
18 Water Act permits to pay a fee to mitigate impacts to streams and wetlands rather than having to develop  
19 their own mitigation plans. The UGS delivered a final report to the legislature in May 2023, finding that  
20 an ILF program would both benefit wetland and stream resources in Utah and streamline the permitting  
21 process for applicants. The UGS recommended that the state pursue funding to hire a program coordinator  
22 who could develop the program details and steer the program through the USACE approval process.

23  
24 Only wetlands considered ~~Waters of the U.S. (WOTUS)~~ are regulated under the Clean Water Act. The  
25 WOTUS definition has been subject to court cases and varying rules developed under different federal  
26 administrations, dating back to at least the 1980s. In May 2023, the U.S. Supreme Court issued a decision  
27 in the case of Sackett vs. EPA that sets a new standard for which wetlands are considered WOTUS,  
28 narrowing the definition to include only wetlands that have a continuous surface connection with other  
29 waterbodies considered WOTUS, where it is difficult to determine where the other waterbody ends and  
30 the wetland begins. Depending on how it is implemented by USACE, this ruling has the potential to  
31 greatly reduce the number of regulated wetlands in Utah (and the need for an ILF program). Some states  
32 are considering enacting or strengthening their own regulations regarding wetlands to protect important  
33 functions they value.

34  
35 The Governor’s Coordinated Water Action Plan was released in November 2022. “Wetlands, waters of  
36 the U.S., and permitting” is identified as one of the key policy issues in the Healthy Waters and  
37 Watersheds section of the plan due to the changing definition of WOTUS and the fact that existing  
38 regulations only protect wetlands from development, not from water loss. Action 4 of the Healthy Waters  
39 section is to “prioritize and target land conservation and restoration in riparian corridors, floodplains, and  
40 other areas with high values for watershed health, wildlife habitat, and public access and recreation.” Key  
41 tasks under this action that could benefit wetlands include (1) purchasing conservation easements in areas  
42 with multiple benefits; (2) working with local governments to include riparian and watershed health in  
43 land-use plans and ordinances; and (3) evaluating whether the state should start a wetland mitigation  
44 program. The Water Action Plan also talks about the need for more research to better understand critical  
45 thresholds in our aquatic systems.

## 46 **Economic Considerations**

47  
48 Societal benefits of wetlands include increased water quantity, reduced costs of water purification,  
49 reduced flood damage, reduced erosion, and increased hunting, fishing, and recreational opportunities.  
50 Most of these benefits are difficult to quantify because the costs are realized only when wetlands are lost.  
51

1 It is difficult to evaluate, for example, the increase in water-purification costs Salt Lake City would incur  
2 if wetlands in Big and Little Cottonwood Canyons were removed, or how many more homes would have  
3 been damaged by flooding in 2011 if there were no wetlands along the Ogden and Weber Rivers.  
4 Recreational use, on the other hand, brings in revenue when wetlands are present through purchase of  
5 hunting and fishing supplies, license fees, and travel-related expenditures. Recreational use around ~~Great~~  
6 ~~Salt Lake~~GSL, such as bird watching, boating, and waterfowl hunting, is estimated to have an economic  
7 effect of over \$130 million annually as of 2010; almost all of that use is tied to recreational activities in  
8 wetlands. Millions of migratory birds representing almost 260 species visit ~~Great Salt Lake~~GSL wetlands  
9 every year as they migrate between the arctic and South America. Some feed and rest in the wetlands to  
10 prepare for their long migration, while other species nest and mate in the wetlands during spring.

11  
12 Wetland management focuses on water management and invasive species control. Around ~~Great Salt~~  
13 ~~Lake~~GSL, water supplies are scarce and managers impound water within wetlands to extend the amount  
14 of time they are flooded. Wetland managers expend significant resources trying to remove and prevent the  
15 spread of the invasive grass, such as *Phragmites australis* ssp. *australis*, around the ~~Great Salt Lake~~GSL  
16 and Utah Lake.

17  
18 Many species of greatest conservation need in Utah as identified in the UWAP are dependent on  
19 wetlands areas; maintaining healthy wetlands areas can decrease the chances of costly Threatened and  
20 Endangered Species listing decisions. Many wetlands are located along streams and rivers and play a  
21 role in storing and slowing floodwaters. Flooding is the most expensive geologic hazard in Utah; 16  
22 major flood events since 1923 have caused more than \$1.3 trillion in damage. [6]

23  
24 Increasing growth in Utah has led to increased pressure to develop on land containing wetlands. The  
25 permitting process under the federal Clean Water Act does not prohibit impactful activities in wetlands,  
26 but examines the potential impacts of a project and how to avoid, minimize, or mitigate any impacts.  
27 Permitting can increase the cost of new development—from consulting fees for wetland delineation, to  
28 wetlands permit costs, to the cost of mitigation itself. In some cases, local jurisdictions have enacted their  
29 own rules regarding wetlands to prevent loss of the ecological functions provided by these systems. These  
30 rules can include requiring buffers between development and wetlands or ordinances that protect wetlands  
31 within the floodplain. However, under Utah Code 10-9a-521, “a municipality may not designate or treat  
32 any land as wetlands unless the ~~United States~~US Army Corps of Engineers or other agency of the federal  
33 government has designated the land as wetlands,” which prevents local governments from developing  
34 their own definition of wetland. The USACE definition of what constitutes a wetland has been stable,  
35 relying on indicators of hydrology, vegetation, and soils, unlike the definition of WOTUS.

## 36 37 **Goals, Objectives, and Policies**

- 38 • Work with federal land-management agencies to implement the principles of Utah’s Wetland  
39 Program Plan on public lands managed by the federal government.
- 40 • Support a combination of active water management where necessary (e.g., ~~Great Salt Lake~~GSL)  
41 and maintaining or restoring natural hydrology when possible to support wildlife habitat and  
42 healthy functioning of aquatic ecosystems.
- 43 • Cooperate and coordinate with federal land-management agencies on all federal projects relating  
44 to the management of wetlands.
- 45 • Support the thoughtful management of the scope, intensity, duration, and species of livestock  
46 grazing to minimize potential negative impacts and, in some cases, mimic natural ecological  
47 processes, to support sensitive aquatic wildlife species and aquatic habitats.
- 48 • Support the use of mechanical treatments, controlled burns, livestock grazing, and other tools to  
49 control invasive plants and other plant species that compromise wetland health, in accordance

1 with best available practices and support use of early detection- and rapid-response programs to  
2 detect invasive weeds before they become a problem.

- 3 • Encourage avoidance of wetland impacts before mitigation and restoration are considered. If  
4 avoidance is not possible, mitigation of impacts to wetlands is required.
- 5 • Coordinate with groups responsible for protecting and managing wetlands, including public and  
6 private wildlife managers, regulatory agencies, and interested stakeholders.
- 7 • Identify opportunities to ensure long-term protection for high-priority wetlands that provide  
8 multiple benefits, such as recreation, wildlife habitat, and flood control.
- 9 • Federal agencies shall work with state resource experts on the siting of roads and residential and  
10 commercial developments adjacent to floodplains and wetlands.

## 11 **State Code**

12  
13  
14 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*  
15 *following are selected portions of the Utah State Code and do not represent every potential legal*  
16 *reference in the Code related to this section of the State Resource Management Plan or the*  
17 *administration of public lands.*

### 18 **Public Lands Planning**

19  
20  
21 **§ 63L-11-302.** *Principles to be recognized and promoted.*

22  
23 **§ 63L-11-303.** *Findings to be recognized and promoted.*

### 24 **State Land Use and Management Plan for Federal Lands**

25  
26  
27 **§ 63L-8-104.** *State land-use planning and management program.*

### 28 **Environmental Quality Code of Utah**

### 29 **Water and Irrigation (Title 73)**

### 30 **References:**

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- 32 2. <https://geology.utah.gov/apps/wetlandplants/>
- 33 3. <https://geology.utah.gov/apps/wetlands/index.html>
- 34 4. [https://wildlife.utah.gov/pdf/WAP/Utah\\_WAP.pdf](https://wildlife.utah.gov/pdf/WAP/Utah_WAP.pdf)
- 35 5. <https://deq.utah.gov/water-quality/wetlands-program/wetlands-program>
- 36 6. <https://geology.utah.gov/hazards/flooding/>

## WILD AND SCENIC RIVERS

### Introduction

The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.) to preserve rivers with outstanding natural, cultural, and recreational values in free-flowing condition for the enjoyment of present and future generations (16 U.S.C. §1271). 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.

Rivers may be designated as wild and scenic by Congress or, if certain requirements are met, the Secretary of the Interior. Each river is administered by either a federal or state agency. Wild and scenic designation may be granted to river segments; the status need not include the entire river and may include tributaries. For federally administered rivers in the lower 48 states, to protect river-related values, the designated boundaries generally average one-quarter mile (from either bank) in ~~length~~width. Outside of national parks and in Alaska, designated boundaries average one-half mile in width (from either bank). Designated boundaries do not extend beyond federal lands onto private or state lands.

Rivers can be classified as wild, scenic, or recreational.

**Wild River Areas** are 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** are rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

**Recreational River Areas** are rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Regardless of classification, rivers in the National Wild and Scenic Rivers System are administered with the goal of protecting and enhancing the values for which they were designated. Designation neither prohibits development nor gives the federal government control over private property. Recreation, agricultural practices, residential development, and other uses may continue. Protection of the river is provided through voluntary stewardship by landowners and river users and through regulation and programs of federal, state, local, or tribal governments. In most cases, not all land within designation boundaries is, or will be, publicly owned, and the act limits how much land the federal government is allowed to acquire from willing sellers. Visitors to these rivers are cautioned to be aware of and respect private property rights.

The act purposefully strives to balance dams 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. [1]

1 **Findings**

2  
3 The Virgin River (including its tributaries in Beartrap Canyon, Deep Creek, Goose Creek, Kolob Creek,  
4 LaVerkin Creek, Middle Fork Taylor Creek, North Fork Virgin River, Oak Creek, Shunes Creek, Smith  
5 Creek, and Willis Creek) was the first designated Wild and Scenic River in Utah, under the management  
6 of the National Park Service (NPS) and the U.S. Bureau of Land Management (BLM). On the Virgin  
7 River, 145.4 miles are wild, 11.3 miles are scenic, and 12.3 miles are recreational, for a total of 169.3  
8 miles. The Virgin River received its Wild and Scenic River designation as part of the Omnibus Public  
9 Lands Management Act of 2009 (P.L. 111-11).

10  
11 The second Wild and Scenic River designation in Utah was granted to portions of the Green River on  
12 March 12, 2019, by the John D. Dingell, Jr. Conservation, Management and Recreation Act (Public Law  
13 116-9). The designation includes 5.3 miles of wild river (from the boundary of the Uintah and Ouray  
14 Reservation south to the Nefertiti boat ramp), 49.2 miles of scenic river (in Labyrinth Canyon from Bull  
15 Bottom south to the Emery-Wayne County line) and 8.5 miles of recreational designation (from the  
16 Nefertiti boat ramp through Gray Canyon south to Swasey’s boat ramp) for a total of 63 miles.

17  
18 Federal land-management agencies periodically analyze rivers and streams within their boundaries for  
19 inclusion into the National Wild and Scenic Rivers System. Such considerations are open to comment  
20 from the state, local governments, and the public. Several river segments in Utah have been deemed  
21 eligible or suitable for designation but have yet to be formally designated by Congress.

22  
23 **Economic Considerations**

24  
25 Considerations include the tradeoff between increases in recreation and tourism and the potential  
26 economic loss of future river development. A 2008 report for the Public Lands Policy Coordinating  
27 Office by Utah State University, “Impacts of Wild and Scenic River Designation,” made the following  
28 observations: [2]

29  
30 1. There exist no ex ante-ex post examinations of the effects that wild and scenic designation have on  
31 recreation activities.

32  
33 2. One study statistically examined trends in property values adjacent to a designated river  
34 but found no statistical evidence that designation had a significant effect on those values.

35  
36 3. There are some anecdotal reports in some studies that a designation effect does occur  
37 according to managers of those rivers. No scientific or statistical evidence supports those  
38 observations.

39  
40 4. Evidence from two studies relative to recreators’ knowledge of the status of the wild and  
41 scenic rivers being used suggests that users’ knowledge varied widely. However, a  
42 large majority of users in both studies reported that designation had preserved the quality  
43 of the riverine environment.

44  
45 5. In one ex ante study of the value (contingent valuation) of potential designation,  
46 Colorado respondents’ willingness to pay for designation of 11 rivers was significant.

47  
48 6. Non-recreation impacts identified in the key informant survey included those on water  
49 rights, private land uses, and public land uses.

1 7. In general, because the law specifies that existing water rights will not be impacted, no  
2 evidence of impact on those rights from designation was found. There is currently one  
3 case in litigation relative to unallocated—excess water production on the Lemhi River in  
4 Idaho.

5  
6 8. In several cases, priority dates for potential upstream uses that were senior to the federal  
7 reserved water rights for the designated segment(s) of the river were guaranteed in the  
8 specific designation act or amendment to the act.

9  
10 9. Some private land has been obtained by condemnation, although not in the western United States,  
11 because of the legal limits placed on land purchase by the act.

12  
13 10. Scenic easements have been obtained by the managing agency through condemnation of private  
14 property, without specific limit in the act. Agency regulation of activities on those easements has  
15 occurred, including limiting both physical and use modifications.

16  
17 11. The existence of a local (county or regional) planning and/or zoning commission usually provides  
18 local input to private land management. Where no zoning exists, the managing federal agency may  
19 control private property uses.

20  
21 12. There is some evidence of limited ability to construct flood protection on private property in the state  
22 of Washington. In general, however, respondents were satisfied with the designation and felt little impact  
23 on their private land.

24  
25 13. Some public land uses (federally permitted uses) have been affected by designation. At least one  
26 placer mining claim has been closed and others have been regulated (particularly gravel operations).

27  
28 14. The largest issue to date appears to be grazing in riparian areas. Several court cases have determined  
29 that grazing fails to maintain the water quality in the designated segments and grazing has been  
30 eliminated in those areas.

31  
32 15. To date, timber harvest does not appear to have been affected by designation (although timber harvest  
33 on federal land has continued to decline for other reasons).

34  
35 16. It is the opinion of the researchers that, in order for local users and landowners to maintain their  
36 property rights and privileges, local citizens, local officials, and state officials should become involved in  
37 the designation process more deeply than simply providing comments on designation plans. Official  
38 committees or task forces made up of local residents and officials, state officials, and federal managers  
39 should be formed to determine what segments are recommended to Congress to be designated.

## 40 41 **Goals, Objectives, and Policies**

- 42
- 43 • Be actively involved in all studies or plans that may consider or evaluate eligibility or may
- 44 recommend inclusion of rivers in the National Wild and Scenic River System.
- 45 • Be actively involved in all federal legislation that could result in designation of wild or scenic
- 46 rivers within Utah.
- 47 • Potential reservoir sites in Utah should be protected from designation as wild and scenic rivers.
- 48 • Enact policies on the assumption that any instream water right created by the designation of wild
- 49 and scenic rivers is junior to all absolute and conditional water rights existing before the special
- 50 designation is finalized.

- Identify wild and scenic rivers based on their regional and national significance rather than on their local significance. These selections should be supported by data that clearly show such selection will not negatively impact the ability of agriculture and other industries to access the water it needs and the State of Utah or its political subdivisions to develop water supplies and other resources to meet future needs. Where such impacts are unavoidable, a plan to mitigate such impacts should be presented.

## **Policies Pertaining to Proposed Wild and Scenic Rivers**

Official state policy regarding new wild and scenic rivers is found in Utah Code § 63L-11-303 (4). The State of Utah will coordinate with federal land-management agencies in order to ensure that the duly adopted policies contained in Utah Code § 63L-11-303 (4) are incorporated into the analysis and decision making of federal land management agencies.

## **Policies Pertaining to the Green River and Virgin River Wild and Scenic Rivers:**

- Coordinate and cooperate with the BLM and the NPS in the management of the designated wild, scenic, and recreational segments of the Green River and the Virgin River and its tributaries.
- Advocate for the protection of the Green River's and Virgin River's wild, scenic, and recreational qualities within the designated segments without infringing on private property rights or the sustained multiple use of public lands surrounding the Green River and Virgin River.
- Oppose the designation of new segments of the Green River and Virgin River as "Wild and Scenic Rivers" unless a proposed designation complies with Utah Code § 63L-11-303
- Oppose any actions taken in the management of the Green River and Virgin River that would infringe on valid water rights or the jurisdiction of the Utah Division of Water Rights.

## **State Code**

*State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The following are selected portions of the Utah State Code and do not represent every potential legal reference in the Code related to this section of the State Resource Management Plan or the administration of public lands.*

## **State Land Use and Management Plan for Federal Lands**

**§ 63L-8-104.** *State land use planning and management program.*

## **Public Lands Planning**

**§ 63L-11-302.** *Principles to be recognized and promoted.*

**§ 63L-11-303.** *Findings to be recognized and promoted.*

(4) the state's support for the addition of a river segment to the National Wild and Scenic Rivers System, 16 U.S.C. Sec. 1271 et seq., will be withheld until:

- (a) it is clearly demonstrated that water is present and flowing at all times;
- (b) it is clearly demonstrated that the required water-related value is considered outstandingly remarkable within a region of comparison consisting of one of the three

1 physiographic provinces in the state, and that the rationale and justification for the  
2 conclusions are disclosed;

3 (c) it is clearly demonstrated that the inclusion of each river segment is consistent with  
4 the plans and policies of the state and the county or counties where the river segment is  
5 located as those plans and policies are developed according to Subsection (3);

6 (d) the effects of the addition upon the local and state economies, agricultural and  
7 industrial operations and interests, outdoor recreation, water rights, water quality, water  
8 resource planning, and access to and across river corridors in both upstream and  
9 downstream directions from the proposed river segment have been evaluated in detail by  
10 the relevant federal agency;

11 (e) it is clearly demonstrated that the provisions and terms of the process for review of  
12 potential additions have been applied in a consistent manner by all federal agencies;

13 (f) the rationale and justification for the proposed addition, including a comparison with  
14 protections offered by other management tools, is clearly analyzed within the multiple-  
15 use mandate, and the results disclosed;

16 (g) it is clearly demonstrated that the federal agency that has management authority over  
17 the river segment and that is proposing the segment for inclusion in the National Wild  
18 and Scenic River System will not use the actual or proposed designation as a basis to  
19 impose management standards outside of the federal land management plan;

20 (h) it is clearly demonstrated that the federal land and resource management plan  
21 containing a recommendation for inclusion in the National Wild and Scenic River  
22 System:

23 (i) evaluates all eligible river segments in the resource planning area completely  
24 and fully for suitability for inclusion in the National Wild and Scenic River  
25 System;

26 (ii) does not suspend or terminate any studies for inclusion in the National Wild  
27 and Scenic River System at the eligibility phase;

28 (iii) fully disclaims any interest in water rights for the recommended segment as  
29 a result of the adoption of the plan; and

30 (iv) fully disclaims the use of the recommendation for inclusion in the National  
31 Wild and Scenic River System as a reason or rationale for an evaluation of  
32 impacts by proposals for projects upstream, downstream, or within the  
33 recommended segment;

34 (i) it is clearly demonstrated that the agency with management authority over the river  
35 segment commits not to use an actual or proposed designation as a basis to impose Visual  
36 Resource Management Class I or II management prescriptions that do not comply with  
37 the provisions of Subsection (24); and

38 (j) it is clearly demonstrated that including the river segment and the terms and conditions  
39 for managing the river segment as part of the National Wild and Scenic River System  
40 will not prevent, reduce, impair, or otherwise interfere with:

41 (i) the enjoyment of the state and the state's citizens of complete and exclusive  
42 water rights in and to the rivers of the state as determined by the laws of the state;  
43 or

44 (ii) local, state, regional, or interstate water compacts to which the state or any  
45 county is a party;

46  
47



1 **References:**

- 2 1. <https://www.rivers.gov/wsr-act.php>
- 3 2. <https://extension.usu.edu/iort/research/impacts-of-wsr-designation>

# WILDERNESS

## Introduction

In 1964, the passage of the Wilderness Act gave Congress the authority to declare wilderness areas as part of a National Wilderness Preservation System. The passage of the Wilderness Act gave the U.S. Forest Service (Forest Service) 10 years to review areas that might be eligible for designation as national wilderness areas and make recommendations to Congress. Similarly, the U.S Bureau of Land Management (BLM) had 15 years after the passage of the Federal Land Policy and Management Act of 1976 (FLPMA) to make similar recommendations to Congress.

The Wilderness Act prescribes management to ensure that the land is “unimpaired for the future use and enjoyment as wilderness” (16 USC 1131). Only Congress may designate wilderness or change the status of wilderness areas. Wilderness areas are designated within existing federal public land. Congress has generally not made designation decisions in most areas. Areas recommended for wilderness by the BLM are generally managed for non-impairment of their wilderness characteristics and are known as Wilderness Study Areas (WSAs). The BLM recommended approximately 86 WSAs to Congress in June 1992, in accordance with FLPMA.

The Utah Wilderness Act of 1984 designated 12 wilderness areas within Utah’s national forests, and added these wilderness areas to the National Wilderness Preservation System (Public Law 98-428, § 102(a)). Congress declared that the Forest Service had completed the second roadless area review and evaluation program (better known as RARE II) with Utah (Id, at § 201(a)(1)). Upon completion of RARE II, Congress found that areas not designated as wilderness in the Utah Wilderness Act must be managed for multiple-use in accordance with the National Forest Management Act of 1976 (NFMA) (Public Law 98-428, §201(b)(3)). The NFMA required the Forest Service to review wilderness options under RARE II at the revisions of the forest management plans (Id, at § 201(b)(2)).

The John D. Dingell, Jr., Conservation, Management, and Recreation Act (Public Law 116-9) created several additional wilderness areas in Emery County, Utah. This included 653,722 acres of wilderness on 17 units of BLM-administered land and 7,433 acres of wilderness on Forest Service-administered land.

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. The Wilderness Act also prohibits permanent roads and commercial enterprises, although commercial services are allowed “to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes” of the wilderness area. Livestock grazing is allowed in wilderness areas. The Wilderness Act acknowledges the need to provide for human health and safety, protect private property, control insect infestations, and fight fires.

Over the years, the Forest Service and BLM have repeatedly sought to manage additional areas as de facto wilderness areas using titles such as “roadless areas,” wildlands,” and “lands with wilderness characteristics.” These administrative actions to manage multiple-use lands as de facto wilderness are outside the authority of the Wilderness Act and FLPMA.

## Findings

As of July 2022, the State of Utah holds [1]:

- 51 wilderness areas, covering approximately 2 million acres.

- 77 BLM WSAs, covering approximately 2.8 million acres.

Large areas of Utah’s national forests are managed as “roadless areas” under Forest Service rules, while the Forest Service continues to conduct “wilderness inventories” of multiple-use forest lands in search of additional lands with wilderness character.

Pursuant to BLM administrative guidance, the BLM periodically conducts inventories for “lands with wilderness characteristics” of BLM multiple-use land outside of wilderness areas and WSAs.

## **Economic Considerations**

Wilderness areas attract some recreational spending while prohibiting most forms of multiple-use. Economic impacts of specific wilderness areas depend on the size of the wilderness area and the forms of multiple-use that existed prior to the wilderness designation. Environmental and social benefits or costs of wilderness areas are typically not captured in economic data.

## **Goals, Objectives, and Policies**

### **Goal(s):**

The State of Utah recognizes that management of existing wilderness is defined by federal law as codified in the Wilderness Act. Management of wilderness areas should conform with the Wilderness Act without being more restrictive on human activities than the Wilderness Act requires. Management of WSAs is similarly codified in FLPMA, and management of WSAs should conform with FLPMA without restricting human activities or mechanical activities more than FLPMA requires.

Management of wilderness areas and WSAs should provide for the public’s enjoyment of existing wilderness areas and WSAs.

### **Objectives and Policies:**

*(See also Utah Code 63L-11-303, Findings to be recognized and promoted)*

1. Support the continued management of wilderness areas as wilderness, in accordance with the Wilderness Act when management provides for public enjoyment and active management under the act.
2. Recognize BLM WSAs recommended by the BLM during or before June 1992 in accordance with FLPMA.
3. Oppose the ~~recommendation~~ designation of new WSAs subsequent to June 1992.
4. Actively participate in all public land-management planning activities.
5. Oppose any legislation introduced in Congress to designate additional wilderness areas except for legislation introduced by a member of Utah’s congressional delegation.
6. Oppose the designation of additional roadless areas in Utah.
7. Support targeted forestry, fire, and watershed management in roadless areas through coordination with federal agencies to allow for healthy forests, reduced wildfire risk, and to create reliable and resilient watersheds.
8. Oppose any legislation introduced in Congress to designate additional wilderness areas unless such legislation is supported by the respective county commission or county council in the county or counties impacted by the proposed legislation.
9. Actively participate with federal partners in making wilderness management plans.

- 1 10. All wilderness management plans must provide access for the elderly and physically disabled  
2 individuals to the fullest extent possible provided by law.
- 3 11. Oppose the management of non-wilderness federal lands as de facto wilderness, including  
4 “wildlands,” “lands with wilderness characteristics,” “wilderness inventory areas,” and other such  
5 administrative designations and encourage federal agencies and Congress to withdraw such lands  
6 from wilderness management if not acted upon by Congress within ten years.
- 7 12. Oppose the review of additional Forest Service lands for wilderness designation, except for the  
8 reviews expressly provided for in the Utah Wilderness Act of 1984 (§201(b)). [2]
- 9 13. Conduct wilderness management that provides for continued and reasonable access to and  
10 development of valid, existing private-property rights within the area, and provide for full use and  
11 enjoyment of those rights.

## 12 13 **State Code**

### 14 15 **Utah Code § 63L-11-302.** *Principles to be recognized and promoted.*

16  
17 (2) managing public lands for wilderness characteristics circumvents the statutory wilderness process  
18 and is inconsistent with the multiple-use and sustained-yield management standard that applies to all  
19 Bureau of Land Management and United States. Forest Service lands that are not wilderness areas or  
20 wilderness study areas;

### 21 22 **Utah Code 63L-11-303,** *Findings to be recognized and promoted.*

## 23 24 **Areas of Critical Environmental Concern**

25  
26 (6) the state's support for designation of an Area of Critical Environmental Concern (ACEC), as  
27 defined in 43 U.S.C. Sec. 1702, within federal land management plans will be withheld until:

28 (a) it is clearly demonstrated that the proposed area satisfies all the definitional requirements of the  
29 Federal Land Policy and Management Act of 1976, 43 U.S.C. Sec. 1702(a);

30 (b) it is clearly demonstrated that:

31 (i) the area proposed for designation as an ACEC is limited in geographic size; and

32 (ii) the proposed management prescriptions are limited in scope to the minimum necessary to  
33 specifically protect and prevent irreparable damage to the relevant and important values identified, or  
34 limited in geographic size and management prescriptions to the minimum required to specifically protect  
35 human life or safety from natural hazards;

36 (c) it is clearly demonstrated that the proposed area is limited only to areas that are already developed  
37 or used or to areas where no development is required;

38 (d) it is clearly demonstrated that the proposed area contains relevant and important historic, cultural  
39 or scenic values, fish or wildlife resources, or natural processes which are unique or substantially  
40 significant on a regional basis, or contain natural hazards which significantly threaten human life or  
41 safety;

42 (e) the federal agency has analyzed regional values, resources, processes, or hazards for irreparable  
43 damage and potential causes of the damage resulting from potential actions which are consistent with the  
44 multiple-use, sustained-yield principles, and the analysis describes the rationale for any special  
45 management attention required to protect, or prevent irreparable damage to, the values, resources,  
46 processes, or hazards;

47 (f) it is clearly demonstrated that the proposed designation is consistent with the plans and policies of  
48 the state and of the county where the proposed designation is located as those plans and policies are  
49 developed according to Subsection (3);

50 (g) it is clearly demonstrated that the proposed ACEC designation will not be applied redundantly  
51 over existing protections provided by other state and federal laws for federal lands or resources on federal

1 lands, and that the federal statutory requirement for special management attention for a proposed ACEC  
2 will discuss and justify any management requirements needed in addition to those specified by the other  
3 state and federal laws;

4 (h) the difference between special management attention required for an ACEC and normal multiple-  
5 use management has been identified and justified, and any determination of irreparable damage has been  
6 analyzed and justified for short-term and long-term horizons;

7 (i) it is clearly demonstrated that the proposed designation:

8 (i) is not a substitute for a wilderness suitability recommendation;

9 (ii) is not a substitute for managing areas inventoried for wilderness characteristics after 1993  
10 under the Bureau of Land Management interim management plan for valid wilderness study areas; and

11 (iii) it is not an excuse or justification to apply de facto wilderness management standards;

12 and

13 (j) the conclusions of all studies are submitted to the state, as a cooperating agency, for review, and  
14 the results, in support of or in opposition to, are included in all planning documents;

## 15 16 **Roadless Areas**

17  
18 **(11)** the state opposes any additional evaluation of national forest service lands as roadless or  
19 unroaded beyond the forest service's second roadless area review evaluation and opposes efforts by  
20 agencies to specially manage those areas in a way that:

21 (a) closes or declassifies existing roads unless multiple side-by-side roads exist running to the same  
22 destination and state and local governments consent to close or declassify the extra roads;

23 (b) permanently bars travel on existing roads;

24 (c) excludes or diminishes traditional multiple-use activities, including grazing and proper forest  
25 harvesting;

26 (d) interferes with the enjoyment and use of valid, existing rights, including water rights, local  
27 transportation plan rights, R.S. 2477 rights, grazing allotment rights, and mineral leasing rights; or

28 (e) prohibits development of additional roads reasonably necessary to pursue traditional multiple-use  
29 activities;

## 30 31 **Wilderness**

32  
33 **(13)** the state's support for any recommendations made under the statutory requirement to examine the  
34 wilderness option during the revision of land and resource management plans by the United States Forest  
35 Service will be withheld until it is clearly demonstrated that:

36 (a) the duly adopted transportation plans of the state and each county within the planning area are  
37 fully and completely incorporated into the baseline inventory of information from which plan provisions  
38 are derived;

39 (b) valid state or local roads and rights-of-way are recognized and not impaired in any way by the  
40 recommendations;

41 (c) the development of mineral resources by underground mining is not affected by the  
42 recommendations;

43 (d) the need for additional administrative or public roads necessary for the full use of the various  
44 multiple uses, including recreation, mineral exploration and development, forest health activities, and  
45 grazing operations, is not unduly affected by the recommendations;

46 (e) analysis and full disclosure are made concerning the balance of multiple-use management in the  
47 proposed areas, and that the analysis compares the full benefit of multiple-use management to the  
48 recreational, forest health, and economic needs of the state and the counties to the benefits of the  
49 requirements of wilderness management; and

50 (f) the conclusions of all studies related to the requirement to examine the wilderness option are  
51 submitted to the state for review and action by the Legislature and governor, and the results, in support of

1 or in opposition to, are included in any planning documents or other proposals that are forwarded to the  
2 United States Congress;

3

4 **References:**

5

6 1. <https://wilderness.net/default.php>

7 2. <https://www.govinfo.gov/content/pkg/STATUTE-98/pdf/STATUTE-98-Pg1657.pdf>

8

# WILDLIFE

## Introduction

Utah Code § 23A-1-102 provides that Utah’s wildlife is the property of the state. The Utah Division of Wildlife Resources (DWR) has been given authority to manage protected wildlife. Wildlife includes brine shrimp and crayfish; mollusks; and vertebrate animals (fish, amphibians, reptiles, birds, and mammals) living in nature. Wildlife does not include feral and domestic animals such as cats, dogs, etc. All wildlife within the state are protected [1], except as outlined in Utah Code § 23A-1-43 Rare species and those subject to federal listing under the federal Endangered Species Act of 1973 are referenced more fully in the chapter entitled “Threatened and Endangered Species” Although fish are legally considered “wildlife,” fisheries and angling-related benefits for local economies are addressed in the “Fisheries” chapter.

Wildlife and wildlife habitat contribute to a productive natural environment. Wildlife improves Utah’s quality of life and provides a rich source of aesthetic enjoyment, inspiration, and outdoor recreation for many people. Healthy wildlife populations can have a positive impact on the economy, while influencing how people experience the benefits of their private property. Most people support efforts to find a balance between habitat requirements of wildlife populations and economic activities of people. Wildlife is important socially and economically, and contributes to activities such as: hunting, photography, and wildlife viewing.

## Findings

The DWR’s mission is to serve the people of Utah as trustee and guardian of the state’s protected wildlife. As such, the DWR and State of Utah seek to maintain sustainable, viable, and diverse wildlife populations that are valuable to all citizens of Utah. More than 600 vertebrate wildlife species currently occur in Utah. Many of those wildlife species are found on public lands throughout Utah.

Wildlife species such as deer, elk, moose, ~~antelope~~pronghorn, bighorn sheep, and mountain goats provide hunting and viewing opportunities on public and private land. Wildlife is managed for biological diversity and species health while providing hunting opportunities when applicable. The DWR seeks to manage and minimize species impacts to private and public lands. The DWR establishes management plans for many wildlife species, including big game species, predator species, upland game, and game fowl [2]. The DWR also assists the U.S. Fish and Wildlife Service (USFWS) in establishing management plans for some migratory birds, such as Canada geese, sandhill cranes, and American white pelicans.

## Economic Considerations

Wildlife and the associated recreation tied to wildlife in Utah attracts many who enjoy fishing, hunting, and wildlife watching. According to a ~~2016~~2022 USFWS survey, ~~103.39.9~~ million Americans 16 years and older (~~nearly 4 out of 10 people~~)fished, 14.4 million hunted and 148.3 million participated in ~~some type of~~ wildlife-related recreation in 2016watching 2022 and spent \$~~156.9~~250.2 billion dollars [~~31.3~~In Utah, expenditures on wildlife-related recreation totaled \$1.87 billion, with \$1.17 billion spent on fishing and hunting and \$701 million spent on wildlife watching [4]. Not only do these activities support thousands of jobs in related industries and businesses, they generate significant financial support to help manage wildlife and improve habitat.

1 Thriving populations of big-game animals will, at times, cause some level of damage to farming and  
2 ranching operations, by competing with domestic livestock for available forage, or by damaging crops,  
3 fences, and irrigation equipment. A number of methods can be applied to mitigate such damage, including  
4 wildlife harvest and removal, issuance of landowner permits, development of conservation leases (which  
5 involve remuneration or other forms of compensation for depredation,) and direct monetary compensation  
6 for agricultural damages. Although depredation mitigation review and appeal procedures apply and are  
7 used as needed, the total amount of compensation that can be provided to landowners to prevent or  
8 compensate for damages may not exceed the funding amounts appropriated by the legislature for fencing  
9 material and compensation for damaged crops, fences, and irrigation equipment (State Code § 23A-8-405  
10 (4)(a))[5].

11  
12 Utah’s Watershed Restoration Initiative (WRI) [6] focuses on improving three ecosystem values: (1)  
13 watershed health and biological diversity, (2) water quality and yield, and (3) opportunities for  
14 sustainable uses of natural resources. ~~Significant investments have been made through the WRI to  
15 improve rangeland health and watershed conditions. Since the program’s creation in 2006, the WRI  
16 has improved nearly 2 million acres in Utah. In fiscal year 2020, the Utah Legislature contributed  
17 \$6.2 million to the WRI. Eighty six participating partners completed restoration of 110,041 acres of  
18 uplands and 166 miles of stream and riparian areas, leveraging the legislative funds by a factor of 14-  
19 to 1. Sportsman generated funding plays an important role in the WRI. Counties in general appreciate  
20 the benefits realized through WRI habitat restoration projects. The long term results of the WRI will  
21 be measured in reduced wildfire acreage and suppression costs, reduced soil loss from erosion,  
22 reduced sedimentation and storage loss in reservoirs, improved water quality and yield, improved  
23 wildlife populations, reduced risk of additional federal listing of species under the Endangered  
24 Species Act, improved agricultural production, and resistance to invasive plant species.~~

25  
26 To participate effectively, counties must task their staff to attend meetings and field tours of the WRI  
27 regional teams, expressing their views and advocating the watershed restoration efforts they feel are  
28 most important. For more information on the WRI program, including dates and times of upcoming  
29 regional team events, please visit the WRI website at watershed.utah.gov.

30  
31 The Utah Wildlife Migration Initiative (WMI), founded in 2017, identifies and protects connective  
32 corridors that allow fish and wildlife to migrate to necessary habitat areas around the state. The mission  
33 is to document, preserve, and enhance wildlife movement for species throughout Utah using state-of-the-  
34 art tracking and data-management technologies, strong collaborative partnerships, and compelling  
35 outreach. The WMI uses state-of-the-art technology to identify the following:

- 36
- 37 ● Migration and movement patterns
- 38 ● Wildlife stopover sites
- 39 ● Priority areas that can reconnect fragmented habitat ranges
- 40 ● Locations that allow wildlife species to safely move from one large habitat area to another
- 41

42 Although predator management is discussed under a separate chapter entitled “Predator Management,” the  
43 Wildlife Damage Compensation Act [7] should be mentioned because it provides a mechanism by which  
44 livestock owners may obtain compensation for livestock damage by bears, mountain lions, wolves, or  
45 eagles. In this case, livestock means cattle, sheep, goats, and turkeys.

## 46 47 **Goals, Objectives, and Policies**

- 48
- 49 ● Expand wildlife populations and conserve species of greatest conservation need as identified in  
50 the WAP by protecting and improving wildlife habitat.



- 1 • Manage current populations or establish new populations of wildlife in suitable habitats in Utah,  
2 as outlined in approved management plans.
- 3 • By 2024, ~~increase the manage~~ mule deer populations ~~in Utah to 404,900,~~ within the state as  
4 conditions allow and bring all populatiions to their unit objectives (453,100 in 2019).
- 5 • Improve the quality and quantity of vegetation for mule deer on a minimum of 500,000 acres of  
6 crucial range by 2024.
- 7 • Provide a diversity of high-quality hunting and viewing opportunities for wildlife species  
8 throughout Utah.
- 9 • Manage fish and game populations to meet management-plan objectives, and expand quality  
10 fishing and hunting opportunities throughout Utah.
- 11 • Manage species in need of conservation to prevent listing under the Endangered Species Act of  
12 1973.
  - 13 ○ Every effort should be rendered to keep management of species at the state level.
- 14 • Work with constituencies to achieve broad-based support for wildlife programs within the state  
15 by demonstrating the value of wildlife to all citizens of Utah.
- 16 • Increase public awareness in Utah of wildlife as a “quality-of-life” issue in order to expand the  
17 issue’s support base and achieve stable funding.
- 18 • Improve communications with wildlife organizations, public officials, private landowners, and  
19 government agencies to obtain support for wildlife in Utah.
- 20 • Expand programs to recruit and retain Utah’s young hunters, anglers, and wildlife watchers.
- 21 • Produce and maintain the desired vegetation for wildlife and domestic livestock forage on public  
22 and private lands throughout Utah.
- 23 • Avoid, mitigate, minimize, or compensate for damages to private land occurring when Utah’s  
24 wildlife populations are above targeted management-plan objectives.
- 25 • Work with landowners, the federal government, and private organizations to conserve valuable  
26 wildlife habitat in Utah and winter range along the wildland-urban interface.
- 27 • Minimize negative impacts from wildlife on private lands in Utah.
- 28 • Work with local governments and federal agencies to identify and conserve crucial wildlife  
29 habitat and migration corridors throughout Utah, including migratory bird stopover locations.
- 30 • Utilize the best available science and wildlife management techniques to manage wildlife  
31 populations throughout Utah.
- 32 • Work with universities and constituency groups to study and better understand wildlife  
33 populations throughout the State.
- 34 • Develop mechanisms and policies to incentivize private landowners throughout Utah to conserve  
35 valuable wildlife habitat.

### 36 37 **General Guidelines**

38  
39 The process for determining the balance among competing uses and establishing the best wildlife  
40 management policies is described in state law. This process is founded on an open, public dialogue  
41 concerning wildlife issues. Five regional advisory councils (RACs) are active across the state, each  
42 consisting of 12–15 members nominated by various interest groups and selected by the Utah Department  
43 of Natural Resources’ leadership. Members represent agriculture, sportsmen, non-consumptive wildlife,  
44 locally elected public officials, federal land agencies, and the public at large. The duty of each RAC is to  
45 hear input and recommendations, gather data, and evaluate expert testimony, and then make informed  
46 policy recommendations to the Wildlife Board.

47  
48 The Utah Wildlife Board is composed of individuals nominated by a committee selected by the  
49 governor of Utah, which reflects representation by diverse groups, including non-consumptive wildlife  
50 interests, the agriculture industry, sportsmen groups, federal land-management agencies, the Utah

1 Association of Counties, and range-management specialists. From this list of nominees, the governor of  
2 Utah appoints seven Wildlife Board members with the consent of the Utah Senate.

3  
4 The Wildlife Board is responsible for considering RAC input and recommendations. ~~The Wildlife Board  
5 must provide written explanations if they reject recommendations or positions submitted by a RAC.~~ The  
6 Wildlife Board uses public input, the recommendations of the RACs, and the assembled facts to make  
7 determinations and establish the policies best designed to accomplish the purposes and fulfill the intent of  
8 the state's wildlife laws. The Wildlife Board generates wildlife management policy and exercises its  
9 powers by promulgating administrative rules and issuing proclamations and orders under Utah Code.

- 10
- 11 • Ensure that federal land-management decisions are coordinated with and consistent with state  
12 wildlife management.
- 13 • Encourage agency support of state-sponsored initiatives or programs designed to stabilize wildlife  
14 populations that may be experiencing a scientifically proven decline in numbers.
- 15 • Encourage development of wildlife-crossing structures to provide safe passage across roads  
16 and other movement barriers.
- 17 • Support the review of development plans on private property to take wildlife-movement corridors  
18 and wintering habitats into account during project design.
- 19

## 20 State Code

21  
22 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The  
23 following are selected portions of the Utah State Code and do not represent every potential legal  
24 reference in the Code related to this section of the State Resource Management Plan or the  
25 administration of public lands.*

### 26 Public Lands Planning

27  
28  
29 § 63L-11-302. *Principles to be recognized and promoted.*

30  
31 § 63L-11-303. *Findings to be recognized and promoted.*

32  
33 (3) transportation and access routes to and across federal lands, including all rights-  
34 of-way vested under R.S. 2477, are vital to the state's economy and to the quality of life  
35 in the state, and must provide, at a minimum, a network of roads throughout the resource  
36 planning area that provides for:

- 37 (a) movement of people, goods, and services across public lands;
- 38 (b) reasonable access to a broad range of resources and opportunities  
39 throughout the resource planning area, including:
  - 40 (i) livestock operations and improvements;
  - 41 (ii) solid, fluid, and gaseous mineral operations;
  - 42 (iii) recreational opportunities and operations, including motorized  
43 and non-motorized recreation;
  - 44 (iv) search and rescue needs;
  - 45 (v) public safety needs; and
  - 46 (vi) access for transportation of wood products to market;
- 47 (c) access to federal lands for people with disabilities and the elderly;
- 48 (d) and access to state lands and school and institutional trust lands to  
49 accomplish the purposes of those lands;
- 50

### 51 State Land Use and Management Plan for Federal Lands

1            § 63L-8-104. *State land use planning and management program.*  
2

3 **Wildlife Resources Code of Utah (Title 23A)**  
4

5 **Utah Division of Indian Affairs Act**  
6

7            § 9-9-213. *Concurrent state and federal jurisdiction over hunting, trapping, or fishing offenses on*  
8 *reservations.*  
9

10            (1)        With respect to any of the offenses enumerated in this chapter, over which  
11 federal courts may have lawful jurisdiction, the jurisdiction of the courts of the state of  
12 Utah shall be concurrent and not exclusive.

13            (2)        It shall be the duty of the courts of the state of Utah to order delivery to the  
14 proper authorities of the federal government for prosecution, any offender there to be  
15 dealt with according to law or regulations authorized by law, where such authorities  
16 consent to exercise jurisdiction lawfully vested in them over the said offender.  
17

18 **References:**

- 19            1. [https://le.utah.gov/xcode/Title23A/C23A\\_2023050320230701.pdf](https://le.utah.gov/xcode/Title23A/C23A_2023050320230701.pdf)  
20            2. <https://wildlife.utah.gov/>  
21            3. <https://www.census.gov/content/dam/Census/library/publications/2018/demo/fhw16-nat.pdf>  
22            4. <https://www.census.gov/content/dam/Census/library/publications/2018/demo/fhw16-nat.pdf>  
23            5. [https://le.utah.gov/xcode/Title23A/C23A\\_2023050320230701.pdf](https://le.utah.gov/xcode/Title23A/C23A_2023050320230701.pdf)  
24            6. <https://wri.utah.gov/wri/>  
25            7. [https://le.utah.gov/xcode/Title4/Chapter23/4-23-S108.html?v=C4-23-S108\\_2017050920170701](https://le.utah.gov/xcode/Title4/Chapter23/4-23-S108.html?v=C4-23-S108_2017050920170701)  
26

# WILD HORSES AND BURROS

## Introduction

The State of Utah supports active management of wild horse and burro populations through a combination of the application of approved contraception methods and the removal of excess populations. The current population of wild horses and burros in Utah is unacceptably large and must be reduced to appropriate management levels (AML) established by the U.S. Bureau of Land Management (BLM).

The native horse species of North America were extirpated near the end of the Pleistocene epoch, between 7,500 to 12,000 years ago. Evidence suggests that a global cooling event led to the extinction of many large mammal species during that time period, including woolly mammoths, American camels, dire wolves, saber tooth cats, and woolly rhinos. This event might have led to the demise of the horse species had it not been for the Bering Land Bridge, which connected Alaska and Siberia at the time and allowed the horses to migrate to Europe and Asia.

Spanish explorers and settlers introduced many forms of livestock to the vast rangelands of North America in the 16th century. Because the Spanish word for “stray” is *Mustengo*, the stray and fugitive horses of the Spaniards would later become known as “mustangs,” which is how North American wild horses are referred to today. Hence, in the mid-1800s, the American West was explored, settled and powered by “horsepower.” As commerce and transportation of goods and people expanded, the breeding of horses and burros became essential for the success of businesses, families, communities, and states. The horse became highly valued. Demand for horsepower created a very strong commodity market for horses and burros. Horses were often the most expensive domestic animal—during the 1870s, the cost of cattle averaged \$20.00 per head, a work horse \$150.00, and a saddle horse \$200.00, or more. The demand for horsepower created a population boom of equines in North America, from no horses in the early 1600s to more than 21,000,000 by 1920. Currently, there are approximately 3 million horses in America.

In the western United States, the free-range policy of the late 1800s and early 1900s resulted in large herds of horses on the range. Settlers and ranchers released domestic animals onto areas of open range, then collected the animals to train and sell as demand and opportunity dictated. Selected breeds were released onto the range to create animals that would meet the specific requirements ~~required for~~ of the U.S. Army Cavalry Remount program, Pony Express mounts, freight animals, ranch horses, pack animals, etc. Accordingly, these managed herds grew by the millions to meet the demands of a growing nation.

What are now referred to as “wild horses” (a construct of the Wild Horse and Burro Act) are actually the remnants of these range herds of domestic horses and burros, which were bred and managed by local ranchers to meet specific commodity markets until the early 1900s.

Today, large numbers of unbranded and unclaimed feral horses can be found on public lands administered by the U.S. Secretary of Interior through the ~~U.S. Bureau of Land Management (BLM)~~, U.S. States Secretary of Agriculture through the U.S. Forest Service (Forest Service), and state-owned trust lands administered by the Utah School and Institutional Trust Lands Administration (SITLA). Wild horses, as they are now perceived, are not native to America’s rangelands. They are feral animals; however, for planning purposes those found on certain federal lands are referred to as wild free-roaming horses and burros to be consistent with 16 United States Code (U.S.C.) 1331(b).

The BLM and Forest Service, under the authority of the Wild Free-Roaming Horse and Burro Act (Public Law 92-195) of 1971 (WFRHBA), are responsible for the protection, management, and control of wild

1 horses and burros on certain public lands in Utah. The act requires federal agencies to “manage wild free-  
2 roaming horses and burros in a manner that is designed to achieve and maintain a thriving natural  
3 ecological balance on the public lands” [1]. Additionally, federal land managers must consult with Utah  
4 wildlife agencies and take into consideration the needs of wildlife in their management decisions. Land  
5 managers must also ensure that free-roaming wild horse and burro populations are in balance with  
6 traditional multiple-use activities and managed accordingly.  
7

8 Following the passage of the WFRHBA, the BLM inventoried wild horse populations in Utah from 1971  
9 to 1974. These inventories found wild horses in 19 areas, which were subsequently designated as “herd  
10 areas,” ~~which~~ and remain in place today. Through the federal land-use planning process, 19 wild horse  
11 herd management areas (HMAs) were established upon the originally designated herd areas. Each HMA  
12 shares the name of the herd area in which it is located. The BLM and Forest Service do not manage  
13 portions of the original herd area outside the HMA boundaries for wild horses. Some herd area and HMA  
14 boundaries coincide with human-made boundaries, such as fences, and natural features, such as cliffs and  
15 canyons, but most ~~are not restrictive and of them~~ allow the animals unrestricted movement across the  
16 established boundaries.  
17

## 18 Findings

### 19 National Findings

20 The following national findings related to wild horse and burro management in the United States were  
21 derived from the Wild Horse and Burro Management: Overview of Costs published by Congressional  
22 Research Services on July 13, 2022.  
23

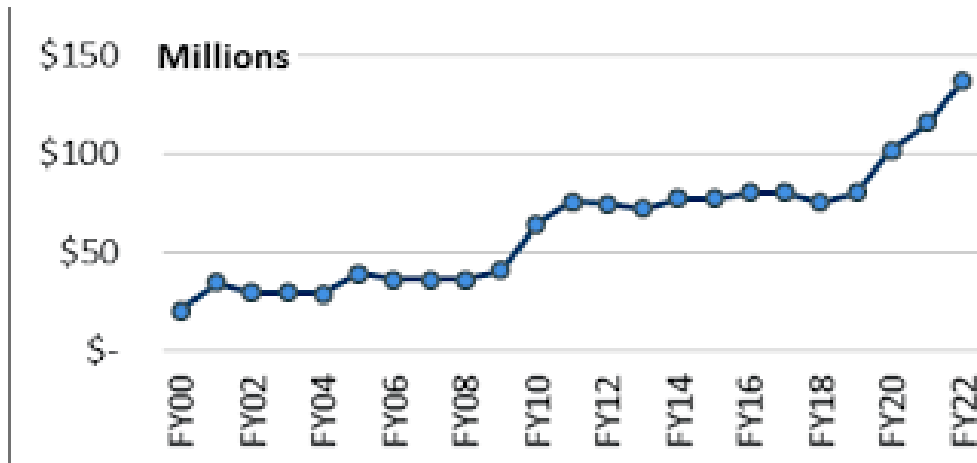
24 The BLM has set the upper limit for the AML for all wild horse and burro herds on BLM lands at 26,785  
25 animals. As of March 2022, there were an estimated 82,384 animals on BLM lands—more than triple the  
26 current AML—and more than double the 40,605 on-range estimates from 2013. However, the 2022 on-  
27 range estimate is 13 percent lower than the 2020 high of 95,114 animals. The decrease was the result of  
28 increased removals, fertility control, and other factors as the result of additional federal funding ~~being~~  
29 allocated for herd management. [2]  
30

31 In fiscal year 2021, “Off-range holding accounted for \$77.7 million (64%) of expenditures, composed of  
32 \$35.0 million for long-term care and \$42.7 million for short-term care. The next-largest portion, \$15.1  
33 million (12%), was expended for program support and overhead. Placement into private care, through  
34 adoptions and sales, was \$14.7 million (12%). Another \$8.5 million (7%) was used for gathering animals  
35 on the range. The remaining \$6.2 million (5%) was expended for varied purposes (including <1% for  
36 fertility control).”[3]  
37

38 For fiscal year 2022, the appropriation for BLM management of wild horses and burros was \$137.1  
39 million, 18 percent higher than that of fiscal year 2021 (\$115.7 million). The increase was intended to  
40 support “an aggressive, non-lethal population control strategy” as set out in a May 2020 BLM report,  
41 according to the explanatory statement on the fiscal year 2022 appropriations law. This strategy includes  
42 increased removals, long-term holding, and fertility control. Fiscal year 2022’s funding was more than six  
43 times fiscal year 2000’s amount (\$20.4 million) and more than double fiscal year 2010’s amount (\$64.0  
44 million), in nominal dollars.  
45

46 **Figure 1** depicts BLM’s annual funding.  
47

48 **Figure 1:** BLM Appropriations for Wild Horse and Burro Management (fiscal year 2000–2022)  
49  
50  
51



For fiscal year 2021, expenditures totaled \$122.2 million. Figure 2 shows fiscal year 2021 expenditures by activity. Off-range holdings accounted for \$77.7 million (64%) of expenditures, composed of \$35.0 million for long-term care and \$42.7 million for short-term care. The next largest portion, \$15.1 million (12%), was expended for program support and overhead. The cost of placement into private care, through adoptions and sales, was \$14.7 million (12%). Another \$8.5 million (7%) was used for gathering animals on the range. The remaining \$6.2 million (5%) was expended for various purposes (including <1% for fertility control).

The BLM typically charges a minimum of \$125 per adoption of a trained animal and \$25 per untrained animal, but the average cost for the BLM to complete an adoption (or sale) was estimated in 2020 at about \$1,500. This cost includes activities to make the animals more marketable, such as training, advertising, and transporting. It does not include the \$1,000 incentive BLM has paid individuals for each untrained animal they adopt (since March 12, 2019). The cost of adoptions was considerably less than the lifetime cost of off-range care; in 2020, BLM estimated its savings on average to be \$24,000 per animal.

Long-term holding typically is used for older animals and those with less potential for adoption or sale; the average cost was estimated in 2020 at about \$2 per animal, per day. By comparison, the cost of short-term corral facilities was about \$5 per animal, per day. Short-term facilities are more expensive due in part to hay costs, veterinary services, and farrier services to prepare the animals for adoption or sale and, in some cases, to the costs of salaried employees of the BLM.

The most common fertility-control method was estimated (in 2020) to cost roughly \$2,500 per mare, including gathering, treatment, and short-term holding. Under this treatment, an immunocontraceptive agent—Porcine Zona Pellucida (PZP)—is typically applied during periodic gathers to remove excess animals from the range. Mares are captured, treated with PZP, and released to the range. PZP generally is most effective for only 1 year.

GonaCon is an immunocontraceptive vaccine that was developed and is used by the U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) in the management of certain wildlife and feral vertebrate animal populations. The State of Utah supports both the use of PZP-22 and GonaCon contraceptives in wild horse and burro herd management. However, the State of Utah takes the position that when comparing the two, GonaCon would likely be a more effective plan to manage HMAs to proper AML.

GonaCon is EPA-approved, inexpensive, and has been shown to be safe for mares and the environment. Even without booster treatments, GonaCon provides 3–4 years of effectiveness compared to the PZP treatment, which is effective for only 1–2 years. One downside to using GonaCon is that horses must

1 receive a booster shot for maximum effectiveness, which requires holding the animals for 30 to 45 days  
2 until the second shot can be administered. Although it would be burdensome to feed and water mares in  
3 pens for 30 to 45 days, it would likely save money in the long run. PZP-22 is a 2-year contraceptive at  
4 best, with other sources claiming that a single treatment of PZP may have an effectiveness period of as  
5 little as 1 year.

6 As federal land managers carry out their duty to manage and protect wild horses and the lands upon which  
7 they live, it is important to develop and use a variety of humane fertility control methods that can slow  
8 herd growth and reduce the need to gather excess animals and pay for their care. In 2020, the BLM began  
9 using specialized intrauterine devices (IUDs). These flexible, soft, Y-shaped IUDs are made from  
10 medical-grade silicone and were specifically designed for use in horses. IUDs have been shown to be  
11 humane, safe and effective for horses and are supported by peer-reviewed research published in *Animal*  
12 *Reproduction Science* and in the *Journal of Wildlife Management*. The research indicates that “if wild  
13 horses have the same IUD retention rates as were seen in pasture trials (75% for 2 breeding seasons),  
14 about half of IUD-treated mares could still be contracepted for up to 5 years later” [4]. Accordingly, the  
15 State of Utah is supportive of the utilization of IUDs.

## 16 **State of Utah Findings**

17  
18 Many of Utah’s HMAs are showing signs of over-utilization of forage and water, indicating their inability  
19 to support current populations of wild horses. In some areas, the wild horses have moved outside HMAs,  
20 negatively impacting private or other federal land, especially in riparian habitat and vegetation treatment  
21 areas.

22  
23 Population management is critical in balancing herd numbers with forage resources. Studies have  
24 demonstrated that growth rates of wild horses approach 20 percent, or more, in many horse populations.  
25 This rapid increase in population is affecting the condition of the range in and around HMAs, and it  
26 increases competition for resources between wild horses, cattle, and a variety of wildlife, including  
27 sensitive species. Despite being mandated by law, consultation between federal land managers and the  
28 Utah Division of Wildlife Resources (DWR) regarding wild-horse management is lacking.

29  
30 The BLM and Forest Service are required by the WFRHBA to manage populations within appropriate  
31 management levels through wild-horse removals and other-population control methods “(achieved by the  
32 removal or destruction of excess animals, or other options (such as sterilization, or natural controls on  
33 population levels))” [5]. Ideally, these removals would take place every 3 to 4 years on each HMA to  
34 meet population objectives. Excess horses are put up for adoption, but the majority are placed in pastures  
35 or permanent holding facilities costing the federal government in excess of \$77 million per year.  
36 Generally speaking, only young animals (2 years old and younger) are adopted by the public, leading the  
37 BLM to increase the number of off-site holding corrals.

38  
39 Euthanasia was allowed prior to 1980, but since that time, Congress has prohibited the use of federal  
40 funds to euthanize excess horses, other than those that are sick or lame. Implementing a full suite of  
41 contraceptive methods would assist in reducing reproduction rates.

42  
43 As herd population numbers have increased, the condition of grazed vegetation and water resources in  
44 HMAs have decreased because of the non-selective way that wild horses feed, which also negatively  
45 impacts the ecosystem. Domestic livestock producers who run cattle in the same ecosystems are required  
46 to adhere to strict grazing-management plans that outline grazing periods, timing, and rotation of  
47 animals. These principles are the basis of sound range management. Unfortunately, wild horses and  
48 burros are not managed with the same principles, which leads to a disproportionate amount of damage.  
49 Grazing permittees are routinely required to reduce Animal-unit Months (AUMs) to compensate for

1 the overpopulation of wild horses. Horses are also known to drive away competing livestock and wildlife  
2 from springs during drought years. This trend will only escalate as wild horses are allowed to increase  
3 without adequate active management.

4  
5 The BLM in Utah manages 19 wild horse and burro ~~herd management areas~~ HMAs on nearly 2.4 million  
6 acres. The combined appropriate management level for all HMA s in the state is 1,956 animals. Utah has  
7 two contracted off-range corrals for wild horses (3,750), one off-range corral/pasture for wild burros  
8 (2,000), and one BLM corral facility (300) with a total holding capacity of 6,050 animals. As of May 18,  
9 2022, these facilities are currently housing and caring for approximately 2,745 animals (2,455 horses and  
10 290 burros). As of May 18, 2022, Utah also has one off-range pasture currently caring for approximately  
11 476 wild horses near Fountain Green, Utah. Since 1971, the BLM has removed approximately 17,942  
12 animals from public rangelands in Utah as part of its efforts to maintain healthy horses and burros on  
13 healthy public rangelands. The BLM in Utah has placed 9,288 wild horses and burros into private care  
14 since 1971. Animals removed from public rangelands are offered to the public for adoption; unadopted  
15 animals are cared for on open pastures for the rest of their lives. [6]

16  
17 The Free Roaming Equids and Ecosystem Sustainability Network (FREES), located at Utah State  
18 University, is a group of diverse organizations working for a common goal of “healthy herds of free-  
19 roaming equids (wild horse and burros) on healthy rangelands.” FREES seeks to enhance communication  
20 and engage diverse stakeholder groups in meaningful dialogue as they work to achieve equid and  
21 ecosystem sustainability. In 2021, FREES completed a survey titled U.S. Knowledge and Opinions of  
22 Free-Roaming Horses in 2020, which improved the State of Utah’s understanding of public knowledge  
23 and how to guide future management. [7]

## 24 25 **Forecast**

26  
27 Based on existing trends, wild horses will continue to encroach in areas outside the designated HMA s.  
28 The continued growth and expansion of resident herds will create increased stress on rangeland vegetation  
29 conditions and negatively impact overall herd health through reductions in viable forage areas. Persistent  
30 drought conditions will reduce water, forage availability, and habitat for wild horses, depleting the  
31 already stressed range.

32  
33 Long-term wild-horse management objectives are designed to maintain wild horse populations within  
34 appropriate management levels while providing for the health of the wild horses and a healthy ecological  
35 balance with other resources. Under current conditions, wild horses are dying on the range from thirst and  
36 starvation, permitted livestock are being removed through the reduction of permitted AUMs, and the  
37 range is being destroyed.

## 38 39 **Economic Considerations**

40  
41 The overall goal is to reach and maintain the identified appropriate management level for each HMA.  
42 Current management policies are failing, and wild horse populations continue to grow by 20 percent per  
43 year, depleting ranges that will take years and millions of dollars to restore.

44  
45 These impacts include, but are not limited to, decreased biodiversity in both plants and animals, decreased  
46 water yield and water quality; encroachment of woody and non-edible plants such as pinyon and juniper;  
47 increased erosion from both wind and water; decreased air quality due to dust particle pollution;  
48 unavailability of water for wildlife due to excess wild horses.

49  
50 Direct monetary costs of excess wild horses include but are not limited to, restoration costs of rangeland  
51 treatments and re-seeding under arid and semi-arid conditions; loss of AUMs resulting in lost income and



1 unsustainability of ranching operations; and, negative economic impacts to communities reliant on  
2 agriculture.

3  
4 The funding allocated and utilized to reduce populations on HMAs has been clearly articulated in the  
5 **Findings** section above.

## 6 7 **Goals, Objectives, and Policies**

### 8 9 **Goal(s):**

- 10  
11 • Support *The Path Forward* strategy for management of wild horses and burros in Utah. This  
12 strategy calls for an upfront investment in gathers and fertility control that will eventually release  
13 the BLM from the costly cycle of roundups and holdings, while reducing the number of horses  
14 and burros on the range and making progress towards the agency-determined AML.
- 15 • Achieve and maintain the identified AML for each HMA.

### 16 17 **Objectives:**

- 18 1. Conduct targeted gathers and removals at densely populated HMAs to reduce herd sizes and  
19 make progress towards AMLs in Utah’s wild horse and burro populations.
- 20 2. Treat gathered horses and burros with population-growth-suppression tools prior to being  
21 returned to the range. Reversible methods must be administered to an appropriate percentage of  
22 mares (generally close to 90%) to control populations, with some flexibility depending on  
23 modeling of range and herd parameters.
- 24 3. Relocate horses and burros in holding facilities, and those taken off the range, to large, cost-  
25 effective, humane pasture facilities funded through public-private partnerships.
- 26 4. Promote adoptions of wild horses to reduce captive populations and costs. The BLM is currently  
27 spending \$2,250 (\$3,250 with incentive) per adopted horse to promote adoptions that ultimately  
28 provide considerable cost savings to the agency. Adoptions save the BLM \$1,850 per horse, per  
29 year [8]. Investing in the adoption process can reduce or eliminate up to \$46,000 in lifetime costs  
30 associated with off-range holding of a horse.
- 31 5. Reanalyze AML on Utah HMAs.
- 32 6. Support efforts to gather, remove, and implement contraception methods in Utah’s wild horse and  
33 burro populations.

### 34 35 **Policies:**

- 36  
37 • Support wild horses in existing HMAs at appropriate management levels.
- 38 • Wild horses and burros should be managed for viable, healthy herds that will result in ~~the~~  
39 thriving, natural ecological balance (including standards and guidelines for rangeland health) and  
40 multiple-use, sustained-yield.
- 41 • Immediately remove wild horses from private lands when notified of their presence as directed in  
42 the WFRHBA.
  - 43 ○ Immediate removal should be conducted in such a manner so that the animals will not  
44 return to the private lands from which they are removed.
- 45 • Immediate removal of wild horses and burros in trespass shall coincide with the same time frame  
46 granted to allotment owners or wildlife that is in trespass, which is 72 hours.
- 47 • Support the use of long-term fertility control as a means to reduce the growth rate of wild horses  
48 and burros in Utah. This is most effective once AML is achieved. Both gather-and-removal and  
49 contraception efforts must be simultaneously implemented.

- 1 • Support the restoration of AUMs to domestic livestock as wild horse populations are brought to
- 2 AMLs and rangeland conditions improve.
- 3 • Consider any equine animal released from private lands, individuals, tribes, or neighboring lands
- 4 onto public lands after 1971 “estrays” as defined by Utah Code, Title 4 chapter 25, and deal with
- 5 such animals accordingly.
- 6 • Support the Comprehensive Animal Welfare Program (~~CAWP~~) for the treatment of horses
- 7 involved in gathers, off-site holding, fertility control, and adoption.
- 8 • Support the adoption of wild horses and burros and the gifting of horses to non-governmental
- 9 organizations, or other proven organizations willing to provide humane care should adoptions
- 10 fail.
- 11 • As directed by the WFRHBA, require federal agencies to consult with “the wildlife agency of the
- 12 ~~S~~state wherein such lands are located in order to protect the natural ecological balance of all
- 13 wildlife species... particularly endangered wildlife species” [10]. Meaningful consultation is not
- 14 regularly occurring which needs to be corrected. The ~~U~~DWR has experts and data ready to assist
- 15 federal land managers in meeting their obligation of reducing negative impacts to sensitive and
- 16 non-sensitive wildlife habitat throughout Utah.

## 17

### 18 **State Code**

19

20 *State Code changes periodically and the current code can be located online at [www.le.utah.gov](http://www.le.utah.gov). The*

21 *following are selected portions of the Utah State Code and do not represent every potential legal*

22 *reference in the Code related to this section of the State Resource Management Plan or the*

23 *administration of public lands.*

### 24

#### 25 **Public Lands Planning**

26

27 **§ 63L-11-302.** *Principles to be recognized and promoted.*

28

29 **§ 63L-11-303.** *Findings to be recognized and promoted.*

30

31 (3) transportation and access routes to and across federal lands, including all rights-

32 of-way vested under R.S. 2477, are vital to the state's economy and to the quality of life

33 in the state, and must provide, at a minimum, a network of roads throughout the resource

34 planning area that provides for:

- 35 (a) movement of people, goods, and services across public lands;
- 36 (b) reasonable access to a broad range of resources and opportunities
- 37 throughout the resource planning area, including:
  - 38 (i) livestock operations and improvements;
  - 39 (ii) solid, fluid, and gaseous mineral operations;
  - 40 (iii) recreational opportunities and operations, including motorized
  - 41 and non-motorized recreation;
  - 42 (iv) search and rescue needs;
  - 43 (v) public safety needs; and
  - 44 (vi) access for transportation of wood products to market;
- 45 (c) access to federal lands for people with disabilities and the elderly;
- 46 (d) and access to state lands and school and institutional trust lands to
- 47 accomplish the purposes of those lands;

### 48

#### 49 **State Land Use and Management Plan for Federal Lands**

50

51 **§ 63L-8-104.** *State land-use planning and management program.*

1 **Department of Agriculture**  
2

3 **§ 4-2-102.** *Department created.*

4 (1) There is created within the state government the Department of Agriculture and Food.

5 (2) The department created in Subsection (1) is responsible for the administration and  
6 enforcement of all laws, services, functions, and consumer programs related to agriculture in this  
7 state as assigned to the department by the Legislature.  
8

9 **Uniform Agriculture Cooperative Association Act**  
10

11 **§ 3-1-1.** *Declaration of policy.*

12 “It is the declared policy of this state, as one means of improving the economic position of  
13 agriculture, to encourage the organization of producers of agricultural products into effective  
14 associations under the control of such producers, and to that end this act shall be liberally  
15 construed.”  
16

17 **Livestock Dealers’ Act**  
18

19 **§ 4-7-102.** *Purpose declaration.*

20 The Legislature finds that the public interest requires regulation of the sale of livestock between  
21 the producer and a person who purchases livestock for resale to protect the producer from  
22 unwarranted hazard and loss in the sale of livestock.  
23

24 **§ 4-7-104.** *Unlawful to act as an agent or dealer without license—Exception.*

25 Except as exempted by Section 4-7-105, no person may act as an agent or dealer in this state  
26 without being licensed under this chapter.  
27

28 **Agriculture Fair Trade Act**  
29

30 **§ 4-8-102.** *Purpose declaration.*

31 (1) The Legislature finds and declares that in order to preserve the agricultural industry of  
32 this state it is necessary to protect and improve the economic status of persons engaged in the  
33 production of products of agriculture.

34 (2) To carry out the policy described in Subsection (1), the Legislature determines it  
35 necessary to regulate the production and marketing of such products and to prohibit unfair and  
36 injurious trade practices.

37 (3) This chapter shall be liberally construed.  
38

39 **Conservation Commission Act**  
40

41 **§ 4-18-102.** *Findings and Declarations – Duties.*  
42

43 (1) In addition to the policy provided in Section 4-46-101, the Legislature finds and  
44 declares that:

45 (a) the soil and water resources of this state constitute one of the state’s basic  
46 assets; and

47 (b) the preservation of soil and water resources requires planning and programs to  
48 ensure:

49 (i) the development and use of soil and water resources; and

1 (ii) soil and water resources' protection from the adverse effects of wind  
2 and water erosion, sediment, and sediment related pollutants.

3 (2) The Legislature finds that local production of food is essential for:

4 (a) the security of the state's food supply; and

5 (b) the self-sufficiency of the state's citizens.

6 (3) The Legislature finds that sustainable agriculture is critical to:

7 (a) the success of rural communities;

8 (b) the historical culture of the state;

9 (c) maintaining healthy farmland;

10 (d) maintaining high water quality;

11 (e) maintaining abundant wildlife;

12 (f) high-quality recreation for citizens of the state; and

13 (g) helping to stabilize the state economy.

14 (4) The Legislature finds that livestock grazing on public lands is important for the proper  
15 management, maintenance, and health of public lands in the state.

16 (5) The Legislature encourages each agricultural producer in the state to operate in a  
17 reasonable and responsible manner to maintain the integrity of soil, water, and air.

18 (6) The department shall administer the Utah Agriculture Certificate of Environmental  
19 Stewardship Program, created in Section 4-18-107, to encourage each agricultural producer in  
20 this state to operate in a reasonable and responsible manner to maintain the integrity of the  
21 state's resources.

22 (7) The Legislature finds that soil health is essential to protecting the state's soil and  
23 water resources, bolstering the state's food supply, and sustaining the state's agricultural  
24 industry.

25  
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- 27  
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38  
39